

DIGICOMP RESEARCH CORPORATION

MODEL DR-70

DESK-TOP

ASTROLOGY COMPUTER

USER'S MANUAL

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Digicomp Research Corporation
(607) 273-8779

A DR-70 PRIMER:

Natal Chart
Secondary Progressions
Transits

INTRODUCING THE DR-70 DESK-TOP ASTROLOGY COMPUTER

This primer will introduce you to a unique astrological tool. After reading it, you will be able to cast a natal chart in less than five minutes on the Digicomp Research Corporation Model DR-70 Desk-Top Astrology Computer.

In another five minutes, you can have all the secondary progressions of that natal chart for any date after the birth (from 3000 B.C. to 7000 A.D.). And in even less time, you can have the transits to both the natal chart and its secondary progressions.

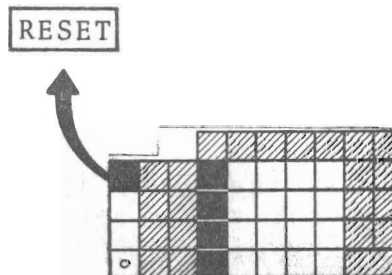
These three basic functions only scratch the surface of DR-70's capabilities. A complete User's Manual, available from either Digicomp or its representatives, presents many other functions that can be performed with equal simplicity on DR-70. Ask for our fact sheet.

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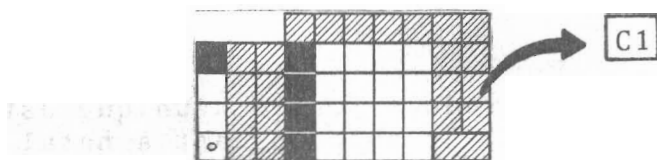
I. Casting The Natal Chart

If the computer is not on, start DR-70 by turning the key (at the rear of the right panel) clockwise to a horizontal position.

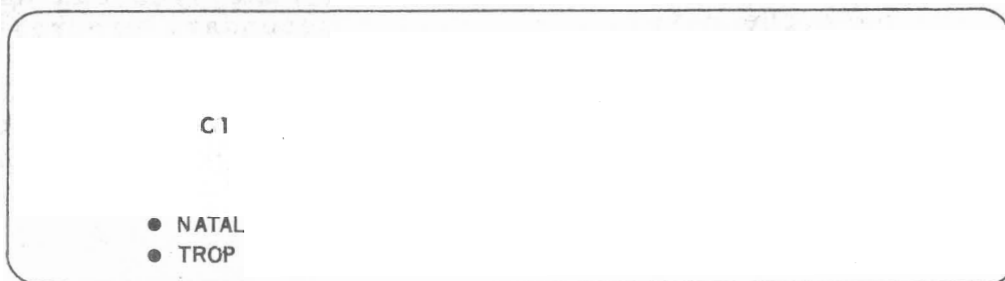
If the computer is on, press the RESET key in the upper left-hand corner of the keyboard.



In either case, now press the C1 (Chart One) key:



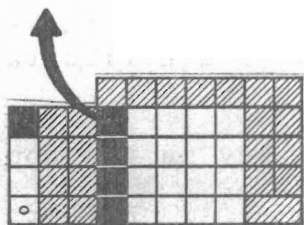
The C1, NATAL, and TROPical (zodiac) lights will be illuminated in red on the display (where answers appear):



DR-70 is now ready to cast a natal chart in a tropical (classical geocentric) zodiac. The procedure is:


Step one: Give DR-70 the date for which the chart is to be cast.

DATE



Requirements: Month
Day
Year in full

DR-70 separates month, day and year with a decimal point. The year must be entered in full.

 in the lower left-hand corner of the graphic above indicates that the shift key is in its normal (unlighted) position: the DATE key is on the lower-case keyboard. In step six, we will explain the use of the shift key.

For steps one through five, the shift key should be in its normal (unlighted) position. If the shift key light is on, press the key once: the light will go out as the shift returns to its normal position.

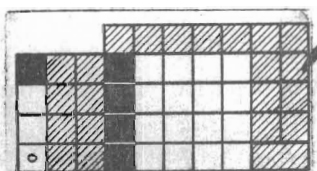
The shift key will be discussed in more detail in step six.

To enter the date, separate the month, day and year with a decimal point. We will cast the horoscope of the current president of the United States as an example.

Jimmy Carter was born on October 1, 1924. With the shift key in the unlighted position, press

DATE 1 0 . 0 1 . 1 9 2 4 ENTER

The numbers appear on the number display as you press the keys. If you make a mistake, press the CE key and begin again with the correct sequence.



CE

If you make a mistake,
press CE and begin again.

When the date-entry is complete,

┌ 10.01.1924

appears on the number register.

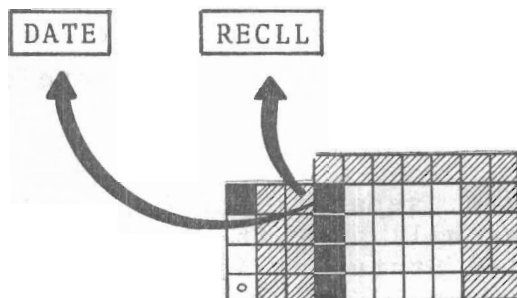
month/day/year

┌ to the left of the numbers indicates that DR-70 has accepted the date as entered. If ┌ does not appear, the entry is not completed. Did you press ENTER? If you didn't, press it now. If ┌ still does not appear, press CE and make the entry again.

Wait for

┌ 10.01.1924

Now, double-check the entry by means of the "Recall" key.
Press



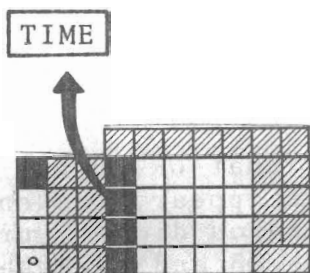
10.01.1924

appears on the display. \square does not appear on a "Recall" operation: it appears only at the conclusion of an entry.

If the correct date does not appear on the number register when you press DATE RECLL, simply repeat the entry with the proper keys. Review page three if necessary.

Step two: Give DR-70 the time for which the chart is to be cast.

The normal conversion of clock time to true local time at the place of birth is not required on DR-70. Sidereal time and longitude corrections are handled internally. Only two simple adjustments of clock time are required.



Requirements: 24-hour clock
GMT of birth

"Clock time" is the time in use throughout an entire time zone. For example, a television broadcast scheduled to run at 9 P.M. EST begins at 9:00 P.M. "clock time" throughout the Eastern Time Zone.

The following example will illustrate these simple adjustments:

Jimmy Carter was born in Plains, Georgia, at 7:00 A.M.

A. 24-Hour Clock Adjustment

1. For A.M. Times:

✓ Clock time as given. (Note: Midnight-1:00 A.M. is read as 0: hours plus "n" minutes. Example: 12:17 A.M. is read as 0:17.)

2. For P.M. Times: (Exception: 12-12:59 P.M. Use clock time.)

Clock time plus 12 hours.

In both cases, the A.M.-P.M. notation is dropped once the 24-Hour clock adjustment is made.

Jimmy Carter was born at 7:00 A.M. His 24-Hour clock-adjusted time is 7:00. The adjustment for an A.M. time amounts to merely dropping its A.M. notation. Its numerical value is unchanged.

B. GMT Adjustment

1. For Time Zones West of Greenwich:

24-Hour clock time
+ Whole number of time zones west of Greenwich
- Daylight Savings or War Time if in effect

2. For Time Zones East of Greenwich:

24-Hour clock time
- Whole* number of time zones east of Greenwich
+ Any special "Savings-Time" that may be in effect.
(*Exception: for India, subtract 5½ hours.)

Plains, Georgia, is six time zones west of Greenwich. Mr. Carter's GMT adjustment is made as follows:

| | |
|--------|--------------------------------------------------|
| 7:00 | 24-Hour clock time |
| + 6:00 | Time-zone hours west of Greenwich |
| 13:00 | |
| - 0:00 | No special "Savings-Time" in effect |
| 13:00 | Adjusted Time: <u>ready to enter into DR-70.</u> |

The entry is made as follows: Press

TIME 1 3 . 0 0 ENTER

If you make a mistake, use the CE key as illustrated in step one (page 3).

13.00

hrs./min.

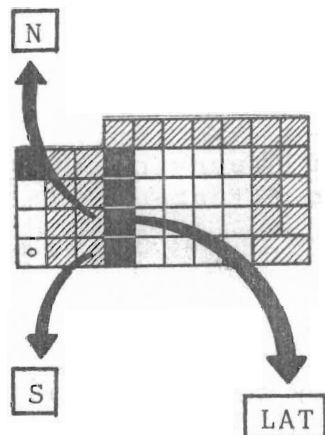
appears on the display when the entry is completed. If \square does not appear, press CE and then repeat the entry.

Double-check the entry by pressing

TIME RECLL

If the correct adjusted time does not appear on the number register, repeat the entry. (Remember: \square does not appear on "Recall" operations.)

Step three: Give DR-70 the latitude of birth.



Requirements: latitude of birth
north or south

"Coordinate-modifier" keys NW and/or SE indicate whether latitude is north or south, respectively, of the equator. NW, when used in a latitude sequence, reads "north"; SE, in a latitude sequence, reads "south".

Plains, Georgia, is 32°01' North latitude. It is entered as follows: press

LAT 3 2 . 0 1 N ENTER

32.01

deg./min

appears when the entry is complete. The N light is illumined in red to the right of the number register.

(Use the CE key and repeat the entry if necessary.)

Double-check the entry by pressing

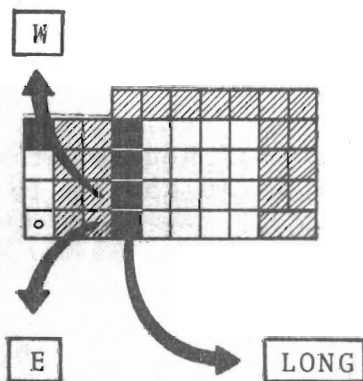
LAT RECLL

32.01

deg./min.

appears on the display. (If the correct latitude doesn't appear, repeat the entry.)

Step four: Give DR-70 the longitude of birth.



Requirements: longitude of birth
west or east

"Coordinate-modifier" keys NW and SE now indicate whether longitude is west or east, respectively, of the Greenwich meridian. NW, when used in a longitude sequence, reads "west"; SE, in a longitude sequence, reads "east".

Plains, Georgia, is 84°24' West longitude. It is entered as follows: press

LONG 8 4 . 2 4 W ENTER

84.24

deg./min.

appears when the entry is complete.
(Use CE and repeat the entry if necessary.)

Double-check the entry with

LONG

RECLL

84.24

deg./min.

appears on the display.

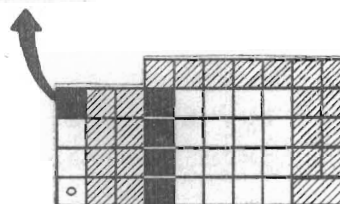
Summary Of Steps One Through Four:

You have now given DR-70 all the information it needs to cast a natal chart in a tropical (classical geocentric) zodiac. At any stage of the remaining procedure, you may use the RECLL key to remind yourself of this "input" information. As long as DR-70 remains on, this "input" date, time, latitude and longitude will be used. Any or all of the input may be changed by the user at any stage of calculations: DR-70 will make the required adjustments internally.

If you turn the machine off, all user-defined information is erased. You must begin again. (Note: DR-70 can be left running for hours.)

If you make a mistake (press a wrong key, etc.), simply press the CE key as is demonstrated in step one. If you get completely lost and want to start over. Press the RESET key and begin again.

RESET

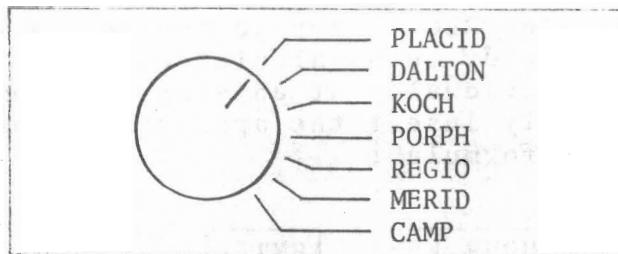


Press RESET only if
you want to start over.

Step five: Calculate House Positions.

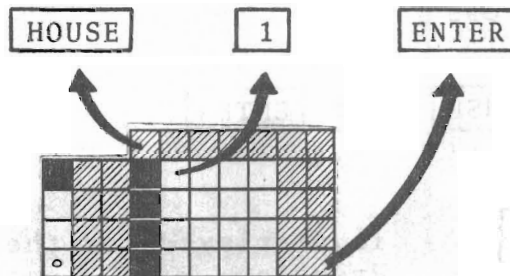
A. Select a house system.

The House Dial (above the RESET key) determines which house system DR-70 will apply to your chart. For the example chart in progress, we will cast houses according to Placidus. Turn the dial to




B. Calculate cusps.

For the Ascendant (house one), press




In a few seconds,


 7 26.06
 sign/deg./min.

appears on the display. President Carter's Ascendant is at 26°06' of the seventh sign, Libra. Transfer this number to your horoscope sheet.

Now press

ENTER


 8 24.41

The number 2 appears, indicating that what follows is the cusp of the second house:

Put 24°41' Scorpio on your horoscope sheet.

Now, each time you press the ENTER key, the next house cusp (3-12) will appear on the number register in a few seconds. These numbers should be recorded on the horoscope sheet as they appear.

DR-70 will cycle through these cusps ad infinitum now in response to the continued pressing of the ENTER key. To review the whole set of cusps, simply continue to press ENTER.

Note: Do not use the RECLL key to remind yourself of cusps that have already been calculated. Each cusp may be requested individually at an stage of the ongoing procedure. Simply insert the appropriate number key in the general "formula":

HOUSE NUMBER KEY * ENTER

*Grey keys 10, 11 and 12 should be used for cusps 10, 11 and 12. They should not be used as regular digits (in entries, etc.).

Example. To request the mid-heaven individually, press

HOUSE 10 ENTER

☊

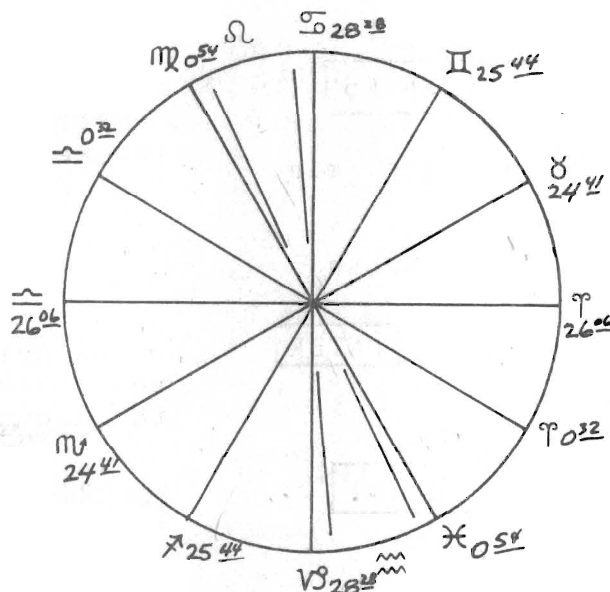
4 28.28

is displayed for the example chart. Pressing ENTER again will now give the cusp of the eleventh house, and so on through the cycle.

We now have:

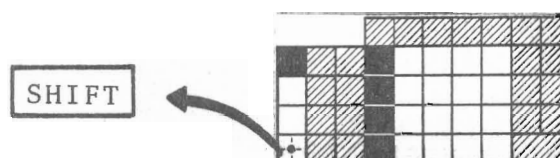
Jimmy Carter
October 1, 1924
7:00 A.M. CST
32N01
84W24

Placidus



Step six: Calculate Planet Positions.

In this step, you have to use the shift key for the first time. Press it down.




When pressed down, the shift key lights and locks in place. When pressed again, the key returns to its normal position and the light goes out.

When the shift key is in its normal (unlighted) position, the lower-case keyboard (DATE, TIME, 1, 2, etc.) is operational. All the operations you have done so far have been performed on the lower-case keyboard.

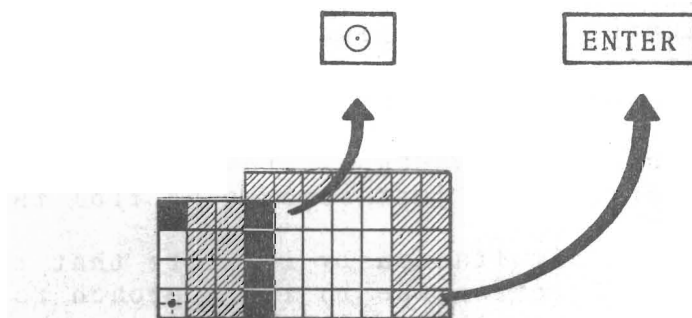
Planets, however, are upper-case terms on the DR-70 keyboard. To operate with the upper-case keyboard, press the shift key down. It will light and lock in place. Until you press the shift key again, the upper-case keys will be operational.

Single-case keys (C1, ENTER, RESET, etc.) may be used when the shift key is in either position.

To return (later) to the lower-case keyboard, simply press the shift key again: the light will go out. DR-70 will then operate with the lower-case keyboard.

 in the graphic above indicates that the shift key is pressed down and lighted.

Now, with the shift key in the lighted position, press



⊙

≈

7.08.03.40

sign/deg/min/sec.

appears on the display. The Sun light and the Libra light are illumined above the number register. Jimmy Carter's natal Sun is at 8°03'40" of the seventh sign, Libra.

Now press

ENTER

only. The Sun and Libra lights go out.

☾

m

8 13.48

sign/deg/min.

appears on the display. Mr. Carter's Moon is at 13°48' of the eighth sign, Scorpio. (Note that seconds are displayed for the Sun only.)

Each time you press ENTER, DR-70 will advance a step in its "Planet Line". Next comes Mercury, then Venus, then Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto. Last in the "Planet Line" comes ♌, which is the Moon's north node. ♌ is used for the north node of the Moon only, and cannot be used to calculate the nodes of any other planets

Let's note what happens when our continued pressing of the ENTER key brings us to the calculation for Uranus.

♅

✕

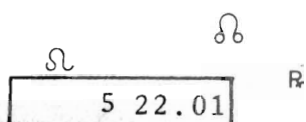
R

12 18.47

appears on the display. R to the right of the number register tells us that the planet Uranus is retrograde in the President's natal chart.

- R alone indicates that the planet is retrograde.
- SR alone indicates that the planet is stationary and will go retrograde.
- SD alone means that the planet is stationary and will go direct.
- RSR when illumined simultaneously indicate that the planet is retrograde, just separating from the station-point.
- RSD when illumined simultaneously indicate that the planet is still retrograde in its approach to a station-point. It will go direct.

When



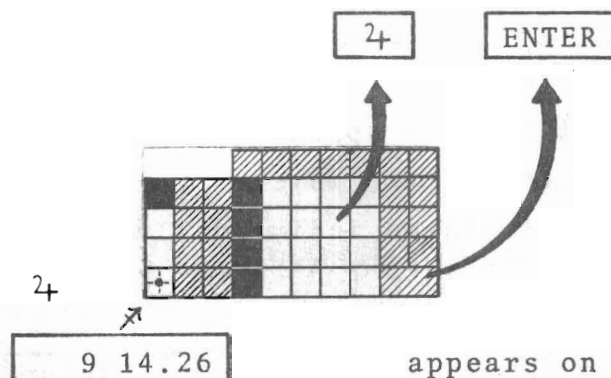
appears on the display, you have completed one cycle of the planet line. Each planet should be put in its appropriate position on the horoscope.

Continuing to press the ENTER key will advance DR-70 through the planet line again. You may double-check your calculations: DR-70 will now cycle "ad infinitum" through the planet line in response to the ENTER key.

Note: Do not use the RECLL key to remind yourself of planets whose positions have already been calculated. Each one may be requested individually at any stage in the ongoing procedure. Simply insert the appropriate planet key in the general "formula":

PLANET KEY ENTER

Example. To remind yourself of Jupiter's position in the horoscope, press

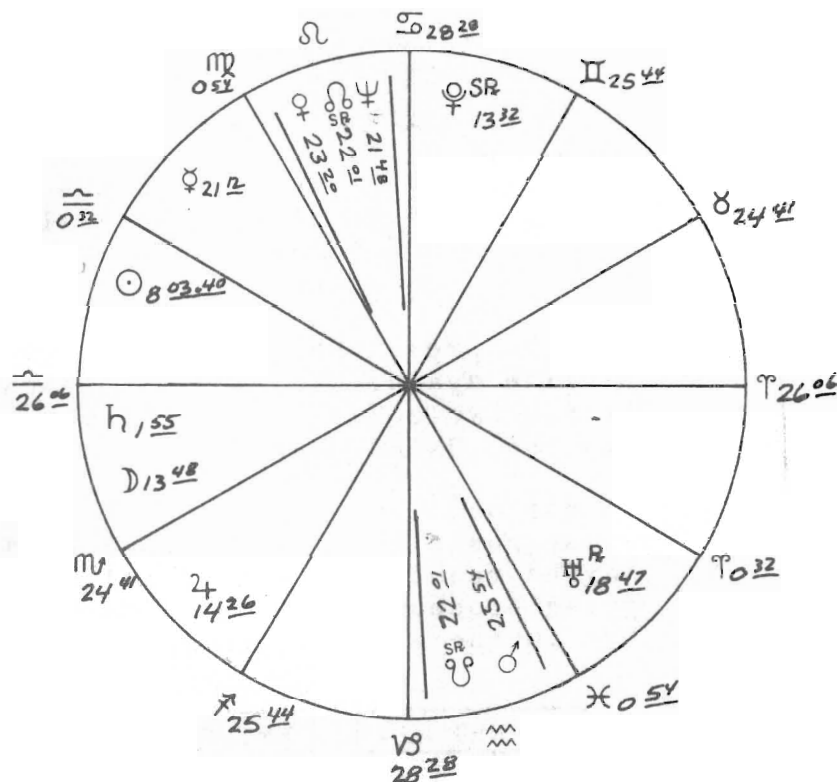


appears on the display. If now you press ENTER again, DR-70 will advance to Saturn, etc.

Summary Of Steps Five And Six:

With the completion of steps five and six, the natal chart is constructed. The horoscope appears on the following page.

Jimmy Carter
Natal
Tropical
Placidus



Points to be remembered are:

Step five.

A. Turn the "house dial" to the appropriate house system.

B. Cusps may be calculated in two ways:

1. Each cusp may be calculated individually. Insert the appropriate number key (white keys 1-9 and grey keys 10, 11, 12) in the sequence:

(shift unlighted)

HOUSE

NUMBER KEY

ENTER

2. Once the above sequence has been used for any cusp, the remaining cusps may be calculated automatically. Simply press the ENTER key, and the next cusp in the series will be displayed.

C. Do not use the RECALL key to remind yourself of a cusp already calculated. Repeat the sequence in B.1.

Step six.

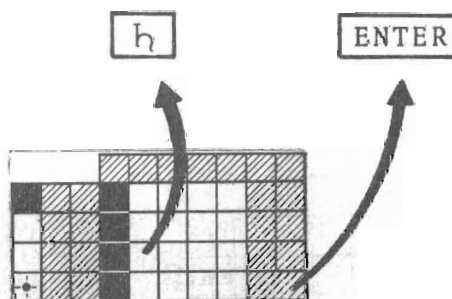
A. The shift must be in the lighted position.

- B. Each planet may be calculated individually. Press the appropriate planet key (☉-♏) in the sequence:

PLANET ENTER

PLANET here means "any planet", ☉ - ♏ .

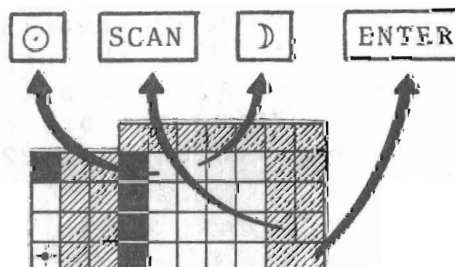
- C. Once any planet has been used in the above sequence, the remaining planets may be calculated automatically. Simply press the ENTER key, and the next planet in the series will be displayed. The series runs Sun, Moon, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, Moon's north node. The series repeats "ad infinitum".
- D. Do not use the RECLL key for planets. Recalculate the planet you want to see again. To remind yourself of Saturn's position, for example, press:



Now we can begin to analyze the structure of the chart:

Step eight: Calculate Aspects And Orbs.

DR-70 has three methods of calculating aspects. For the present example, we will use the SCAN function. With the shift key in its lighted position, press:



☉ ☾

30 5.44

aspect orb

appears on the display. The Sun and Moon lights are illuminated. The display is telling us that Jimmy Carter's natal Sun and Moon are within 5°44' of forming a semi-sextile.

Now press ENTER . DR-70 flows onward to the next aspect in the standard aspect-triangle.

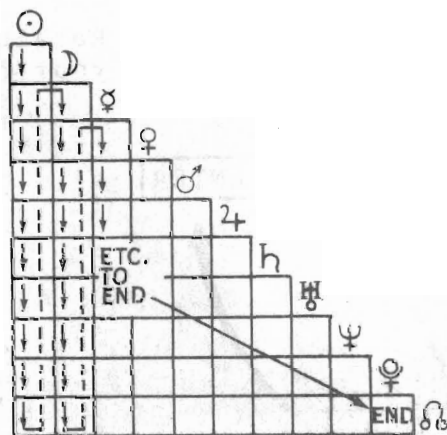
⊙ ♀

- 51.26 6.42

- = "short"

appears on the display. DR-70 is telling us that Jimmy Carter's natal Sun and Venus are within $6^{\circ}42'$ of forming a septile: the aspect is short of exact.

Each time you press ENTER , DR-70 will advance to the next aspect in the standard aspectarian. The direction of the flow is illustrated in the diagram below:



Triangle Flow System

Obeing a user-definable orb, DR-70 will SCAN for the following major and minor aspects:

| | | | |
|--------|-------------------|--------|---------------------|
| Major: | ♊ - 0° | Minor: | ♊ - 30° |
| | ♋ - 60° | | ♋ - $51^{\circ}26'$ |
| | ♌ - 90° | | ♌ - 72° |
| | ♍ - 120° | | ♍ - 150° |
| | ♎ - 180° | | ♎ - 45° |
| | | | ♏ - 135° |

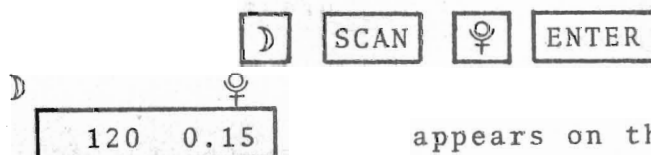
Note: At present, DR-70 is scanning with the "cold-start" orb setting of 10° . The aspects listed above will be displayed if their orb is ten degrees or less. Details on setting the orb to another range (from 0° - 360°) are given on pages 21-22 and 25.

Press ENTER again:

the appropriate planets into the general formula:

PLANET SCAN PLANET ENTER

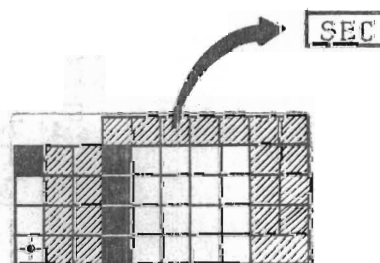
To double-check the Moon-Pluto aspect, for example, press


 appears on the display

Note: Do not use the RECLL key to remind yourself of aspects that have already been calculated. To remind yourself of an individual aspect, use method 2 as demonstrated immediately above.

A variety of other options are open to the user at this stage of the procedure. At present we are interested in calculating a chart of secondary progressions. Other options (discussed on the fact sheet) are presented in the complete User's Manual.

II. Casting The Secondary Progressions



Step one:

With the shift key still in the lighted position, press:

SEC

All calculations will now be internally adapted to produce a chart of secondary progressions.

Step two:

Press the shift key. The light will go out, and the key will return to its normal position.

Now, give DR-70 the date for which you want to know the progressions. DR-70 will find the appropriate "as if" birthdate internally. If you want to know the position of Jimmy Carter's progressed Moon for Easter, 1978, for example, press:

(shift normal) DATE 3 . 2 6 . 1 9 7 8 ENTER

3.26.1978

mo./day/year

appears on the display as the completed date-entry. (If you have any problems, review page 3. The same conditions apply here as for entry of the natal date.)

Steps three through five:

Unless otherwise directed by the user, DR-70 will automatically apply the natal time, latitude and longitude to the progressions. If any changes from the natal specifications are required, the new time, latitude and longitude should be entered at this stage of the procedure. The methods for making these entries are the same as has already been demonstrated for the natal chart.

For the present example, we will use the same time, latitude and longitude as for the natal chart. No new entries are required.

Step six: Calculate Progressed Cusps.

The procedure is the same as for the natal chart:

A. Select a house system. We will continue with Placidus.
No new setting is required.

B. Generate the cusps. Press:

(shift normal) HOUSE 1 ENTER

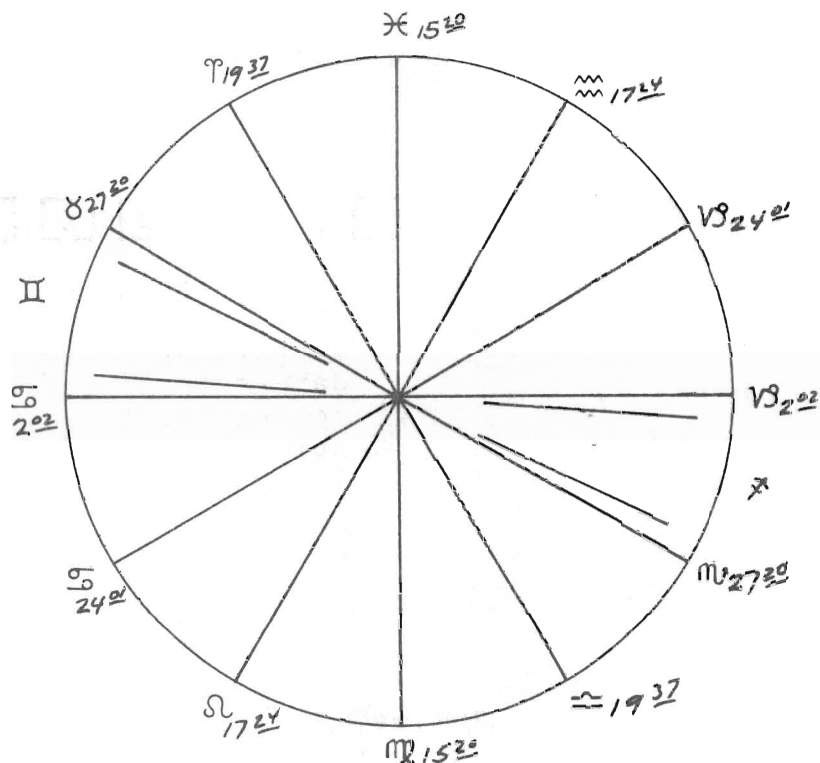
4

4.02.02

appears on the display. The progressed Ascendant for March 26, 1978 is at 2°02' of the fourth sign, Cancer.

With each pressing of ENTER, DR-70 advances to the next progressed cusp. Review pages 9-10 if necessary.

Jimmy Carter
Secondary Progressed
Placidus Cusps
March 26, 1978



Step seven: Calculate Progressed Planets.

The procedure is the same as for calculating the positions of natal planets. First, press the shift key down. It will light and lock in place. Now press:

(shift lighted)



ENTER

⊙

9.01.27.55

appears on the display. On March 26, 1978, Mr. Carter's progressed Sun is at 10°27'55" of the ninth sign, Sagittarius.

Press

ENTER

)

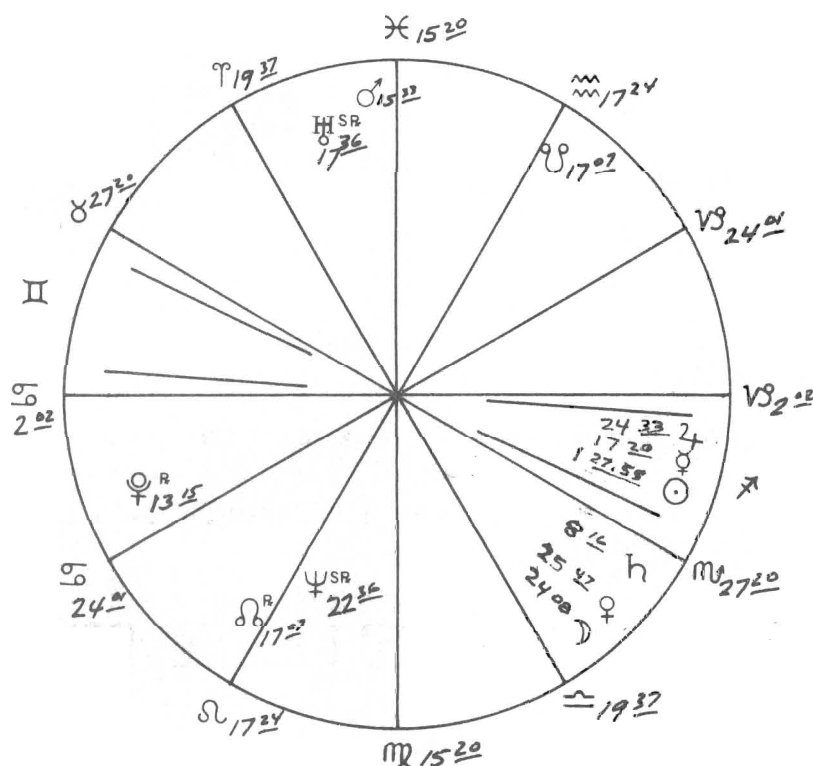
☾

7.24.08

is displayed as the position of Mr. Carter's progressed Moon on March 26, 1978: 24°08' of the seventh sign, Libra. (Remember: seconds are displayed for the Sun only.)

Continue to press the ENTER key as for the natal chart construction. Review pages 11-15 if necessary.

Jimmy Carter
 Secondary Progressed
 March 26, 1978
 Placidus/Tropical



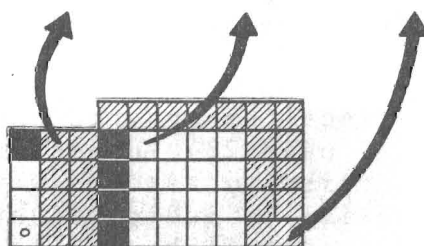
Step eight: Compare The Natal And Secondary Charts

Do any of the progressed planets make important aspects to the natal chart? The answer can be had by means of the SCAN key.

A. Set an appropriate orb.

Before going on to the aspect-scan proper, we must set a smaller orb than the present one of ten degrees. Return the shift key to its normal (unlighted) position. Press:

(shift normal) **ORB** **1** **ENTER**



1

appears as the completed entry. Double-check it with ORB RECLL . Now,

1.00

deg./min.

is displayed in response to the "Recall" operation. DR-70 will ignore all aspects with an orb greater than one degree; only those within one degree of exact will be displayed.

(If you have any problems, press CE and repeat the entry.)

B. Scan for aspects between the two charts.

Press the shift key down. It will light and lock in place. Now press:

(shift
lighted)

SEC

☉

SCAN

NATAL

☉

ENTER

☉

h

- 30 0.27

appears on the display. Note that the Saturn and NATAL lights are "blinking". This "blinking" tells us that the Saturn is from the natal chart. The first 1st aspect DR-70 has found is between the secondary Sun and the natal Saturn. (See flow chart, page 23.)

The second term in an operation is indicated by a blinking light. In the present example,

SEC planets are the first term,
NATAL planets are the second term, and
SCAN is the operation.

On March 26, 1978, Jimmy Carter's progressed Sun is 27' short of an exact semi-sextile to his natal Saturn.

DR-70 will now advance through the "Chart Comparison Planet Square" (see diagram, page 23) in response to the ENTER key. It will stop only to display aspects within one degree of exact. Natal planets will be indicated by a blinking planet light. If only one planet light is illumined, the same planet is in aspect from both charts.

When the SCAN operation is complete, you have generated the following aspectarian:

Progressed Planets

Natal
Planets

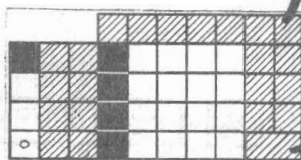
| | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|---|-----------------|-----------------|-----------------|-----------------|---|---|-----------------|-----------------|-----------------|-----------------|------------------|
| ☉ | | | | | | | V ₁₂ | | ∠ ₁₈ | | \$ ₂₅ |
| ☽ | | | | | | | | | | Δ ₃₂ | |
| ♂ | | | | | | | | | | | |
| ♀ | | * ₄₈ | | | | | | | ♂ ₄₄ | | |
| ♂ | | | | Δ ₂₂ | | | | | | | |
| ♂ | | | | | | | | | | | |
| ♂ | V ₂₂ | | ∠ ₃₅ | | | | | ♂ ₄₁ | | | |
| ♂ | | | | | | | | | | | |
| ♂ | | | | | | | | | ♂ ₄₈ | | |
| ♂ | | | | | | | | | | ♂ ₁₇ | |
| ♂ | | | | | | | | | ♂ ₃₅ | | |

Comment: The chart of secondary progressions is cast "as if" the native were born a certain number of years after the actual birth. The present example is cast for approximately midway into Mr. Carter's fifty-fourth year. The progressions are cast "as if" the President were born approximately midway into the fifty-fourth day after his actual birth. DR-70 makes the required adjustment internally. To see the date actually used in calculating the positions displayed for the progressed planets and cusps, press:

(shift normal)

DR DT

ENTER



11.24.1924

is displayed. November 24, 1924 is the ephemeris-date on which DR-70's progressed calculations are based.

This DR DT key is used for display purposes only. You do not need to give DR-70 this "derived date". The derived-date feature simply tells you the date DR-70 used to calculate the progressions that are in effect on the date you entered in step two.

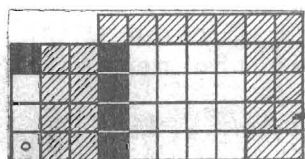
III. Calculating The Transits

The positions of the transiting planets are calculated as a second natal chart. This second natal chart is then compared with both the birth chart and its secondary progressions.

We will calculate Jimmy Carter's transits for Easter, 1978.

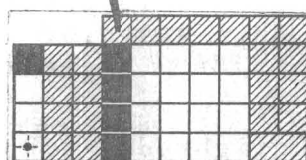
Step one: Press

C2



Step two: With the shift key in the lighted position, press:

NATAL



Step three: Return the shift key to its unlighted position, and enter the date for which the transits are to be calculated. With the shift unlighted, press

DATE

3

.

2

6

.

1

9

7

8

ENTER

Review pages 3-4 if necessary.

Step four: Give DR-70 the time for which transits are to be calculated. We'll use GMT 12:00. (7 A.M. EST)

(shift unlighted) TIME 1 2 . 0 0 ENTER

Review page 6 if necessary.

Observation: Since we are calculating transits, latitude and longitude entries are not required. We are interested only in the positions of the planets in the zodiac at the date and time in question. Zodiacal position is unaffected by terrestrial location of the native.

Step five: Calculate the transits to the natal chart.

Two options are available:

- A. This step may be performed before, after, or in place of step B. Aspects of the transiting planets to the natal chart can be calculated without first requesting the transiting positions: DR-70 handles the necessary calculations internally.

1. Press ORB RECLL

1.00

is displayed. We know that DR-70 will consider aspects only within one degree of exact. We will use it.

Note: If a wider orb is desired, the new setting is made at this stage of the procedure. To set an orb of "n" degrees, for example, press:

(shift unlighted) ORB n ENTER

2. Reactivate Chart One, Natal. With the shift now in the lighted position, press:

(shift lighted) C1 ☉ ENTER

☉

7.08.03.40

re-appears.

We have generated the following aspectarian:

Natal Planets

Transiting
Planets

| | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|---|------------------|------------------|------------------|------------------|------------------|---|---|------------------|---|------------------|---|
| ☉ | | | | | | | | | | | |
| ☽ | | | | | | | | | | | |
| ♂ | | | | △ _{.32} | | | | | | | |
| ♀ | | | ⋈ _{.19} | | | | | △ _{.55} | | | |
| ♂ | ☿ _{.32} | | | | ♂ _{.32} | | | | | | |
| ♂ | | ♂ _{.51} | | | | | | | | | |
| ♂ | | | | | | | | | | | |
| ♂ | | | | | | | | | | | |
| ♂ | | | | | | | | ☐ _{.39} | | | |
| ♂ | | | | ♂ _{.49} | | | | | | | |
| ♂ | | | | | | | | | | ♂ _{.55} | |

Any of the transits to the natal chart may be double-checked individually. With the shift key in the lighted position, apply the general formula:

[C1] [NATAL] [PLANET] [SCAN] [C2] [PLANET] [ENTER]

Do not use the RECLL key. To double-check the transit to the natal Venus from Mercury, for example, press:

[C1] [NATAL] [♀] [SCAN] [C2] [♂] [ENTER]

♂ ♀

- 120 0.27

appears on the number register.

To double-check all the transits, repeat the operation from the beginning,

B. To calculate the positions of the transiting planets, press:

(shift lighted)

C2

☉

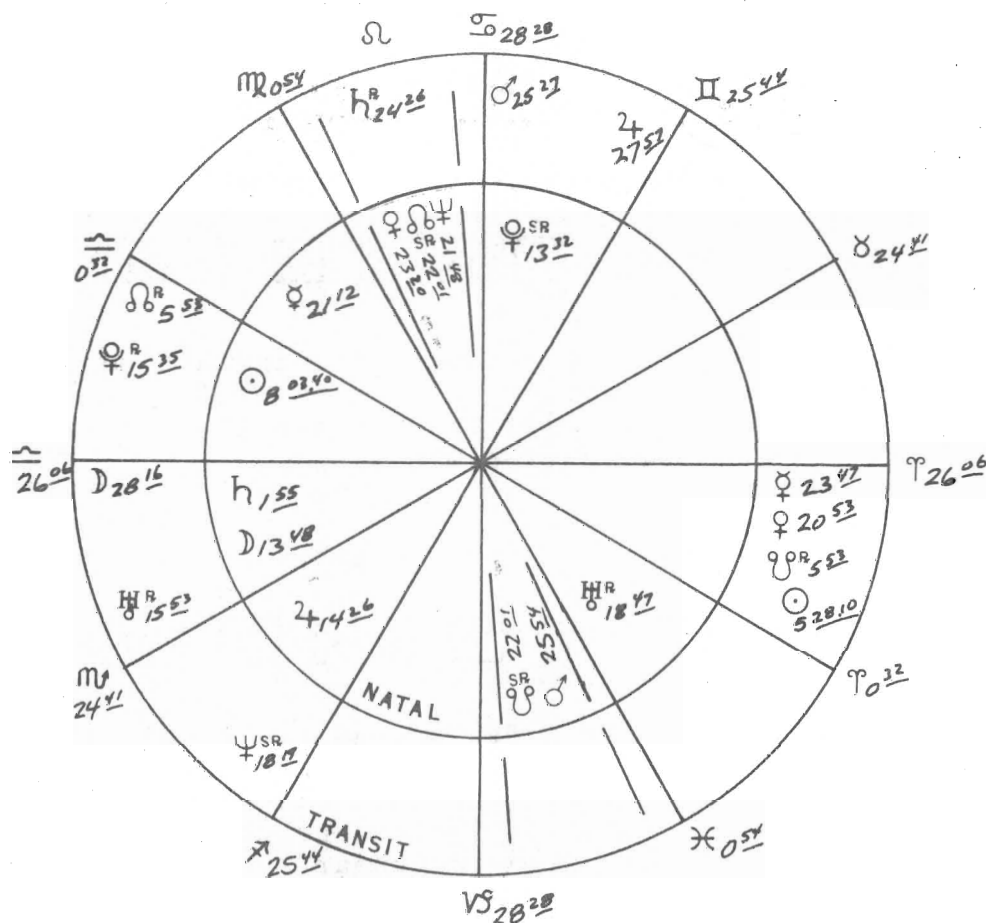
ENTER

☉
☿

1.05.28.10

appears on the display. At 7 A.M. EST on March 26, 1978, the transiting Sun is at 5°28'10" Aries.

The positions of the rest of the transiting planets may now be calculated in the same manner as was demonstrated for the natal and progressed charts. In response to each pressing of the ENTER key, DR-70 will advance a step in the planet line. The positions of the transiting planets are indicated in the chart below:



Step six: Calculate transits to the secondary progressions.

Again, two options are available. Step A (transits proper) may be performed before, after, or in place of step B (requesting positions for the transiting planets).

A. Transits proper.

1. We have already set the orb. If you want to double-check the setting, press

(shift unlighted) ORB RECLL

2. Reactivate Chart One, Secondary. Press:

(shift lighted) C1 SEC ☉ ENTER

In about seven seconds,

☉

↗
9.01.27.55 re-appears.

3. Reactivate Chart Two, Natal. Press:

(shift lighted) C2 NATAL ☉ ENTER

Comment: Re-activating the two charts in this manner is simply a time-saving device. The reasons for inserting them at this stage is explained in the "Timesavers" section of the complete User's Manual.

4. Scan for transits to the progressed chart. Press:

(shift lighted) C1 SEC ☉ SCAN C2 NATAL ☉ ENTER

DR-70 will take a few seconds to handle the required calculations internally. In the interval between 3 and 4, the computer began making advance calculations. The time you allowed DR-70 to idle influences the amount of time it takes for your first answer to appear. Allow 25-30 seconds if necessary for

☉

♀
45 0.53

to appear on the display. Again, the transiting planet is indicated by a blinking light. The first transit DR-70 has

found is a semi-square from Pluto to the secondary Sun. It is 53' wide.

DR-70 will now traverse the "Chart Comparison Planet Square" (see page 27) in response to the ENTER key. But now the secondary progressed planets occupy the horizontal. The transiting planets are again listed vertically.

Press ENTER

☾ ☿

- 180 0.21

is displayed. The Moon light is constant; the Mercury light blinks. The transit is an opposition of Mercury to the secondary Moon. It is 21' shy.

Continue in this manner until

End

is displayed. The resultant aspectarian reads:

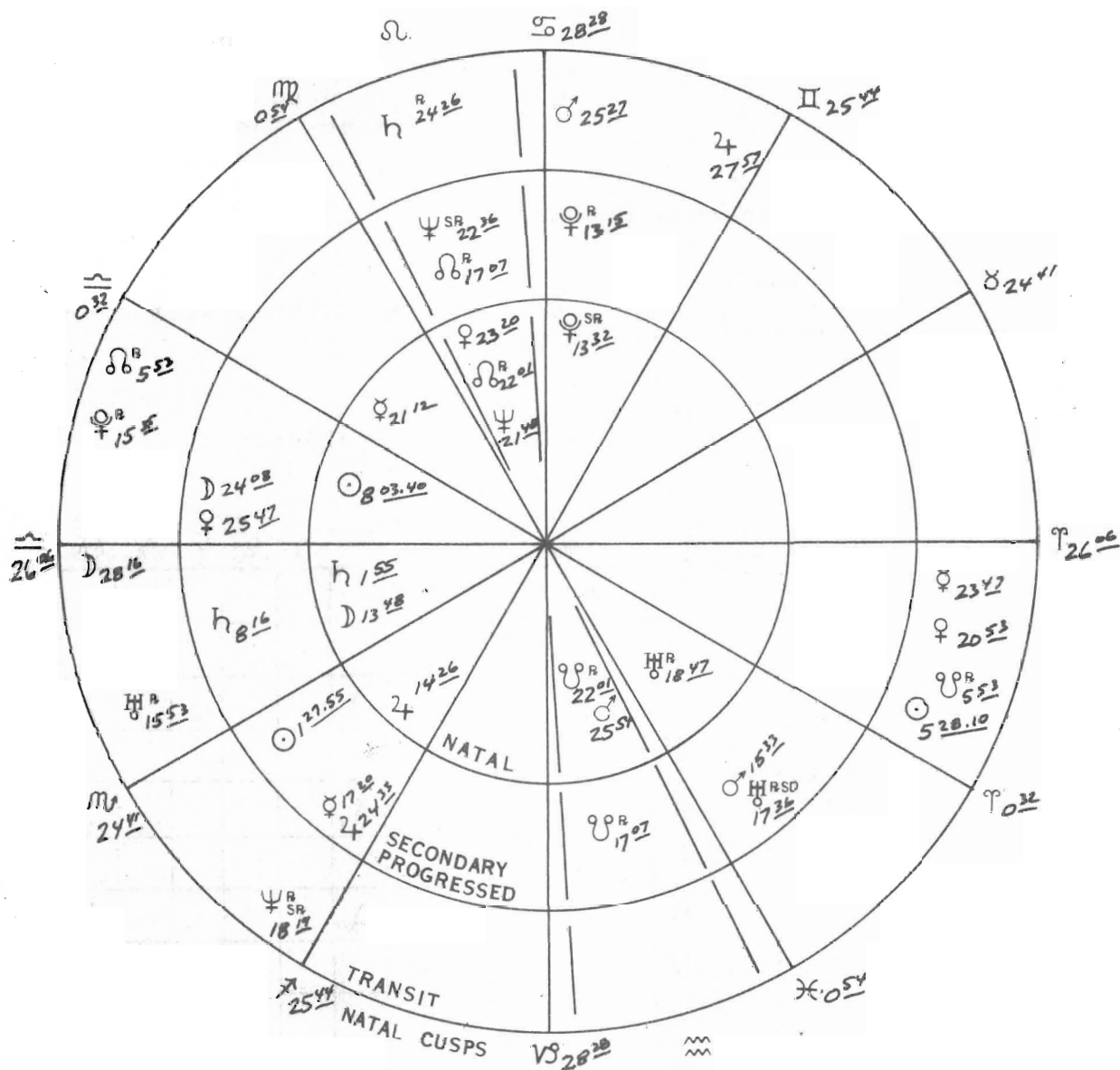
Secondary Planets

Transiting
Planets

| | ☉ | ☾ | ☿ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|---|----------|----------|----------|----------|----------|----------|---|----------|---|----------|---|
| ☉ | | | | | | | | | | | |
| ☾ | | | | | | | | | | ☿ .51 | |
| ☿ | | ☿ .21 | | | | ♂ .46 | | | | | |
| ♀ | | | | | | | | | | | |
| ♂ | | | | ☿ .20 | | ♂ .53 | | | | | |
| ♂ | | | | | | | | | | | |
| ♂ | | ♂ .17 | | | | ♂ .00 | | | | | |
| ♂ | | | | | ♂ .20 | | | | | | |
| ♂ | | | | ♂ .59 | | | | ☿ .43 | | | |
| ♂ | ♂ .53 | | | | ♂ .03 | | | | | | |
| ♂ | | | ☿ .33 | | | | | | | | |

B. Transiting positions.

If you haven't already calculated the positions of the transiting planets, you may want to do so now. The procedure is given in step five, B. Putting it all together, we get the following picture of 7 A.M. EST for Mr. Carter on Easter Sunday, 1978:



Summary

The preceding pages have demonstrated the simplicity of calculating a natal chart, its secondary progressions, and the transits to both on DR-70. With a little practice, you should now be able to do the same for a chart of your own.

Press RESET before you begin: DR-70 will be ready to start over with you. Return to page one and follow the step-by-step procedure you used to calculate President Carter's data. Enter your own date, your adjusted time, etc., in the appropriate steps as demonstrated.

For further details on these basic procedures, and for demonstrations of DR-70's many other functions, consult our complete User's Manual.

Don't be afraid to experiment with DR-70: the computer won't burn up or explode if you press a wrong key or a wrong sequence. If you run into problems, use the CE key and repeat the entry or calculation. If you get lost and want to start over, press RESET : DR-70 will again be under your control.

Greetings:

Digicomp Research Corporation is pleased to introduce the DR-70 Desk-Top Astrology Computer. Three years of intensive research and development have gone into the production of this unique little machine. At present there is nothing else like it.

We've simplified the computational dimension of astrology. Even the most complex calculations can be performed by means of short, simple key sequences. Students and professionals alike should be more than pleased with the speed and ease of getting answers which are more accurate than most published ephemerides from the Digicomp DR-70.

From 1800-2000, our Sun positions are accurate within two seconds of arc; our Moon positions are accurate within forty seconds of arc; positions for the other planets are accurate within one minute of arc. Going back to 300 A.D., our Sun and Moon are both accurate within one minute of arc. And back to 100 B.C., our Sun is accurate within two minutes of arc.

All these accuracies as quoted above have been carefully examined against tapes provided by the U.S. Naval Observatory in Washington, D.C.

Our positions for planets other than the Sun and Moon have not been examined against Naval Observatory tapes for dates outside the 1800-2000 range. With the exception of Pluto, however, accuracy may reasonably be expected to be within a degree. The orbit of Pluto remains insufficiently defined by an easily tractable mathematical form. Our positions may be less accurate here than for the other planets; at present, we can't be sure.

Asteroid positions have also been examined against tapes provided by the Naval Observatory. Corrections have been applied to ensure accuracy within thirty minutes of arc from 1928-1998. Due to the complex orbits of these bodies, our accuracy is less for earlier dates.

The remainder of this foreword is devoted to advising you on the use of this manual. First of all, don't be intimidated by the number of pages ahead of you. We've taken the time and expended the space required to give clear and comprehensive explanations of how to use the DR-70. Most of the basic calculations can be done after reading only a few pages. Other sections give instructions on how to generate the figures required by techniques that may not be for you. We've tried to be comprehensive: DR-70 does a lot.

Section I tells you what we know DR-70 will do. The various types of charts, zodiacs, house systems, astrological functions and mathematical operations that the computer is programmed to produce and/or execute are itemized. Definitions of some basic astrological terms are provided.

Section II tells you how to start the machine. The "cold-start" values of user-definable keys are presented.

Section III introduces the DR-70 keyboard. A brief description of the function of each key is given.



Section IV introduces DR-70's display. The various terms on the display board are explained.

Section V discusses some of the important keys in detail. It is made clear how a number of unnecessary pitfalls can be avoided through a proper use of these keys.

Section VI introduces the natal chart, its secondary progressions and transits. The simplicity of calculating these items on DR-70 is demonstrated through examples. References to pages in the manual where the details of applying the examples to charts of your own appear is given in a summary that concludes this section.

Section VII begins the discussion of chart-construction details. The requirements with respect to birth-time adjustments are explained. The horoscope is developed to its completed stage as mapped on a standard horoscope sheet.

Section VIII introduces single-step keyboard techniques used to carry out standard astrological operations. Aspects, orbs, midpoints and Arabian parts are discussed.

Section IX demonstrates how automation can be applied to the functions introduced in sections VII and VIII. Simple Auto-Enter flow systems are introduced and explained.

Section X introduces the Scan function: the fastest method of calculating aspects on DR-70.

Section XI explains how the 90-dial key is used to execute the cluster-analysis techniques employed by cosmobiologists.

Section XII demonstrates the methods used to calculate secondary progressions, tertiary progressions, solar returns, lunar returns and the chart of solar arc.

Section XIII illustrates two methods of calculating primary directions.

Section XIV presents chart-comparison techniques. Special attention is given to transits.

Section XV is a discussion of the coordinates used in astrology. Methods for translating positions from one coordinate system to another are explained. The method for calculating parallels on DR-70 is presented.

Section XVI demonstrates how to use DR-70 to perform mathematical operations.

Section XVII suggests the best ways of saving time by making efficient use of DR-70's Idle feature.

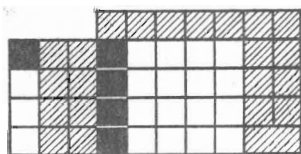
Section XVIII discusses the consequences of entering any of DR-70's Auto-Enter flow systems in mid-stream.



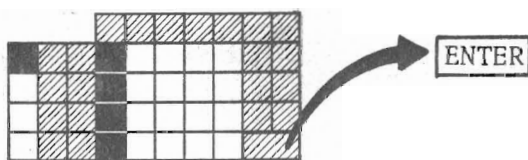
Section XIX explains DR-70's printer functions.

Section XX is a comprehensive index .

Now a word about graphics. Throughout the manual, we use



to suggest the keyboard. To this graphic we add an appropriately-placed arrow to indicate the position of the key that is being discussed. The following graphic illustrates the position of the ENTER key:



In the pages that follow, a number of possible applications of the DR-70 have not been mentioned. Don't be afraid to experiment. The machine won't burn up or explode if you make a mistake or if an improper sequence is used. Simply press the RESET key and DR-70 is again under your control. As you become more familiar with the machine, much of the information in this manual will be unnecessary for you. You'll evolve your own techniques.

I am confident that DR-70 will be an extremely valuable tool both for professionals and for students of astrology.

Sincerely,

Om P. Gupta
President

TABLE OF CONTENTS

| | |
|-------------------------------------------------|----|
| Foreword | |
| I. Charts, Zodiacs, House Systems and Functions | |
| A. Chart Types | 02 |
| B. Zodiacs | 03 |
| C. Houses | 05 |
| D. Chart Number | 06 |
| E. Functions | 06 |
| II. Starting the DR-70 | |
| "Cold-start" | 01 |
| III. Keyboard | |
| IV. Display | |
| A. Number Display | 01 |
| B-N. Terms on the Display | 03 |
| V. The DR-70 Self-Help And Information Center | |
| A. Error? : SHIFT | 01 |
| B. Still waiting? : ENTER | 02 |
| C. Wrong key? : C/CE | 03 |
| D. Forgot? : RECL | 04 |
| E. That bad? : RESET | 06 |
| VI. The Basics | |
| A. Natal Chart | |
| Construction | 01 |
| Aspects | 05 |
| B. Secondary Progressions | |
| Construction | 06 |
| Aspects to Natal Chart | 08 |
| C. Transits | |
| Locating planets | 09 |
| To Natal Chart | 11 |
| To Secondary Progressions | 12 |
| Reference List For Details | 14 |

VII. Chart Construction

| | |
|--------------------------------|----|
| Chart Number | 01 |
| Chart Type | 01 |
| Zodiac Type | 02 |
| Planetary Coordinate | 02 |
| Date | 03 |
| Time | 03 |
| 24-Hour Clock Adjustment | 04 |
| GMT Adjustment | 04 |
| Plus-or-Minus Twelve | 06 |
| Latitude | 07 |
| Longitude | 07 |
| House Cusps | 09 |
| Planet Positions | 10 |

VIII. Chart Analysis

| | |
|---------------------|----|
| Aspects | 01 |
| Midpoints | 03 |
| Arabian Parts | 04 |
| Aspect-orbs | 07 |

IX. Auto-Enter

| | |
|---------------------------|----|
| A. Houses | 03 |
| B. Planets | 04 |
| C. Aspects | |
| ASpect Function | 05 |
| Aspect ORB Function | 08 |
| D. Midpoints | 10 |
| E. Arabian Parts | 11 |

X. SCAN

XI. 90-Dial

XII. Derived Charts

| | |
|------------------------------|----|
| General Information | 01 |
| Example For First | 03 |
| Example For Subsequent | 04 |
| DR DT, JL DT, ST | 06 |

XIII. Primary Directions

| | |
|------------------|----|
| Method One | 04 |
| Method 2A | 08 |
| Method 2B | 10 |

XIV. Chart Comparison

| | |
|------------------------------------|----|
| A. Natal and Derived | 02 |
| B. Two Natal, Transits | 13 |
| C. Different Number and Type | 17 |

XV. Coordinates

| | |
|------------------------------|----|
| A. LONG/LAT | 01 |
| B. NW/SE | 01 |
| C. P LON/P LAT/RA/DECL | 02 |
| D. CRD X | 03 |
| E. Terrestrial Light | 07 |
| F. Parallels | 07 |

XVI. Mathematical Operations

| | |
|-------------------------------------|----|
| A. Number Formats | 01 |
| B. Keys That Can Be Used | 15 |
| C. Applications | |
| Adjusting Birth Time on DR-70 | 15 |
| Composite Charts | 16 |
| Harmonics | 21 |
| ST and GMT for a Given MC | 26 |
| Planet at Ascendant | 26 |

XVII. Timesavers

XVIII. Mid-stream Entry

XIX. Printer Functions

| | |
|-----------------------------------------------------------------|----|
| A. Setting up / Printer Maintenance | 02 |
| B. Example: Natal chart/Aspects/ Progressions/Transits | 06 |
| C. CHART Function | 14 |
| D. TABLE Function | 24 |
| E. PRINT Function | 37 |
| F. LIST Function | 41 |

Appendix I. Star (*) Functions

| | |
|-------------------------------------------------------------------------------|----|
| A. Series 01: Define A-B-C-D | 05 |
| B. Series 10 and 11: Selective Aspect Search | 09 |
| C. Printer-Associated Star Functions - Series 12, 30, 33, 34, 34, 35 | 15 |
| D. Series 46 and 47: Equal House System | 18 |

Index

I. CHARTS, ZODIACS, HOUSES, FUNCTIONS: an introduction

Given a date, time, latitude and longitude, DR-70 constructs seven kinds of charts (called 'Chart Types')

- 1) Natal (also used for horary and transits)
- 2) Primary directions
- 3) Secondary progressions
- 4) Tertiary progressions
- 5) Solar return
- 6) Lunar return
- 7) Solar arc

in three zodiac types

- 1) Tropical (classical geocentric)
- 2) Sidereal
- 3) Heliocentric

with houses in terms of seven systems

- 1) Placidus
- 2) Dalton
- 3) Koch
- 4) Porphyry
- 5) Regiomontanus
- 6) Meridian
- 7) Campanus

and allows you to simultaneously operate on four charts (two natal, two derived) through a chart classification according to 'Number' and 'Type'.

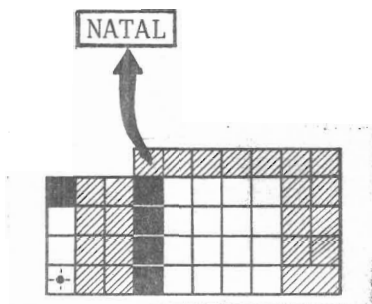
Once any of these charts have been constructed, DR-70 will quickly supply all the figures required for any of the following techniques of chart analysis:

- 1) Aspects and orbs
- 2) Midpoints
- 3) Arabian parts
- 4) Cosmobiological functions
- 5) Harmonics
- 6) Chart comparison
- 7) Parallels

Other DR-70 functions include:

- 1) Mathematical operations
- 2) Coordinate exchange

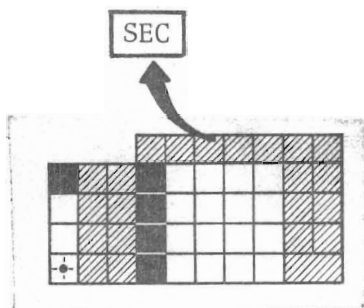
A. Chart Types



1. Natal. A natal chart is the horoscope cast for time and place of birth. It may also be used as a horary chart when cast for the time and place of a particular event or question. All the derived charts refer to and are developed from the natal chart.

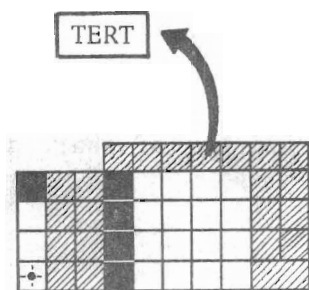
2. Derived. All derived charts depict effects of the continued motion of planets, signs and houses away from their positions in the natal chart.

The changes are due to either the axial rotation of the earth or to the motion of the earth and the planets around the Sun. Such charts are meaningful only with respect to the natal chart whose 'directions' or 'progressions' they represent. Those which DR-70 will construct are:



a) Primary directions. The chart of primary directions is complex and will be discussed in section XIII.

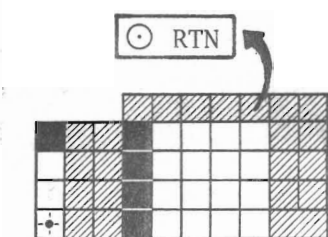
b) Secondary progressions. The secondary system of directions, commonly called secondary progressions, is one of the chief systems of directions in common use. This system results from the continued motion of the planets after the moment of birth. Each day after birth is related to a corresponding year of life. The positions of the planets ten days after the birthday, for example, define the secondary chart for the tenth year.



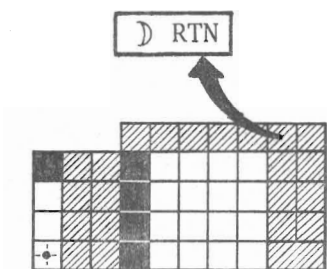
c) Tertiary progressions. Once each month the transiting Sun and Moon form the same angle that was between them at birth. Tertiary progression has the recurrence of this angle as its reference point. Each recurrence of the natal Sun-Moon angle is corresponded to a year of life. Note that the angle must be the same with respect to whether the Moon is approaching or separating from the Sun.

For 'n' years, take the 'nth' time that the transiting Sun and Moon form the same angle as is between them in the natal chart. The positions of all the planets at that moment define the tertiary chart.

(For dates other than the birthday, the tertiary chart is constructed with reference to the recurrence of the natal angle that affects the date in question.)

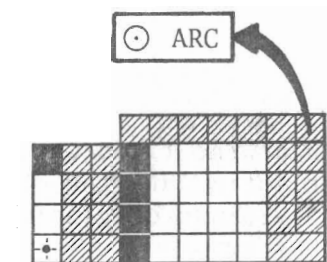


d) Solar return. The chart of solar return is the 'birthday' chart. It is calculated each year for the precise moment when the transiting Sun returns to its natal position. A horoscope is cast for the location of the native when this conjunction occurs.



e) Lunar return. Once each month the transiting Moon returns to its natal place. The chart constructed for this return is the Lunar Return. Unlike the Solar Return, which depicts conditions effective for a full year, the chart of Lunar Return depicts conditions effective for a single month only.

During the first year of life, for example, approximately thirteen of these charts can be drawn.



f) Solar arc. The solar arc chart is cast as follows. Take:

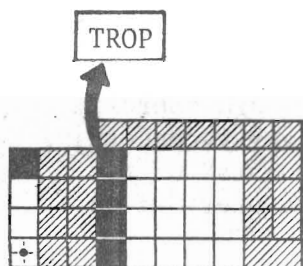
- (1) The Sun's position for Secondary progression
- (2) The Natal Sun
- (3) Subtract the two
- (4) Add this difference to all the natal planets.

B. Zodiacs

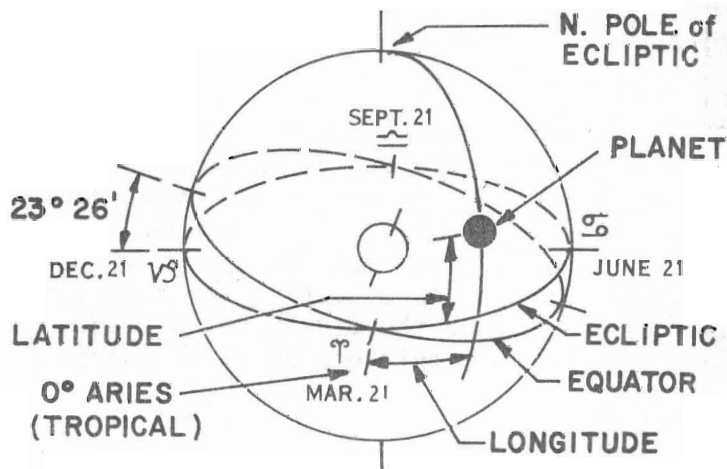
DR-70 will cast any of the above 'Chart Types' in the Tropical (classical geocentric), the Sidereal and the Heliocentric (heliocentric-tropical) zodiacs. (Positions can be calculated in planetary latitude, right ascension and declination as well --see Section XV)

All three zodiacs lie on the same plane, which is established by the earth's orbit of the Sun. This plane, called the 'ecliptic', presently makes an angle of $23^{\circ}26'$ to the equator of the earth. The way this plane is divided up varies according to the zodiac type in use.

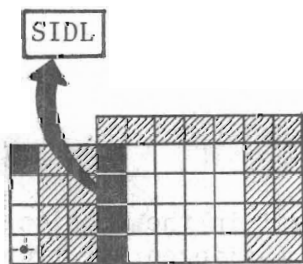
1. Tropical. The tropical zodiac is the standard geocentric zodiac used in classical astrology. It takes the earth as the fixed center of a plane that extends the ecliptic into the celestial sphere. This plane is then divided into twelve equal (30°) 'signs': Aries, Taurus, Gemini, etc.



0° Aries in this system is defined as the position occupied by the Sun at the familiar vernal equinox: the Sun's apparent northward motion brings it to an intersection of the ecliptic and the equator.



2. Sidereal. The sidereal zodiac also takes the earth as the fixed center of a plane that extends the ecliptic into the celestial sphere. But its twelve divisions originate from a backdrop of the "fixed" stars.



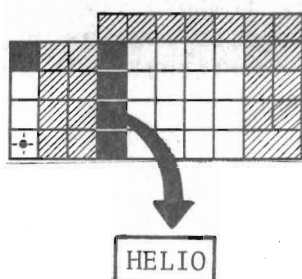
The difference in the Tropical and Sidereal zodiacs results from the way that each measures a year. The Tropical zodiac counts a year as the interval between two vernal equinoxes: this year is related to the seasons on the earth. The Sidereal zodiac measures a year as the time taken by the earth to complete a revolution around the Sun so that the Sun appears to have returned to the same longitude with respect to a fixed star. The Sidereal year is just over twenty minutes longer than the Tropical year. When this twenty-minute interval is translated into celestial longitude, we find that 0° Aries of the Tropical system lags behind 0° Aries in the Sidereal system by approximately 50.26 seconds per calendar year.

It must be made clear that the "signs" of the Tropical zodiac are not to be equated with the constellations that bear the same names. Due to the difference between the Tropical and Sidereal years, a phenomenon known as the "precession of the equinox" occurs. 0° Sidereal Aries no longer appears as the backdrop for the Sun's position at noon on the vernal equinox.

Each year, 0° Tropical Aries appears to move backward approximately 50.26 seconds in the Sidereal zodiac. Due to the controversy concerning exactly which equinox marks the last time that the "zero points" of the Tropical and Sidereal zodiacs were in alignment, DR-70 has a user-definable Ayanamsha. It cold-starts to Stahl's Ayanamsha of 23°20'56".

("Ayanamsha" indicates the difference in sidereal and tropical longitudes as of Jan. 1, 1900. It is internally precessed approximately 50.26"/year ± from the cold-start or user-defined figure as required by the date in use.)

3. Heliocentric. DR-70 uses the heliocentric-tropical zodiac. The Sun is taken as the center of the ecliptic. Twelve equal divisions are established with respect to the zero-point of the tropical zodiac.



Heliocentric coordinates in DR-70 are always presented in the tropical system only. However, if you wish to compute heliocentric coordinates with respect to some fixed equinox (sidereal) you can do so by subtracting precessed Ayanamsha from the heliocentric longitudes obtained from DR-70. See page XVI-25.

C. Houses

The Placidus-Dalton distinction on DR-70 requires explanation. The same geometry is used in both systems. Each gives the same Ascendant and Midheaven. But there is a difference in intermediate cusps between the two systems which becomes more significant as latitude increases.

DALTON on DR-70 gives the figures which result from an "approximation method" of mathematics that Dalton applied to calculate the intermediate cusps of the Placidus system. These figures appear in "Dalton's Tables of Houses", a text with which students of astrology are familiar.

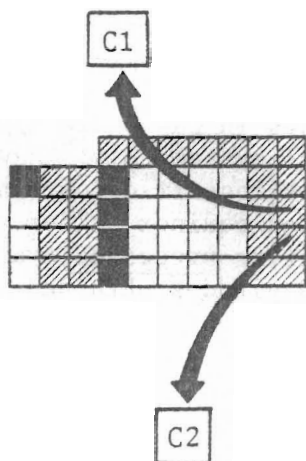
PLACID on DR-70 uses a more accurate method to calculate intermediate cusps. For low latitudes, there is little difference between these figures and those that come from DALTON. Answers in PLACID come back more slowly than the answers for DALTON.

DALTON is not meant for high latitudes. Above 73° , it completely breaks down: "Error" is always lighted for the intermediate cusps. Between 66° and 73° , DALTON may display an answer for a non-existent cusp. PLACID will not. PLACID will display "Error" to indicate that the Placidian system breaks down for the latitude and sidereal time in use. For latitudes above 66° , use PLACID.

With the exception of Meridian (also called Zariel), each of the remaining house systems on DR-70 is latitude-dependent. Each uses the Ascendant (the point where the horizon and the ecliptic intersect) as its first-house cusp. Each has the same Ascendant and Midheaven. But the method of calculating intermediate cusps varies with each system. Consult Dona Marie Lorenz's Tools of Astrology: Houses for a good discussion of the geometry of house division in each of these systems.

Meridian (or Zariel) is latitude-independent. It has the same Midheaven as the other systems, which is the point of intersection of the ecliptic with a great circle that runs through the zenith and the poles of the earth. The first-house cusp is calculated differently and displays a different answer than the first-house cusp in other systems. See Lorenz.

D. Chart Number



Two natal charts can be temporarily stored in the DR-70. So long as the computer remains on, the data for both charts is operational. The first of these two charts is referred to as 'Chart One.' Requests for its data are prefixed by the C1 (Chart One) key. The second horoscope is referenced as 'Chart Two.' To get or use information pertaining to Chart Two, begin by pressing the C2 key.

Charts developed from either of these two natal charts are referenced to the appropriate Chart Number. Directions or progressions of 'Chart One, Natal' are referred to as 'Chart One, Derived'. Directions or progressions of 'Chart Two, Natal' are referred to as 'Chart Two, Derived'.

In actual practice, the word 'Derived' is further specified by the Chart Type (SEC, TERT, etc.) in effect. The appropriate display lights are illuminated to indicate which Chart Number and Type is in use. If you are working with secondary progressions of the natal Chart Two, for example, the C2 and SEC lights appear red on the display.

E. Functions

1. Aspects and orbs.

Aspects arise when significant angles are formed between the Sun, Moon, planets or cusps in the zodiac or by mundane position.

The ASP function displays the simple angle between two points in degrees and minutes. A ORB and SCAN take specific aspects into account. A user-definable orb setting determines the orb (arc plus-or-minus from exact) these aspects will be allowed. (See also Appendix, p.09)

| | Angle | Name | Symbol |
|--------|--------|----------------|--------|
| Major: | 0° | Conjunction | ♌ |
| | 180° | Opposition | ♍ |
| | 90° | Square | ⊞ |
| | 120° | Trine | ♊ |
| | 60° | Sextile | ♋ |
| Minor: | 72° | Quintile | ♌ |
| | 51°26' | Septile | ♍ |
| | 150° | Quincunx | ♎ |
| | 30° | Semi-sextile | ♏ |
| | 45° | Semi-square | ♐ |
| | 135° | Sesquiquadrate | ♑ |

Note: DR-70 searches for aspects in this order. Displaying the first one found within the required orb. Thus if ORB is set to 10°, a 40° aspect will be picked up as a 10° semi-sextile, not a 5° semi-square. (See Appendix, p.09)

When one of these aspects is found, DR-70's A ORB and SCAN functions display both the kind of aspect and its orb plus-or-minus from exact. See sections VIII, IX, X.

2. Midpoints

Any two positions in the horoscope have a point which is midway between them. That position is called the "midpoint" of the two related terms. See sections VIII and X.

3. Arabian Parts

Arabian parts relate the zodiac to mundane (house) positions. A discussion of these parts is presented in section VIII.

4. Cosmobiological Functions

Cosmobiological functions are executed by means of DR-70's 90-dial key. See section XI.

5. Harmonics

Harmonics analysis is performed on DR-70 as a mathematical operation. See XVI-21.

6. Chart Comparison

Chart comparison techniques are presented in section XIV.

7. Parallels

Planets that have the same declination are said to be in "parallel." One planet may be north and the other south; both may be north; both may be south. In all three cases, a parallel is formed. See section XV.

Other Functions:

1. Mathematical Operations

DR-70 adds, subtracts, multiplies and divides in decimal, 60-base and zodiacal (signs/degrees/minutes/seconds) number formats. See XVI.

2. Coordinate Exchange

Given either planetary longitude or right ascension and one other coordinate, DR-70 will calculate the other two. See CRD X, section XV.

II. STARTING THE DR-70

Attach the "female" end of the electrical cord to the power-inlet socket at the rear of the computer. Insert the "male" end of the cord into any standard three-prong 110-volt electrical outlet.

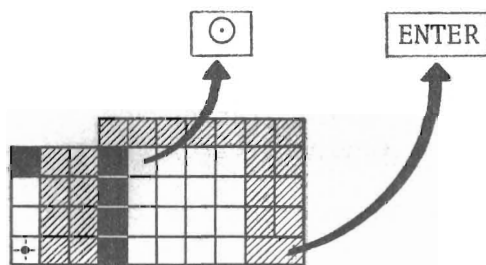
Insert the key into its slot at the rear of the DR-70's right side panel. Turn it clockwise: you will hear the hum of DR-70's cooling fan. If you don't hear the fan, check to see if the cord is properly connected. If both ends of the cord are snugly in place and the fan still does not come on, is the electrical outlet working properly?

Once the fan is on, DR-70 is all set to cast a natal horoscope in a tropical (classical geocentric) zodiac. It will function with its pre-programmed "cold-start" values until new values are specified by the user. Let us demonstrate some of these "cold-start" values.

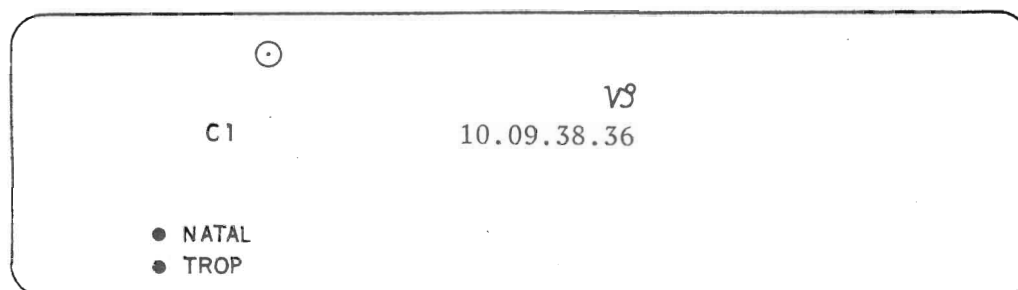
"Cold-start" values are the values to which the DR-70's user-definable keys are preset. They are functional when you start the computer. They are also the values to which DR-70 returns when the RESET key is pressed.

The shift key is in the lower left-hand corner of the keyboard. Press it down: it will light and lock in place. Now, with the shift in this lighted position, press:

(shift lighted)



Six lights will appear on the display:



C1, NATAL, and TROPICAL (zodiac) are three of DR-70's cold-start values. 9°38'36" Capricorn is the Sun's position in a natal chart cast in the tropical zodiac for 0:00 GMT on December 31, 1899. The Sun and Capricorn lights indicate that 10.09.38.36 applies to the Sun's position and should be read as 9°38'36" of the tenth sign, Capricorn.

10.09.38.36

sign/deg/min/sec

(Note: Seconds are displayed for the Sun only. If seconds come out to .00, they will not be displayed even for the Sun.)

Press

ENTER

9 25.18

appears on the display to indicate that the cold-start Moon is at 25°18' of the ninth sign: Sagittarius.

Now, each time you press ENTER, DR-70 will display the next planet (♃-♄) in its "cold-start" horoscope:

Mercury - 18°22' Sagittarius
 Venus 5°46' Aquarius
 Mars - 13°29' Capricorn
 Jupiter - 1°02' Sagittarius
 Saturn - 27°39' Sagittarius
 Uranus - 10°07' Sagittarius
 Neptune - 25°14' Gemini (retrograde)
 Pluto - 15°15' Gemini (retrograde)
 Dragon's
 Head - 20°16' Sagittarius (retrograde)

This horoscope is defined according to the following "cold-start" background:

| | |
|----------------------|---------------------|
| Chart Number | Chart One |
| Chart Type | Natal |
| Zodiac Type | Tropical |
| Planetary Coordinate | Planetary Longitude |
| Date | December 31, 1899 |
| Time | 0:00 GMT |
| Latitude | 0.00 N* |
| Longitude | 0.00 W* |

*If latitude is not specified as either north or south, DR-70 will assume that north latitude is meant. If longitude is not specified as east or west, DR-70 will assume that the longitude is west. See section XV, pages 01-02 when it is necessary to enter a southern latitude or an eastern longitude.

There are six more user-definable keys with cold-start values:

| | | |
|-----------|---------------|-----------|
| AYANamsha | 23°20'56" | (60-Base) |
| ORB | 10° | (60-Base) |
| MEMory | 1.0 | (any) |
| INTVL | 1.0 | (10-Base) |
| DYF | 1 degree/year | (60-Base) |
| 90D | 360° | (60-Base) |

The functions of these keys will be presented as the need arises for their use. The number formats in which these keys operate appear in parentheses in the right column. Number formats are discussed in XVI.



III. KEYBOARD

| | | | NATAL HOUSE | PRIM 10 | SEC 11 | TERT 12 | ☉ RTN JL DT | ☽ RTN ST | ☾ ARC DR DT |
|----------------|-----------|----------------|----------------|--------------|-----------|------------|----------------|-------------|----------------|
| RESET | A ORB | P LON RECLL | TROP DATE | ☉ 1 | ☽ 2 | ☿ 3 | PART ÷ | * ZOD | C CE |
| LIST TABLE | B AYAN | P LAT MEM | SIDL TIME | ♀ 4 | ♂ 5 | ♂ 6 | MDPT X | C-D 60B | C1 |
| CHART PRINT | C 90D | RA NW | HELIO LAT | ♂ 7 | ♂ 8 | ♂ 9 | A ORB - | SCAN 10B | C2 |
| SHIFT | D DYF | DECL SE | INTVL LONG | CRD X CHS | ☿ ♂ | ♂ ♂ | ASP + | ENTER | |

Most of DR-70's keys have both upper and lower case terms on them. The one DR-70 will respond to is determined by the position of the Shift Key (lower left). Starting at the top of the column on the extreme left of the keyboard, DR-70's keys are as follows:

| | |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RESET | Reset key: returns machine to cold-start values. |
| LIST TABLE | List function: prints out changes in planet or house cusp positions for user-specified time increments. See section XIX. Table function: prints data in tabular form. (XIX) |
| CHART PRINT | Chart function: prints out all basic data automatically. (XIX) Print function: prints out user-calculated data. (XIX) |
| SHIFT | Shift/lock key: lights and locks in place when pressed down. Upper-case terms are then operational. See section V. |
| A ORB | A: user-definable key; see Orb: user-definable orb setting for aspects, directions, etc. |
| B AYAN | B: user-definable key; see Ayanamsha: user-definable ayanamsha for use in sidereal calculations. Cold-starts at 23°20'56". |
| C 90D | C: user-definable key; see 90-dial function: "mods" any zodiac or planetary coordinate system. See section XI. |
| D DYF | D: user-definable key; see Degree/year factor: user-definable "measure of time" for directions, progressions, etc. |

| | |
|----------------|--------------------------------------------------------------------------------------------------------------------|
| P LON RECLL | Planetary longitude key: sets planetary coordinate to zodiacal longitude. |
| | Recall key: recalls user-defined information. See section V. |
| P LAT MEM | Planetary latitude key: sets planetary coordinate to planetary latitude. |
| | Memory function: stores user-defined information for later use in calculations. |
| RA NW | Right ascension key: sets planetary coordinates to right ascension. |
| | North/West key: appended to LAT, P LAT or DECL indicates north; appended to LONG indicates west. |
| DECL SE | Declination key: sets planetary coordinate to declination. |
| | South/East key: appended to LAT, P LAT or DECL indicates south; appended to LONG indicates east. |
| NATAL HOUSE | Natal key: sets chart type to natal. |
| | House key: necessary prefix for house cusp calculations. |
| TROP DATE | Tropical key: sets zodiac type to Tropical. |
| | Date key: used to enter and recall user-selected dates. |
| SIDL TIME | Sidereal key: sets zodiac type to Sidereal. |
| | Time key: used to enter and recall user-selected times. |
| HELIO LAT | Heliocentric key: sets zodiac type to Heliocentric. |
| | Latitude key: used to enter and recall terrestrial latitude. |
| INTVL LONG | Interval key: user-definable time increment key. (See XIX) |
| | Longitude key: used to enter and recall terrestrial longitude. |
| PRIM 10 | Primary directions key: sets chart type to primary directions. |
| | 10: <u>not a digit key</u> . Prefixed by ZOD: means Capricorn. Prefixed by HOUSE: means tenth house cusp (M.C.) |
| ☉ 1 | Sun key |
| | 1: used as house cusp or as arithmetical integer. |
| ♀ 4 | Venus key |
| | 4: used as house cusp or as arithmetical integer. |
| ♄ 7 | Saturn key |
| | 7: used as house cusp or as arithmetical integer. |

CRD X
CHS

Coordinate exchange key: given either planetary longitude or right ascension and one other coordinate, calculates either of the other two coordinates.

Change-sign key: (1) Changes sign of a number entered, i.e., +3 to -3 (2) Used for south and east in arithmetic involving latitude, longitude, declination.

SEC
11

Secondary progressions key: sets chart type to secondary progression.

11: not a digit key. Prefixed by ZOD: means Aquarius. Prefixed by HOUSE: means eleventh house cusp.

Moon key

D
2

2: used as house cusp or arithmetical integer.

♂
5

Mars key

5: used as house cusp or arithmetical integer.

♄
8

Uranus key

8: used as house cusp or arithmetical integer.

♇
0

Pluto key

Zero: used as a digit in entries, calculations, etc.

TERT
12

Tertiary progressions key: sets chart type to tertiary progressions.

12: not a digit key. Prefixed by ZOD: means Pisces. Prefixed by HOUSE: means twelfth house cusp.

♿
3

Mercury key

3: used as a house cusp or arithmetical integer.

♃
6

Jupiter key

6: used as a house cusp or arithmetical integer.

♆
9

Neptune key

9: used as a house cusp or arithmetical integer.

♊
.

North lunar node key

Decimal point: separates decimal fractions from integers; also used to separate "place values" for entered data.

☉ RTN
JL DT

Solar return key: sets chart type to solar return.

Julian Date: used to enter or display Julian Dates.

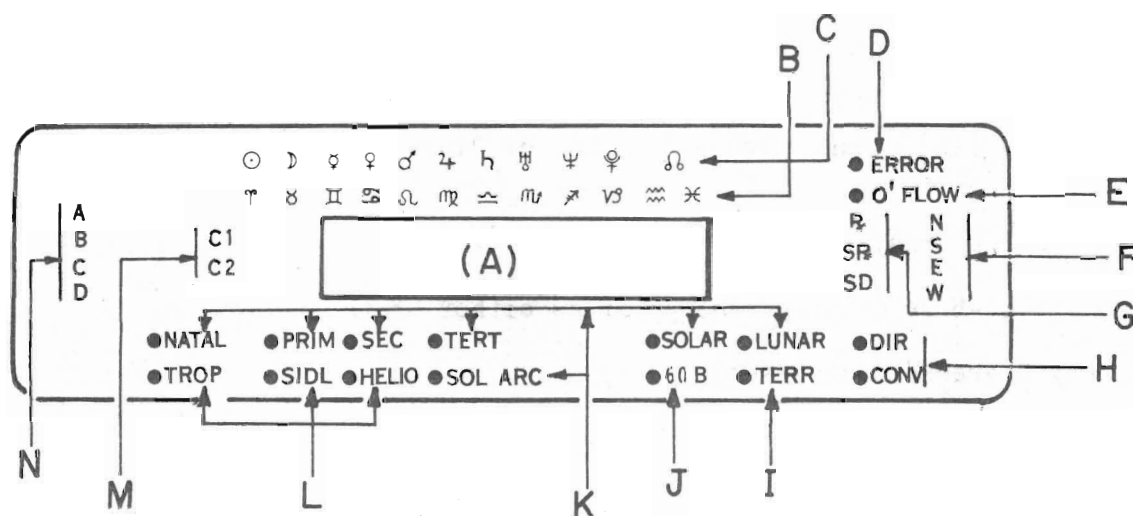
PART
÷

Arabian parts key: computes Arabian parts.

Division key: divides in decimal, 60-base and zodiacal number formats.

| | |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| MDPT X | Midpoint key: calculates midpoints. |
| | Multiplication key: multiplies in decimal, 60-base and zodiacal number formats. |
| A ORB - | Aspect-orb key: searches for major and minor aspects of a single planet or cusp within user-specified orb. |
| | Minus key: subtracts in decimal, 60-base and zodiacal number formats. |
| ASP + | Aspect key: used to find the angle between two positions. |
| | Plus key: adds in decimal, 60-base and zodiacal number formats. |
| D RTN ST | Lunar return key: sets chart type to lunar return. |
| | Sidereal time key: used to enter or display sidereal time. |
| * ZOD | Asterisk key: user-definable function key. See section XIII and appendix. |
| | Zodiacal number format key: sets calculations to zodiacal number format (signs, degrees, minutes, seconds). |
| C-D 60B | Converse-direct key: used <u>only</u> with primary directions. See section XIII. |
| | 60-base key: sets calculations to 60-base number format (degrees/min/sec; hours/min/sec) |
| SCAN 10B | Scan function: performs high-speed search of entire chart pattern for major and minor aspects within user-specified orb. See section X. |
| | Decimal number format key: sets calculations to decimal number format. |
| ⊙ ARC DR DT | Solar arc key: sets chart type to solar arc. |
| | Derived-date key: displays actual date for which a derived chart is constructed. See section XII. |
| C CE | Clear key: blanks display; resumes background information (chart number, type, etc.) of last answer displayed. See section V. |
| | Clear-entry key: clears number-display register only; background information most recently specified remains in effect. |
| C1 | Chart one key: see section I, p. 06. |
| C2 | Chart two key: see section I, p. 06. |
| ENTER | Enter key: doubles as calculate/request key; must be pressed to complete any operation. Exception: recall. See section V. |

IV. DISPLAY



Most of the terms on DR-70's display board are self-explanatory. Starting in the center of the diagram above, and then spiralling in a clockwise direction, we will discuss the various functions of the display.

A. Number Display

DR-70's number-display register serves the same purpose as its counterpart on any standard pocket calculator. Each digit of user-specified input is registered and illuminated on the display in response to keys pressed. Then, after an operation is executed (ASpect, MiDPoiNT, position, +, -, etc.), the answer is displayed.

As discussed in section XVI, DR-70 uses three number formats. The number format is in turn determined and/or modified internally by the function in use. All together, five different display formats are employed.

Eight digits is the maximum for any number displayed.

1. Decimal, or 10-base Display Format

1234.5678

integer/fraction

The decimal point may appear anywhere in the series. The number to its left is always an integer. The number to the right of it is a decimal fraction. If no decimal point appears, the number is an integer.

Note: In this display format (decimal), use only digit keys 0 - 9 .
Do not use keys 10 11 or 12 .

- 10 means 10th house cusp or Capricorn.
11 means 11th house cusp or Aquarius.
12 means 12th house cusp or Pisces.

2. 60-base Display Format

The 60-base display can appear as either of the following:

(a) Degrees/minutes/seconds

| | |
|----------|--------------------------|
| 12.34.56 | = 12 ⁰ 34'56" |
| d. m. s. | |

(b) Hours/minutes/seconds of either clock time or sidereal time.

| | |
|----------|--------------------------------------------------------|
| 12.34.56 | = Twelve hours, thirty-four minutes, fifty-six seconds |
| h. m. s. | |

3. Zodiac Display Format

The zodiac number format expresses signs/degrees/minutes/seconds of zodiacal longitude (position in the ecliptic). Seconds are displayed for the Sun's position only. Exception: chart comparison, when operations involving Suns of two charts are performed. (If seconds are .00, they will not be displayed even for the Sun.)

| |
|---------------|
| 5. 14. 53. 04 |
|---------------|

sign/deg/min/sec

(seconds for Sun only)

Observation: The decimal point is used to separate "place-values" in all display formats. It is also used for entering all input (to be demonstrated in section VII).

4. Month/Day/Year Display Format

| | |
|------------|-----------------------------------------|
| 12.30.1977 | = December 30, 1977 |
| m. d. year | (For B.C. dates, a minus sign is used.) |

5. Aspect-orb Display Format

Aspect-orb and Scan functions display aspects in the following format:
(Example is for a trine.)

| | | |
|---|--------|------------------------|
| - | 1 2 0 | 0 . 31 |
| ± | aspect | deg./min. of orb |

Both the kind of aspect found and its orb (plus-or-minus from exact) are displayed.

Aspect-orb function is demonstrated in sections VIII and IX. Scan is demonstrated in section X.

6. Related Information

(a) A Word on \square

\square appears when a date-entry, time-entry, latitude-entry or longitude-entry is complete. Until \square appears, DR-70 has not accepted the input. Usually \square will appear immediately after the ENTER key is pressed. If it doesn't, repeat the entry.

(b) Over-writing Display Carry-Over

The latest item registered on the display remains active until overwritten. It may be either a user-defined input term (date, time, etc.,) or the answer to the last calculation performed. If followed by any function key (ASP, MDPT, +, -, etc.), it will be used as the first term in the new operation. This feature allows for chain-mathematics on DR-70.

Pressing any planet or digit key automatically overwrites the last item registered. Most of the standard formulas given in the body of the manual do the overwriting automatically. The few exceptions will be explained as they arise.

To blank the number-display register at any time, use the C or CE keys. See section V.

B. Signs

When using the zodiac number format, the symbol of the zodiacal sign in which the answer falls is illumined in red above the number-display.

C. Planets

The planet(s) in use are illuminated. When requesting the position of Alan Leo's natal Sun, for example,



For the aspect between his natal Sun and Moon (using ASP function), the planets in aspect are both illuminated:

D. Error.

If this light is illuminated, you have made an error. Use the CE key to clear the display and then try again. If the error light still appears, refer more carefully to the manual to see if you are making a procedural error. See section V. If you can find no procedural error and the light still appears, press the RESET key and start over.

E. O'flow

Somewhere along the line, your calculation went beyond DR-70's capacity to compute with accuracy. If any answer is displayed, it is approximate at best.

F. NSEW

Illuminated to indicate that coordinates in use are north, south, east or west.

N - coordinate, if latitude or planetary latitude, is north of equator;
if declination, is north of ecliptic.

S - same as above, only south.

E - position is east of Greenwich Meridian (longitude)

W - position is west of Greenwich Meridian (longitude)

G. R SR SD

When illuminated

R means planet is retrograde.

SR means planet is stationary, will go retrograde.

SD means planet is stationary, will go direct.

R/SR means planet is retrograde, just separating from stationary point.

R/SD means planet is still retrograde, but very near to stationary point;
it will go direct.

If no light, planet is direct.

H. DIR/CONV

Indicates whether a primary direction is DIRect or CONVerse.

I. TERR

Terrestrial light: illumined when the coordinate in use is right ascension or declination.

If terrestrial light is on, and

1. No NSEW light appears, coordinate is right ascension.
2. N or S appears, coordinate is declination.

If terrestrial light is off, and

1. No NSEW light appears, coordinate is planetary longitude.
2. N or S appears, coordinate is either latitude or planetary latitude.

J. 60B

Indicates that 60-base number format is in use for calculations.

K. NATAL/PRIM/SEC/TERT/SOLAR/LUNAR/SOL ARC

Chart types. The term illumined indicates the chart type in use:

| | |
|---------|--------------------------------------------|
| NATAL | = Natal; also used for horary and transits |
| PRIM | = Primary directions |
| SEC | = Secondary progressions |
| TERT | = Tertiary progressions |
| SOLAR | = Solar return |
| LUNAR | = Lunar return |
| SOL ARC | = Solar arc |

L. TROP/SIDL/HELIO

Zodiac types. The term illumined indicates the zodiac type in use:

| | |
|-------|-----------------------------------|
| TROP | = Tropical (classical geocentric) |
| SIDL | = Sidereal |
| HELIO | = Heliocentric |

M. C1/C2

Chart number. The term illumined indicates which chart number is in use:

| | |
|----|-------------|
| C1 | = Chart One |
| C2 | = Chart Two |

N. A B C D

These lights are illumined in conjunction with user-defined functions on the ☐ * key. For example, when using asteroids:

A = Ceres
B = Pallas
C = Juno
D = Vesta

V. THE DR-70 SELF-HELP AND INFORMATION CENTER


(Motto: "You did WHAT??")

What if you press a wrong key? Or forget the current value of a user-defined key? What if you find yourself waiting for an answer that doesn't appear? What if the ✱ ERROR light appears on the display? What if all DR-70's lights go out and the computer doesn't respond to the keyboard? Or what if you just get plain befuddled and want to start over? The solutions to these and other dilemmas are to be found at DR-70's Self-Help and Information Center.

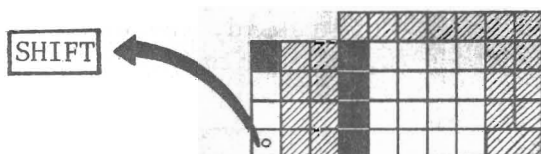
Don't be afraid to experiment with DR-70. The machine won't burn up or explode if you make a mistake. The "formulas" we've suggested in later sections of the manual are simply the ones we've found most efficient. They're reliable. But don't be afraid to modify them and evolve techniques of your own as you become familiar with the machine. As long as your answers match up with the answers that appear in response to our suggested sequences, all is well. And if you run into problems, the "clear-entry", "clear", and "reset" keys will get you out of them.


A. ERROR?

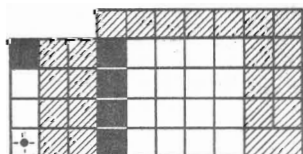
Is the shift key in the appropriate position for the term in use? Failure to shift as required is a common pitfall for newcomers to DR-70.

The shift key is in the lower left-hand corner of the keyboard. Note that in the following graphic it is illustrated as . The key is

in its normal position. It has not been pressed down. The lower-case keyboard is operational.




In the next graphic, the shift key has been pressed down. It locks in place: the shift key is a shift/lock key. When locked in place, the shift key lights up. The upper-case keyboard is then operational. In this graphic  indicates that the shift key has been pressed down and is lighted: the upper case keyboard is now in use.



The shift key will remain lighted until you press it again. Then the light will go out, and the key will return to its normal position. You will again have access to the lower-case keyboard.

Keys with only a single term on them (C1 , C2 , ENTER , RESET) can be used when the shift key is in either position.

In the early stages of this manual, the position of the shift key is indicated when formulas are presented.

 means "shift in normal, unlighted position"

 means "shift pressed down, lighted"

As we progress into the manual, however, the use of these "training wheels" is discontinued. It is assumed that the user understands that the shift key must be positioned as the term in use requires.

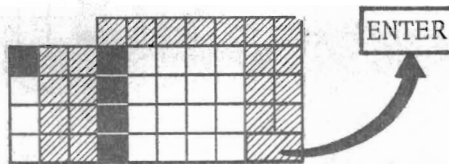
A little care with respect to the proper positioning of this key will will eliminate the majority of a beginner's problems on DR-70.

B. Still waiting for an answer?

Did you press ENTER ? It must be pressed to complete an operation. (Exception: Recall, see below.)

The various "formulas" given in this manual define operations that DR-70 will perform. The keys leading up to the ENTER key tell DR-70 what you want it to do. The ENTER key says, "Do it now." Until you press ENTER DR-70 busies itself with other matters (see section XVII, on Idle function).

All changes, corrections, etc. in an operation must be made prior to pressing ENTER . Once ENTER is pressed, the operation is executed.*



ENTER also doubles as a request key for the "derived date" of a chart. To display the date for which a chart is actually calculated, press

  (Do not use the  key with )

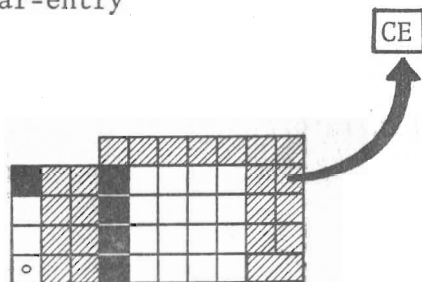
This "derived date" bears a special relation to derived charts that will be discussed in section XII.

*If in TERT, D RTN, or C RTN, see Note 2, page XII-04.

C. Pressed a wrong key?

Use "clear-entry" or "clear".

1. Clear-entry



The clear-entry key blanks the number-display register only. The background information most recently specified remains in use.

Example. Let's say that the last operation performed was

[C1] [P LON] [NATAL] [⊖] [ENTER]

You calculated the planetary longitude of the Sun in Chart One, Natal. Now you want to calculate declination for the Sun in Chart Two, Natal. You pick the new coordinate, enter date, time, latitude, longitude, etc. (procedure given in section VII). Then you mean to press

[⊖] [ENTER]

The "implied" background of this formula is indicated by the keys in parentheses below:

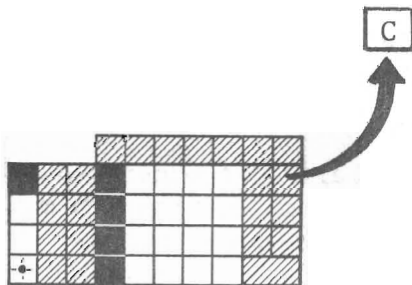
([C2] [DECL] [NATAL]) [⊖] [ENTER]

But you forgot to shift after making the longitude entry. You actually press

[1]

and immediately catch the mistake. Press [CE] : only the number 1 on the display register will be cleared away. You are still in Chart Two, Natal; your coordinate is still declination.

2. Clear



The clear key
1: Blanks number-display
2: Restores background of last calculated answer.

The clear key is the upper-case term of the

| |
|----|
| C |
| CE |

 key. It does a little more than the fellow downstairs.

Consider the same example as given above for the clear-entry key. But this time you don't make the same mistake. Instead, you just change your mind. You get as far as

(

| |
|----|
| C2 |
|----|

| |
|------|
| DECL |
|------|

| |
|-------|
| NATAL |
|-------|

)

and then decide that you don't need that information after all. Press

| |
|---|
| C |
|---|

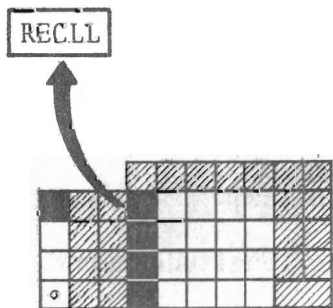
DR-70 will

1. Blank the number-display register.
2. Restore the background information of the last calculated* answer.

*A Recall (see below) is not considered a calculation.

You will be back in Chart One, Natal. Your planetary coordinate is once again set to planetary longitude.

D. Forgot?



Each of the following keys will display its current value when followed by RECLL :

1.

| |
|------|
| DATE |
|------|

| |
|------|
| TIME |
|------|

| |
|------|
| LONG |
|------|

| |
|-----|
| LAT |
|-----|
2.

| |
|-----|
| ORB |
|-----|

| |
|------|
| AYAN |
|------|

| |
|-----|
| 90D |
|-----|

| |
|-----|
| DYF |
|-----|

| |
|-------|
| INTVL |
|-------|
3.

| |
|-----|
| MEM |
|-----|
4.

| |
|-------|
| JL DT |
|-------|

| |
|----|
| ST |
|----|

1.

| |
|------|
| DATE |
|------|

| |
|------|
| TIME |
|------|

| |
|-----|
| LAT |
|-----|

| |
|------|
| LONG |
|------|

Date, time, latitude and longitude must be provided by the user. They constitute the "when" and "where" background information for which the horoscope will be cast.

But what if --midway in casting a chart-- it occurs to you that one of the above may be wrong? You realize, for example, that you may have pressed a wrong number when entering the date. How can you check?

Press

| |
|------|
| DATE |
|------|

| |
|-------|
| RECLL |
|-------|

 : the date you entered will be displayed.

What if, as you expected, it turns out to be incorrect? You meant to enter 9.15.1949. But you pressed a wrong key and actually entered 9.15.1948. What can you do? Simply overwrite the error directly with the appropriate entry-formula from section VII. The same procedure is used for time, latitude and longitude.

Any of these keys can be redefined directly without use of the CE key to blank the display. Simply overwrite the current value.

Exception: To correct an error in input not yet entered,

1. Blank the display with CE
2. Redefine the key. (Enter a new value.)

2. ORB AYAN 90D DYF INTVL

Orb, ayanamsha, 90-dial, degree/year factor and interval provide user-definable constants that are used in calculations. Each of them has its own sphere of application and will be discussed in more detail later in the manual. Each of them will display its current value when followed by the recall key.

- ORB determines the orb allowed to aspects.
- AYAN is a user-definable ayanamsha used in sidereal calculations.
- 90D sets the "mod" dial for cosmobiological functions; it is also used on DR-70 for calculating primary directions.
- DYF determines the degree/year factor used in calculating directions and progressions.
- INTVL determines the increment of time employed in time-studies of aspect-formation. (Used with printer only)

Example: ORB RECLL displays the current range allowed for aspects.

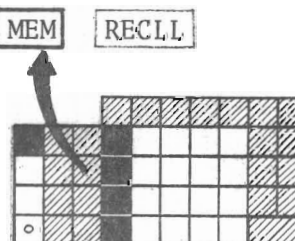
The same redefine/correct rules apply to these keys as for date, time, etc. The formulas for defining these keys are introduced along with their applications later in the manual. (See index)

3. MEM

The MEMory key will temporarily store user-specified information. The number stored may later be included in calculations. Details of its use are outlined in section XVI.

To display its current value, press MEM RECLL

To redefine/correct, apply the same rules as for date, time, etc.



4. JL DT ST

JL DT means "Julian Date." Julian Date indicates the number of days (fractions included) that a date is plus-or-minus from January 0, 1900.

JL DT RECLL displays the Julian Date for which a chart is constructed.

ST means "sidereal time."

ST RECLL displays the sidereal time for which the chart is constructed.

*Note: Do not redefine these keys without first referring to section XII, pages 06-07.

E. That bad?

The RESET key restores DR-70 to cold-start values. All user-defined information is erased.

There are two situations in which this key will be used:

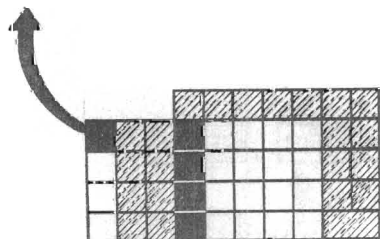
1. The user becomes hopelessly lost. Press RESET and start over.
2. DR-70 "crashes". Computer does not respond at all to any keys. Press RESET and start over. (If lights are on, press RESET as soon as possible to prevent possible damage to display panel.)

Press RESET if:

1. User becomes hopelessly lost.
2. DR-70 "crashes".

DR-70 will restore cold-start values.
Start over.

RESET



VI. THE BASICS

The basics of classical astrology are:

1. The natal chart
2. Its secondary progressions
3. Transits.

This section serves as a quick "walk-through" of the procedures used to calculate these three basic items on the DR-70. Throughout the remainder of this manual, references will be made to the examples presented here. The details of these procedures will be unfolded as the manual progresses.

If you have any problems in following these examples on your DR-70, consult the "Reference List" on page VI-14. This list will refer you to sections of the manual where more details are provided.

A. How To Cast A Natal Chart

To start the computer, plug DR-70 into any standard 110 volt outlet. Then insert the key into its slot at the rear of the right panel. Turn it clockwise: you will hear the hum of DR-70's cooling fan. If you don't hear the fan, check to see if the machine is properly plugged in.

Once the fan is on, DR-70 is all set to cast a natal horoscope in the tropical (classical geocentric) zodiac. We'll cast one for Alan Leo.

Native: Alan Leo
 Birthplace: Westminster, England
 Date: August 7, 1860
 Time: 5:51:35 A.M.
 Latitude: 51°29'30" North
 Longitude: 0°0'30" West

(Note: If, in following these examples, you press a wrong key, press the CE key in the upper section of the right column of the keyboard; then begin the entry again with the proper keys. If there is still a problem, refer to section V.)

Step one: Give DR-70 the date for which the chart is to be cast.

The shift key (lower left on the keyboard) should be in its normal (unlighted) position. If it is not, press it once: the light will go out as the key returns to its normal position. To enter August 7, 1860, press:

(shift normal) DATE 8 . 7 . 1 8 6 0 ENTER

┐ 8.7.1860

appears on the display when the entry is completed. If ┐ does not appear within a few seconds, did you press ENTER ? If you did, and ┐ still does not appear, make the entry again.

Step two: Give DR-70 the adjusted* time for which the chart is to be cast.

Alan Leo's birth time is a rare case: it requires no adjustment. To enter it into DR-70, press:

(shift normal) TIME 5 . 5 1 . 3 5 ENTER

┐ 5.51.35

appears on the display as the completed time-entry.

*The vast majority of birth times require adjustments. Before applying the example to charts of your own, consult pages 03-06 of section VII.

Step three: Give DR-70 the latitude of birth. Press:

(shift normal) LAT 5 1 . 2 9 . 3 0 ENTER

┐ 51.29.30

appears on the display as the completed entry.

Note: If the latitude of birth is south, coordinate-modifier key SE must be included in the latitude entry. See section XV, pages 01-02 when a southern latitude must be entered.

Step four: Give DR-70 the longitude of birth. Press:

(shift normal) LONG 0 . 0 . 3 0 ENTER

┐ 0.0.30

appears on the display as the completed entry.

Note: If the longitude of birth is east, coordinate-modifier key SE must be included in the longitude entry. See section XV, pages 01-02 when an eastern longitude must be entered.

If working with a printer, proceed immediately to section XIX. If working without a printer, go on to step five.

Step five: Calculate house positions.

- 1) Select a house system. We will use Placidus. Turn the house dial (above the left-hand side of the keyboard) to PLACID.
- 2) Generate the house cusps. Press:

(shift normal)

HOUSE

1

ENTER

In a few seconds,

♈

5 27.36

appears on the display. Alan Leo's Ascendant is at 27°36' of the fifth sign: Leo.

The remaining house cusps can now be "Auto-Entered" as follows. Press

ENTER

only. The number "2" appears on the display, indicating that what follows is the cusp of the second house:

♊

6 17.07

Now, each time you press ENTER, DR-70 will advance to the next house cusp (3-12). The number of the cusp to be displayed will precede the appearance of its position on the number register. Transfer each of these positions to a horoscope sheet as it appears on the display.

Step six: Generate planet positions.

First, press the shift key down: it will light and lock in place. Then press:

(shift lighted)

ENTER



♈

5.14.52.45

is displayed. Alan Leo's natal Sun is at 14°53'04" of the fifth sign: Leo.

The remaining planet positions may now be "Auto-Entered" in the same manner as was used above for the house cusps. Press:

ENTER

only:

1 15.20

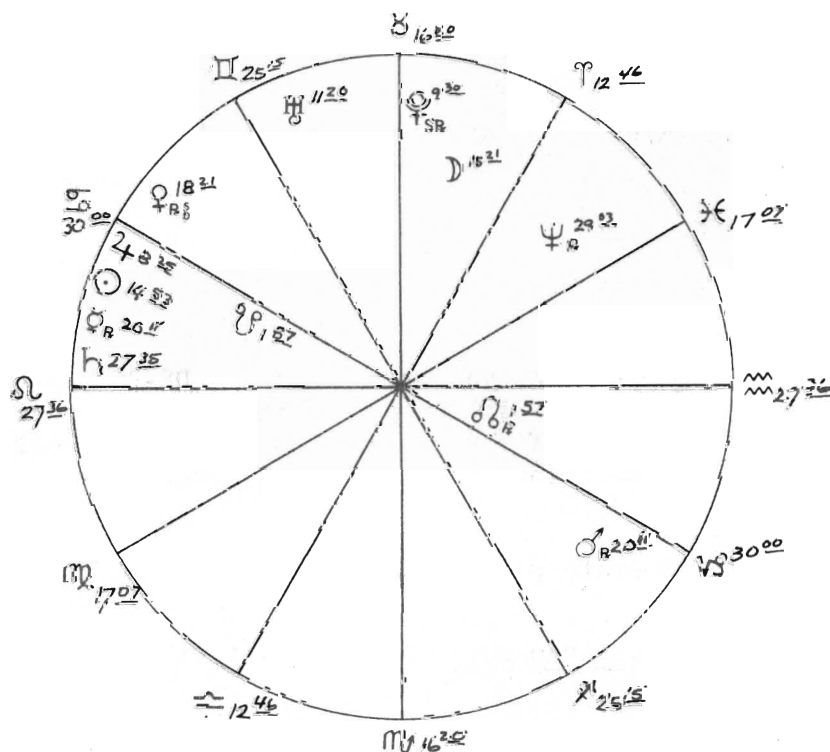
appears to tell us that Alan Leo's natal Moon is at 15 20' of the first sign: Aries.

Now, each time you press ENTER, DR-70 will display the next planet in the series Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, Dragon's Head. The appropriate planet lights (♂ - ♀) will be illuminated to indicate the planet whose position is being displayed.

R, SR, SD, etc., lights will appear to the right of the number register when the displayed planet is retrograde, stationary retrograde, stationary direct, etc. Review section IV-G if necessary for the meaning of these lights.

Transfer the planet positions to the horoscope sheet as they are displayed. The final result appears below:

Alan Leo:
Natal



The natal horoscope is constructed. Now we can begin to analyze its structure. (For more details on the construction of the natal horoscope, see section VII.)

Step seven: Aspects.

Of the three aspect functions on DR-70, we will use SCAN. It gives a high-speed report of major and minor aspects. With the shift key still in the lighted position, press:

(shift lighted)  SCAN  ENTER

⊙

-120 0.28

appears on the display. The Sun and Moon lights are illuminated. "120" on the display tells us that the aspect is a trine. "0.28" tells us that the trine has an orb of 28'. The minus sign (-) to the left of the "120" tells us that the trine is short of exact. Alan Leo has a natal Sun-Moon trine.

The remaining aspects can be "Auto-Entered". Press:

ENTER

⊙ ☿

0 5.18

only. DR-70 will advance through the standard aspect triangle to the next aspect within ten degrees of exact.

is the next aspect to be displayed. The Sun and Mercury lights are illuminated. "0" on the display tells us that they are in conjunction. "5.18" tells us that their conjunction is 5°18' wide of exact.

Now, each time you press the ENTER key, DR-70 will advance to the next aspect within ten degrees of exact. The planets forming the aspect will be indicated by lights above the number register. The first number on the register indicates the type of aspect formed (30=semi-sextile, 45=semi-square, 60=sextile, etc.). The number to the right indicates the aspect's orb. If a minus sign appears, the aspect is short of exact. Continue to press the ENTER key until "End" appears on the display.

(Note: The orb that DR-70 will allow when scanning for aspects can be user-defined from 0-360°. The procedure for setting this orb is given later in this section. At present, we are working with DR-70's "cold-start" orb setting of ten degrees.)

The natal aspectarian appears below. We have included all the aspects that appear on the display.

[illegible]

At this stage, we have a variety of options. We can calculate midpoints. We can calculate Arabian parts. We can do a cluster-analysis for any dial from 0-360°. We can analyze its harmonics. We can cast directions, progressions, etc. We can examine transits for any date.

What we want first is a chart of secondary progressions.

B. Secondary Progressions Of The Natal Chart

We will do Alan Leo's secondary progressions for August 7, 1895.

1) Casting Progressed Positions.

Step one: Select Chart Type. We want a chart of secondary progressions. With the shift key in the lighted position, press:

(shift lighted)

SEC

Step two: Give DR-70 the date for which you want to know the progressions.

First, return the shift key to its normal position.
Then press:

(shift normal) DATE 8 . 7 . 1 8 9 5 ENTER

The date-entry is complete when ☐ appears in the left-hand corner of the number register.

Steps two through five of the natal chart construction need not be repeated. Unless otherwise directed by the user, DR-70 will use the same time, latitude and longitude as was entered for the natal chart.

Step three: Houses.

- A. House system. We will leave the house dial set to Placidus.
- B. Generate progressed cusps. With the shift key in its normal position, press:

(shift normal) HOUSE 1 ENTER

☐
6 21.17

is displayed as the position of the progressed Ascendant. Now, "Auto-Enter" the remaining progressed cusps with the method demonstrated in step five of the natal construction. Transfer their positions to a horoscope sheet.

Step four: Generate Planet Positions.

First, put the shift key into its lighted position.
Then press:

(shift lighted) ☉ ENTER

☐
6.18.40.44

is the position of the progressed Sun. "Auto-Enter" the remaining progressed planets with the method demonstrated for step six of the natal chart construction. Put them on the horoscope sheet.

2) Finding The Aspects To The Natal Chart Formed By The Progressions

We are interested only in aspects within one degree of exact. A comparison of "Chart One, Natal" with "Chart One, Secondary" is required. The SCAN function is best suited to our purpose.

Step one: Set an appropriate orb.

We want to scan for aspects within one degree. With the shift now in its normal (unlighted) position, press:

(shift normal) ORB 1 ENTER

appears in the left of the number register when the entry is complete.

Note: This orb may be set to any number from 0-360°. To set the orb to "n", for example, press:

ORB "n" ENTER

The orb setting may also be recalled at any time. To display the current value of the orb key, press:

(shift normal) ORB RECL

For the present example, ORB RECL should display:

1.00

Step two: Begin the aspect search with the progressed Sun.

First, put the shift key in its lighted position.
Then press:

(shift lighted) SEC ☉ SCAN NATAL ☉ ENTER

DR-70 will search for aspects within one degree of exact between the two charts. It will stop only when it finds an aspect within the specified orb. The first aspect to be displayed is:

☉

♀

60 0.20

The Sun light is constant: it is from the progressed chart. The Venus light and the Natal lights are "blinking": the blinking planet lights correspond to natal planets. The aspect reads: sextile, progressed Sun-natal Venus, twenty minutes wide of exact.

The remaining one-degree aspects between the two charts may now be "Auto-Entered". Simply press ENTER: DR-70 will advance to the next aspect. The type of aspect and its orb will be displayed. The planets forming the aspect will be indicated by lights on the display. Those indicated by a constant light are from the progressed chart; those indicated by a blinking light are from the natal chart. If only one planet light is illuminated, the same planet is involved from both charts.

After each aspect is displayed, press the ENTER key again. DR-70 will advance to the next aspect. Continue in this manner until "End" is displayed on the number register. The resultant aspectarian appears below.

Secondary Progressed

Natal

| | ☉ | ☽ | ♀ | ♀ | ♂ | ♄ | ♅ | ♁ | ♂ | ♂ | ♂ |
|---|-----------|---|------------|---|---|------------|-----------|------------|-----------|-----------|---|
| ☉ | | | | | | | | | | | |
| ☽ | | | | | | △ 0.33 | | | | | |
| ♀ | | | | | | | | | | | |
| ♀ | * 0.20 | | -♄ 0.44 | | | | | | | | |
| ♂ | | | | | | | | | | | |
| ♄ | | | ♄ 0.37 | | | | | | | □ 0.52 | |
| ♅ | | | | | | | | -♅ 0.39 | | | |
| ♁ | | | | | | | ♂ 0.41 | | | | |
| ♂ | | | | | | | ♂ 0.57 | ♂ 0.49 | | | |
| ♂ | | | -△ 0.26 | | | | | | ♂ 0.11 | | |
| ♂ | | | | | | -♅ 0.03 | | | | ♂ 0.55 | |

C. Transits

We will calculate Alan Leo's transits for August 7, 1895.

1) Locating The Transiting Planets

A second natal chart is required.

Step one: Indicate Chart Number. Chart Two must be used. Press:

(shift in either position)

C2

The C1 light goes out; the C2 light comes on.

Step two: Indicate Chart Type.

A map of the transiting planets is constructed as a second natal chart. With the shift key in the lighted position, press:

(shift lighted) NATAL

Step three: Give DR-70 the date for which you want to know the transits.

First, return the shift key to its normal (unlighted) position. Then press:

(shift normal) DATE 8 . 7 . 1 8 9 5 ENTER

Step four: Give DR-70 a time for the transits.

We will use GMT Noon. Press:

(shift normal) TIME 1 2 . 0 0 ENTER

Latitude and longitude entries are not required. House cusps are not a matter of concern. We are interested only in the positions of the planets in the zodiac.

Step five: Calculate transiting positions.

First, put the shift key into its lighted position. Then press:

(shift lighted) ☉ ENTER

The position of the transiting Sun is displayed:

☉

♈

5.14.41.14

You may now "Auto-Enter" the remainder of the transiting planets with the method demonstrated for step six of the first natal chart. Or, you may go directly to the next step: transits proper may be calculated without actually displaying the positions of the transiting planets.

2) Examining The Transits

The aspects formed by transiting planets to both the natal chart and its secondary progressions are required.

(a) To The Natal Chart

Step one: Remind DR-70 of Chart One, Natal. With the shift key in the lighted position, press:

(shift lighted) C1 NATAL ☉ ENTER

Allow 10-15 seconds for the position of the natal Sun to be displayed:

☉

Ω
5.14.52.45

Chart One, Natal contents are re-activated.

Step two: Aspects

We will use the SCAN function again. The one-degree orb setting is still appropriate. Press:

(shift lighted) C2 NATAL ☉ SCAN C1 NATAL ☉ ENTER

☉

0 0.12

is the first transit to be displayed. Since the Sun light is the only planet illumined, we know that the transiting Sun is within 12' of a conjunction with the natal Sun.

Press ENTER :

☉ D

- 120 0.39

is the next transit displayed. Note that three lights are blinking on the display: C1, NATAL and D. We know that the Moon is from Alan Leo's natal chart, Chart One, Natal. The transiting Sun is within 39' of an exact trine with Mr. Leo's natal Moon.

Continue the "Auto-Entry" as in the previous SCAN procedures. The operation is complete when "End" appears on the display. The resultant aspectarian appears on the next page.

Transiting

Natal

| | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|---|---|-----------|---|-----------|-----------|-----------|---|-----------|-----------|-----------|---|
| ☉ | | | | | | | | | | | |
| ☽ | | | | | | ♂ 0.33 | | ♂ 0.51 | | | |
| ♀ | | | | | | | | | | | |
| ♂ | | ☐ 0.57 | | ♂ 0.08 | | | | | | | |
| ♂ | | | | | | | | | | ♂ 0.43 | |
| ♂ | | | | ♂ 1.00 | ♂ 0.42 | | | ♂ 0.49 | | | |
| ♂ | | | | | | | | ♂ 0.35 | | | |
| ♂ | | | | | | | | | ♂ 0.01 | | |
| ♂ | | | | | | | | | ♂ 0.17 | | |
| ♂ | | | | ♂ 0.04 | | | | | | | |
| ♂ | | | | | | | | ♂ 0.47 | | | |

(b) Transits To The Secondary Progressions

Step one: Remind DR-70 of Chart One, Secondary. With the shift still in the lighted position, press:

(shift lighted) C1 SEC ☉ ENTER

Allow approximately ten seconds for the secondary Sun to appear:

☿
6.18.40.41

Step two: Aspects

The procedure is the same as the one used for examining transits to the natal chart. Press:

(shift lighted) C2 NATAL ☉ SCAN C1 SEC ☉ ENTER

Allow approximately fifteen seconds for the first transit to be displayed:

☉ ♀

- 45 0.02

is the first answer to appear. The C1, SEC and ♀ lights are blinking. The C2, NATAL and ☉ lights are constant. We know that the transiting Mercury is within 2' of an exact semisquare with Mr. Leo's progressed Sun.

"Auto-Enter" the remaining transits. The procedure is complete when "End" appears on the display. The aspectarian of transits to Mr. Leo's progressed planets for August 7, 1895 appears below.

Transiting

Secondary
Progressed

| | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|---|-----------|-----------|-----------|-----------|---|-----------|-----------|-----------|---|---|
| ☉ | | | ✱ 0.12 | | | | | | | |
| ☽ | | | | | | | △ 0.28 | | | |
| ♀ | | | | □ 0.23 | | | | | | |
| ♂ | ✱ 0.18 | | | | | | | | | |
| ♂ | | | | | | | ✱ 0.14 | | | |
| ♂ | | | | | | □ 0.01 | ✱ 0.18 | | | |
| ♂ | | □ 0.23 | | | | | | | | |
| ♂ | | | | | | | | ♂ 0.40 | | |
| ♂ | | | | | | | | | | |
| ♂ | | | | ✱ 0.08 | | | | | | |
| ♂ | | | ♂ 0.35 | ♂ 0.12 | | | ♂ 0.08 | | | |

For Details on the Procedures in this Section

| Procedure | Reference Section |
|------------------------------|-------------------------------|
| I. Natal Chart | Section I, p. 02 (definition) |
| A. Construction | Section VII |
| B. Auto-Enter | Section IX |
| C. Aspects | Sections VIII and X |
| II. Secondary Progressions | Section I, p. 02 (definition) |
| A. Construction | Section XII |
| B. Comparison with Natal | Section XIV |
| III. Transits | |
| A. Construction | Section XIV, p. 13 |
| B. Comparison with Natal | Section XIV, p. 13 |
| C. Comparison with Secondary | Section XIV, p. 17 |
| IV. Further Analysis | |
| A. Midpoints | Section VIII, p. 03 |
| B. Arabian Parts | Section VIII, p. 04 |
| C. Cluster Analysis | Section XI |
| D. Harmonics | Section XVI |
| E. Parallels | Section XV, p. 07 |

VII. CHART CONSTRUCTION

Example charts were constructed in the previous section. Now we will go back over the first example and discuss in detail the procedure for constructing a chart.

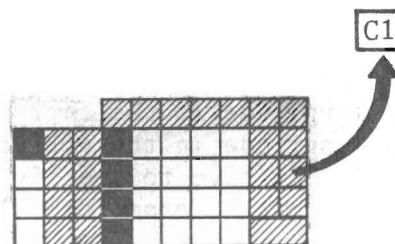
As was already indicated in section I, DR-70 handles four charts simultaneously through a classification according to chart number and type. For that reason, it is wise to begin immediately to form the habit of labelling the background information used in a chart.

You will notice that the "steps" in this section are not the same as the ones followed in section VI. We are now making explicit the terms that were implied in that procedure.

Step one: Chart Number

DR-70 cold-starts to Chart One. For that reason, we did not have to specify chart number in casting the first natal chart. Chart one was implied; the C1 light was illumined on the display. But the first step in constructing a chart is to determine which chart number will be used. The chart number in effect is illumined in red on the display. Press C1 or C2 as required. For the example natal chart constructed in section VI, our "implied" chart number key is

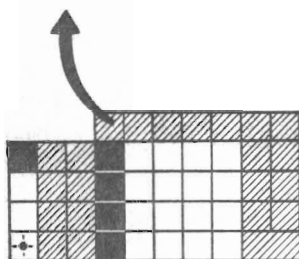
The Chart Number in use is illumined on the display.



Step two: Chart Type

DR-70 cold-starts to Natal. For that reason, we did not have to specify chart type in our first example. The natal type was implied; the NATAL light was illumined on the display. But the second step in constructing a chart is to determine what type of chart it will be. Press the key that indicates the chart type you want. The "implied" chart type key for the first example in section VI is

NATAL

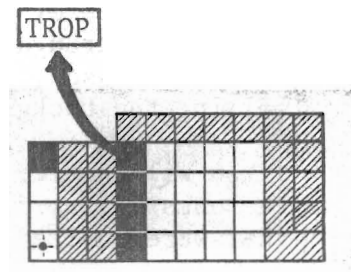


The Chart Type in use is illumined on the display.

Step three: Zodiac

DR-70 constructs charts in three different zodiacs. It cold-starts to the Tropical zodiac. For that reason, we did not have to specify zodiac type in the example in section VI: we wanted a Tropical (classical geocentric) zodiac. The "implied" zodiac-type key in that example is

The Zodiac Type in use is illuminated on the display.

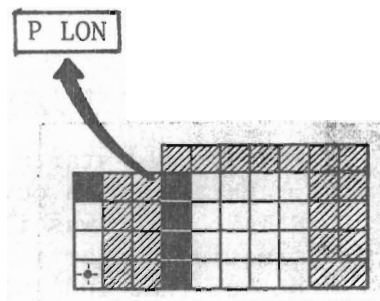


Select zodiac type in this step by pressing TROP SIDL or HELIO as required. If no zodiac type is specified from cold-start, Tropical will be used.

Step four: Planetary Coordinate

DR-70 gives positions in planetary longitude, planetary latitude, right ascension and declination. Only one of these coordinates can be displayed at one time. The coordinate for positions is determined in this step.

Planetary longitude is the familiar signs/degrees/minutes/seconds format: it measures longitude in the ecliptic. DR-70 cold-starts to it. For that reason, we did not have to specify coordinate in section VI. The "implied" coordinate key for the examples in section VI is

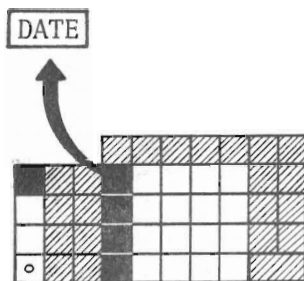


Set the coordinate for which positions will be calculated by pressing P LON (planetary longitude), P LAT (planetary latitude), RA (right ascension) or DECL (declination). DR-70 will display positions according to the user-indicated coordinate for that chart (number and type) until otherwise directed by the user. If no coordinate is specified, planetary longitude will be used. See section XV for a discussion of the coordinates used in astrology.

The coordinate in use will be indicated by lights on the display. See section IV, "Terrestrial Light."

Step five: Date

DR-70 must be given the date, time, latitude and longitude for which a natal chart is to be cast. This information, called "input information", is provided by the user. In this step, we are concerned only with date.



Requirements: Month
Day
Year in full

DR-70 separates month, day and year with a decimal point. The year must be entered in full.

Alan Leo was born on August 7, 1860. The date is entered as follows:

Press

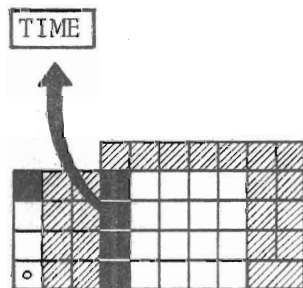
As you press the keys,

(mo.)(day) (year)

appears on the display. As soon as appears, the date-entry is completed.

Wait for

(If you make an error, see section V.)

Step six: Time

Requirements: 24-hour clock
GMT of birth

The normal conversion of clock time to true local time at the place of birth is not required on DR-70. Sidereal time and longitude corrections are handled internally. Only two simple adjustments of clock time are required.

Clock time is the time in use throughout an entire time zone. For example, a television broadcast scheduled to run at 9:00 P.M. EST begins at 9:00 P.M. clock time throughout the Eastern Time Zone. It doesn't matter that the true local times of Portland, Maine, and Ithaca, New York, differ by twenty-five minutes: when the broadcast begins, it is 9:00 P.M. EST in both cities.

Two adjustments are required:

1. 24-Hour Clock Adjustment

The 24-hour clock runs from 0:00 A.M. to 11:59+ of standard clock time. But it dispenses with the A.M.-P.M. notation and assigns a number (0:00-23:59+) to each of the twenty-four hours of the day. 6:00 A.M., for example, becomes simply 6:00 on the 24-hour clock; 6:00 P.M. becomes 18:00.

A.M. times are converted to the 24-hour clock by simply dropping the A.M. notation: the numbers remain the same.

P.M. times are converted to the 24-hour clock by adding twelve hours to their number value, then dropping the P.M. notation.

*Note: Clock times from midnight to 1:00 A.M. are read on the 24-hour clock as 0: hours plus 'n' minutes. Example: 12:17 A.M. is read as 0:17.

Clock times from noon to 1:00 P.M. require no numerical adjustment. Example: 12:17 P.M. is read as 12:17.

2. GMT Adjustment

A. Time zone

To adjust the clock time of birth to GMT, simply add or subtract the number of hours that correspond to the number of time zones that the birthplace is distant from Greenwich. Use whole numbers only.*

Example one. A birth at 10:17 A.M. in New York City takes place five time zones west of Greenwich. Five hours must be added. The GMT-adjusted birthtime becomes 15:17 on the 24-hour clock.

Example two. A birth in Leningrad at the same moment as for example one reads as 3:17 A.M. on the clocks there. Leningrad is two time zones east of Greenwich. Two hours must be subtracted. The GMT-adjusted time reads as 1:17 on the 24-hour clock.

*Exception:

For India, subtract 5½ hours.

B. Daylight Savings Time

Subtract one hour from clock time when Daylight Savings Time is in effect.

Summary of Adjustments:

1. 24-Hour Clock

for A.M. times: clock time as given
for P.M. times: clock time + 12 hours

Exception: Midnight-1 A.M. and Noon-1 P.M. See Note, p. CC:04.

2. GMT Adjustment

for births west of Greenwich:

clock time adjusted to 24-hour clock
+ time zones from Greenwich
- one hour when DST in effect

for births east of Greenwich

clock time adjusted to 24-hour clock
- time zones from Greenwich
+ one hour if DST in effect

3. Example: birth at 10:17 A.M., New York City

| | |
|--------|---------------------------------------|
| 10:17 | |
| + 0:00 | 24-hour clock adjustment (A.M.) |
| 10:17 | 24-hour clock adjustment completed |
| + 5:00 | 5 time zones <u>west</u> of Greenwich |
| 15:17 | GMT time-zone adjustment completed |
| - 0:00 | Daylight Savings not in effect |
| 15:17 | Adjusted time: ready to ENTER |

Alan Leo was born five hours, fifty-one minutes and thirty-five seconds after midnight in Westminster, England. Westminster is in the same time zone as Greenwich. There was no Daylight Savings Time in effect. Adjustment of his birth time amounts to no more than dropping its A.M. notation:

| | |
|-----------|------------------------------------|
| 5:51.35 | |
| + 0:00.00 | |
| 5:51.35 | 24-hour clock adjustment completed |
| + 0:00.00 | Same time zone as Greenwich |
| 5:51.35 | GMT time-zone adjustment completed |
| - 0:00.00 | No Daylight Savings |
| 5:51.35 | Adjusted time: ready to ENTER |

Press

As you press the keys,

5 . 5 1 . 3 5
(hrs.) (min.) (sec.)

appears on the display. When appears, the time-entry is completed:

5 . 5 1 . 3 5

Feature: Plus-or-Minus Twelve

Corrections of clock time to GMT frequently involve a change of effective chart-date. DR-70's Plus-or-Minus Twelve feature allows you to keep the date already entered. No backing-up to change the date entered in step five is required.

For example, a birth in Leningrad at 1:17 A.M. is adjusted as follows:

$$\begin{array}{r} 1:17 \\ + 0:00 \text{ (24-hour clock)} \\ \hline 1:17 \\ - 2:00 \text{ (two time zones east)} \\ - :43 \text{ (subtract in 60-base)} \end{array}$$

Normally, you would call this time either 11:17 P.M. or 23:17 of the previous date. But DR-70 is programmed to accept times that fall within a range of plus-or-minus twelve hours of the twenty-four hours allotted to any given date. Times from -12:00 to +36:00 can be entered.

The CHS (change-sign) key is used in entering minus times. Example:

TIME . 4 3 CHS ENTER

- 0.43

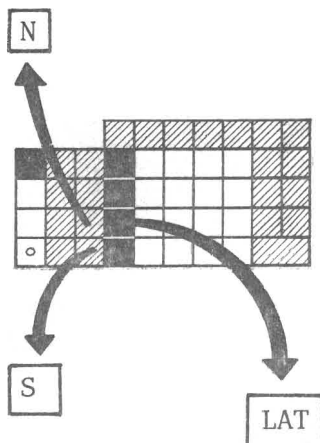
is displayed as the completed time-entry.

Note that the Plus-or-Minus Twelve feature has nothing to do with the twelve hours that must be added to adjust P.M. times to the 24-hour clock. It serves a purpose specifically adapted to entering the time of a horoscope into the DR-70. The adjustments must be made as already indicated on the preceding pages.

Plus-or-Minus Twelve refers to the forty-eight-hour range of times that DR-70 will accept.

Step seven: Latitude

Latitude of birthplace must be entered. Coordinate-modifier keys NW and/or SE indicate whether latitude is north or south of the equator. DR-70 cold-starts to north latitude: if no coordinate modifier is included in the latitude entry, north will be used.



Requirements: latitude of birth
north or south

Westminster is 51°29'30" N. latitude. It is entered as follows:

☐ LAT 5 1 . 2 9 . 3 0 N ENTER

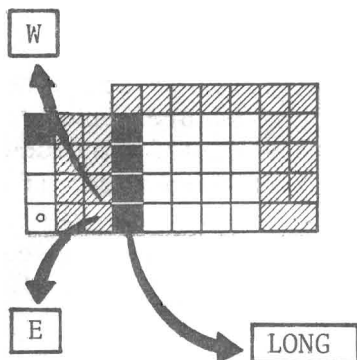
When the entry is complete,

51.29.30
(d./m./sec.)

appears on the display.

Step eight: Longitude

Longitude of birth must be entered. Coordinate-modifier keys NW and/or SE indicate whether longitude is west or east of Greenwich Meridian. DR-70 cold-starts to west longitude: if no coordinate-modifier is included in the longitude entry, west will be used.



Requirements: longitude of birth
west or east

Westminster is 0°0'30" W. longitude. It is entered as follows:

☐ LONG ☐ 0 ☐ . ☐ 0 ☐ . ☐ 3 ☐ 0 ☐ W ☐ ENTER

When the entry is complete,

☐ 0.0.30 ☐ -W-

appears on the display.

Synopsis of Steps One through Eight:

Steps one and two classify the chart according to number and type. All the information pertaining to the chart to be constructed will be referred to as so classified.

Steps three and four set the scene. A reference frame of zodiac type and/or coordinate establishes the "milieu" in which calculations will be performed.

Steps four through eight introduce the individual character (or event) that is to be studied. Steps four and five establish the when; steps six and seven establish the where of the chart. All that is required to produce a map of the heavens for a specific birth or other event has been provided.

You are now ready to calculate positions for house cusps and planets. The information already entered can be recalled at any time. Chart number, chart type, zodiac and coordinate are indicated by lights on the display. Date, time, latitude and longitude will appear on the number-register in response to DATE RECLL, TIME RECLL, etc. See section V.

After Chart Number and Type have been specified or implied, the order of the remaining steps is flexible. Latitude can be entered first, date can be entered after longitude, etc. Also, within any step that involves number input (date, time, latitude, longitude), the term that defines the entry can be pressed anywhere before ENTER in the key sequence.

If you pressed only 5 . 5 1 . 3 5, for example, you don't have to start over. Just press TIME before you press the ENTER key. Or the sequence could go: 5 . 5 1 . 3 TIME 5 ENTER. As long as the term that defines the entry is included somewhere in the sequence (and before ENTER), the entry goes through. This flexibility applies to all date, time, latitude and longitude entries. Any of these keys can be pressed more than once within a sequence: if you aren't sure if you have already included the defining term of an entry, press it again. Press it a dozen times if you like.

But, once you have pressed ENTER, the data is entered, and subsequent pressing of the DATE, TIME, etc., keys will refer to the next item of data.

If you press a wrong digit key in making an entry, press CE and start the entry again.

Chart type, zodiac, coordinate, date, time, latitude and/or longitude can be changed at any stage of input or calculations. Positions will be re-calculated for the re-defined background information. Chart type can be changed without the loss of natal data already calculated. See section XII.

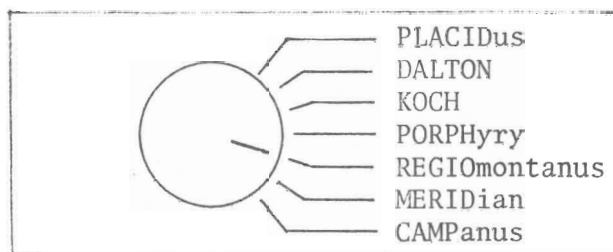
Step nine: House Cusps

We are ready to start calculating positions. Transfer the positions for the housecusps to a horoscope sheet as they appear on the display.

A. House System

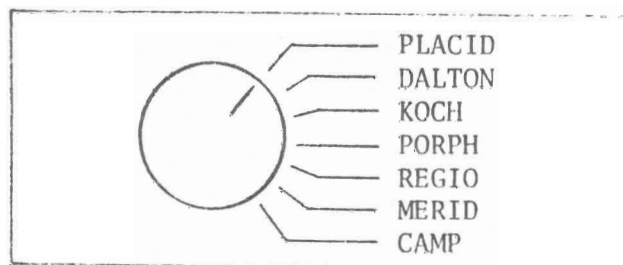
Select a house system by turning the House Dial to the system desired.

Example one:



The dial will generate houses according to the system of Regiomontanus.

Example two:

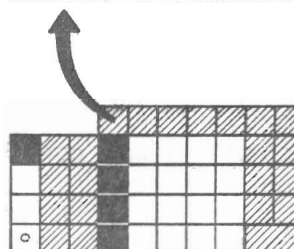


The dial is set to generate houses according to Placidus. This is the system we will use for our example.

B. Cusp Positions

To generate House 1/Ascendant, press

☐ HOUSE 1 ENTER



5.27.36
(sign/deg./min.)

appears on the display. We know that Alan Leo's ascendant is at 27°36' of Leo.

The remaining houses may be generated in the same manner. Simply substitute the appropriate number (2-12) in place of "1" above (between HOUSE and ENTER).

*Note: [10] [11] and [12] keys are used for requesting tenth, eleventh, and twelfth house cusps, respectively. See section III, pages 2-3.

A faster method of generating house cusps will be introduced in section IX.

*Note two: Do not use recall key to display positions that have already been calculated. Repeat the sequence by which the calculation was performed. Example: The ascendant has already been calculated. If, at a later stage in calculations, you want to see the ascendant displayed again, press [HOUSE] [1] [ENTER]

Step ten: Planet Positions

Having transferred the house cusps to a horoscope sheet, we are now prepared to complete the horoscope map. Press

(SHIFT LIGHTED) [☉] [☽] [ENTER]

5.14.52.45
(sign/deg/min/sec*)

appears on the display. We know that Alan Leo's natal Sun is at 14°53'04" of Leo.

*Seconds are displayed for the Sun only. Other planets are displayed in signs/degrees/minutes.

The remaining planet positions are calculated in the same manner. Substitute the appropriate planet (☿ - ♀) for ☉ above. Note that the Moon's north node is included in DR-70's planet series. ♀ refers to the north lunar node only; nodes of other planets can not be calculated by means of ♀ key.

The south lunar node is included by implication: it is always opposite ♀.

A faster method of calculating planet positions will be introduced in section IX.

The same rule with respect to recalling already-calculated positions for cusps applies to planets also. Do not use RECALL key. Repeat the sequence by which the original calculation was performed.

The chart is now constructed. We can go on to an analysis of its inherent relationships.

Synopsis Of Section VII

A. Select or use "implied"

- 1) Chart Number
- 2) Chart Type
- 3) Planetary Coordinate
- 4) Zodiac Type

Check the display lights to be sure that the number, type, etc., that you want to use are in effect.


B. Give DR-70


- 1) The date
- 2) The adjusted time
- 3) The latitude north or south, and
- 4) The longitude east or west

for which the chart is to be constructed. Note: Time, latitude, and longitude entries are not required for many of the "derived" charts. See section XII.

(Any of this user-defined input (date, etc.) can be recalled at any stage of operations by means of the RECLL key. Review page V-04.)

C. Calculate cusp and planet positions.

Houses are calculated with the shift key in the normal (unlighted) position. The normal shift position is indicated in key sequences by: 

Planets are calculated with the shift key in the lighted position. The "shift lighted" position is indicated in key sequences by: 



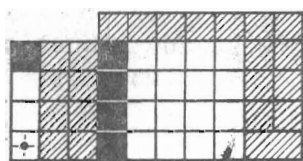
VIII. CHART ANALYSIS

'Analysis' here does not mean interpretation. It simply means that we will demonstrate methods of breaking the chart down into some of its components. We will discuss aspects, midpoints, Arabian parts and aspect-orbs in this section. Other analytical approaches to the chart (parallels, cluster analysis, harmonics, etc.) will be left for later sections.

This manual is concerned solely with demonstrating how to perform on DR-70 the calculations required to supply the raw material for interpretation. Interpretation is left to the user.

Step one: Aspects

There are three methods of calculating aspects on DR-70. Each method requires the use of a different function-key. At present, we will discuss the simplest of the three methods: the ASPECT function.



ASP

*Note: A ORB and SCAN functions provide much faster methods of getting major and minor aspects. We introduce ASP first only because of its simplicity and comprehensiveness.

The ASPECT function is used to calculate the angle between any two positions in the zodiac or mundane circle. The angle is displayed in degrees and minutes.

The ASPECT function is also used to calculate angles of right ascension, declination and planetary latitude.

As our current coordinate is planetary longitude, the ASP function will display the zodiacal interval between the positions calculated in section VII.

A. Planet aspect Planet

Example: What is the angle between Alan Leo's Sun and Moon? Press


☉ ☾ ASP ☾ ENTER

119.32

(deg/min)

appears on the display. The Sun and Moon lights are illuminated. We know that there are 119°32' of zodiacal interval between Alan Leo's Sun and Moon.

Generalization: We can now calculate the interval between any two planets with the ASP function. The general formula to be applied is:

 PLANET ASP PLANET ENTER

B. Planet aspect House Cusp

Example: What is the angle between Alan Leo's Sun and Ascendant? Press

  ASP  HOUSE 1 ENTER

12.43

appears on the display. We know that there are 12°53' of zodiacal interval between Alan Leo's Sun and Ascendant.

Note: The first half of this sequence involves upper-case keys; the second half involves lower-case keys. Shift as required is indicated.

Generalization: We can now calculate the interval between any planet and any house cusp with the ASP function. The general formula is:


PLANET ASP HOUSE # ENTER

(# here means keys 1-9 10 11 and 12)

Shift as required.

C. House Cusp aspect House Cusp

Example. What is the angle between Alan Leo's Ascendant and Midheaven? Press

 HOUSE 1 ASP HOUSE 10 ENTER

101.16

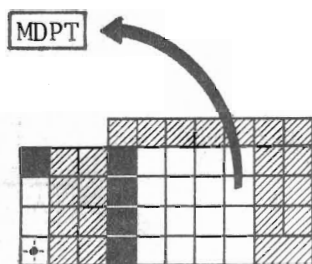
is displayed.

Generalization: To calculate the angle between two house cusps, use the formula

HOUSE # ASP HOUSE # ENTER

Remember: 10 prefixed by HOUSE means 10th house cusp
 11 prefixed by HOUSE means 11th house cusp
 12 prefixed by HOUSE means 12th house cusp

These three keys are not to be used in arithmetical calculations.

Step two: Midpoints

Any two positions in the horoscope have a point which is midway between them. That position is the "midpoint" of the related terms. It is customary to calculate these positions in planetary longitude only.

When calculating midpoints, set coordinate to planetary longitude. Midpoint will be displayed in sign/degree/minute format.

A. Midpoint of Two Planets

Example: What is the midpoint of Alan Leo's Sun and Moon? Press

MDPT ENTER

3.15.07

appears on the display. Alan Leo's Sun-Moon midpoint is at 15°07' of Gemini.

(sign/deg/min)

Generalization: Calculate the midpoint of two planets by the formula:

PLANET MDPT ENTER

B. Midpoint of Planet and House Cusp

Calculate the midpoint of a planet and a house cusp by the formula:

PLANET MDPT HOUSE # ENTER

(Sun-Midpoint-House 1 = 5 21.14, or 21°14' Leo.)

C. Midpoint of Two House Cusps

Calculate the midpoint of two house cusps by the formula:

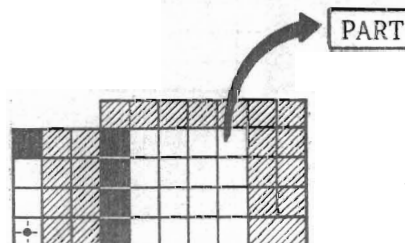
HOUSE # MDPT HOUSE # ENTER

(House 1 - Midpoint - House 10 = 4 06.58, or 6°58' Cancer.)

Step three: Arabian Parts

Direct and inverse Arabian parts can be drawn with reference to so many points that their number runs into thousands. Basically, the distance between two positions in the horoscope is measured in a forward direction through the zodiac; the interval thus calculated is then projected from a third point, usually the Ascendant. Three groups of parts are thus produced.

Requirements: positions must be in planetary longitude.



Planetary parts are the parts drawn for planetary pairs. The distance between two planets is measured in a forward direction through the zodiac; that distance, when projected from the Ascendant, arrives at the planetary part.

Within the remaining two groups, some of the individual parts have generally-accepted names. But the two groups themselves are referred to as simply "the other Arabian parts."

Of these "other" parts, one type is generated as follows: the distance between a planet and a house cusp is measured in a forward direction through the zodiac; that distance is projected from the Ascendant to produce the part.

The second group of "other" parts is generated in a similar fashion. The distance between a planet and a house cusp (again, in a forward direction) is measured. Then that distance is projected from a house cusp other than the Ascendant.

Note that "direct" and "inverse" have no effect on the manner in which the interval between two positions is measured. Nor do they have any reference to DR-70's C-D key. Measurement is always in a forward direction, i.e., the direction of the planets' normal motion in the zodiac. The DR-70 C-D key is used for calculating direct and converse primary directions only. See section XIII when necessary.

"Direct" and "inverse" as applied to Arabian parts indicate which position is "taken" to which. For, example, the Part of Fortune is the direct part of the Sun-Moon planetary pair. The Sun's normal motion "takes" it to a conjunction with the Moon. The distance it travels to make the conjunction is the interval measured. That distance, projected from the Ascendant, arrives at the Part of Fortune. The inverse Sun-Moon part is called the Part of Spirit: the Moon is taken to the Sun. That is, the Moon traverses a certain distance before its normal motion leads it to a conjunction with the Sun. That distance, projected from the Ascendant, arrives at the Part of Spirit.

Taking the slower-moving planet to the faster-moving planet yields the direct planetary part; take the faster to the slower for the inverse part. For the "other" parts, planet-to-cusp yields the direct part; cusp-to-planet yields the inverse.

A simple example: Say the Sun is at 0° Leo, the Moon is at 0° Cancer, and the Ascendant is at 0° Aries.

Part of Fortune.

distance ☉ to ☾ : 330°
 plus Asc: 0°
 330° or 0° Pisces

All three groups of parts are simple to calculate on DR-70:

A. Planetary parts

Example. What is Alan Leo's Part of Fortune? The Part of Fortune requires that the Sun be "taken" to the Moon. The Sun is used as the first term in the following key sequence:

☉ ☾ PART ☾ ENTER

1.28.03

appears on the display. The Sun was taken to the Moon. The interval thus calculated was automatically projected from the Ascendant. Alan Leo's Part of Fortune is at 28°04' of Aries.

To get the Part of Spirit, we would "take" the Moon to the Sun. The Moon would be used as the first term in the PART operation, i.e.,

☾ ☉ PART ☉ ENTER for Part of Spirit.
 (9 27.08)

Generalization. To calculate planetary parts, apply the formula

☉ PLANET PART PLANET ENTER

B. "Other" Arabian parts

1. Projected from the Ascendant

These parts, when direct, take the ruler of a house to the cusp(s) of the house(s) it rules. The inverse of these parts takes the cusp(s) to the ruler.

Example. What is Alan Leo's Part of Marriage? This part requires that Venus be taken to the seventh house cusp. Press

☿ ♀ PART ☉ HOUSE 7 ENTER

1.06.51

appears on the display. Alan Leo's Part of Marriage is at 6°51 of Aries.

The inverse of this part is the Part of Divorce or Non-marriage. The seventh house cusp is "taken" to Venus. The required formula is

☐ HOUSE 7 ☐ PART ♀ ENTER

2. Projected from a cusp other than the Ascendant.

The value of these parts is disputed. DR-70, however, will calculate them. Introduction of the "long-form" parts formula is required.

The parts-calculations already illustrated employed DR-70's "short-form" parts formula. When the short-form is used, DR-70 automatically projects the part from the Ascendant.

To project a part from a cusp other than the Ascendant, the cusp from which the part is to be projected must be user-indicated. Apply the following "long-form" parts formula:

☐ PLANET PART PLANET PART ☐ HOUSE # ENTER

The part will be projected from the house cusp indicated by # in the formula.

The following may also be used:

☐ PLANET PART ☐ HOUSE # ☐ PART ☐ HOUSE # ENTER

The inverse of this formula is also allowed. The part will be projected from the cusp indicated by the # pressed immediately prior to ENTER.

Summary:

There are two basic formulas for Arabian parts.

1. Short form:

☐ PLANET
OR
HOUSE# ☐ PART ☐ PLANET
OR
HOUSE# ENTER

HOUSE# means "any house cusp". Shift as term in use requires.

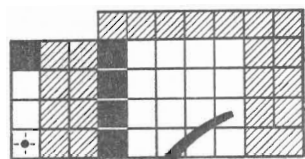
2. Long form:

☐ PLANET
OR
HOUSE# ☐ PART ☐ PLANET
OR
HOUSE# ☐ PART ☐ HOUSE# ENTER

Automation can be applied to generating Arabian parts. See section IX.

Step four: Aspect-orbs

Obeying a user-defined orb, the A ORB (aspect-orb) function searches for major and minor aspects in the following order:



A ORB

Major

♊ - 0°
 ✱ - 60°
 □ - 90°
 △ - 120°
 ♂ - 180°

Minor

∨ - 30°
 § - 51°26' (calc. to 8 places)
 Q - 72°
 π - 150°
 ∠ - 45°
 ♞ - 135°

When one of these aspects is found, DR-70 displays both the kind of aspect and its orb plus-or-minus from exact. Example below is for a trine 28' shy of exact.

| | | |
|---|-----|------|
| - | 120 | 0.28 |
|---|-----|------|

+ = long kind d.m. of
 - = short of orb
 aspect

If none of these aspects are found, DR-70 displays the simple angle in degrees and minutes (same as ASP function). Exception: to be explained in section IX.

A. Planet aspect-orb Planet

Example: Does Alan Leo's Sun make an aspect to his Moon? Since the Sun and Moon are involved, we'll allow an orb of twelve degrees.



1. Set **ORB** to twelve degrees, Press

○ **ORB** **1** **2** **ENTER**



(Remember: **12** key means the cusp of the twelfth house or Pisces. It is not to be used as an arithmetical integer.)

(Note: ORB is set in 60-Base. To set an orb of x°y'z'', press: x . y . z ENTER: consult section XVI for 60-Base number format if necessary.)

2. Press

  [A ORB] [D] [ENTER]

DR-70 looks first to see if the Sun and Moon are conjunct. Then it looks to see if they are in sextile. Then it looks for a square. Then

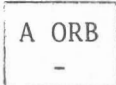

- 120 0.28

appears on the display. Mr. Leo's Sun and Moon are 28' short of an exact trine.


Generalization: To see if there is an aspect between two planets


1. Set ORB key to allowed range. (ORB cold-starts at 10°.)
2. Apply the formula

 [PLANET] [A ORB] [PLANET] [ENTER]

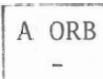
Observation: A possibility of confusing  key with the  key exists.

Both keys have upper and lower-case terms.



is a user-definable key used along with  functions.

lower case: sets the orb allowed for aspects



upper case: the function-key now being discussed, i.e., aspect-orb.

subtraction key

Proper positioning of the shift key eliminates the confusion.

B. Planet aspect-orb House Cusp

Example: Does Alan Leo's Sun aspect his Ascendant? We will abide by our twelve-degree orb as set in the last example. Press

 [A ORB]  [HOUSE] [1] [ENTER]

12.43

appears on the display. Mr. Leo's Sun is 12°43' from his Ascendant.

Generalization: To see if there is an aspect between a planet and a house,

1. Set orb or use the setting already in effect.
2. Apply the formula

☐ PLANET A ORB ☐ HOUSE# ENTER

The inverse of this formula may also be used, i.e.:

☐ HOUSE# ☐ A ORB PLANET ENTER

Comment: ORB RECLL will remind you of the current orb setting. Calculations in progress are unaffected by the recall operation.

C. House Cusp aspect-orb House Cusp

To answer questions such as, "Are the Ascendant and Midheaven in aspect?" apply the formula

HOUSE# A ORB HOUSE# ENTER

Be sure to shift from lower to upper case and back as required.

D. Automation

A ORB will usually be used in conjunction with the auto-enter method introduced in section IX. Automation of A, B and C appear in that section.

Synopsis of Section VIII

The order of "steps" in which functions are introduced in this section is, of course, flexible. Any (or all) of the techniques offered may be omitted. Other techniques appear in sections X-XVI.

A. Mnemonics introduced: ☐ HOUSE# means "any house cusp", i.e., ☐ HOUSE prefixed to keys ☐ 1 through ☐ 12 .

B. Functions and formulas introduced:

1. ASpect

Coordinate: planetary longitude. Exception: a) when used to calculate mundane aspects in chart of primary directions. See section XIII.
b) when used to calculate angles other than aspects

Formula:

| | | | |
|------------------------|-----|------------------------|-------|
| PLANET OR HOUSE# | ASP | PLANET OR HOUSE# | ENTER |
|------------------------|-----|------------------------|-------|

Shift as required by the term in use.

2. MidPoint

Coordinate: planetary longitude

Formula:

| | | | |
|------------------------|------|------------------------|-------|
| PLANET OR HOUSE# | MDPT | PLANET OR HOUSE# | ENTER |
|------------------------|------|------------------------|-------|

3. Arabian PARTs

Coordinate: planetary longitude

Formula:

a) Short-form

| | | | |
|------------------------|------|------------------------|-------|
| PLANET OR HOUSE# | PART | PLANET OR HOUSE# | ENTER |
|------------------------|------|------------------------|-------|

b) Long-form:

| | | | | | |
|------------------------|------|------------------------|------|--------|-------|
| PLANET OR HOUSE# | PART | PLANET OR HOUSE# | PART | HOUSE# | ENTER |
|------------------------|------|------------------------|------|--------|-------|

4. Aspect-ORB

Coordinate: see ASPECT

Formula:

a) Set ORB key

| | | | |
|------------------------|-------|------------------------|-------|
| PLANET OR HOUSE# | A ORB | PLANET OR HOUSE# | ENTER |
|------------------------|-------|------------------------|-------|

C. Vocabulary introduced

Astrological: "direct" and "inverse" parts (p. VIII-04)

DR-70 technical: none.

IX. AUTO-ENTER

Often you'll be executing procedures in which a general formula or key sequence undergoes cyclical modification. Examples of such procedures are:

| | | |
|-------|---|-------|
| HOUSE | 1 | ENTER |
| " | 2 | " |
| " | 3 | " |

...etc.

| | |
|---|-------|
| ☉ | ENTER |
| ☽ | " |
| ♀ | " |

...etc.

| | | | |
|---|-----|---|-------|
| ☉ | ASP | ☽ | ENTER |
| " | " | ♀ | " |
| " | " | ♀ | " |

...etc.

The Auto-Enter function simplifies procedures of this kind by making it unnecessary for you to apply the full formula for each modification. It can be used when you are

A. Generating house cusps with the formula

| | |
|--------|-------|
| HOUSE# | ENTER |
|--------|-------|

B. Generating planet positions with the formula

| | |
|--------|-------|
| PLANET | ENTER |
|--------|-------|

C. Finding aspects with any of the three aspect-formulas

1.

| | | | |
|------------------|-----|------------------|-------|
| PLANET OR HOUSE# | ASP | PLANET OR HOUSE# | ENTER |
|------------------|-----|------------------|-------|
2.

| | | | |
|------------------|-------|------------------|-------|
| PLANET OR HOUSE# | A ORB | PLANET OR HOUSE# | ENTER |
|------------------|-------|------------------|-------|
3.

| | | | |
|------------------|------|------------------|-------|
| PLANET OR HOUSE# | SCAN | PLANET OR HOUSE# | ENTER |
|------------------|------|------------------|-------|

(See section X for details on SCAN.)

D. Calculating midpoints with the formula

| | | | |
|------------------|------|------------------|-------|
| PLANET OR HOUSE# | MDPT | PLANET OR HOUSE# | ENTER |
|------------------|------|------------------|-------|

E. Calculating Arabian parts

1. By the short-form

| | | | |
|------------------|------|------------------|-------|
| PLANET OR HOUSE# | PART | PLANET OR HOUSE# | ENTER |
|------------------|------|------------------|-------|

2. By the long-form

| | | | | | |
|------------------|------|------------------|------|--------|-------|
| PLANET OR HOUSE# | PART | PLANET OR HOUSE# | PART | HOUSE# | ENTER |
|------------------|------|------------------|------|--------|-------|

Each of these operations, when carried out in full, is a multiple-stage cyclical operation (MSCO). A general key sequence is repeated many times with only a single modification each time.

HOUSE 1 ENTER, HOUSE 2 ENTER, etc. is an example of a "simple" operation of this sort: only the number of the cusp to be displayed changes in each sequence. \odot ENTER, D ENTER, etc., is another "simple" operation. The item or term (House 1, House 2, \odot , D , etc.) on which some sort of operation is to be performed is called an "operand."

An item or term on which some sort of operation is to be performed is called an "operand."

"Simple" operations involve only a single operand.

"Binary" operations involve two operands related by a function-key (ASP, MDPT, +, -, etc.) The function-key defines the type of operation that is to be performed. An example of a binary operation is:

| | | | |
|---------|-----|------------|-------|
| \odot | ASP | D | ENTER |
|---------|-----|------------|-------|

The Sun is the first operand, the Moon is the second operand. ASP is the "function key" that defines the operation to be performed: the angle between the Sun (first operand) and the Moon (second operand) is to be calculated and displayed.

The majority of the operations that you will be Auto-Entering are binary operations. The general form of a binary operation appears on the following page.

| FIRST OPERAND | FUNCTION KEY | SECOND OPERAND | ENTER |
|---------------------------------------------|------------------------------------------|---------------------------------------------|-------|
| Any planet or house may take this position. | ASP, MDPT, PART, A ORB, SCAN, +, -, etc. | Any planet or house may take this position. | |

DR-70 takes the tedium out of these multiple-stage procedures (MSCOs) by pressing most of the keys for you.

To define the MSCO that you want DR-70 to perform, press in full the key sequence that initiates the general "formula" (examples follow). Then, for each ensuing step of the on-going MSCO, you press ENTER only. As long as you remain in that MSCO, you need press only the ENTER key to advance to the next step in the operation. But if you press any key(s) other than ENTER, you will have to re-define the operation with a key sequence in order to proceed (see section XVIII).

To Auto-Enter

1. Define the MSCO with a full key sequence (examples follow).
2. Press ENTER for each ensuing step in the operation.

A. Generating House Cusps

Formula: HOUSE# ENTER

To use the Auto-Enter feature, define the MSCO with

o HOUSE 1 ENTER

The position of the Ascendant will appear on the display. For the example chart (Alan Leo)

5 27.36 appears.

Now press ENTER only. "2" appears on the display to indicate that what follows is the cusp of the second house:

6 17.07

Go on to press ENTER ten more times. Each time you press it, the next house cusp (3-12) will appear on the display.

This procedure (A) uses the simplest of DR-70's five basic flow systems, the "Line". We will discuss two types of "Line" in this section:

| | | | |
|---------------|----|----------------|---|
| House Line | 1 | Planet Line | ☉ |
| | 2 | | ☾ |
| | 3 | | ♂ |
| | 4 | | ♀ |
| | 5 | | ♂ |
| | 6 | | ♂ |
| | 7 | | ♂ |
| | 8 | | ♂ |
| | 9 | | ♂ |
| | 10 | | ♂ |
| | 11 | | ♂ |
| | 12 | | ♂ |

DR-70 advances one step (box) in the line each time you press ENTER . When it reaches the last term in the line (here, House 12), it returns to the starting-place. It will repeat the line cycle ad infinitum in response to ENTER .

For the time being, we recommend that you initiate the Auto-Entry of all MSCOs with the leader of the appropriate operand series, i.e., as illustrated in this section. Consequences of entering flow systems mid-stream are discussed in section XVIII.

Initiate MSCOs with the leader of the operand series in use. House 1 is the leader of the House series. ☉ is the leader of the planets.

B. Generating Planet Positions

Formula: PLANET ENTER

To use the Auto-Enter feature, define this MSCO with

☉ ENTER

5 14.52.45

appears on the display to tell us that Alan Leo's Sun is at 14°52' 45" of Leo.

Now press ENTER only. The Sun light goes out, the Moon light comes on.

1 15.20

appears on the display. Alan Leo's Moon is at 15°20' of Aries.

Go on to press ENTER nine more times. Each time you press it, DR-70 will advance a step in the "Planet Line" shown above.

Observation: Positions are Auto-Entered on a "Line" flow system. They are "simple" operations. "Simple" operations are Auto-Entered on a "Line".

C. Aspects

DR-70 has three functions that calculate aspects.

1. ASpect function

Formula: PLANET OR HOUSE# ASP PLANET OR HOUSE# ENTER

To use the Auto-Enter feature

(a) For Planet Aspect Planet, define the operation with

☉ ASP ☾ ENTER

119.32

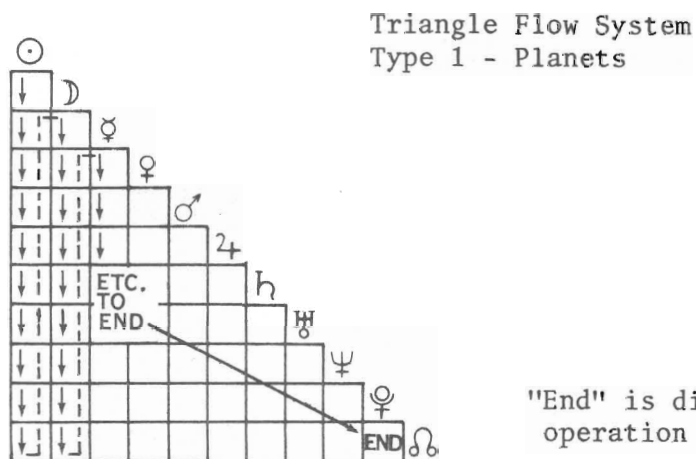
is displayed. Alan Leo's Sun and Moon are separated by 119°32'. The second operand (here, ☾) "blinks."

Now press ENTER only. The Moon light goes out, the Mercury light comes on.

5.18

is displayed. Alan Leo's Sun and Mercury are separated by 5°18'.

Each time you press ENTER, DR-70 will advance a step in the "Triangle" flow system illustrated below:



"End" is displayed when the operation is completed.

When both operands share a common line (i.e., both are planets or both are cusps), a "Triangle" flow system is used for Auto-Entering. (Binary operations only)

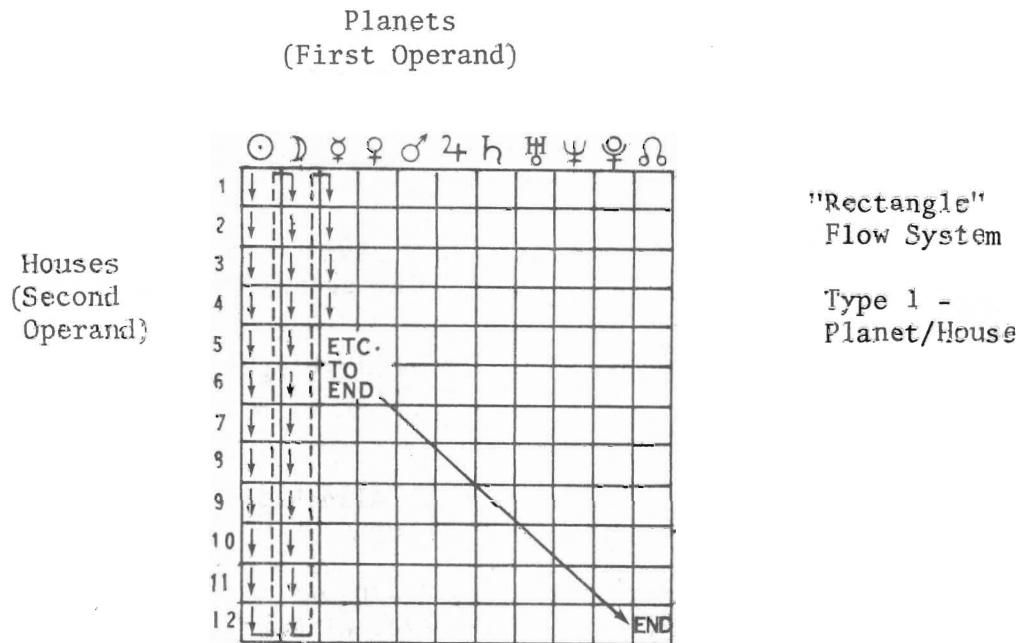
(b) For Planet Aspect House Cusp, define the operation with

  ASP  HOUSE 1 ENTER

12.43

is displayed as the angle between the Sun and the Ascendant.

Now, each time you press ENTER, DR-70 will advance a step in the Planet-House "Rectangle" as illustrated below:



When the two operands of a binary operation do not share a common "line", a "Rectangle" flow system is used for Auto-Entering.

Note: The "inverse" of the key sequence used above can also be used to define the Auto-Entry. Simply reverse the positions of the two operands, i.e., use

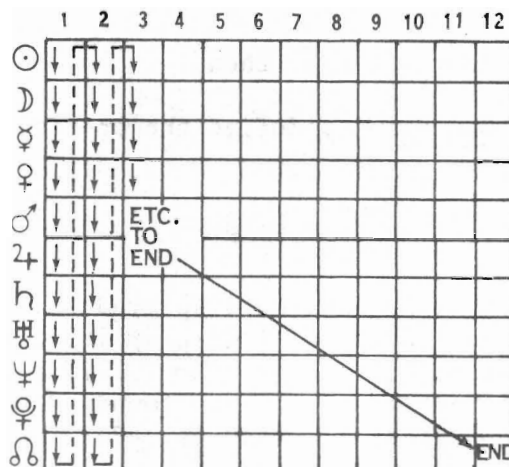
 HOUSE 1  ASP  ENTER

Houses now occupy the position of first operand, and planets are now the second operand(s).

We recommend this "inverse" sequence for those working without a printer. The house cusp in use as first operand will precede the answer on the number register; the planet in use as second operand will "blink". The Rectangle is modified as follows:

Houses (First Operand)

Planets
(Second
Operand)



"Rectangle"
Flow System

Type 2 -
House/Planet

(c) For House Cusp Aspect House Cusp (see note, IX-14)

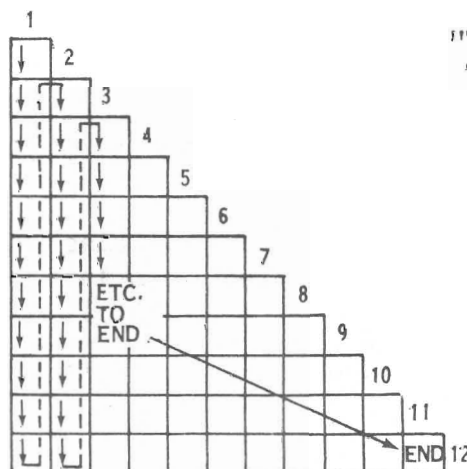
Formula:

The procedure is a binary operation. Both operands share a common line. A "Triangle" will be used as the flow system for Auto-Entering.

Define the operation with

The angle between the cusps of the first and second houses will be displayed.

Each time you press ENTER, DR-70 will advance a step in the "House Triangle":



"Triangle" Flow System
Type 2 - Houses

2. Aspect ORB function



Formula : 1) Set ORB

2) PLANET OR HOUSE# A ORB PLANET OR HOUSE# ENTER

To Auto-Enter, first set orb, then

(a) For Planet A ORB Planet, define the operation with  A ORB  ENTER

The Sun-Moon angle will be displayed. If one of the major or minor aspects is found, DR-70 will display it in the \pm / aspect / orb format. (See section VIII, page 07.) If none of the major or minor aspects listed on VIII-07 are found, DR-70 will display the Sun-Moon angle in degrees and minutes. For the example chart,

| | | |
|---|-----|------|
| - | 120 | 0.28 |
|---|-----|------|

is displayed.

Now press ENTER. DR-70 will advance through the "Planet Line" on page IX-04 from ☿ - ♀. But now it will stop only to display major and minor aspects. The degree/minute format will no longer be used. If no major or minor aspects are found at any step on the line, DR-70 will skip on to the next step; it will not stop to display the angle in degrees and minutes.

In response to a full key sequence, A ORB uses the degree/minute format if no major or minor aspects are found within the specified orb.

In response to ENTER only (Auto-Entry procedure), A ORB uses the \pm / aspect / orb format only. It stops to display only if a major or minor aspect is formed within the specified orb.

In the example natal chart, we are working with the cold-start orb setting (10°). A ORB gives us aspects for:

Sun A ORB Mercury: conjunct

Sun A ORB Venus: semi-sextile

Sun A ORB Mars: quincunx

Sun A ORB Jupiter: conjunct

With each step along the Planet Line, DR-70 illuminates the planet lights above the number display to indicate the two planets in aspect. So far, we have proceeded along the line one step at a time. But when we get to Sun A ORB Saturn, no aspect is displayed. The ♄ light goes out, the ♀ light comes on, and DR-70 displays

Sun A ORB Uranus: sextile

The Sun makes no major or minor aspect (within 10°) to Saturn. DR-70, finding no such aspect, skipped on to the next step.




It should be noted that DR-70 emphasizes major aspects over minor ones. It will call an angle of 53° , for example, a 7° sextile rather than a septile if the orb is set at 7° or more. To examine minor aspects, it is best to set the orb to a smaller interval, e.g., one or two degrees.

Within a specified ORB, DR-70 emphasizes major aspects over minor ones. To search for minor aspects, set orb to one or two degrees.

Since aspect-orbs are Auto-Entered on a Line, the first operand of the initiating key sequence is not cycled. This function is designed for searching the major and/or minor aspects of any one planet or cusp at a time. (For a high-speed search of the entire chart pattern, see section X, Scan.)

To get the aspect-orbs of another planet, re-define the operation with that planet as first operand. Use the Sun as second operand. When DR-70 reaches the natural position in the Line of the planet used as first operand, it will skip to the next step in the Line. The appropriate lights will be illuminated above the number display to indicate the planets in aspect.

Example. To get the aspect-orbs of the Moon, define the operation with

  A ORB  ENTER

The Moon-Sun aspect is displayed. For the example chart, we get

| | | |
|---|-----|------|
| - | 120 | 0.28 |
|---|-----|------|




Press ENTER. DR-70 skips over Moon A ORB Moon. The next aspect to be displayed is:

| | | |
|--|-----|------|
| | 120 | 4.51 |
|--|-----|------|

The Moon-Mercury lights are lighted. (orb=10)

Procedure is the same for the remaining planets.

(b) For Planet A ORB House Cusp, define the operation with

  A ORB  HOUSE 1 ENTER

12.43

is displayed as the aspect between Alan Leo's Sun and Ascendant.

Each time you press ENTER, DR-70 will advance along the House Line on page IX-04. It will stop only to display major and/or minor aspects in the \pm / aspect / orb format.

For the aspect-orbs of another planet to the cusps, redefine the operation with that planet as first operand. Continue to use House 1 as the second operand.

If working without a printer, define the Auto-Entry with the "inverse" of the above formula, i.e.,

 HOUSE 1  A ORB  ENTER

Each time you press ENTER, DR-70 will advance in the Planet Line to the next major or minor aspect of the Ascendant to planets. It will obey the specified orb.

(c) For House Cusp A ORB House Cusp, define the operation with

 HOUSE 1  A ORB  HOUSE 2 ENTER

The angle between house cusps one and two will be displayed in the appropriate display format. DR-70 will then obey orb and advance through the House Line in response to ENTER. It will stop only to display major or minor aspects of the Ascendant to other house cusps.

(This procedure should be used only when working with a printer; otherwise, use the ASP function.)

For the aspect-orbs of another cusp, redefine the operation with that cusp as first operand.

3. SCAN: see section X.

D. Midpoints

Formula:  PLANET OR HOUSE# MDPT  PLANET OR HOUSE# ENTER

1. For Planet Midpoint Planet, define the operation with

  MDPT  ENTER

3.15.07

The Sun-Moon midpoint appears. Alan Leo's is at 15°07' of Gemini.

DR-70 will advance one step in the Planet Triangle (IX-05) in response to each pressing of the ENTER key. Now, however, it displays midpoints, not aspects.

2. For Planet Midpoint House Cusp, define the operation with


  MDPT  HOUSE 1 ENTER

5.21.14

The Sun-Ascendant midpoint is displayed.




Each pressing of ENTER will advance DR-70 one step in the Planet/House Rectangle on page IX-06.

The inverse can also be used, i.e., define the operation with

 HOUSE 1  MDPT  ENTER

When this formula is used, DR-70 flows through the House/Planet Rectangle (page IX-07). Use this "inverse" form when working without a printer.

3. For House Cusp Midpoint House Cusp, define the operation with

 HOUSE 1  MDPT  HOUSE 2 ENTER

The midpoint of the Ascendant and the cusp of the second House will be displayed. Each pressing of ENTER will then advance DR-70 a step in the House Triangle on page IX-07.

E. Arabian Parts

Formula: 1) Short-form:

PLANET OR HOUSE# PART PLANET OR HOUSE# ENTER

2) Long-form

PLANET OR HOUSE# PART PLANET OR HOUSE# PART HOUSE# ENTER

To Auto-Enter

1. Planet Part Planet, define the operation with



The Ascendant will be displayed. For the example chart (Alan Leo), we get:

5.27.35.36

The Ascendant is displayed more accurately than it would be if you had pressed HOUSE 1 ENTER. The reason for this increased accuracy is that the Sun is the only operand in the calculation: seconds are displayed when the Sun is the only operand involved in a calculation.

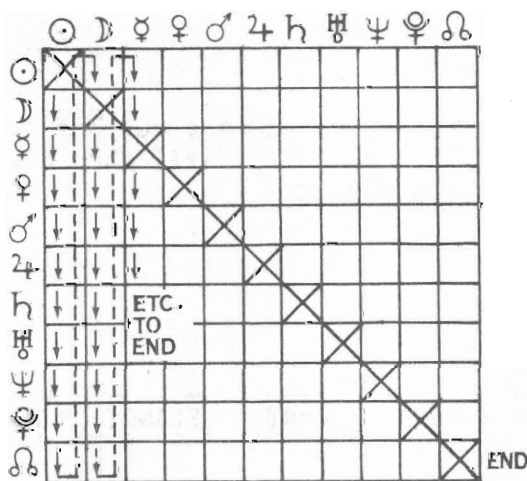
Now press ENTER only:

1 28.03

The Sun-Moon part (Part of Fortune) is displayed. Now, each time you press ENTER, DR-70 will advance a step in the "Square Without Diagonal" flow system diagrammed below:

First Operand

Second
Operand



"Square Without
Diagonal"

2. Planet Part House Cusp, define the operation with

  PART  HOUSE 1 ENTER

6 10.18

appears in a few seconds. Now, each time you press ENTER, DR-70 will advance a step in the Planet/House Rectangle on page IX-06.

The inverse formula may also be used. Define the operation with

 HOUSE 1  PART  ENTER

5 14.53

is displayed. (This, of course, is the position of the natal Sun ... displayed in degrees and minutes only.) Now, each time you press ENTER, DR-70 will advance a step in the House/Planet Rectangle on page IX-07.

3. To Project Parts From A Cusp Other Than The Ascendant, use the long-form to define the operation:

PLANET
OR
HOUSE# PART PLANET
OR
HOUSE# PART  HOUSE # ENTER

DR-70 will flow as illustrated in 1 and 2 above. The parts displayed are as projected from the house cusp specified by # before the ENTER key.

General Note On Auto-Entering Without A Printer

When working without a printer, avoid the use of house cusps as second operands. Whenever possible, use cusps as first operands in the key sequences that start the Auto-Entry. Each time you press ENTER , the cusp being used as first operand for the calculation in progress will appear on the display.

This rule applies especially to A ORB and SCAN procedures. If a cusp is used as second operand in the key sequence that initiates the Auto-Entry, DR-70 has no way to indicate which cusps later in flow system form the "second term" in the aspect being displayed.

When working with a printer, of course, there is no problem: the terms for both sides of the operation are printed out. See section XIX.

X. SCAN

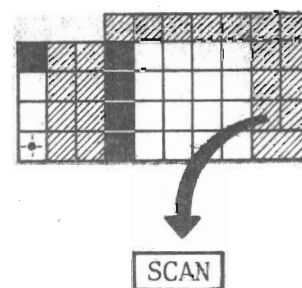
The SCAN function searches the entire chart pattern for major and minor aspects within a specified orb. It searches these aspects in the same order as is listed for the A ORB function on page 07 of section VIII. It displays them in the \pm / aspect / orb format only. The degree/minute format is never used; aspects other than those listed as major and minor are ignored.

SCAN resembles A ORB in that it

- 1) Obeys a user-defined orb
- 2) Searches for major and minor aspects
- 3) Displays in the \pm /aspect/orb format

SCAN differs from A ORB in that it

- 1) Searches entire chart pattern
- 2) Never uses the degree/minute format
- 3) Is strictly an automated function



Scan differs from A ORB in its sphere of usefulness. A ORB stops once it has considered the aspects of the particular planet or cusp used as first operand; the second operand is cycled once through the appropriate (planet or house) Line; the first operand is not cycled. SCAN continues the search: it flows onward through the appropriate Triangle, Square or Rectangle as required by the operands in use. Consequently, you will use SCAN when you want to find all the aspects (with no emphasis on the particular item that forms them) operating within a specified orb.

If, for example, you want to know the significant aspects formed by a particular planet or cusp, use A ORB. Use the item of special interest as the first operand in defining the Auto-Entry. Once DR-70 has searched the aspects of that particular item, the operation will end.

But, if you want to know if the chart contains any aspects of the specified orb, use SCAN. When the function has searched out all the aspects within the orb (for instance, one degree), "End" will appear on the display.

In short, A ORB emphasizes a particular planet or cusp; SCAN emphasizes orb.

Use SCAN to search the entire chart pattern for aspects within a specified orb. Use A ORB to search the aspects of a particular planet or cusp.

Because the SCAN function is designed for a high-speed search, it is used exclusively as an automated feature.

A Reminder:

Within a specified orb, DR-70 emphasizes major aspects over minor ones. To search for minor aspects, set orb to one or two degrees.

The formula for SCAN is:

1) Set ORB

2) PLANET OR HOUSE# SCAN PLANET OR HOUSE# ENTER

To SCAN for

A. Planet Scan Planet, define the operation with:

  SCAN  ENTER

In the example natal chart (section VI), we scanned for all aspects within a 10^0 orb. Since DR-70 cold-starts to an orb of 10^0 , no orb setting was required. We generated the aspect Triangle that appears on page VI-06.

| | | |
|---|-----|------|
| - | 120 | 0.28 |
|---|-----|------|

is the first aspect displayed in response to the defining key sequence. (Sun-Moon)

Now press ENTER. DR-70 flows onward through the Planet Triangle (see diagram, page IX-05). The next aspect to appear is:

| | | |
|---|------|--|
| 0 | 5.28 | |
|---|------|--|

The aspect is between the Sun and Mercury.

Press ENTER again, and DR-70 resumes the flow. It advances to the next aspect:

| | | |
|---|----|------|
| - | 30 | 3.28 |
|---|----|------|

The aspect is between the Sun and Venus.

Continuing in the same manner, the entire triangle is generated as it appears on p. VI-06. The appropriate lights above the number register are illuminated to indicate the planets whose aspect is displayed.

"End" is displayed when the operation is completed.

B. Planet Scan House or House Scan Planet

This operation is not recommended unless you are working with a printer.
See section XIX.

If working without a printer, use A ORB: see page IX-10.

C. Special Feature: Aspects Formed To Midpoints

DR-70 will find major and minor aspects to midpoints when either the SCAN or A ORB function is used in the general sequence:

(ZOD) PLANET OR HOUSE# MDPT PLANET OR HOUSE# ENTER SCAN OR A ORB PLANET OR HOUSE# ENTER

Example. Does Alan Leo's Sun-Moon midpoint make any aspects to his planets?
Press:

☉ MDPT ☾ ENTER

(3 15.07 appears as the midpoint)

Continue the sequence with ...

ZOD SCAN ☉ ENTER

-60 0.14

is the first answer to appear. The Sun light is blinking. We know that the Sun-Moon midpoint forms a sextile to the Sun. Press ENTER

-60 0.13

appears next. The midpoint is, of course, also sextile the Moon. Press ENTER: (orb = 10 degrees)

-60 5.04

displays a sextile of the Sun-Moon midpoint to Mercury. DR-70 will now cycle through the planet line (see page IX-04) in response to the ENTER key.

If DR-70 displays a slightly different answer for the second time through the Line, go by the first answer. To take aspects for another midpoint, calculate that midpoint in the first half of the general sequence given above.

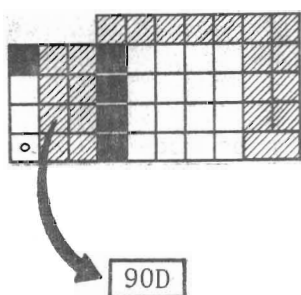


XI. 90-DIAL

A main purpose of DR-70's 90-dial function is to facilitate the technique of cluster-analysis in use among cosmobiologists. It is also used in the chart of primary directions, as will be discussed in section XIII.

This section is devoted to an explanation of how to use the 90-dial for cluster analysis.

The name 90-dial may be misleading to beginners. The dial may actually be set to function at any interval from 0° to 360° .



As a general introduction to the technique of cluster analysis, we include the following:

A whole chart may be considered with respect to any portion of itself that divides equally into 360° . The remainder of the chart is then portioned according to this same division and the resulting sections are superimposed on the first.

The number of degrees in each portion is determined by the dial setting. When the chart is divided into 90° sections, the dial is set to 90; when dividing into sections of 120° , the dial is set to 120; when dividing into 45° sections, the dial is set to 45. The above settings are properly called 90-, 120- and 45-dial, respectively.

The general rule is this:

"n" dial = n° ; the rest of the chart is "mod"-ed with respect to "n".

The word "mod" as used above is explained as follows:

Think of the chart as a whole pie. "n" becomes the size of one slice of the pie. Take as many slices of this size as the pie will allow, and then superimpose them all on the first one.

When transits, progressions, etc., are thus mod-ed, the resultant positions may be charted on a transparent sheet. They can be superimposed on a mod-ed natal chart. The resultant visual scheme emphasizes certain significant relationships. The type of relationship emphasized depends on the dial setting.

In 90-dial, planets in square are seen as conjunct when mod-ed. In 120-dial, trines are seen as conjunct when mod-ed, etc.

Example. Alan Leo's T-square of Mars-opposition-Venus-square-Moon provides a good example of the usefulness of 90-dial. Set the dial to 90° by pressing

For all our preceding calculations, DR-70 was functioning with the cold-start 90-dial of 360°. When we pressed ENTER, DR-70 displayed

5.14.52.45

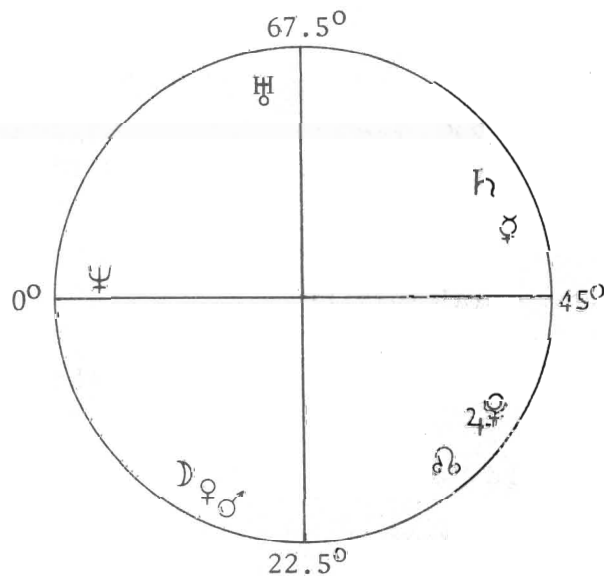
But now if we press , we get

44.52.45

14°53'04" Leo has been mod-ed to 44.53.04.

To begin a 90-dial cluster analysis, let's set up a 90-dial circle. Auto-entering the remaining planets gives us the following mod-ed positions:

☾ = 15.20
 ♀ = 50.11
 ♀ = 18.21
 ♂ = 20.10
 ♄ = 38.26
 ♃ = 57.36
 ♀ = 71.20
 ♃ = 89.04
 ♀ = 39.29
 ☾ = 31.58



The cluster of Moon-Venus-Mars reveals that these planets are all sensitive to transits, progressions, etc., that form with respect to any one of them. We can use this mod-ed natal chart as an underlie for a mod-ed transparency of today's transits, next year's secondary progressions, etc.

All normal DR-70 functions can be used in this mod-ed framework. All the numbers of the natal and derived charts will be modified with respect to the dial setting in effect.

For example,

Sun-Midpoint-Moon was Gemini $15^{\circ}07'$
...will be 30.07 .

Sun-Aspect-Moon was $119^{\circ}32'$
...will be 29.32 .

Note: A ORB and SCAN may be used, but the orb is not mod-ed. The user-defined orb setting remains constant. Orb should be set with this fact in mind.

To return DR-70 to normal operations, set dial back to 360° . Press

Summary:

Set dial to "n".
Proceed with all normal functions.

To resume normal operations, reset dial to 360.



XII. DERIVED CHARTS

Review pages I-02, 03 and 06 if necessary.

Requirement: Natal date, time, latitude and longitude must be already entered under NATAL for the chart number in use.

The procedure for casting derived charts is almost identical with the method used to cast a natal chart. Review section VII if necessary for details. In step two,, press one of the derived chart-type keys (SEC, TERT, ☉ RTN, ☿ RTN ☉ ARC) instead of NATAL. For primary directions, see section XIII.

To cast any one of the derived charts, first check the display lights to see that DR-70 is in the chart number (C1 or C2) of the natal chart from which the derived chart is to be developed. Then (with the shift in the lighted position) press the chart-type key of the derived chart you mean to calculate. Check the display lights again to see that the zodiac type and planetary coordinate you want are in use: if they are not, press the appropriate zodiac type and/or planetary coordinate keys.

Once all the correct lights are illumined on the display (chart number, chart type, zodiac and coordinate --see page IV-05 for coordinate-- go on to enter the date for the derived chart. The date should be the date for which you want to know the directions. progressions, etc. The chart type selected above will be cast as it affects this date. (To get the progressed Moon for 8/7/1895, for example, press 8.7.1895.) The procedure thus far is the same for all derived charts.

With respect to time:

- 1) For the first derived chart in each chart number.

Natal time is copied over into the derived chart bank as soon as a date is entered for the derived chart. Unless otherwise directed by the user, DR-70 will automatically use this natal time. If this use of the natal time for the derived chart is acceptable, no new time-entry is required. If, however, you want to use a different time, enter the new time for the derived chart with the same method that is used to enter a natal time. Review section VII, pages 03-06 if necessary.

- 2) For subsequent derived charts in each chart number.

- a) If the date for the new derived chart is the same as the date used for the previous derived chart in the same chart number:

Unless otherwise directed by the user, DR-70 will use the time it used for the previous derived chart in the same chart number. If the natal time was used for the previous derived chart, it will be used again. But if a new time was entered for the previous derived chart, that time --rather than the natal time-- will be used unless another new time is entered for the derived chart in progress. (If

using the same date for two or more derived charts in series in the same chart number, make no new date-entry for the second and/or subsequent derived charts. The date entered for the first derived chart will automatically be carried over for subsequent derived charts in the same chart number. If, for example, you mean to cast first a secondary and then a tertiary chart for the same date, no new date-entry is required for the tertiary chart: the date used for the secondary chart will automatically be used again.)

- b) If the date for the new derived chart is different from the date used for the previous derived chart of the same chart number:

Natal time will be restored and applied to the derived chart as soon as you make a calculation. Unless a new time is entered after the new date for the derived chart, natal time will be used: any changes from the natal time previously entered for derived charts in the same chart number will be erased.

Condition b) also applies if the same date as was used for the previous derived chart is re-entered for the new derived chart. For example: you start with a natal time of 5.51.35. You enter 8.7.1895 as the date for secondary progressions. You enter 12.00 as the time for the secondary progressions and then calculate the chart. Then you go on to calculate a solar arc chart. You press ARC and then re-enter 8.7.1895 as the date for the solar arc chart. You go on, expecting that 12.00 will automatically be used as the time for the solar arc chart: it will not. As soon as you make a calculation (HOUSE 1 ENTER or ENTER), 5.51.35 will be applied as the time for the solar arc chart. Press TIME RECL and 5.51.35 will appear.

To carry over the time used for the previous derived chart in the same chart number, make no new date-entry for the derived chart in progress. If any new date entry is made --even if the former date is re-entered-- natal time will be used unless a new time is then entered by the user.

With respect to latitude and longitude:

- a) For the first derived chart in each chart number.

Natal latitude and longitude are copied over into the derived chart bank simultaneously with the natal entries. Unless otherwise directed by the user, DR-70 will use natal longitude and latitude for the derived chart(s). If changes from the natal data are required (as, for example, in the solar return chart) make new entries with the methods given on pages 07 and 08 of section VII.

- b) For subsequent derived charts in each chart number.

Unless new entries are made for the chart in progress, DR-70 will use the latitude and longitude of the previous derived chart in the same chart number. Any changes from the natal data will be carried

over and applied to the chart in progress unless:

- 1) new data is entered for the chart in progress, or
- 2) natal latitude and/or longitude is/are changed.

If 2), then the new natal latitude and/or longitude will be immediately copied over into the derived chart bank and applied.

Examples:

All the examples that follow are based on Alan Leo's natal data (date: 8.7.1860, time: 5.51.35, latitude: 51.29.30 N., longitude: 0.0.30 W.). They are cast in the tropical zodiac with planetary longitude as the coordinate in which positions are displayed.

A. For a first derived chart in each chart number.

In section VI, we cast a chart of secondary progressions for Alan Leo. In that example, we took advantage of all the "implied" keys to make the procedure as short as possible. Now we will repeat the procedure as a general example of how to cast a first derived chart in either chart number.

1. Chart number. DR-70 was already in chart one. No pressing of the C1 key was required.
2. Chart type. Press the derived type key for the chart you want to cast. In section VI, we used SEC. The SEC light appeared on the display.
3. Zodiac. We used the "implied" tropical zodiac. No pressing of the TROP key was required. Check the display lights. If DR-70 is already in the zodiac type you want to use, go on to the next step. If not in the required zodiac, press TROP, SIDL or HELIO as necessary.
4. Planetary Coordinate. We used the "implied" P LON. No pressing of the P LON key was required. If you want to calculate derived positions in a coordinate other than the one DR-70 is in, press P LON, P LAT, RA or DECL.
5. Date. We used 8.7.1895. Enter this date in the standard manner (see page VII-03 if necessary).
6. Time. We used the natal "carry-over" time. No new entry was required. If a time other than the natal time is to be used, enter it now (see pages 03-06 of section VII if necessary). To follow the present example, use the natal carry-over time.
7. Latitude. We used the natal "carry-over". No new entry was required. If a latitude other than natal is to be used, enter it in this step. For the present example, use the natal carry-over.
8. Longitude. Same as for 7 above.
9. Auto-Enter the cusps of the derived chart with the method on page IX-03.
10. Auto-Enter the planets with the method given on page IX-04.

This method is used for all derived charts when cast as the first one in each chart number. Simply use the required chart-type key in place of SEC in the example above. The positions displayed in steps nine and

ten will be cast according to the requirements of the derived chart type illuminated on the display.

All astrological functions (ASP, MDPT, PART, A ORB, SCAN, 90 D, etc.) may applied to the derived charts in the same manner as used in a natal chart.

Methods for chart comparison appear in section XIV.

Note 1: When casting the solar return chart, latitude and longitude of the native at the time of the return should be entered in steps seven and eight. When you go on to calculate another derived chart in the same chart number, restore natal latitude and longitude.

Note 2: When in TERT or D RTN, wait 2-2½ minutes if necessary for Γ to appear on entries (date, time, etc.). Then allow 2-2½ minutes again, if necessary for your first answer (HOUSE 1 ENTER, \odot ENTER) to appear. In these chart types, answers appear much more slowly than for the other types.

When in \odot RTN, wait 15-20 seconds for Γ to appear on entries.

B. For subsequent derived charts in each chart number.

Once any derived chart has been calculated, another derived type may be calculated directly in the same chart number and for the same date, time, latitude and longitude. Simply press the new chart-type key: its light will appear on the display.

Begin Auto-Entering cusps or planets.

Example. Having calculated the secondary chart above, we will cast tertiary progressions for the same date, time, latitude and longitude.

Press TERT : the TERT light appears on the display.

With the house dial still set to PLACIDus, press:

(shift normal) HOUSE 1 ENTER

In less than two minutes,

4 19.35

appears as the tertiary Ascendant.
Auto-Enter the remaining cusps.

Put the shift into its lighted position and press:

⊙ ENTER :

The time taken for the Sun to appear on the number register is determined by how much time DR-70 has had between key sequences to precalculate planets in its "idle" time (see XVII-01).

Allow 2-2½ minutes if necessary for

3.15.00.41

to appear as the position of the tertiary Sun. Auto-Enter the remaining planets. Allow for long calculating times.

This method may be used for all the derived chart types once any one of them has been cast for the chart number in use. Simply press the appropriate chart-type key in place of TERT in the example. The exception, of course, arises when the native is at a location other than the place of birth at the time of the solar return. Review both notes on page XII-04.

Answers to HOUSE 1 ENTER and ⊙ ENTER for each of the remaining derived chart types are given below:

| Chart Type | HOUSE 1 | ⊙ |
|------------|-----------|------------|
| RTN* | 4 07.00 | 5.14.52.45 |
| RTN | 12 22.48 | 5.17.54.18 |
| ARC | 7 01.24** | 6.18.40.44 |

*Cast as if Mr. Leo were at his place of birth at the time of the solar return.

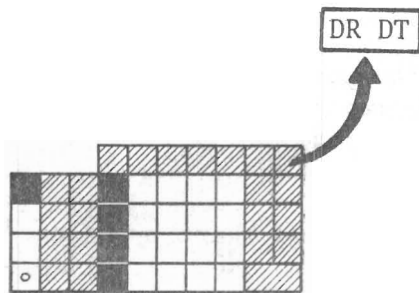
**DR-70 determines the solar arc Ascendant by simply adding the difference between the secondary progressed and the natal Sun to the natal Ascendant. Another method of determining the solar arc Ascendant is:

- Compute the difference between the secondary progressed and the natal Sun.
- Add this difference to the natal M.C.
- Find the sidereal time for this new M.C. and cast the solar arc cusps for that time. The Ascendant will be different from that obtained by DR-70's standard solar arc method.

The method to use for c) above is given on page XVI-26.

Important Additional InformationDerived Date, Julian Date, Sidereal Time

Three keys bear a special relationship to derived charts.



The "derived date" key displays the "as if" birthdate used in calculating derived charts. It is used for display purposes only.

Pressing DR DT ENTER displays the date for which the chart is actually calculated, i.e.. the date to which the figures used in calculating the chart refer.

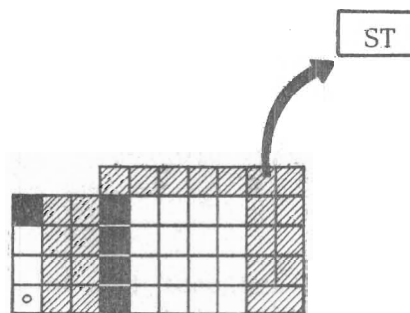
Pressing DR DT ENTER for the example secondary chart displays

9.11.1860

as the "derived date" of the chart.

1895 is thirty-five years later than 1860. The derived date for the secondary progressions is thirty-five years later than the birthdate. The secondary chart is cast "as if" Mr. Leo were born at the same time and place, but thirty-five days later.

You do not have to give DR-70 this date. It uses it automatically. The derived date feature simply tells you what date DR-70 is using for the derived chart in progress.



The ST key is used for displaying and/or entering the sidereal time of a chart.

ST

RECL

displays the sidereal time in use for the chart in progress.

ST

ENTER

does two things:

- 1) The number on the number register is entered as the sidereal time for a chart.
- 2) The number on the display changes its format to GMT.

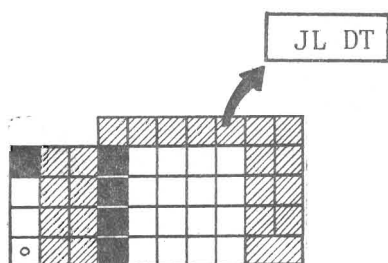
To get the GMT of a derived chart, first press ST RECL. The sidereal time of the chart in progress will be displayed. For the example secondary chart, DR-70 displays:

5.10.33

Then press ST ENTER. The sidereal time will be re-entered, and the format of the number previously on the number register will be changed to GMT. For the example secondary chart, DR-70 displays:

10.19.25

as the GMT (in hours, minutes, seconds).



DR-70 uses December 31, 1899 as the zero-point for its "Julian Date." It measures days \pm from Dec. 31, 1899.

JL DT RECL

displays the "Julian Date" for the chart in use. For the example secondary chart, we get

- 14355

JL DT ENTER

enters the number on the number register as the "Julian Date" for a chart. Use whole numbers only when entering Julian Dates. See page XVI-18 for an example involving Julian Dates.



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November 21, 1978

In our discussions with DR-70 users, we have been asked many times about different methods of calculating secondary progressed house cusps. We wanted to clear up any confusion that might arise when owners expect one type of results and get another type. We planned to include this in our forthcoming newsletter but we'd like you to have this information now.

In the following discussion, we will present three ways of progressing house cusps, using Alan Leo as an example. These methods apply as long as the location remains the same.

The method followed in the DR-70 manual is called Precise Progressed House Cusps. This is based on the fact that each day in the ephemeris, we move through approximately 24 hours and 4 minutes of sidereal time. This extra 4 minutes will move the cusps approximately 1 degree of planetary longitude from one day to the next. Thus if only the birthdays are considered, the house cusps will change approximately one degree per year.

There are two ways of progressing cusps for an intermediate date. The first way assumes that the sidereal time only changes 4 minutes from one ephemeris day to the next. Therefore, an intermediate date will result in house cusps that change some portion of one degree.

The method most easily done on the DR-70 takes the actual sidereal time movement from one day to the next as approximately 24 hours and 4 minutes (depending on the time of year). If a date between two birthdays is desired, (say 6 months after the birthday) the corresponding sidereal time will be approximately 12 hours later. For example, if you enter Alan Leo's chart (see Step 1 on enclosed sheets) on NATAL and then enter the following dates on SEC, you will get these results:

| <u>Date</u> | <u>S.T.</u> | <u>Asc</u> | <u>Sun</u> | <u>Moon</u> |
|-------------|-------------|---------------|---------------|-------------|
| 8.7.1880 | 4.14.18 | Virgo 11.23 | Virgo 4.07.58 | Capr. 18.18 |
| 2.7.1881 | 16.22.03 | Aquarius 8.55 | Virgo 4.37.11 | Capr. 24.31 |

As you know, in 12 hours the zodiac moves 180° . Therefore, the DR-70 indicates an ascendent 180° away from its location on the birthday. This will vary with the time of year. Also, the moon moves approximately 6° during 12 hours. Therefore, using this method, one would have planets' positions consistent with the change in sidereal time. Since the planets will cycle through all the houses each year, this opens up interesting possibilities for timing events.

The first set of accompanying sheets gives the steps involved in calculating cusps for an intermediate date, according to the first method mentioned above. The manual indicates the second method.

Another method of calculating progressed cusps is given on the second set of accompanying sheets. This involves adding the solar arc movement of the sun to the midheaven and calculating new cusps based on that cusp.



If you need more help with these, please let us know. We are also interested in your interpretative results using these methods.

Sincerely,



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SECONDARY PROGRESSED HOUSE CUSPS

(According to the approximate degree per year method)

1. Enter the natal Date, GMT, Place (we are using Alan Leo's)

Date: 8.7.1860

GMT: 5.51.35

LAT: 51.29.30

LONG: 0.0.30

2. SHIFT-ON SEC SHIFT-OFF

Enter the date for the birthday desired. If an intermediate date is desired, enter the birthday prior to it.

DATE 8.7.1880 ENTER

3. DRDT ENTER

This indicates the actual ephemeris day of the birthday entered.

The display reads 8.27.1860

4. SHIFT-ON NATAL SHIFT-OFF DATE ENTER

You are entering the ephemeris' progressed day as if it were a natal chart. At this point you could write out the progressed chart for the birthday desired.

HSE 1 ENTER gives Virgo 11.23

SUN ENTER gives Virgo 4.07.58

MOON ENTER gives Capricorn 18.18

For a day that falls between two birthdays:

5. After step #4 push ST RECL. This gives the sidereal time of the progressed birthday (4.14.18).

The change in ST from year to year (day to day) is approximately 3 minutes 57 seconds per year. This figure divided by 12 months

equals 20 seconds per month. If, for example, we progress this chart for 6 months after the birthday, we have to add $6 \times 20 = 120 = 2$ minutes to the ST. Once the new ST (4.16.18) is typed on the display, push:

6. ST ENTER

The display will change to the new GMT (5.53.35). Now push ST RECL, ST ENTER to make sure the ST was entered properly.

7. HSE 1 ENTER gives Virgo 11.45 which is the progressed ASC for the date in question.

After the houses are recorded, you need the planets:

8. Re-enter the natal date (8.7.1860).

9. SHIFT-ON SEC SHIFT-OFF

Enter the date (2.7.1881) which was 6 months after the birthday, i.e., the date for which the progressed planets are desired.

10. SHIFT-ON SUN ENTER gives the progressed Sun (Virgo 4.37.11)

MOON ENTER gives the progressed moon (Capricorn 24.31)

If you want more precision than the approximate 20 second per month movement, after Step #4 above:

5. On C2, enter the birthday prior to the desired date. (We want progressions for 2.7.1881, so we enter 8.7.1880)

6. JLDT RECL (-7085)

This gives the Julian day for the last birthday.

7. 10B MEM ENTER

This tells the DR-70 to store this day in memory.

8. Enter the desired progressed day (2.7.1881) on the natal mode (this erases Step #5 above).

9. JLDT RECL

This gives the Julian day (-6901) for the date in question.

10. - MEM RECL (-7085) ENTER

The answer of 184 is the difference of the two dates.

11. 60B ÷ 365 ENTER

The answer (0.30.15) indicates in 60 base the proportion of the year that has gone by.

12. X 0.3.57 ENTER

The answer (0.01.59) is how much sidereal time has elapsed over the 6 months.

13. C1 + ST RECL (4.14.18) ENTER

(4.16.17) indicates the interpolated ST for the date in question.

14. ST ENTER

This enters the ST in the DR-70 and indicates the GMT of 5.53.34.

15. HSE 1 ENTER (Virgo 11.44) gives the progressed house cusps.

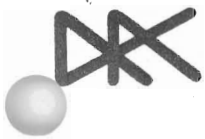
Write those down.

16. To get the planets, re-enter the natal date (8.7.1860).

17. SHIFT-ON SEC SHIFT-OFF

DATE 2.7.1881 ENTER puts in the desired progressed day.

18. SHIFT-ON SUN ENTER gives the progressed Sun (Virgo 4.37.11)



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SECONDARY PROGRESSED CUSPS

(According to the Solar Arc Midheaven method)

1. ENTER the natal Date, GMT, Place on C1 NATAL.

Date 8.7.1860

GMT 5.51.35

LAT 51.29.30N

LONG 0.0.30W

2. SHIFT-ON SOLAR-ARC SHIFT-OFF

Now enter the date for which progressions are desired (wait for the registered mark).

DATE 2.7.1881 ENTER

3. HSE 10 ENTER

This gives the solar arc midheaven (Gemini 6.04)

4. ZOD SHIFT-ON PLON CRDX SHIFT-OFF 60B 0.0 SHIFT-ON

PLAT CRDX RA ENTER

The answer 64.10.53 is the right ascension of the MC.

5. NATAL SHIFT-OFF ÷ 15 ENTER

This gives the ST (4.16.44). RA of the MC divided by 15 always is the sidereal time.

6. ~~SHIFT-ON NATAL SHIFT-OFF~~ ST ENTER

This enters the new ST on the natal chart to give the corrected cusps. The new GMT of 7.12.39 is displayed. Check HSE 10 to make sure it is the same as the solar arc MC calculated in Step #3.

7. HSE 10 ENTER gives Gemini 6.04. Write down the houses.

(If it is not the same, re-enter the ST: 4.16.44 ST ENTER)

To get the progressed planets:

8. Re-enter the natal date (8.7.1860)

9. SHIFT-ON PLON SEC SUN ENTER (Virgo 4.37.11)

This gives the secondary progressed Sun, etc. for the date
(2.7.1881)

XIII. PRIMARY DIRECTIONS

DR-70 calculates primary directions in the tropical zodiac only.

The primary system of directions depicts apparent motions that result from the earth's continued rotation on its axis after the nativity. The hours immediately following birth are corresponded with certain years of life.

DR-70 calculates these directions according to the method presented in Alan Leo's book, The Progressed Horoscope. Consult that text for a detailed discussion of this system.

Calculating primary directions on DR-70 involves a simple technique of chart comparison, similar to that presented in section VI for comparing the natal chart and its secondary progressions for a given date. This technique differs from the other techniques of chart comparison in only one way: the operands are not interchangeable.

When calculating aspects between a natal chart and its secondary progressions, for example, either chart type may be used as first operand. You can press either C1 NATAL PLANET SCAN SEC PLANET ENTER or C1 SEC PLANET SCAN NATAL PLANET ENTER: the angle will be the same in both cases; the only difference will be in which planet is indicated by a blinking light on the display. But when calculating primary directions, the directed planet is always the first operand.

When calculating primary directions, the directed planet is always the first operand.

This rule will be made clear in the examples that follow.

To Calculate Mundane Primary Directions

Requirement: A natal date, time, latitude and longitude must already have been entered for the chart number in use.

We will calculate some primary directions for Alan Leo. If his natal data is not already on your DR-70, enter it now (date: 8.7.1860, time: 5.51.35, latitude: 51.29.30 N., longitude: 0.0.30 W.). We will work in Chart One. (Review section VII if necessary.)

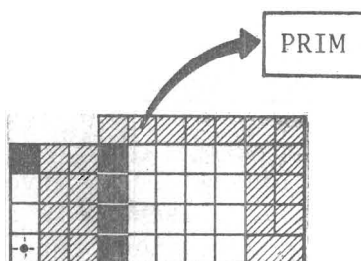
Step one: Chart Number

Natal data can be in either chart number. We are presently working the primary directions of Chart One, Natal. The C1 light should be on.

(When working primary directions for Chart Two, Natal, C2 light should be on. Press C1 or C2 key as necessary.)

Step two: Chart Type

We want primary directions. With the shift key in the lighted position, press:



The PRIM light will appear in red on the display. Any derived chart previously calculated for chart one will be dropped as soon as you enter a new date or calculate a direction.

Step three: Zodiac

Zodiac must be tropical. Be sure TROP light is illumined on the display.

Step four: Planetary Coordinate

Planetary coordinate may be either P LON or RA. We are working with P LON. Press P LON if necessary.

Step five: Give DR-70 the date for which you want to know the directions.

We will calculate directions for August 7, 1895. Enter this date in the normal manner (shift normal: DATE 8 . 7 . 1 8 9 5 ENTER).

Step six: Time

Unless otherwise directed by the user, DR-70 will use the natal time automatically. The natal time was copied directly into the derived chart bank as soon as the date (8.7.1895) was entered. But, for the present example, we will specify GMT Noon. Enter this time in the standard manner (shift normal: TIME 1 2 ENTER).

Step seven: Latitude and Longitude

The natal latitude and longitude were copied into the derived chart bank as soon as the natal entries were made. Unless otherwise directed by the user, DR-70 will automatically apply them to the directed chart. We will use them: no new entries are required.

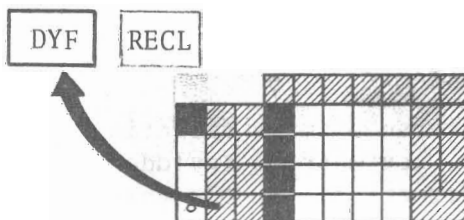
Step eight: Determine or use "implied" degree/year factor.

The hours immediately following the nativity are corresponded with certain years of life. The simplest and most-commonly used method of measuring this correspondence comes from Ptolemy: each degree of right ascension that passes the meridian while the direction is forming equals one year of life. This measure of correspondence will automatically be used unless another is specified by the user.

The DYF key (degree/year factor) is user-definable. Its setting determines how the hours following the birth will be corresponded with later years of the native's life. It "cold-starts" to Ptolemy's

$$1^{\circ} \text{ R.A.} = 1 \text{ year of life}$$

Press:



1.00

should be displayed as the cold-start value of the DYF key. This setting will be "implied" unless another value is entered by the user. We will use it: no new setting is required.

If, however, you wish to use a different value for this key on charts of your own, the entry is made as follows:

To set DYF to $x^{\circ}y'z''$, press:

(shift normal) DYF x . y . z ENTER

Wait for Γ when entering new values.

For the present example, we are using $\text{DYF} = 1.00$.

Step nine: Calculate the directions.

Two methods are available:

"Method One" gives the arc of direction in degrees and minutes (and seconds when the Sun is the only operand). ASP, A ORB, and SCAN functions may be used with this method.

"Method Two" gives the date on which an aspect by direction is exact. Only A ORB and SCAN functions may be used with Method Two.

Example for Method One

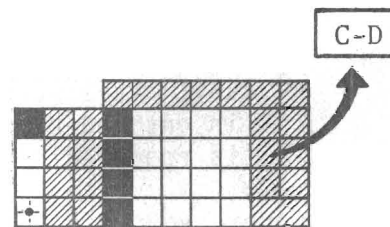
- A. Set 90 D (90-dial key) to any number less than 399. First, recall the current value of the 90-dial key with 90 D RECL. In most cases, 360.00 will be displayed. Since 360 is less than 399, no new setting is required: Method One will automatically be used.

If your dial setting is not less than 399, make it so. (Press, for example, 90 D 3 6 0 ENTER.)

Setting 90 D to any number less than 399 activates Method One.

- B. Calculate the directions.

Both direct and converse primary directions can be calculated. For that reason, the C-D key must be included in the general formula for calculating primary directions. Let's take a moment to discuss this key.



With the shift key in the lighted position, press the C-D key. The DIRect or CONVerse light --whichever is lighted on the display-- will change to its opposite. Press the key a few times: each time you press it, the light which is on will change to its opposite -DIR-CONV-DIR-CONV, etc. As will be illustrated in the example which follows, this key is used to tell DR-70 whether you want it to calculate a direct or a converse primary direction.

Now we are ready to start calculating directions. Of the three functions that can be used (ASP, A ORB and SCAN) in Method One, we will demonstrate the ASP function first. Press:

C1 PRIM ☉ C-D (the DIR light should be illumined before you continue the sequence)

ASP NATAL ☉ ENTER

In about twenty seconds,

28.12.09

is displayed as the arc of direction (seconds are displayed because the Sun is used on both sides of the operation). The DIR light is still on: we know that the angle being displayed is Direct.

Press ENTER : In a little more than twenty seconds,

74.39

is displayed as the arc of direction between the directed Sun and the radix Moon. The directed planet is indicated by a constant light: it is always the planet used as first operand.

The DIR light is still on: we know that the angle being displayed is direct: 74°39'.


Continue to press the ENTER key as in a normal Auto-Entry. Allow DR-70 more calculating time than it requires for charts other than primary directions. DR-70 will continue to calculate direct primary directions in response to the ENTER key. It will flow through the "Chart Comparison Planet Square" (see diagram, page XIV-03). The next direction to appear is Sun-Mercury: 37.47; then comes Sun-Venus: 5.59, followed by Sun-Mars: 179.52 ... etc. "End is displayed when the operation is complete.

To calculate converse directions according to Method One, repeat the key sequence given above. When you reach the C-D key, press it so that the CONV light comes on. Complete the remainder of the key sequence as given.

The Sun-Sun converse direction will be the first answer to appear: 36.47.48. The CONV light will be on. Press ENTER and wait for the Sun-Moon converse direction: 139.39. The next answer to appear after ENTER will be the Sun-Mercury converse direction: 27.13. Continue to press ENTER: the operation is complete when "End" is displayed.

This method will display all the mundane primary directions of the planets as of the date and time entered for the primary chart. To get only the directions that form aspects from DR-70's standard aspect list (see page VIII-07 if necessary), use SCAN.

We will SCAN for directions within one degree of exact. If your orb is not presently set to one degree, set it now (ORB 1 ENTER). Then press:

PRIM  C-D (the DIR light should be on before you continue the key sequence: we will SCAN for the direct directions first)

SCAN NATAL  ENTER

DR-70 will flow through the "Chart Comparison Planet Square" as before. But now it will stop to display only those direct directions which are within one degree of exact. The time it takes to display the first answer is determined by how far into the flow system it must calculate before it finds such an aspect. For the present example, it takes about 1½ minutes of calculating time before

180 0.08

is displayed as the arc of direction between the directed Sun (indicated by a constant light) and Mars. The direction is an opposition within 8' of exact.

Press ENTER : DR-70 will flow onward through the square in search of another major or minor aspect within one degree. For the present example, the next such aspect to appear is:

- 30 0.22

The Moon light is the only planet light that is on. We know that there is a semi-sextile 22' short of exact being formed between the directed and the radix Moon. The answer takes a little over two minutes to appear.

Press ENTER again: in about three minutes, DR-70 will display a sextile with an orb of 11' between the directed Moon and the Dragon's Head. Continue the Auto-Entry in this manner until "End" is displayed.

To SCAN for converse aspects, use the same key sequence as is given above. When you reach the C-D key, press it so that the CONV light comes on. Complete the sequence as given: DR-70 will SCAN for the first converse direction that forms a major or minor aspect within one degree of exact. Allow for lengthy calculating times. The operation is complete when "End" is displayed.

A ORB can also be used with Method One. The procedure differs from SCAN only in that it will "End" when the directions formed by the particular term used as first operand have been calculated.

So far we have demonstrated Method One only for planet-primary-direct/converse-planet. But house cusp directions can be calculated also. To use a house cusp as the directed term, use the specified house cusp as first operand in the formulas already given. When house cusps are used as second-operands, the directions of the directed term to the cusp will be calculated.

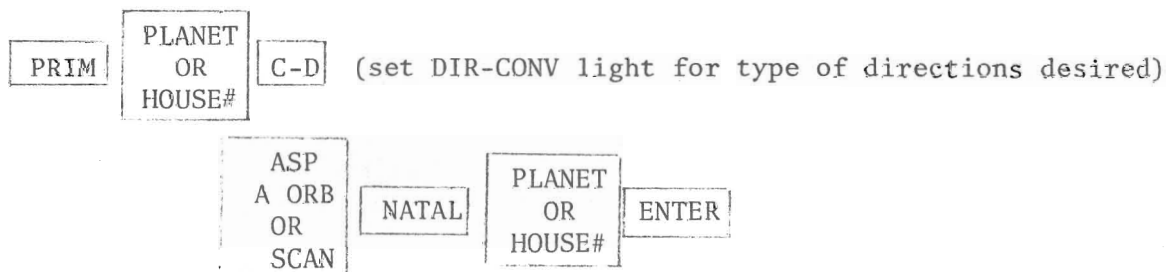
When a house cusp is used as first operand and a planet is used as the second operand, DR-70 will flow through the "Chart Comparison House-Planet Rectangle" (page XIV-07) in response to the ENTER key.

When a planet is used as first operand and a cusp is used as second operand, DR-70 will flow through the "Chart Comparison Planet-House Rectangle" (page XIV-08) in response to the ENTER key. Auto-Entries of this formula are not recommended when working without a printer: DR-70 gives no indication on the display of the cusp in use as second operand.

When cusps are used as both operands, DR-70 flows through the "Chart Comparison House Square" (page XIV-05) in response to the ENTER key. Auto-Entries of this formula are not recommended when working without a printer, for the reason given above.

Summary of Method One

- A. Set 90 D to any number less than 399.
- B. Apply the general formula:



The term used as first operand will be directed. The type of directions (i.e., direct or converse) indicated by the DIR-CONV lights will be calculated. The directions will be displayed in degrees and minutes. Seconds will be displayed only if the Sun is used on both sides of the operation.

Examples for Method Two

There are two approaches to Method Two. Both give the date on which a major or minor aspect is exact by primary direction. Only A ORB and SCAN functions may be used.

Method 2A

1. Set 90 D (90-Dial key) to any number greater than 399. DR-70 will search for and display only those aspects that are equal to "90 D setting minus 400." For example, to search for squares, set the dial to 490: DR-70 will search for aspects that equal "490 (dial setting) minus 400", i.e., 90° aspects. To search for trines, set 90 D to 520: DR-70 will search for "520 - 400", or 120° aspects.

We will search for septiles. Set the 90-Dial (a 60-Base key) to 451.25.43. With the shift in the normal position, press:

(shift normal) [90 D] [4] [5] [1] [.] [2] [5] [.] [4] [3] [ENTER]

Wait for .

2. Set an orb. In the context of Method Two, the orb has a special meaning. It now means years, not degrees. The entry is made in the normal manner. Press:

(shift normal) [ORB] [1] [ENTER]

DR-70 will display only those directions which form septiles within one year of exact (or any other aspect indicated by the 90 D).

In Method Two, orb means years.

(Note: the ORB key still works in 60-Base number* format. To enter an orb of 1½ years, for example, enter an orb of 1.30, which means 1°30'. Before going on with the example, however, make sure that your orb is set to one degree.)

3. Calculate directions with A ORB or SCAN.

We will use SCAN. Again, the C-D key is included in the general formula. The type of direction (i.e., direct or converse) indicated by the DIR-CONV light determines where DR-70 will start the search; but both types will be displayed as they are found. We want to start at the beginning of the flow pattern (see next page). With the shift lighted, press:

[PRIM] [⊙] [C-D] (DIR light on) [SCAN] [NATAL] [⊙] [ENTER]

DR-70 will flow through a system similar to the "Chart Comparison Planet Square". But each "box" of that square now includes four steps, for the following reason:

For all aspects other than the conjunction and the opposition, there are two points (one of greater and one of lesser longitude than the non-directed term) at which the directed term can form an aspect. Each of these points can be reached by either direct or "converse" motion. (For the conjunction and the opposition, of course, there are only two possible aspects: one direct, one converse.)

In Method Two, DR-70 displays both the direct and the converse directions. The DIR-CONV indication in the key sequence only tells DR-70 where to start the search. Both direct and converse directions will be displayed as they are found in the natural order of the flow.

The search goes: PRIM SUN - NATAL SUN
 + direct
 + converse
 - direct
 - converse

for the aspect in use, then

PRIM SUN - NATAL MOON
 + direct
 + converse
 - direct
 - converse

for the aspect in use, then

PRIM SUN - NATAL MERCURY
 + direct
 etc. to ...

PRIM MOON - NATAL SUN
 + direct
 + converse
 - direct
 - converse
 etc.. to "End"

The time required for the first answer to appear is determined by how far DR-70 must go into the flow system before it finds the specified aspect within the specified orb. For the present example, DR-70 takes a little more than eight minutes before

| |
|-----------|
| 5.15.1896 |
|-----------|

is displayed as the date on which Mr. Leo has an exact septile from the directed Venus (constant light) to the Sun. It is direct.

After May 15, 1896 is displayed as the date on which Venus-septile-Sun (direct) is exact, press ENTER: DR-70 will advance to the next septile. Again, the time required for the answer to appear is determined by how far it must go into the flow system. In about four minutes, the next answer appears:

5.13.1896

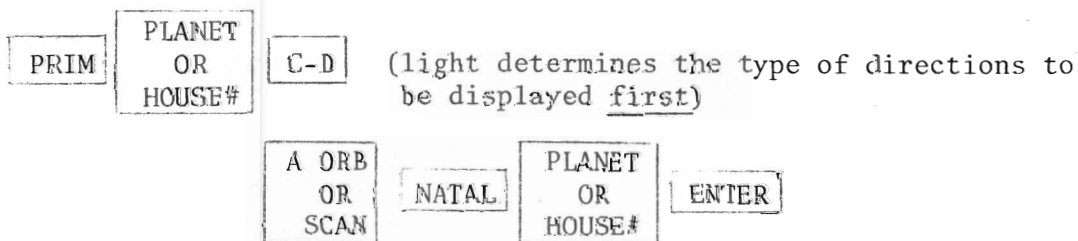
is displayed as the date on which Venus-septile-Moon (direct) is exact.

Continue the Auto-Entry to "End". Allow for long calculating times.

The procedure for using house cusps as a directed term is the same as that discussed for Method One on page XIII-07.

Summary of Method 2A

1. Set 90 D to any number greater than 399. DR-70 will search for aspects equal to "90 D minus 400".
2. Set an orb. The orb, when used in Method Two, means years.
3. Apply the general formula:



The term used as first operand will be directed. The display will give the date on which the specified direction (90 D - 400) is exact. DIR-CONV lights will indicate whether the direction is direct or converse.

Example for Method 2B

Method 2B is more general than method 2A. It searches for the aspects as listed on page VIII-07 (standard A ORB and SCAN functions). It displays both the kind of aspect formed and the date on which the aspect is exact.

1. Set 90 D to 399. This setting tells DR-70, "I want the primary directions that form aspects from your aspect-list." Press:

(shift normal) 90 D 3 9 9 ENTER

2. Set an orb. Again, the orb means years. We will keep the orb as set for Method 2A (page XIII-08). We want only those directions which are within one year of exact.
3. Calculate the directions with A ORB or SCAN.

We will use SCAN. We want to enter the flow pattern on page XIII-09 at the very beginning. Use the C-D key so that the DIR light is on when you press ENTER. With the shift in the lighted position, press:

PRIM ⊙ C-D (DIR light on) SCAN NATAL ⊙ ENTER

DR-70 will flow through the same pattern that was presented on page XIII-09. But now it will search for the aspects included in the standard aspect list (page VIII-07). It will display both direct and converse directions as they are found in the natural order of the flow. The time that elapses before the first answer appears is determined by how far into the flow system DR-70 must advance before it finds one of the standard aspects within the specified orb.

For the present example, DR-70 calculates for about three minutes before the first answer appears:

| | |
|----|-------|
| 60 | 0.746 |
|----|-------|

is displayed. The Sun, as indicated by the constant planet light, is the directed planet. The CONV light is on. The direction is "Sun-sextile-Venus, converse."

In the context of Method 2B, the orb is displayed in decimal years. The direction is .746 years from exact. To get the date on which it is exact, press:

ENTER :

| |
|------------|
| 05.06.1896 |
|------------|

is displayed as the date on which Sun-sextile-Venus, converse is exact: May 6, 1896.

This pattern will be repeated throughout the procedure. In response to the first pressing of the ENTER key, DR-70 will begin its search for an aspect within the specified orb. When it finds one, it will display both the type of the aspect and its orb in decimal years \pm from exact. Then, in response to the next pressing of the ENTER key, it will display the date on which that aspect is exact. The calculating time between answers is determined by how far into the flow system DR-70 must advance to find an angle that meets the aspect/orb requirements.

Press ENTER again: DR-70 will advance to the next aspect. In a little less than two minutes, it displays:

180 0.159

for the present example. Mr. Leo has Sun-opposition-Mars, direct within .159 decimal years of exact as of the date entered in step five. Press ENTER:

10.04.1895

is displayed as the date on which Sun-opposition-Mars, direct is exact: October 4, 1895.

Continue to Auto-Enter in the manner already established by the two examples above. The next answer to appear is Sun-semi-square-Jupiter, converse; it is exact on May 5, 1896. "End" will be displayed when the operation is complete. Allow for long calculating times. Sometimes twenty minutes will elapse before an answer appears.

Summary of Method 2B

1. Set 90 D = 399.
2. Set orb in the standard manner. It will mean years. The orb key reads in degrees/minutes/seconds. To set an orb of $1\frac{1}{2}$ years, for example, press ORB 1 . 3 0 ($1\frac{1}{2}$ degrees).
3. Apply the same general formula as is given on page XIII-10 for Method 2A.

DR-70 will display:

- a) The type of aspect and its orb \pm in decimal years (orb display for 2B --and only for 2B-- reads decimal years) for the first ENTER
- 2) The date on which that aspect is exact in response to the second ENTER

Note: All the methods used in this section can be applied for a specific pair: Auto-Entry is not required. To see the angle for "Moon-Jupiter, direct, for example, set 90 D to less than 399 and press:

PRIM

D

C-D

(DIR light on)

ASP

NATAL

4

ENTER

112.00

is displayed. DR-70 will advance to Moon-Saturn, direct in response to the next pressing of the ENTER key (Method One is in use.)

Preface To Section XIV

DR-70 will handle four charts simultaneously. Each chart is classified according to Chart Number and Chart Type. Requests for data from any of the four charts must be preceded by reference to the appropriate Number and Type.

A few general "rules" will prove useful in the pages that follow:

1. Handle each chart as a whole.
2. Make a full specification of Chart Number and Chart Type for each operand in a comparison operation. This specification can be either explicit (indicated by keys actually pressed) or "implied".
3. When either Chart Number or Chart Type is unspecified for the second operand, DR-70 substitutes the first-operand Number or Type for the unspecified term. Thus, if Number and/or Type is the same for both operands, the second-operand Number and/or Type can be "implied".
4. Any chart can be used as first operand.
5. When an operation is completed, DR-70 resumes the Number and Type of the chart used as first operand. Pressing \odot ENTER will display the Sun's position in the chart most recently used as first operand. The Number and Type lights on the display will indicate the chart in use.

Exceptions to any of these rules will be pointed out as they arise in section XIV.

XIV. CHART COMPARISON

Charts are compared for a variety of reasons. The full significance of a derived chart, for example, is not likely to appear until the natal and derived horoscopes are compared.

But natal charts, too, are often compared. A study of the aspects formed between a pair of natal charts often serves to anticipate, for instance, the likely consequences of a partnership (business, marriage, etc.) in the making. Or, a comparison of both the natal and derived charts for a pair of individuals may prove useful in understanding the dynamics of an existing relationship.

There are many more applications of the techniques of chart comparison. The important point is that mutual aspect patterns, etc., are of interest to practicing astrologers. DR-70 provides all the needed information quickly--for up to four charts at a time.

When it comes to using the computer for chart comparison, there is one basic idea to keep in mind: the key sequences require that you specify in full the chart number and chart type that contains the information you want DR-70 to compare. As you become more familiar with how to use DR-70's "implied" keys and "defaults" (see section XVII), you will find that such a full specification is not always necessary. But for the time being, stick to the idea that it is: you can't go wrong.

Key sequences used in chart comparison "must" include a full specification of the Chart Number and Chart Type for all operands involved in the chart comparison procedure.

In the key sequences that follow, we will use some "mnemonic-shorthand" to conserve space:

C#

will be used as shorthand for "Chart Number", i.e., C1 or C2

CT

will be used as shorthand for "Chart Type." Any one of the seven chart types (natal, secondary, tertiary, etc.) can take its place in a key sequence.

()

Parentheses will be used to indicate keys that can be implied. In the beginning it is a good idea to actually press these keys: you will get a clearer idea of how to handle each chart as a whole. If the key is not pressed, however, DR-70 will use it automatically.

The required shift will not be indicated in the key sequences that appear in this section. It is assumed that the user is familiar with the shift requirements at this stage.

In the examples from section VI, our first occasion to compare charts arose when we had to relate the natal chart to its secondary progressions. We will now examine the details of that comparison procedure.

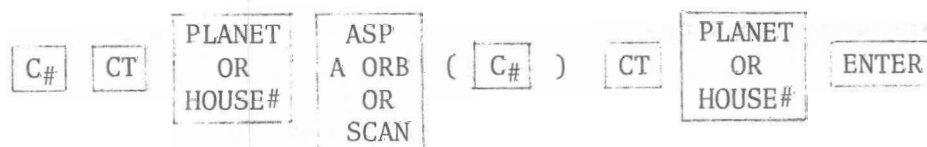
A. Comparison Of The Natal Chart With One Of Its Derived Charts

1. Secondary Progressions

The two charts we will compare are Alan Leo's natal chart and its secondary progressions for August 7, 1895. The first is now operational on DR-70 as "Chart One, Natal". The second is classified as "Chart One, Secondary". The first information we want is:

(a) Aspects

General Chart Comparison Formula For Aspects:



Note that either the natal or the derived chart can occupy the position of first operand in the general formula. CT means "any chart type".

If A ORB or SCAN is used in the above formula, remember to set the orb.

(C#) can be an implied key. If both operands are of the same Chart Number, this key may be omitted from the sequence. If the operands are not of the same Chart Number, the key must be pressed.

In the example from section VI, we set an orb of one degree and scanned for aspects between natal and progressed planets of the same Chart Number.

(1) Planet Aspect Planet

Of the three aspect functions on DR-70, we chose SCAN. Begin the aspect search with the Sun of both charts. In the example, we used the derived chart as the first operand.

Press ENTER and DR-70 will advance in the flow to the next aspect within the specified orb. The progressed ☿ - natal ♀ aspect is displayed. Each subsequent pressing of the ENTER key advances DR-70 to the next aspect in the flow. The resultant aspectarian appears on page

(2) Planet Aspect House or House Aspect Planet (see note, IX-14)

A ORB is the function best suited for this type of analysis. Use a particular house cusp (Ascendant or Midheaven, for example) as first operand. Use the planets of the other chart type as second operand. Set the orb as required. DR-70 will search the planet line of the chart type used as second operand for all major or minor aspects within the specified orb.

Example. Do any of the progressed planets aspect the natal Ascendant?
Set the orb to one degree. Then press

[C1] [NATAL] [HOUSE] [1] [A ORB] ([C1]) [SEC] [☉] [ENTER]

The natal Ascendant's angle to the secondary Sun will be displayed. If no major or minor aspect is formed within the specified orb, the angle will be displayed in the degrees/minutes format. Press the ENTER key and DR-70 will flow through the progressed planet line to the next major or minor aspect. Continue the auto-entry procedure until END is displayed. Then re-define the A ORB sequence using the progressed Moon as second operand, and so on.

Either natal or derived houses may be used as first operand.

(3) House Aspect House (see note, IX-14)

There are two approaches to the problem: it depends on how much information you need. If you want only the aspects between one or two of the natal and progressed cusps (for example, the M.C. and Ascendant of both charts), then it is advisable not to use the auto-enter feature. Simply insert the appropriate cusp numbers into the general formula:

[C#] [CT] [HOUSE#] [ASP] ([C#]) [CT] [HOUSE#] [ENTER]

Example: What is the angle between the progressed M.C. and the natal Ascendant? Press

[C1] [SEC] [HOUSE] [10] [ASP] ([C1]) [NATAL] [HOUSE] [1] [ENTER]

If more complete information is required, do an Auto-Entry with either the ASP or the A ORB function. ASP will give the full details, but it's the long way around.

Example for ASP: Either chart may be used as first operand. We will start with Chart One, Natal. Press

[C1] [NATAL] [HOUSE] [1] [ASP] ([C1]) [SEC] [HOUSE] [1] [ENTER]

(Remember to shift as required by the terms in use. 1st ans. = 23°41'.)

The angle between the two Ascendants will be displayed in degrees and minutes. Each time you press ENTER, DR-70 will advance one step in the "Chart Comparison House Square":

First Operand

Second Operand

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|----|---|---|---|---|------|---|---|---|---|----|----|-----|
| 1 | ↓ | ↓ | ↓ | ↓ | | | | | | | | |
| 2 | ↓ | ↓ | ↓ | ↓ | | | | | | | | |
| 3 | ↓ | ↓ | ↓ | ↓ | | | | | | | | |
| 4 | ↓ | ↓ | ↓ | ↓ | | | | | | | | |
| 5 | ↓ | ↓ | ↓ | ↓ | | | | | | | | |
| 6 | ↓ | ↓ | ↓ | ↓ | ETC. | | | | | | | |
| 7 | ↓ | ↓ | ↓ | ↓ | TO | | | | | | | |
| 8 | ↓ | ↓ | ↓ | ↓ | END | | | | | | | |
| 9 | ↓ | ↓ | ↓ | ↓ | | | | | | | | |
| 10 | ↓ | ↓ | ↓ | ↓ | | | | | | | | |
| 11 | ↓ | ↓ | ↓ | ↓ | | | | | | | | |
| 12 | ↓ | ↓ | ↓ | ↓ | | | | | | | | END |

"Chart Comparison House Square"

Since we used the natal chart as first operand, the natal houses occupy the horizontal line at the top of the diagram. The secondary houses occupy the vertical second-operand positions.

Example for A ORB: (Auto-Enter only when working with printer) First, set the orb. Then press

[C1] [NATAL] [HOUSE] [1] [A ORB] ([C1]) [SEC] [HOUSE] [1] [ENTER]

The angle between the two Ascendants will be displayed. If no major or minor aspect is formed within the specified orb, DR-70 will display in the degree/minute format.

Remember:

At the end of any operation, DR-70 resumes the Chart Number and Chart Type of the chart most recently used as first operand. Pressing \odot ENTER displays the Sun's position in the chart of that number and type.

(b) Midpoints

General Chart Comparison Formula For Midpoints:

C# CT PLANET
OR
HOUSE# MDPT (C#) CT PLANET
OR
HOUSE# ENTER

Any chart can occupy the position of either operand in this formula.

(1) Planet Midpoint Planet

Use the Auto-Enter feature. DR-70 will calculate midpoints according to the flow pattern of the "Chart Comparison Planet Square" (see page XIV-03). Either the natal or the derived chart can be used as first operand. DR-70 ends in the number and type of the chart used as first operand.

Example. What are the midpoints of the natal and secondary progressed planets? Press

C1 NATAL \odot MDPT (C1) SEC \odot ENTER

6.01.46.45

appears on the display: 1°46'45" Virgo.

Auto-Enter the remaining midpoints. Each pressing of ENTER advances DR-70 one step in the "Chart Comparison Planet Square". Natal planets now occupy the first-operand positions.

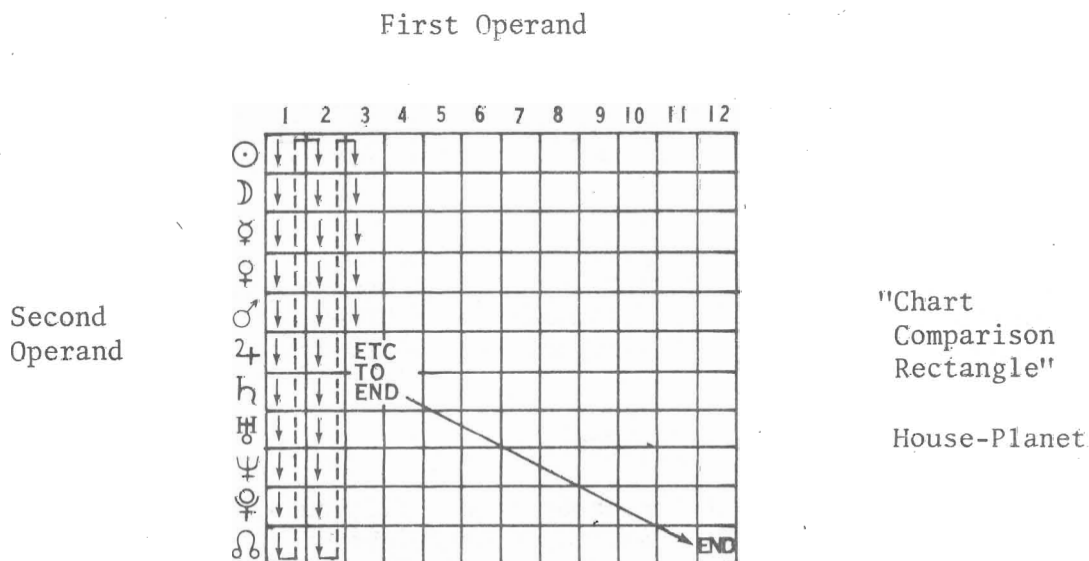
(2) Planet Midpoint House or House Midpoint Planet (see note, IX-14)

Use the Auto-Enter feature. DR-70 will calculate midpoints according to the flow pattern of the "Chart Comparison Rectangle" diagrammed below. Planets or houses of either chart may occupy the position of first operand.

Example. What are the midpoints of the natal houses and the progressed planets? Press

[C1] [NATAL] [HOUSE] [1] [MDPT] ([C1]) [SEC] [⊙] [ENTER]

The midpoint of the natal Ascendant and the progressed Sun is displayed. Then, in response to each pressing of the ENTER key, DR-70 advances one step in the "Chart Comparison Rectangle":



For the present example, the natal houses occupy the position of first operand. They are positioned along the horizontal at the top of the diagram. The progressed planets are being used as the second operand. They occupy the vertical second-operand positions.

If we defined the operation with a planet in the first-operand position, the rectangle would be slightly modified. For example,

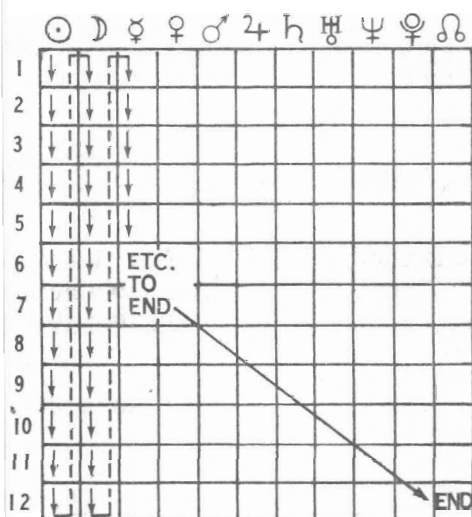
press

[C1] [NATAL] [☉] [MDPT] ([C1]) [SEC] [HOUSE] [1] [ENTER]

DR-70 will now flow through the other type of Chart Comparison Rectangle:

First Operand

Second Operand



"Chart Comparison Rectangle"

Planet-House

In this rectangle, planets occupy the position of the first operand. They are placed along the horizontal at the top of the diagram. Houses are used as second operand. They occupy the vertical.

(3) House Midpoint House

There are two approaches. If you need only a few midpoints (for, example, the Ascendant-Ascendant or Midheaven-Midheaven midpoints), then don't Auto-Enter. Simply insert the appropriate cusp numbers into the general formula:

[C#] [CT] [HOUSE#] [MDPT] ([C#]) [CT] [HOUSE#] [ENTER]

Example. What is the midpoint of the natal Ascendant and the progressed Midheaven? Press

[C1] [NATAL] [HOUSE] [1] [MDPT] ([C1]) [SEC] [HOUSE] [10] [ENTER]

But if you want the full midpoint pattern, Auto-Enter. Define the Auto-Entry with the Ascendant of both charts. Either chart

may be used as first operand.

Example. To find the midpoints of all natal-progressed cusps, press

[C1] [NATAL] [HOUSE] [1] [MDPT] ([C1]) [SEC] [HOUSE] [1] [ENTER]

DR-70 will calculate midpoints according to the flow pattern of the "Chart Comparison House Square" on page XIV-05. The natal houses will occupy the horizontal (first-operand) positions.

Remember:

When either Chart Number or Chart Type is unspecified for the second operand in chart comparison procedures, DR-70 automatically substitutes the Number or Type specified for the first operand.

(c) Arabian Parts

In chart comparisons, Arabian parts may be calculated so as to be projected from the Ascendant or any other house cusp of either of the two charts compared. Consequently, the parts operation between two charts requires the use of both the "short-form" and the "long-form" parts formulas that were introduced in section VIII.

The short-form assumes the Ascendant of the chart number and type used as first operand and thus projects the part from there. Then, when the operation is completed, DR-70 resumes the chart number and type of the first operand. For example, if the first operand is the natal chart and the second operand is a derived chart, the operation will conclude in the natal chart. Pressing \odot ENTER will display the position of the natal Sun.

The short-form assumes the Ascendant of the chart used as first operand and thus projects the part from there. The operation concludes in the chart number and type of the first operand.

The general "short-form" Arabian parts formula for chart comparison is:

[C#] [CT] [PLANET OR HOUSE#] [PART] ([C#]) ([CT]) [PLANET OR HOUSE#]
... [ENTER]

Any chart may take the position of either operand in this short-form sequence. Chart number and/or type of the second operand must be specified if different from the number and/or type of the first operand. Otherwise, the first operand number or type will be used for both operands.

Chart number and/or type must be specified for the second operand if different from the number and/or type of first operand.

The "long-form" is used to indicate that the part is to be projected from the Ascendant of the second operand. When the long-form is used, the operation concludes in the chart number and type of the chart whose Ascendant is specified. Pressing \odot ENTER after the part has been displayed will give the position of the Sun in the chart whose Ascendant is specified. If, for example, the secondary chart is used as second operand and the part is projected from the secondary Ascendant, the operation concludes in the secondary chart.

The "long-form" parts formula for chart comparison concludes in the chart number and type of the chart whose Ascendant is specified.

The "long-form" Arabian parts formula for chart comparison is a bulky one:

[C#] [CT] [PLANET OR HOUSE#] [PART] ([C#]) ([CT]) [PLANET OR HOUSE#]
[PART] [HOUSE] [1] [ENTER]

Note that parts may be projected from second-operand cusps other than the Ascendant, if necessary. Simply press the appropriate cusp number key in place of 1 for the third operand. The operation will conclude in the chart number and type of the chart whose cusp is so indicated.

To project the part from a first-operand cusp other than the Ascendant, specify the appropriate chart number and type for the third operand.

When chart number or chart type is the same for both operands, the long-form can be abbreviated by omitting the appropriate "implied" key for the second operand.

(1) Planet Part Planet

To project the parts from the Ascendant of the first operand, use the short-form:

C# CT PLANET PART (C#) (CT) PLANET ENTER

Any chart may occupy the position of either operand.

Example. What are the parts formed between Alan Leo's natal planets and the progressed planets already calculated?
Press

C1 NATAL ☉ PART (C1) SEC ☉ ENTER

The part between the two Suns will be displayed as projected from the natal Ascendant. Each pressing of the ENTER key will advance DR-70 one step in the "Chart Comparison Planet Square" on page XIV-03. When the operation is completed, DR-70 will be in Chart One, Natal. END will appear on the display.

To project the parts from the derived Ascendant, either

- (a) Use the derived chart as first operand, or
- (b) Use the long-form. Define the Auto-Entry with

C1 NATAL ☉ PART SEC ☉ PART HOUSE 1 ENTER

To project the parts from a cusp other than the Ascendant of either chart, use the long-form. Specify the chart number and type of the third operand if necessary.

(2) Planet Part House or House Part Planet

To project the parts from the Ascendant of the first operand, use the short-form:

C# CT PLANET OR HOUSE# PART (C#) (CT) PLANET OR HOUSE# ENTER

Any chart can occupy the position of either operand.

Example. What are the parts between Alan Leo's natal planets and the secondary progressed house cusps? Press

C1 NATAL ☉ PART (C1) SEC HOUSE 1 ENTER

The part between the natal Sun and the secondary progressed Ascendant will be displayed as projected from the natal Ascendant. Each pressing of the ENTER key will advance DR-70 one step in the "Chart Comparison Planet-House Rectangle" on page XIV-08.

To project the parts from the derived Ascendant, either

- (a) Use the derived chart as first operand, or
- (b) Use the long-form. Define the Auto-Entry with

C1 NATAL ☉ PART SEC HOUSE 1 PART HOUSE 1 ENTER

To project the parts from a cusp other than the Ascendant of either chart, use the long-form. Specify the chart number and type of the third operand if necessary.

Observation: Auto-Entering yields both direct and inverse parts for the operands related. Reading the flow chart top-to-bottom gives the first-operand/second operand part. Reading the flow chart left-to-right gives the second-operand/first-operand part.

Comment: The basic techniques for comparing a natal chart with one of its derived charts have been demonstrated using secondary progressions as a general example. It should now be reasonably simple to apply the same techniques to any derived chart.

2. Tertiary Progressions

Use TERT as the chart type for either operand in the formulas given on pages XIV, 02-11. TERT may be used in place of SEC in any of the examples.

3. Solar Return

Use ☉ RTN as the chart type for either operand in the formulas given on pages XIV, 02-11. ☉ RTN may be used in place of SEC in any of the examples.

4. Lunar Return

Use D RTN as the chart type for either operand in the formulas given on pages XIV, 02-11. D RTN may be used in place of SEC in any of the examples.

5. Solar Arc

Use O ARC as the chart type for either operand in the formulas given on pages XIV, 02-11. O ARC may be used in place of SEC in any of the examples.

6. Primary Directions

The chart-comparison procedures for primary directions are given in section XIII.

B. Comparison of Two Natal Charts: Different Chart Number

Since a comparison of two natal charts calls for a comparison of Chart One with Chart Two, a few words with respect to the construction of Chart Two are required.

With only one exception, the construction of Chart Two is identical with that of the construction of Chart One illustrated in section VII. The one change is at the very beginning, in step one: where you pressed the C1 key before, press the C2 key now. Go on to choose the chart type, zodiac and planetary coordinate. Enter the new date, time, latitude and longitude. Select a house system in step nine; Auto-Enter the house positions as shown in section IX. Auto-Enter the planet positions.

All the analysis techniques introduced for Chart One can be applied to Chart Two. Any of the six derived chart types can be developed. The calculated data will be referenced as Chart Two, Natal or as Chart Two, Derived in the same manner as has already been explained for Chart One.

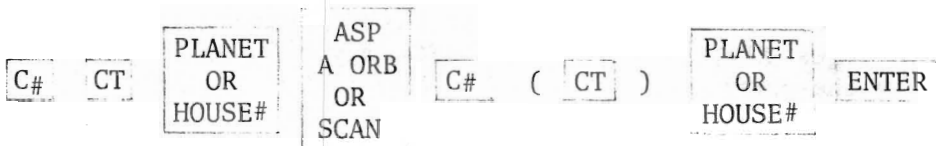
In section VI we had occasion to discuss a special application of Chart Two: transits. For that example, latitude and longitude were irrelevant. When calculating transits, we are not concerned with house cusps; our only interest is in the zodiacal position of the planets at a certain date and time. Location on the earth influences house positions only; it in no way affects the positions of the planets in the zodiac. For that reason, we had no need to specify latitude and longitude. DR-70 substituted the cold-start values, but they had no effect on the information we wanted.

To examine the transits, we did a chart-comparison SCAN for the aspects formed between Chart One, Natal and Chart Two, Natal.

(1) Aspects

The General Chart Comparison Formula For Aspects that was given on page XIV-02 is used here as well. But when comparing charts of different chart number, only the chart type key can be implied for the second operand.

Formula:



Either chart may be used as first operand in this formula. If both charts are of the same type, the chart type of the second operand may be omitted: DR-70 will use the chart type of the first operand for both sides of the operation.

If A ORB or SCAN is used, remember to set the orb.

In the example from section VI, we set an orb of one degree and scanned for aspects between the planets of the two natal charts.

(a) Planet Aspect Planet

We defined the operation in section VI with:

| | | | | | | | |
|----|-------|---|------|----|-------|---|-------|
| C2 | NATAL | ☉ | SCAN | C1 | NATAL | ☉ | ENTER |
|----|-------|---|------|----|-------|---|-------|

| |
|--------|
| 0 0.12 |
|--------|

was the first transit displayed.

Now, each time we press ENTER, DR-70 advances in the "Chart Comparison Planet Square" (XIV-03) to the next aspect within the specified orb. The resultant aspectarian appears on page VI-12.

Generalization: To calculate aspects between two charts, any one of DR-70's three aspect functions can be used. Both ASP, when Auto-Entered, and SCAN will flow through the Chart Comparison Planet Square. The operation should be defined with the Sun from both charts.

If A ORB is used, DR-70 will search the planet line of the chart used as second operand for aspects to the specified first-operand planet only. The operation must be redefined for each first-operand planet.

(b) Planet Aspect House or House Aspect Planet (see note, IX-04)

Apply the general formula from page XIV-14. Either chart may be used as first operand. To Auto-Enter, begin with the Sun of one chart and the Ascendant of the other. If planets are used as the first operand, DR-70 will flow through the Chart Comparison Planet-House Rectangle. If houses are used as first operand, DR-70 will flow through the Chart Comparison House-Planet Rectangle.

Exception: If A ORB is used, DR-70 will search the second-operand Line (see page IX-04) for aspects to the specified first operand only.

Example. Did Alan Leo have any transits to the midheaven on Christmas day, 1895? Press

C1 NATAL HOUSE 10 A ORB C2 (NATAL) ☉ ENTER

DR-70 will search the Planet Line for transiting planets in aspect to the natal midheaven.

(c) House Aspect House

The comparison situation is about the same as the one already discussed for comparing the cusps of a natal and a derived chart on page XIV-04. If only a few of the aspects between important cusps are required, don't Auto-Enter. Simply insert the appropriate cusp numbers into the general formula:

C# CT HOUSE# ASP C# (CT) HOUSE# ENTER

Note that chart number must now be specified for both sides of the operation; chart type has become the key that can be "implied".

If more complete information is required, re-read the discussion that begins on page XIV-05. What there applied to chart type now applies to chart number.

Example for ASP : Either chart may be used as first operand. For

C1 NATAL HOUSE 1 ASP C2 (NATAL) HOUSE 1 ENTER

Chart One cusps will occupy the horizontal line at the top of the Chart Comparison House Square.

(2) Midpoints

The General Chart Comparison Formula For Midpoints that was given on page XIV-02 is used here as well. But when comparing charts of different chart number, only chart type can be implied for the second operand. Chart number must be specified for both operands.

Formula:

| | | | | | | | |
|------|------|--------------------------|--------|------|----------|--------------------------|---------|
| [C#] | [CT] | [PLANET OR HOUSE#] | [MDPT] | [C#] | ([CT]) | [PLANET OR HOUSE#] | [ENTER] |
|------|------|--------------------------|--------|------|----------|--------------------------|---------|

Insert the appropriate planets or houses from either chart into the general formula. Contents of either chart may be used as first operand.

If both operands are planets, DR-70 will flow through the Chart Comparison Planet Square. The planets from the chart used as first operand will occupy the horizontal.

For Planet-Midpoint-House, the Chart Comparison Planet-House Rectangle will be used.

For House-Midpoint-Planet, the Chart Comparison House-Planet Rectangle will be used.

If House-Midpoint-House, the Chart Comparison House Square will be used. The chart used as first operand will occupy the horizontal.

Review pages XIV, 06-09. What applied there for chart type applies here for chart number.

Example. What are the midpoints between the transiting planets and Alan Leo's natal planets? Define the Auto-Entry with

| | | | | | | | |
|------|---------|-----|--------|------|-------------|-----|---------|
| [C2] | [NATAL] | [⊙] | [MDPT] | [C1] | ([NATAL]) | [⊙] | [ENTER] |
|------|---------|-----|--------|------|-------------|-----|---------|

Observation: The operation will conclude in Chart Two, Natal. Pressing ⊙ ENTER will display the transiting Sun.

When comparing charts of a different number, specify the chart number for both operands. If charts are of the same type, chart type can be implied for the second operand.

(3) Arabian Parts

The General Formulas given on pages XIV-09 and XIV-10 are used here as well. But now, chart number must be specified for both operands in the short-form. If the long-form is used to project parts from a first-operand cusp other than the Ascendant, specify the third-operand number as well. Only chart type can be implied for the second operand.

Review pages XIV, 09-12. What applied there for chart type applies here for chart number.

Example. What parts would be formed between Alan Leo's natal planets and the natal planets of an individual born at noon on December 25, 1895? We want the parts projected from Alan Leo's Ascendant. Define the Auto-Entry with

C1 NATAL ⊙ PART C2 (NATAL) ⊙ ENTER

DR-70 will flow through the Chart Comparison Planet Square. Chart One planets will occupy the horizontal.

C. Comparison of Charts of Different Number and Type

It is specifically this situation that necessitates the general rule for full specification of Chart Number and Chart Type for both operands.

Chart Two, Natal may be directed or progressed by the same methods as are described for Chart One in sections XII and XIII. The result of producing a derived chart for chart two is that there are now four operative charts on the machine: pressing either chart number or chart type alone is not sufficient indication for DR-70 to know which chart you want. The failure to make such specifications involves you in DR-70's "default" procedures: you may or may not get the chart you want.

For the time being, avoid activating the wrong chart by specifying in full both chart number and chart type for both operands in the general chart comparison formulas.

Example. For aspects between Chart One, Secondary and Chart Two, D RTN , define the Auto-Entry with

C1 SEC ⊙ ASP C2 D RTN ⊙ ENTER

DR-70 will flow through the Chart Comparison Planet Square. Chart One, Secondary planets will occupy the horizontal.

Observation: The operation concludes in Chart One, Secondary.

XV. COORDINATES

Keys discussed:

- A. LONG LAT
- B. NW SE
- C. P LAT P LON RA DECL
- D. CRD X

Additional discussion:

- E. Terrestrial Light
- F. Parallels

Astrology requires the use of three coordinate systems. Terrestrial longitude and latitude define positions on the earth. Planetary (or celestial) longitude and latitude define positions in space with respect to the ecliptic. Right ascension and declination define positions in space with respect to the celestial equator.

A. LONG LAT

Terrestrial longitude is measured along the earth's equator. It defines positions on the earth in terms of their degrees/minutes/seconds (0-180) east or west of the Greenwich Meridian.

For our example horoscope, the longitude of birth is 0°0'30" west of Greenwich. The procedure for entering this longitude into DR-70 is given on page VII-07.

Terrestrial latitude defines positions on the earth in terms of their degrees/minutes/seconds (0-90) north or south of the equator.

The latitude of birth for our example horoscope is 51°29'30" north of the equator. The procedure for entering this latitude into DR-70 is given on page VII-67.

B. NW SE

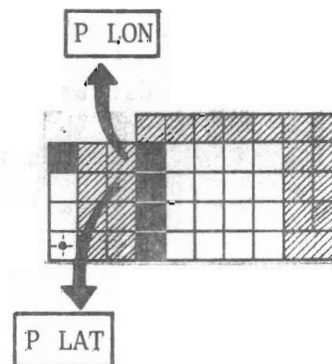
These keys are "coordinate modifiers". When applied to latitude, planetary latitude or declination, NW reads as "north" and SE reads as "south". The same keys, when applied in a longitude (terrestrial only) sequence, read "west" and "east", respectively. They are not required when planetary longitude or right ascension is in use.

DR-70 cold-starts to NW . Unless otherwise directed by the user, DR-70 will use "north" for LAT , P LAT , and DECL ; it will use "west" for LONG .

The positions of these keys are illustrated on page VII-07.

C. P LON P LAT RA DECL

Positions in the celestial sphere are referenced to both the ecliptic and the celestial equator.

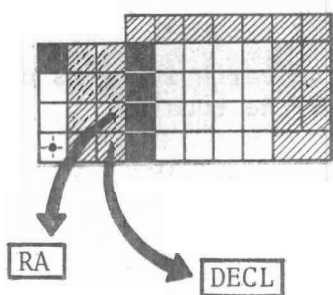


Planetary longitude and planetary latitude are the coordinates that define celestial positions in the ecliptic system.

Planetary longitude is the angular measure of signs/degrees/minutes/seconds along the ecliptic. Measurement begins at 0° Aries. In the Tropical zodiac, 0° Aries is defined by the vernal equinox. In the Sidereal zodiac, 0° Aries is defined in reference to a fixed star. (See section I.)

Planetary latitude is the angular measure of degrees/minutes/seconds (0-90) north or south of the ecliptic.

An illustration of these coordinates is given on page I-04.



Right ascension and declination are the coordinates that define celestial positions in the equatorial system.

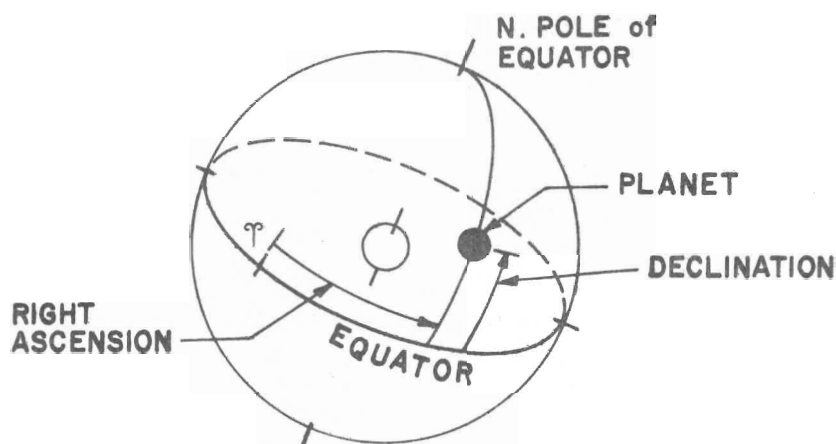
Right ascension is the angular measure of degrees/minutes/seconds (0-360) eastwards along the celestial equator. It may also be measured as hours of time. Measurement begins at 0° Aries.

Declination is the angular measure of degrees/minutes/seconds (0-90) north or south of the celestial equator.

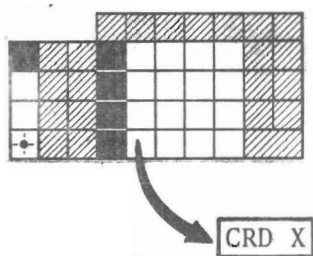
The celestial equator is a geometric projection of the earth's equator into space.

In the diagram below, the celestial sphere is illustrated with the earth at its center.

Equatorial
System:



D. CRD X



The CRD X key is used for coordinate exchange. Given a pair of planetary coordinates, CRD X will calculate a third. (Exception: Declination and P LAT cannot be used as the "given" pair.)

Given any of the coordinate-pairs on the left side of the following table, CRD X will calculate either of the two coordinates on the right. Both may be calculated, but only one at a time. The CRD X operation must be repeated to obtain the remaining right-hand coordinate.

Two other things are required:

- 1) Date.
- 2) Proper number format for the requested coordinate.

Given:

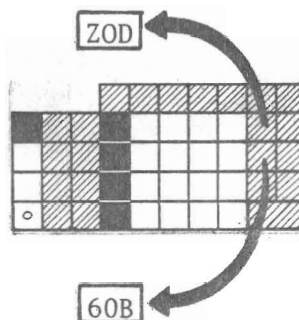
CRD X will calculate:

| | |
|--------------------|----------------|
| A. P LON and P LAT | RA or DECL |
| B. P LON and DECL | RA or P LAT |
| C. P LON and RA | P LAT or DECL |
| D. RA and P LAT | P LON or DECL |
| E. RA and DECL | P LON or P LAT |

Do not use declination and planetary latitude as the "given" pair. DR-70 will not accept them as a pair for the coordinate exchange operation.

Two things are required:

- 1) Date. The angle of the ecliptic to the equator is slowly but constantly changing. Just as the relation of the Tropical and the Sidereal zodiacs to one another changes with the years, so does the relation between the ecliptic and the equator. Thus, the angle between the ecliptic and the equator (called the "obliquity" of the ecliptic) is different for different years. You must tell DR-70 the date for which you want it to calculate coordinates. The appropriate adjustment will be made internally.
- 2) Proper number format for the requested coordinate. Planetary longitude is expressed in the zodiacal number format; planetary latitude, right ascension and declination are expressed in 60-base. DR-70 must be in the number format required by the term in use.



Each coordinate key should be prefixed or followed by the key that activates the number format required by the coordinate in use.

Example for number format.

Let A = given longitude
 B = given latitude
 C = requested right ascension (to be calculated)

Press

[P LON] [ZOD] [A] [CRD X] [P LAT] [60B] [B] [CRD X] [RA (60B)] [C]
 [ENTER]

(Shift as required.)

Planetary longitude requires the zodiac number format.* Thus, ZOD follows P LON . Latitude requires the 60-base number format. 60B follows P LAT . Right ascension requires 60-base. Thus, 60B should follow RA .

In the present example, however, the 60B required for RA can be an implied key: DR-70 remains in the last-specified number format until a new number format is specified.

The display lights will indicate which number format is in use. If ZOD , a zodiacal sign will be illumined for the number in use; if 60B , the 60B light will be illumined; if neither of these two systems are indicated, decimal is in use.

*Exception: When in 90-dial, planetary longitude is handled in 60-base.

Example 2.

Let A = given planetary longitude
 B = given planetary latitude
 C = requested right ascension (to be calculated)

Press

[P LAT] [60B] [B] [CRD X] [P LON] [ZOD] [A] [CRD X] [RA] [60B] [C]
 [ENTER]

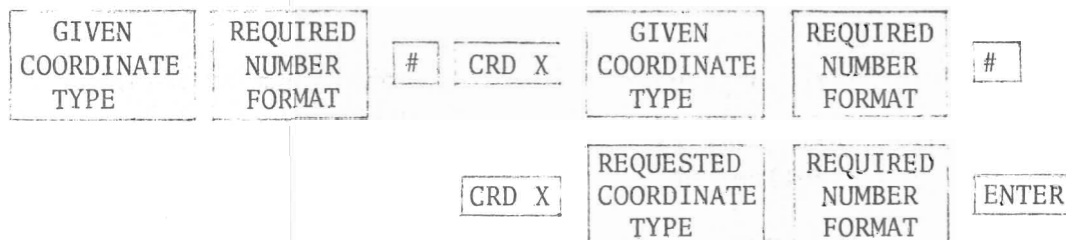
Here, the 60B associated with RA cannot be implied. The key must be pressed. If the 60B is omitted in this example, DR-70 will attempt to calculate right ascension in the zodiac number format. The answer, if any, will be useless.

DR-70 remains in the last-specified number format until a new number format is specified.

Summary of CRD X:

To perform coordinate-exchange:

- 1) Set DATE . Unless otherwise instructed by the user, DR-70 will operate with the date last used (for any chart on the machine).
- 2) Select a pair of coordinates from the "given" side of the table on page XV-04. Pick a pair that can be used to calculate the desired third coordinate.
- 3) Specify number formats as required by the term(s) in use in the following formula:

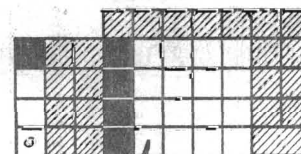


here means the number value (degrees/minutes/seconds or signs/degrees/minutes/seconds) of the given coordinate.

Related Information

- 1) A minus sign (-) is used to indicate south declination. The S light will not be lighted.
- 2) If you get different answers for planetary longitude, for "D" and "E" given coordinate-pairs, there is nothing wrong with your machine. Different formulas are used. "E" is more accurate.
- 3) If the "given" latitude or declination is south, the CHS (change-sign) key must be used. To illustrate:

In example 1 (page XV-05), let the given latitude be south. The formula now becomes:



P LON ZOD A CRD X P LAT 60B B CHS

CRD X RA (60B) C ENTER

(Shift as required by the terms in use.)

Additional Discussion

E. Terrestrial Light

Note that the terrestrial light is not associated with terrestrial longitude and latitude. It is used to indicate whether the coordinate in use is from the ecliptic or the equatorial system of planetary coordinates. See section IV, page 05. (Exception: CRD X ; see "Related Information" page XIV-06.

F. Parallels

Planets that have the same declination are said to be in "parallel". Some astrologers also allow for parallels by planetary latitude.

If both bodies are north or south, a parallel is formed. When one body is north and the other is south, they are said to be in "contra-parallel".

To compute parallels by declination:

- 1) Set planetary coordinate to DECL
- 2) Apply the formula

| | | | | | | | | |
|--------|---|------|---|----------------------------|---|--------|---|-------|
| PLANET | (| DECL |) | ASP A ORB OR SCAN | [| PLANET |] | ENTER |
|--------|---|------|---|----------------------------|---|--------|---|-------|

DR-70 will traverse the flow system required by the terms in use. (Auto-Entry)

Example: To calculate parallels for a single chart, set an orb and then define the Auto-Entry with

| | | | | |
|---|------|------|---|-------|
| ☉ | DECL | SCAN | D | ENTER |
|---|------|------|---|-------|

Read conjunctions only.

To compute parallels by planetary latitude:

- 1) Set planetary coordinate to planetary latitude
- 2) Apply the formula

| | | | | | | | | |
|--------|---|-------|---|----------------------------|---|--------|---|-------|
| PLANET | (| P LAT |) | ASP A ORB OR SCAN | [| PLANET |] | ENTER |
|--------|---|-------|---|----------------------------|---|--------|---|-------|

Example: To calculate these parallels for a single chart,
set an orb and then define the Auto-Entry with

[⊙] [P LAT] [SCAN] [D] [ENTER]

To compute contra-parallels by declination:

- 1) Set planetary coordinate to DECL
- 2) Request positions of the planets to be studied (⊙ ENTER,
D ENTER , etc.)
- 3) If a planet included in the operation is south, use the CHS
key as follows. Apply the formula

[PLANET] ([DECL]) ([CHS]) [ASP] [PLANET] ([CHS]) [ENTER]

Use CHS only
if planet is south.

To compute contraparallels by planetary latitude:

The procedure is the same as for contraparallels by declination.
Use P LAT as the coordinate in place of DECL .

Note: Contraparallels cannot be Auto-Entered. Each must be
individually calculated by the user as demonstrated.

XVI. MATHEMATICAL OPERATIONS

DR-70 solves user-defined mathematical problems. It adds, subtracts, multiplies and divides in three number formats. The computer responds to the digit keys (white keys 0-9 on the keyboard) in terms of the number format in use.

A. Number Formats

1. 10-Base, or Decimal Number Format.

The decimal system is in common use for counting dollars and cents, metric measures, and so forth. We will demonstrate how to add, subtract, multiply and divide decimals on DR-70:

Cold-start the computer (press RESET or re-start the machine).

a) Addition

With the shift in its normal position, press:

1 + 1 ENTER

2

is displayed.

Press:

1 + 1 . 5 ENTER

2.5

is displayed.

b) Subtraction

With the shift in its normal position, press:

3 - 2 ENTER

1

is displayed.

Press:

3 - . 5 ENTER

2.5

is displayed

c) Multiplication

With the shift key in its normal position, press:

2 X 2 ENTER

4 is displayed.

Press: 2 X 2 . 5 ENTER

5 is displayed.

d) Division

With the shift key in its normal position, press:

2 ÷ 2 ENTER

1 is displayed.

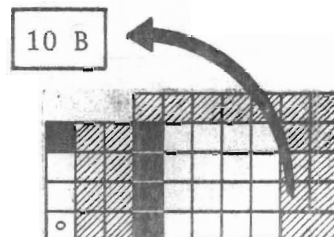
Press: 2 ÷ . 2 ENTER

10 is displayed.

From "cold-start" DR-70 responds to digit keys used in mathematical operations in terms of the 10-Base number format.

When the 10-Base system is in use, the decimal point (.) is used as in standard decimal calculations. Digits to the left of the decimal point are integers. Digits to the right of the decimal point are decimal fractions. If no decimal point appears, the number is an integer.

To access the 10-Base number format without cold-starting the computer, simply press:



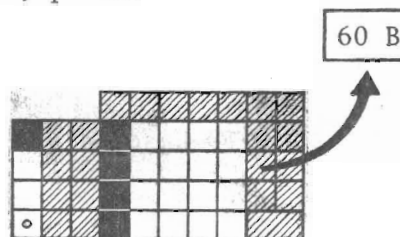
DR-70 will respond to digit keys in the 10-Base number format until another number-format key is pressed.

2. 60-Base

The 60-Base number format is used to measure time (hours, minutes, seconds), to divide circles and spheres (degrees, minutes, seconds), etc.

We will use the same digit keys as for the 10-Base examples to illustrate the differences involved in working with the 60-Base number format.

To put DR-70 into the 60-Base format, press:



The 60 B light will appear on the display.

a) Addition

With the shift key in its normal position, press:

1 + 1 ENTER

2.00

hrs./min.
or
deg.

is displayed. The "2" can be read as either hours or degrees. The ".00" is read as minutes.

In the 60-Base number format, digits to the left of the first decimal point are read as either hours or degrees. Digits to the right of the first decimal point are read as minutes.

Press:

1 + 1 . 5 ENTER

2.05

hrs./min
or
deg.

is displayed.

1.5 is accepted in 60-Base as 1°05'. You will get the same answer to 1 + 1 . 0 5 ENTER. But if you pressed 1 . 5 0, the . 5 0 would be accepted as 50 minutes.

Now press:

1 + 1 . 5 . 5 ENTER

2.05.05

is displayed.

hrs./min./sec.
or
deg.

In 60-Base, digits to the right of the second decimal point are read as seconds.

You will get the same answer for 1 + 1 . 0 5 . 0 5.

b) Subtraction

With the shift key in the normal position, press:

3 - 2 ENTER

1.00

reads as one hour-or-degree, no minutes.

Press:

3 - . 5 ENTER

2.55

reads as two hours-or-degrees, fifty-five minutes. In subtracting .5, you subtracted five minutes from three hours-or-degrees. You would get the same answer for 3 - . 0 5.

Now press:

3 - . 5 . 5 ENTER

2.54.55

is displayed. You subtracted five minutes and five seconds from three hours-or-degrees. The answer is "two hours-or-degrees, fifty-four minutes, fifty-five seconds". You would get the same answer for 3 - . 0 5 . 0 5.

c) Multiplication

With the shift key in the normal position, press:

2 X 2 ENTER

4.00

is displayed.

hrs./min
or
deg.

Press:

2 X 2 . 5 ENTER

4.10

is displayed. . 5 means "five minutes".
You will get the same answer for 2 X
2 . 0 5. But 2 X 2 . 5 0 would
give 5 . 40. The multiplication would
then be: "two hours-or-degrees times two
hours-or-degrees fifty minutes = five
hours-or-degrees, forty minutes"

Press

2 X 2 . 5 . 5 ENTER

4.10.10

reads "four hours-or-degrees, ten minutes,
ten seconds."

d) Division

With the shift key in the normal position, press:

2 ÷ 2 ENTER

1.00

reads "one degree, no minutes".

Press:

2 ÷ . 2 ENTER

60.00

reads "sixty hours-or-degrees". You di-
vided two hour-or-degrees by two minutes.
You would get the same answer for 2 ÷
. 0 2.

Press:

2 . 2 . 2 ENTER

59.00.59

reads "fifty-nine hours-or-degrees, no minutes, fifty-nine seconds". You divided two hours-or-degrees by two minutes, two seconds.

To double-check the answer above, press:

X . 2 . 2 ENTER

2.00

appears: it is the two hours-or-degrees you originally divided by two minutes, two seconds (above).

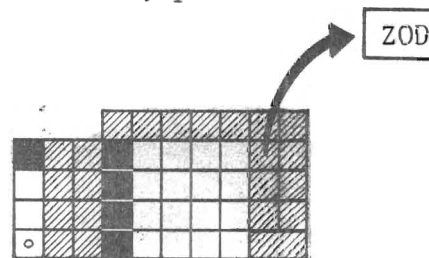
This "double-checking" of the division above illustrates how DR-70's "Display Carry-Over" is used in chain mathematics. The 59.00.59 that was on the number register was used as the first operand in the multiplication that followed. This feature will be demonstrated again in "Applications" below (subsection C).

3. Zodiac Number Format

The ZODIAC number format expresses divisions of the ecliptic in terms of zodiacal signs, degrees, minutes and seconds. The ecliptic is first divided into twelve equal signs of thirty degrees each. Each degree is then subdivided into sixty minutes. Then each minute is subdivided into sixty seconds.

We will continue to use the same digit keys as were used in the 10-Base and 60-Base examples. The differences involved in working with the zodiac number format will be obvious.

To put DR-70 into the ZODIAC number format, press:



a) Addition

With the shift in the normal position, press:

1 + 1 ENTER

| | |
|---|-------|
| 1 | 00.00 |
|---|-------|

sign / deg. / min.

is displayed. Reading the zodiac display in the normal manner, we have an answer of 0 Aries: the Aries light is illumined above the number register. Why?

The addition above read "first sign plus first sign". No degrees or minutes were specified. DR-70 assumed you meant "0° of the first sign plus 0° of the first sign". It displayed the answer: 0° Aries.

But now press:

| | | | | | | | |
|---|---|---|---|---|---|---|-------|
| 1 | . | 1 | + | 1 | . | 1 | ENTER |
|---|---|---|---|---|---|---|-------|

| | |
|---|-------|
| 1 | 02.00 |
|---|-------|

is displayed. You added "one degree of the first sign plus one degree of the first sign". DR-70 displayed the answer: 2° Aries.

In like manner, the

| | | | | | |
|---|---|---|---|---|-------|
| 1 | + | 1 | . | 5 | ENTER |
|---|---|---|---|---|-------|

of the previous examples now displays:

| | |
|---|-------|
| 1 | 05.00 |
|---|-------|

You added "first sign (and no degrees) plus five degrees of the first sign". The answer is 5° Aries.

Let's try one more example. Press:

| | | | | | | | |
|---|---|---|---|---|---|---|-------|
| 2 | . | 5 | + | 3 | . | 8 | ENTER |
|---|---|---|---|---|---|---|-------|

| | |
|---|-------|
| 4 | 13.00 |
|---|-------|

is displayed. You added five degrees Taurus (second sign) to eight degrees Gemini (third sign). The answer is 13° Cancer.

To perform the above additions, DR-70 internally converts the zodiacal positions to their 60-Base equivalent. To add the Taurus and Gemini positions, for example, it first converts 5° Taurus to 35°. 8° Gemini equals 68°. The resultant sum (103°) is then expressed in the zodiac number format as 13° Cancer.

So far we have added only zodiacal degrees according to their sign position. But calculations in the zodiac number format can be carried into minutes and seconds as well.

Press:

1 . 1 . 1 + 1 . 1 . 1 ENTER

1 02.02

is displayed.

sign / deg. / min

When signs, degrees and minutes (only) are displayed in the zodiac number format, the sign is set off to the left of the degree/minute display by a space. The number to the left of the decimal point reads as degrees; the number to the right of the decimal point reads as minutes.

Now press:

1 . 1 . 1 . 1 + 1 . 1 . 1 . 1 ENTER

The calculation is carried into zodiacal seconds. The display reads:

1.02.02.02

sign/deg/min/sec

When seconds are displayed in the zodiac number format, the sign is not set off by a space: three decimal points are used. The number to the left of the first decimal point refers to the sign; the number to the left of the second decimal point refers to zodiacal degrees; the number to the left of the third decimal point indicates minutes; the last set of numbers indicates seconds.

b) Subtraction

With the shift key in the normal position, press:

3 - 2 ENTER

2 00.00

is displayed. The 60-Base equivalent of this subtraction is 60^0 (origin of the third sign) minus 30^0 (origin of the second sign). The difference is 30^0 , which has its zodiacal equivalent at 0^0 Taurus (origin of the second sign).

Press:

3 - . 5 ENTER

DR-70 will display an incorrect answer:

3 25.00

To get the correct answer, you must associate a zodiacal sign with both terms in the operation. Press:

3 - 1 . 5 ENTER

2 25.00

The correct answer to the subtraction is displayed.

When using the zodiac number format, always indicate a zodiacal sign with both terms in any calculation. This rule applies to addition, subtraction, multiplication and division. If either term is left unassociated with a sign, your answer will be incorrect.

c) Multiplication

With the shift key in its normal position, press:

2 X 2 ENTER

| | |
|----|-------|
| 31 | 00.00 |
|----|-------|

is displayed. Ignore the "31". Read the degree/minute display and the sign light that appears above the number register: 0° Libra.

The 60-Base equivalent of this multiplication is "30° (origin of the second sign) times 30° = 900°." 900° takes us midway into the third round of the ecliptic, to its zodiacal equivalent: 0° Libra.

Press:

| | | | | | |
|---|---|---|---|---|-------|
| 2 | X | 2 | . | 5 | ENTER |
|---|---|---|---|---|-------|

| | |
|----|-------|
| 36 | 00.00 |
|----|-------|

is displayed. The 60-Base equivalent of this multiplication is $30^\circ \times 35^\circ = 1050^\circ$, which is 330° degrees into the third round of the ecliptic. We arrive at 0° Pisces.

Multiplication can also be carried to zodiacal minutes and seconds. Simply use and read the decimal point as is illustrated for zodiacal addition.

d) Division

With the shift key in its normal position, press:

| | | | |
|---|---|---|-------|
| 2 | ÷ | 2 | ENTER |
|---|---|---|-------|

| | |
|---|-------|
| 1 | 01.00 |
|---|-------|

is displayed. You have divided 30° by 30°.

We know, from the example of zodiacal subtraction, that $2 \div .2$ will give us an incorrect answer. For that reason, press:

| | | | | | |
|---|---|---|---|---|-------|
| 2 | ÷ | 1 | . | 2 | ENTER |
|---|---|---|---|---|-------|

| | |
|---|-------|
| 1 | 15.00 |
|---|-------|

is the answer. We divided 30° by 2°. DR-70 displays the zodiacal equivalent of the 15° (60-Base) as 15° Aries.

Division can also be carried to zodiacal minutes and seconds. Simply use and read the decimal point as is illustrated for zodiacal addition.

Additional Comments on Number Formats

The examples on the preceding pages have illustrated how to perform simple arithmetic in each of DR-70's three number formats. But there are a few more things you should know about the use of these three formats before going on to applications.

1. Mixing Number Formats and Chain Mathematics

Most of the practical applications of DR-70's arithmetical functions to the problems of astrology involve the use of more than one number format. Calculating the positions of planets in a harmonic chart is one example of this use of mixed number formats.

To calculate the position of Alan Leo's fifth harmonic Sun, for example, we must multiply the zodiacal position of the natal sun by a 10-Base five. In operations of this sort, each number must be associated with the number format appropriate to itself.

If Alan Leo's natal information is not presently active on your DR-70, enter it now. (Date: 8.7.1860; Time: 5.51.35; Latitude: 51.29.30 N.; Longitude: 0.0.30 W.) Then press:

  ENTER

5.14.52.45

is displayed as the position of the natal Sun. Now we must associate this number with its appropriate number format. Put the shift key back into its normal position and press:

ZOD

In the arithmetic that follows, DR-70 will read 5.14.52.45 in the zodiac number format. This number, presently on the display, will be "carried over" as the first operand in the multiplication that follows. Press:

X 5 (and qualify the 5 as 10-Base with) 10B

Press ENTER

23.14.23.45

tells us that Alan Leo's fifth harmonic Sun is at 14°23'45" of Aquarius.

In calculating this position, we had to

- a) Mix number formats, and
- b) Use the display carry-over feature for chain math.

2. Which Number Format?

Given that many situations will arise in which a mixing of number formats is required, it is important to know which number format DR-70 is using at any given moment. There is no problem when DR-70 is using the 60-Base number format: the 60B light is illumined on the display. But what if 10-Base or Zodiac is in use?

There is a simple test:

- a) Blank the number register by pressing the CE key.
- b) Press any digit key (0-9): if the zodiacal sign corresponding to the digit you pressed appears on the display, DR-70 is in Zodiac; if no sign appears, DR-70 is in 10-Base.

Example. Having just calculated Alan Leo's fifth harmonic Sun (1 above), what number format are we in?

The 60-Base light is not on: obviously we are not in 60-Base. So, blank the number register by pressing CE . Press any digit key: we'll use the digit 4 . The Cancer light appears on the display. DR-70 is in the zodiac number format.

But why? The last number format we specified was 10-Base. Why aren't we in 10-Base? The same rule applies for number formats used in binary operations as applies for chart number and type in chart comparison operations.

At the conclusion of a binary arithmetical operation, DR-70 resumes the number format used as first operand in the calculation.

In the present example, our multiplication was 5.14.52.45 (display carry-over) ZOD times 5 10B. ZOD was the number format we associated with the first operand (5.14.52.45). The operation concluded in the zodiac number format,

3. "Implied" Number Format

The same rule applies with respect to "implied" number format(s) as applies for implied chart number and type in chart comparisons. If DR-70 is already in the number format required by the term in use, the number format key can be implied.

If, for example, we want to calculate Alan Leo's fifth harmonic Moon, (after having already calculated his fifth harmonic Sun as in 1 above) we can omit the ZOD key from the sequence. Since the previous operation concluded in the zodiac number format, ZOD will be the "implied" number format for the first operand.

Press **CE** to clear the number register. Then, with the shift key in the lighted position, press:

D **ENTER**

1 15.20

is displayed as the position of the natal Moon. Continuing the key sequence as before, first return the shift key to its normal (unlighted) position. ZOD need not be used: it will be implied if omitted. The remainder of the sequence then, is

X **5** **10 B** **ENTER**

3 16.40

appears as the correct position of the fifth harmonic Moon. The operation concludes in the zodiac number format.

4. Associating Number Format Keys with Operands

The number format key that is to be associated with a term in use can be pressed either immediately before or immediately after the term with which it is to be associated.

Example. In calculating Alan Leo's fifth harmonic Sun, the second half of the operation we used went **X 5 10 B ENTER**. The **10 B** key was pressed immediately after the "5" with which it was to be associated. We could just as well have pressed **X 10 B 5**: the result is the same.

Exception: When working with the zodiac number format, you may often have occasion to enter signs of a number-value greater than 12. If, for example, you want to use 14 signs, 2 degrees as a first operand in zodiac number format, one of two things will happen:

- a) If the machine is not in zodiac (put it in 60-Base now to follow the example) and you press **1 4 . 2 ZOD**, the Aries and Virgo lights will appear on the display. But when you press **ENTER**, the correct light (Taurus) will appear that corresponds with **14 02.00**.
- b) If, however, the machine is not in zodiac (press **CE** to blank the number register to follow the example; press **60 B** again so that DR-70 is not in zodiac) and you press **ZOD 1 4 . 2**, the correct lights should appear as the digit keys are pressed.

In both cases, the number is associated with the zodiac number format; the final answer is unaffected. But, to get the sign lights that correspond with the number to be registered, press **ZOD** first.

5. Changing the Number Format of any Number: MEM

The number format of any value can be changed by going through the "memory-recall" procedure. Press CE to blank the number register before going on to the following example.

Example. With Alan Leo's natal input already active on DR-70, press:

5.14.52.45 is displayed as the Sun's natal position. Put this number into the memory by pressing MEM ENTER. will appear in the left-hand corner of the number register.

Let's express this number in 60-Base. Press:

is displayed as the 60-Base equivalent of the Sun's position in the zodiac.

Now press:

is displayed as its equivalent in decimal degrees.

Now press:

reappears as the zodiacal position of the natal Sun.

To change the number format in which any number-value is expressed:

- a) Put the number to be changed into memory with
- b) Press

B. Keys That Can Be Used

Any key that has a number value can be included in mathematical operations performed on DR-70. Keys that have number values are:

1. Any digit key (0-9) or any digit key sequence that constitutes a number. $\boxed{\cdot}$, of course, may be used to separate digits according to their place-value (degrees/min./sec., etc.) in the number format in use.
2. All planets and house cusps.
3. "Recalled" ORB, AYAN, DYF, MEM, JL DT, ST, 90 D, INTVL, DATE, TIME, LAT or LONG. Any of these keys, when followed by RECL, will display its current number value on the number register. That number, associated with the appropriate number format, may then be carried over as a term in the following mathematical operation.

An example of this use of a recalled number-value appears in subsection C. The MEMory key is used to compute aspects in the harmonic charts.

(Note: All the above keys may also be used as operands in astrological operations, i.e., ASP, MDPT, PART, A ORB and SCAN.)

C. Applications

1. Calculating the adjusted birth time.

Time must be calculated in the 60-Base number format (hours, minutes, seconds).

Example. Birth time is given as 10:17 P.M. EST. Calculate the adjusted time as follows. Press:

$\boxed{1} \boxed{0} \boxed{\cdot} \boxed{1} \boxed{7} \boxed{60 \text{ B}}$ (clock time) $\boxed{+} \boxed{1} \boxed{2}$ (P.M.

time adjustment; 60-B is "implied") $\boxed{\text{ENTER}}$

$\boxed{22.17}$

is displayed. Continue the operation with:

$\boxed{+} \boxed{5}$ (time zones west; 60-Base is still "implied") $\boxed{\text{ENTER}}$:

$\boxed{27.17}$

is the adjusted time. It can be directly entered. Simply press TIME ENTER. The 27.17 on the display will "carry-over" as the entered time.

Example 2. The procedure for entering a "minus" time is the same as that given for the first example. Consider the 1:17 A.M. birth in Leningrad (page VII-06):

. (clock time) B (east) (time zones)

:

is displayed. Press TIME ENTER and the adjusted time as calculated will be entered into DR-70 as a "carry-over" from the number register.

2. Calculating the input for a composite chart.

One type of composite chart is cast for data that results from the averaging of two sets of natal data. We will demonstrate how two sets of birth data can be averaged and how the resultant data is entered into DR-70.

Begin with two sets of natal data. We will use:

| | C1 | C2 |
|-----------|--------------------|------------------|
| Date | 8.7.1860 | 7.15.1920 |
| Time | 5.51.35 (adjusted) | 22.41 (adjusted) |
| Latitude | 51.29.30 N.* | 43.15 N.* |
| Longitude | 0.0.30 W.* | 71.23 W.* |

*For this example, both latitudes are north and both longitudes are south. We will demonstrate how to deal with "mixed" latitudes and longitudes (i.e., north-south and/or east-west) after the example is completed.

- Enter both sets of natal data as given above.
- Average the sidereal time. The calculations should be done in 60-Base. Press:

B (2.55.27 will appear on the display)

(13.29.21 will appear on the display)

(16.24.48 will appear on the display)

: is displayed as the averaged sidereal time.

c) Store this averaged sidereal time for later use. Press:

ORB ENTER

┌ 8.12.24

indicates that 8.12.24 will be available for later "recall-ing."

d) Average the latitudes. DR-70 should still be in 60-Base. Press:

(60 B) C1 LAT RECL (51.29.30 is displayed)

+ C2 LAT RECL (43.15 is displayed)

ENTER : (94.44.30 will appear on the display)

÷ 2 ENTER : 47.22.15 is displayed as the averaged latitude.
Enter this latitude into C1 as the latitude for the composite chart.
Press:

C1 LAT ENTER

┌ should appear in the left-hand corner of the number register.

e) Average the longitudes. DR-70 should still be in 60-Base. Press:

(60 B) C1 LONG RECL (0.00.30 is displayed)

+ C2 LONG RECL (71.23 is displayed)

ENTER : (71.23.30 will appear on the display)

÷ 2 ENTER : 35.41.45 is displayed as the averaged longitude.
Enter this longitude into C1 as the longitude for the composite chart.
Press:

C1 LONG ENTER

┌ should appear in the left-hand corner of the number register.

f) Average the Julian Dates. DR-70 should be put into 10-Base. Press:

[10 B] [JL DT] [RECL] (-14390 will appear on the display)

[+] [C2] [JL DT] [RECL] (7501 will appear)

ENTER : (-6889 will appear as the sum)

[÷] [2] [ENTER] : - 3444.5 is displayed as the averaged Julian Date. But we cannot enter this fraction directly into DR-70 as the Julian date of the composite chart. We must first make an adjustment that will allow us to enter the Julian Date as an integer. Subtract the .5 by pressing:

[-] [.] [5] [ENTER] : (- 3445 is displayed)

A two-step operation follows: this Julian Date must be both stored (for later use, if necessary) and entered into C1. See g), below.

g) Store and enter averaged/adjusted Julian Date.

1) Store the Julian Date for later use by pressing:

[MEM] [ENTER]

2) Enter the Julian Date into Chart One by pressing:

([C1]) [JL DT] [ENTER]

h) Recall the sidereal time that was temporarily stored in the ORB location. DR-70 should be put into 60-Base. Press:

[60 B] [ORB] [RECL] (8.12.24 will re-appear)

Enter this now as the sidereal time for the composite chart. Press:

([C1]) [ST] [ENTER] : 14.18.15 appears as its GMT equivalent.

8.12.24 will be entered as the sidereal time of the composite chart. It will be internally converted to and displayed in its GMT equivalent. Now we can make up for the .5 subtracted from the Julian Date above. Press:

[+] [1] [2] [ENTER]

26.18.15

appears as the correct GMT for the composite chart that will be cast for the Julian Date presently stored in the MEM location. Enter this as the composite time by pressing:

([C1]) [TIME] [ENTER]

┐ appears when the entry is completed. The previously-entered sidereal time will be internally converted to correspond with this new GMT. If you press ST RECL now, the sidereal time that will be used for the composite chart will be displayed:

21.02.43

i) Enter the Julian Date which is presently stored in MEM. Press:

[MEM] [RECL] (- 3445.00 appears)

Press: ([C1]) [JL DT] [ENTER]

When ┐ appears, -3445.00 has been entered as the Julian Date for the composite.

Each of these entries may now be checked by means of the RECL procedure. Recall the time: 26.18.15 should appear. 47.22.15 N should appear when the latitude is recalled. 35.41.45 W should appear as the recalled longitude. -3445 should appear as the recalled Julian Date.

You may now calculate cusps and planets in the normal manner (i.e., HOUSE 1 [ENTER] displays 2 27.43 as the Placidus Ascendant, ☺ [ENTER] displays 5.03.00.21 as the composite Sun, etc.). All normal astrological functions may be used.

Note: 8.7.1860 will still appear if you press DATE RECL. It doesn't matter: DR-70 calculates the chart from the Julian Date you entered.

Feature: Press [DR DT] [ENTER] :

07.26.1890

appears as the calendar date for the composite chart.

.

2'. Special Case: "Mixed Latitudes and/or Longitudes"

When

- a) one latitude is north and the other is south, and/or
- b) one longitude is west and the other is east,

the change-sign key (CHS) must be used when calculating the composite latitude and/or longitude.

Example. N 43.15 is still on DR-70 as the original C2 latitude we entered for the last example. Change it now to 50.10 S.

Press: C2 LAT 5 0 . 1 0 S ENTER

47.22.15 N is still entered as the C1 latitude. We will keep it for the example of mixed latitudes. Press:

60 B C1 LAT RECL + C2 LAT RECL CHS

... A minus sign will appear at the left of the number register. Now DR-70 knows that 50.10 is a south latitude included in the addition:

- 2.47.45

appears as the sum of the two latitudes. Take their average by pressing:

÷ 2 ENTER

- 1.23.52 appears as the averaged latitude. It may be directly entered with LAT ENTER. DR-70 will take the minus sign as meaning south. Press LAT RECL and the S light will appear.

Note on ORB: Before you SCAN for aspects in the composite chart, be sure to re-define the orb key to a value in keeping with the orb you mean to allow for aspects. Otherwise, the orb will remain at the setting that corresponds with the sidereal time stored in that location in step c) above (page XVI-17). At present it is set to search for aspects within a range of 8°12'24".

3. Harmonics


a) Positions

Positions in a harmonic chart are calculated by means of simple multiplication. The planet whose harmonic position is to be calculated must be associated with the ZOD number format; the harmonic to be cast must be associated with the 10 B number format.

Example. Re-enter Alan Leo's natal data into Chart One:

Date: 8.7.1860
Time: 5.51.35
Latitude 51.29.30 N.
Longitude 0.0.30 W.

We will calculate the third harmonic positions of his Sun and Moon. With the shift key in the lighted position, press:

 ENTER : 5.14.52.45 is displayed. Now put the shift into its normal position and press:

ZOD X 3 10 B ENTER

8

14.14.38.15

appears as the position of his third harmonic Sun. Ignore the "14 signs" part of the display: read by the sign light that appears above the number register. Mr. Leo's third harmonic Sun is at 14°38'15" of Taurus.

Now calculate the position of his third harmonic Moon. We know from the rule on page XVI-12 that DR-70 is now in the zodiac number format. ZOD can now be omitted from the sequences used to calculate the harmonic positions of the remaining planets. Press:

(shift lighted)  ENTER (shift normal) X 3 10 B ENTER

8

2 16.00

is the position of Mr. Leo's third harmonic Moon. Note that the planet lights do not appear above the number register: you must remember which planet(s) are in use.

You may calculate the remaining harmonics by applying the formula given on the following page. Or, if you want to calculate aspects at the same time, go to step b).

The general "formula" for calculating harmonics on DR-70 involves two steps. First, with the shift key in its lighted position, press:

(shift lighted) NATAL PLANET ENTER

Then, after the natal planet appears on the display, put the shift key into its normal position and press:

(shift normal) ZOD X HARMONIC NUMBER 10 B ENTER

The position of the planet in the chosen harmonic chart will be indicated on the display. Ignore the large number that indicates signs as being greater than 12: read the sign light above the number register.

b) Aspects

Harmonic aspects cannot be Auto-Entered. But the MEM key will temporarily store any one of the calculated harmonic planets. The remaining planets can be aspected to that planet as their harmonics are calculated. You can generate the standard aspect triangle one box at a time.

Let's repeat the beginning of step a) to demonstrate the method of calculating the aspects in a harmonic chart. Press:

(shift lighted) ☉ ENTER

After the Sun's natal position is displayed, shift and press

(shift normal) ZOD X 3 10 B ENTER

Then press: MEM ENTER

☾ will appear in the left of the number register. The third harmonic Sun will be temporarily stored and available through the recall procedure.

Either the ASP or the A ORB functions can be used to calculate aspects in the harmonic chart. We will use A ORB. Set an orb of 10° for the present example. (Press ORB 1 0 ENTER)

Recalculate the third harmonic Moon as demonstrated in a) above. After it appears on the display, put the shift into its lighted position and press:

(shift lighted) A ORB the display will go blank.

Then return the shift key to its normal position and press:

(shift normal) MEM RECL ENTER

First the position of the stored harmonic Sun will appear on the display. Then, after you press ENTER,

0 1.22

is displayed as the aspect between Alan Leo's Sun and Moon in the third harmonic chart.

Now, calculate the position of Mercury in the third harmonic. Press:

(shift lighted) ☿ ENTER (5 20.11 is displayed)

(shift normal) (ZOD) X 3 10 B ENTER

Ω

81.10.59.59

is displayed. The "Overflow" light appears in the right of the display. This light is telling us that the "minutes" displayed may not be reliable. The third harmonic Mercury is at ten degrees and approximately fifty-nine minutes of Leo. (Note: since we are so close to the end of the degree, even the degree is in some doubt with respect to the "Overflow".

Write down the position of the third harmonic Mercury: you will need it for later calculations. Then, return the shift to its lighted position and press:

(shift lighted) A ORB Again, the display goes blank.

Return the shift to its normal position and press:

(shift normal) MEM RECL ENTER

1646.22

appears on the display. Since there is no aspect from DR-70's aspect list formed between the third harmonic Sun and Mercury, DR-70 is displaying the degree-separation between their previously displayed positions. To convert this number to its equivalent in a 360° circle, subtract multiples of 360 (360, 720, 1080, 1440, 1800, etc.) until a number less than 180° is reached. The subtraction must be done in 60-Base. Press:

(shift normal) 60 B - 1 8 0 0 ENTER

- 153.38

indicates that there are 153 degrees and (approximately) 38 minutes between Alan Leo's third harmonic Sun and Mercury.

Note: At the conclusion of the above calculation, DR-70 is still in 60-Base. The ZOD key must be included in the next position-calculation. Begin the next calculation with ZOD ♀, or press ZOD after the natal Venus is displayed.

Continue this procedure for the remaining harmonic planets. After applying the general "position-formula", put the shift key back into its lighted position and press A ORB. Then press MEM RECL ENTER to take the aspect to the harmonic Sun. In this manner, the Sun line of the standard aspect-triangle will be generated.

Then put the harmonic Moon into the MEM location. You will also by then have written down the positions of all the harmonic planets. The remainder of the aspectarian can then be generated by straightforward subtraction in the zodiac number format with the A ORB key

To get the angle between the Moon and Mercury, for example, press:

(shift normal) ZOD 2 . 1 6 . 0 0 MEM ENTER

The Moon can now be accessed with MEM RECL.

For Moon-Mercury, press:

(ZOD) MEM RECL A ORB 5 . 1 0 . 5 9 . 5 9
 ENTER :

-90 5.00

is displayed as the Moon-Mercury aspect.

Take the aspect to the Moon from each of the remaining planets. If degrees are displayed, they will be less than 180°. No further subtracting of multiples of 360° will be required. Then put Mercury in MEMory and take the A ORBs to it from the remaining planets, etc., to the end of the triangle.

Remember to SHIFT on both sides of the A ORB key!!!

4. Obtaining heliocentric-sidereal longitudes.

To obtain heliocentric-tropical longitudes, subtract the precessed Ayanamsha from the heliocentric-tropical longitudes that appear on the number register when in HELIO. The precessed Ayanamsha is calculated as follows:

a) Calculating the precessed Ayanamsha.

The natal data must first be entered. We will continue to use Alan Leo as an example. If his natal data is not presently on your DR-70, enter it now (see page XVI-11 if necessary).

1) Press: (shift lighted)

In about seven seconds, 4.22.04.50 appears as the sidereal Sun. Return the shift key to its normal position and press:

(shift normal)

When appears, the sidereal Sun is temporarily stored in the MEM location.

2) Press: (shift lighted)

In about seven seconds, the tropical Sun (5.14.52.45) appears.

3) Press: (shift normal)

appears as the precessed Ayanamsha for August 7, 1860 (expressed in the zodiac number format).

Store this precessed Ayanamsha in memory. Press:
The precessed Ayanamsha will over-write the former entry (sidereal Sun). Wait for .

b) Calculate heliocentric-tropical longitudes.

Put the shift key back into the lighted position and press:

(shift lighted)

In about seven seconds, 5.14.52.51 appears as the heliocentric-tropical longitude of the natal Sun. The difference between this longitude and that displayed for the geocentric-tropical Sun reflects a difference in the way the two longitudes are calculated. As already mentioned, geocentric-tropical longitudes are "apparent"; they are calculated with respect to the true equinox. Heliocentric longitudes are calculated with reference to the "mean equinox of the day".

Now return the shift key to its normal position and subtract the precessed Ayanamsha that is presently stored in the MEM location. Press:

- MEM RECL ENTER

☉

4.22.04.56

appears as the heliocentric-sidereal longitude of the natal Sun.

The heliocentric-sidereal positions for the remaining planets are calculated in the same manner:

- 1- Display the heliocentric longitude of the planet as given.
- 2- Subtract the precessed Ayanamsha stored in MEM.

5. Calculating S.T. and GMT for a given M.C.

To find when a given longitude reaches the Midheaven, press:

ZOD P LON SIGN/DEGREE/MIN/SEC CRD X 60 B P LAT 0

CRD X RA ENTER ÷ 1 5 60 B ENTER :

The sidereal time at which the given longitude reaches the Midheaven will be displayed. Note: You must shift before and after P LON, before and after CRD X, before and after P LAT, before (only) CRD X, and after RA.

Once the sidereal time as calculated above is displayed, press:

(shift normal) ST ENTER

The sidereal time as calculated will be entered as the sidereal time for a chart. Its display format will be changed to GMT for the date in use.

Check your results by pressing: HOUSE 10 ENTER

The sign/degree/minute should match that of the longitude originally selected.

6. To put the Sun (or any other planet) at the Ascendant.

A date and time must first be entered. Then, with the shift in the lighted position, press:

☉ RA ENTER

After the right ascension appears, shift back to the normal position and press:

- 9 0 60 B ENTER ÷ 1 5 60 B ENTER

The sidereal time (roughly) at which the Sun is at the Ascendant will be displayed. Press:

ST ENTER : The sidereal time will be entered and its display format will be changed to GMT. Cross-check your results with HOUSE 1 (shift lighted) P LON
ENTER: the longitude of the Ascendant should be roughly the same as that of the Sun.

To get closer:

Calculate the difference between the Sun and the Ascendant. Put the result in MEM. Recall it in 60-Base. Multiply it by four minutes (60-Base). Add the result to the recalled

If the Sun has passed the Ascendant (has a smaller longitude) subtract the above from the recalled sidereal time. If the Sun is approaching the Ascendant (has a greater longitude), add the result above to the sidereal time.

In either case, press ST ENTER again. The modified GMT will appear on the display. Check your results again with HOUSE 1 ENTER.

The same method may be used to calculate the rising time of any planet. When used for the Sun, it generates a solar chart.

XVII. TIMESAVERS

1. Take advantage of DR-70's "Idle" feature.

DR-70 starts precalculating planet positions as soon as a date and time are entered for a chart in use. The intervals between ensuing keyboard operations (LAT ENTER, LONG ENTER, etc.) are used to calculate the remaining planets. It temporarily stores these calculated positions for later use. This precalculating of the planets' positions constitutes DR-70's "Idle" feature: the calculations are made during intervals in which the computer is otherwise "idle."

a) For a single chart.

Specify or decide to use the "implied" zodiac type and planetary coordinate before entering the date and time for a chart. If zodiac type or planetary coordinate is changed after date-and-time are entered, the previously calculated positions will be erased: the time-saving benefit of DR-70's use of its "idle" time is lost. DR-70 will then begin to use its "idle" time to calculate the new positions required by the change.

b) For more than one chart.

Once all the planets for the chart in use are calculated, DR-70 uses its "idle" time to calculate positions for the last chart used (the one exception to this rule --two derived charts of the same chart number-- is given in subsection 2, below). This second set of calculations is also temporarily stored for later use.

One way to take advantage of this feature is easily demonstrated:

Let's say that your plans are to calculate both a natal chart and its secondary progressions. First, enter the required background information (specified or implied zodiac type, planetary coordinate, date, time, etc.) for the natal chart in Chart One, Natal. Then go to Chart One, Secondary and enter the date (and time, if other than the natal time). Return to Chart One, Natal and proceed as usual. The intervals between keyboard operations will then be applied to calculating the remaining natal and derived planets: answers involving the planets of either chart will come back faster.

This technique can be used to advantage for any second chart: transits in C2, a second complete natal chart, etc.

2. Avoid re-calculations that result from jumping to "third" charts.

DR-70 temporarily stores zodiac type, planetary coordinate, date, time, latitude and longitude for four charts. But only two sets of calculated planets can be retained simultaneously. Combinations for which calculated data can be retained are:

- a) Two natal charts.
- b) A natal chart and one derived chart for each chart number.
- c) A natal chart and a derived chart for a different chart number.
- d) Two derived charts of different chart number.

Two derived charts for the same chart number cannot be simultaneously retained. As soon as a second derived chart is entered for the chart number in use, the previously calculated derived chart planets for that chart number are erased.

For example, start with condition a) above: you have two natal charts on DR-70. Enter a date and time for Chart One, Secondary. You are in condition b): the C2 natal planets will be erased and replaced with the new calculations for C1 Secondary. If you return to C2 Natal, you will have to wait for its planets to be recalculated. You will then be in condition c): C1 Natal planets will be erased and replaced with the recalculated C2 planets.

To get faster response to calculations involving the planets of any two charts, do all the work involving the planets of the chart that will be erased before going on to a third chart. DR-70 will retain planets for:

- a) the chart in progress, and
- b) the last chart used.*

*If the chart in progress is a derived chart, and the chart last used was a derived chart of the same chart number as the chart in use, DR-70 will retain the planets for the last chart not of a derived type in the same chart number as the chart in use.

3. Use "implied" keys whenever possible.

Check display lights.

If DR-70 is already in the chart number and type required for the first operand in your next key sequence, chart number and type keys may be omitted for the first operand. If chart number and type are the same for the second operand also, omit chart number and type keys for that operand as well.

Example. DR-70 display lights indicate C1 Natal. You want aspects between C1 Natal planets. Begin the Auto-Entry with:

⊙
ASP
D
ENTER

If DR-70 is not in the chart number and/or type required by the first operand of your next sequence, and you are working with:

- a) charts of the same chart number, specify number and/or type for the first operand. Then omit chart number for the second operand.
- b) charts of the same chart type, specify number and/or type for the first operand. Then omit chart type for the second operand.

Example for a): For

| | | | | | | | | | |
|----|-------|---|-----|---|----|---|-----|---|-------|
| C1 | NATAL | ⊙ | ASP | (| C1 |) | SEC | ⊙ | ENTER |
|----|-------|---|-----|---|----|---|-----|---|-------|

(C1) may be omitted.

Example for b): For

| | | | | | | | | | |
|----|-------|---|-----|----|---|-------|---|---|-------|
| C2 | NATAL | ⊙ | ASP | C1 | (| NATAL |) |) | ENTER |
|----|-------|---|-----|----|---|-------|---|---|-------|

(NATAL) may be omitted.

XVIII. MID-STREAM ENTRY OF FLOW SYSTEMS

Entering a flow system at a point other than its beginning is called making a "mid-stream" entry. This section will demonstrate how mid-stream entering affects the order in which DR-70 displays its calculations.

A. Mid-stream Entry of the "Line"

The "Line" flow system (see page IX-04) is a simple, repeating cycle. Mid-stream entry of the "Line" involves no complications that require an explanation. Wherever you enter the line, DR-70 will advance onward through the system one step at a time "ad infinitum" in response to the ENTER key.

The one exception arises when A ORB is used. DR-70 then traverses the line only once: "End" is displayed when the first operand has been examined in relation to the entire second-operand series. But no matter where you enter the line the result is the same: DR-70 traverses the entire line before displaying "End."

If you press \odot A ORB h , for example, DR-70 will first display the aspect between the Sun and Saturn as $12^{\circ}43'$ (Alan Leo's natal chart; orb = 10). When you press ENTER, it moves on to the next aspect in the line: the natal Sun and Uranus form a sextile with an orb of $3^{\circ}33'$. If you continue to press the ENTER key, it will display the aspects of the Sun first to Neptune, then to Pluto, and then to the natal Moon, Mercury, Venus, Mars and Jupiter before "End" is displayed.

B. Mid-stream Entry of the "Triangle"

The "Triangle" flow system is used whenever both operands in a binary operation are from the same chart and share a common "Line" (see pages IX-05 and IX-07). It can be mid-stream entered in any one of three ways:

1. Second operand only.

\odot ASP 2+ ENTER

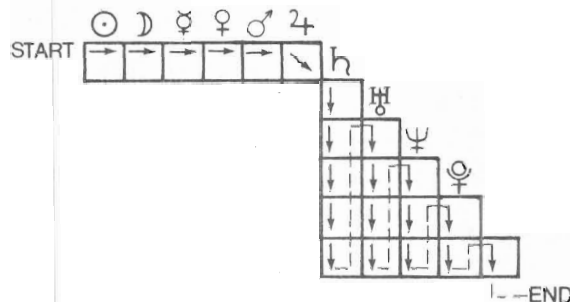
is an example of mid-stream entering a triangle with the second operand only. If you initiate an Auto-Entry with a sequence such as this one, the normal flow is not modified. DR-70 simply picks up from where you entered the flow system and goes on from there: the second-operand terms prior to the entry will be omitted. The remainder of the triangle is generated as illustrated in the diagrams in section IX.

Continuing the Auto-Entry we initiated with the above sequence, for example, gives us Sun-aspect-Saturn, -aspect Uranus, -aspect Neptune, -aspect Pluto, -aspect Dragon's Head ... and then on to Moon--aspect Mercury, -aspect Venus, etc. to "End".

2. First operand only.

h ASP ☉ ENTER

is an example of mid-stream entering a triangle with the first operand only. Now there is a change in the order in which the triangle is generated. The flow is modified as illustrated in the diagram below:



The first-operand term which is mid-stream entered will be considered to the full second-operand series. Then the remainder of the triangle will be generated in the standard manner. The display lights will indicate the planets that are involved in the answer that is being presented.

3. Both operands.

4 ASP ♀ ENTER

is an example of mid-stream entering a triangle with both operands. Continuing to press ENTER, you will get Jupiter-aspect-Mars, skip -aspect-Jupiter, and then DR-70 will complete the triangle in the standard manner, i.e., Jupiter-aspect-Saturn, -aspect-Uranus, etc., to "End."

When both operands are mid-stream entered in a triangle flow system, DR-70 will first consider the first operand to the bottom of the second-operand "Line." If the first operand is closer to the bottom of the "Line" than the second operand (as in the above example), DR-70 will skip over the "conjunction". It will then complete the remainder of the triangle in the standard manner.

C. Mid-stream Entry of a "Rectangle" or a "Square"

Exception: "Square-Without-Diagonal" (see D.)

There are three ways of entering a "Rectangle" or a "Square" flow system in mid-stream. The modifications that result are the same for both of them.

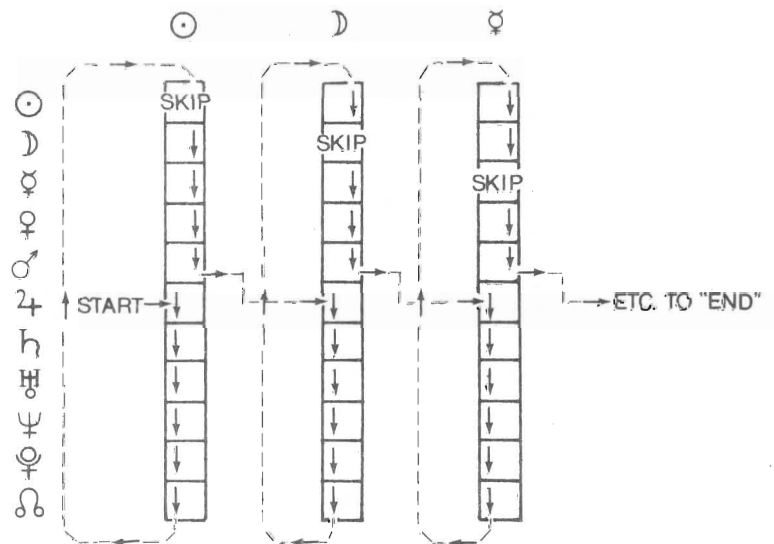
D. Mid-stream Entry of the "Square-Without-Diagonal"

There are three ways of entering the "Square-Without-Diagonal" in mid-stream:

1. Second operand only.

⊙ PART 2+ ENTER

is an example of entering the square-without-diagonal in mid-stream with the second operand only. The square breaks down into a series of non-repeating lines as diagrammed below.



2. First operand only.

2+ PART ⊙ ENTER

is an example of mid-stream entering the square-without-diagonal with the first operand only. The flow will proceed as normal from the point of entry (see page IX-12). Terms prior to the point of entry will be omitted.

3. Both operands.

♀ PART 2+ ENTER

is an example of mid-stream entering the square-without-diagonal with both operands. The flow-modification illustrated above (for second operand only) will begin in the column occupied by the first operand (here, Venus).

XIX. PRINTER

IMPORTANT PREFATORY NOTE

This manual presents a step-by-step course of self-instruction in DR-70 techniques. Later sections assume that the user is familiar with material already presented. In theory, it should be read from front to back. But in practice, many users will be eager to work with the printer before mastering DR-70 as an independent unit.

The examples in this section are adequate as a first-time "walk-through" of basic printer functions. For details on various printer-compatible functions, however, the reader will be referred to other sections of the manual.

Also, our index doubles as a glossary. Refer to it for information on any terms which may not be adequately explained within a given section.

Contents Of This Section

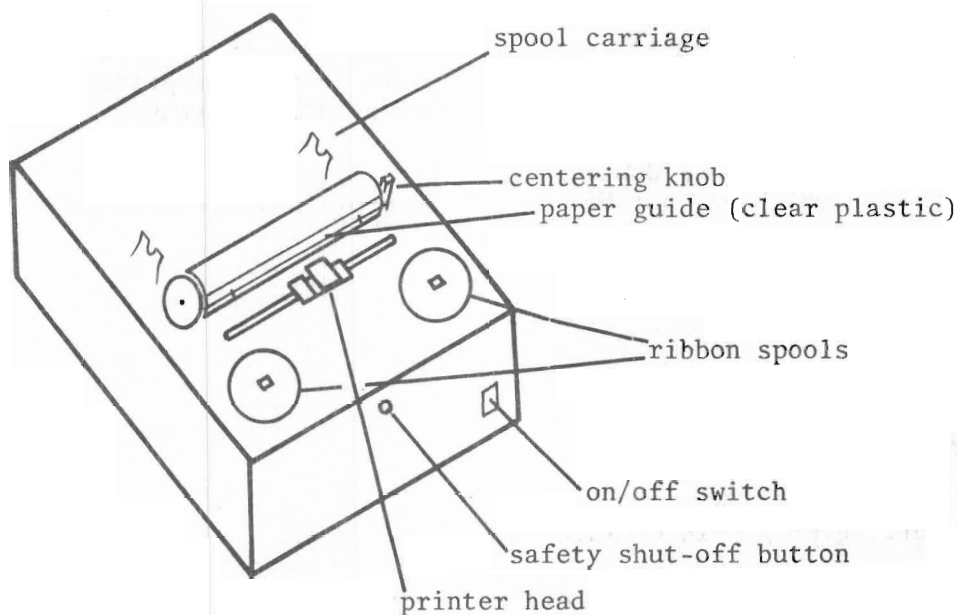
| | |
|-------------------------------------------------------------------|--------|
| A. Setting Up / Printer Maintenance | XIX-02 |
| B. Example: Natal Chart / Aspects / Progressions / Transits | XIX-06 |
| C. CHART Function | XIX-14 |
| D. TABLE Function | XIX-24 |
| E. PRINT Function | XIX-37 |
| F. LIST Function | XIX-41 |

I. Setting Up

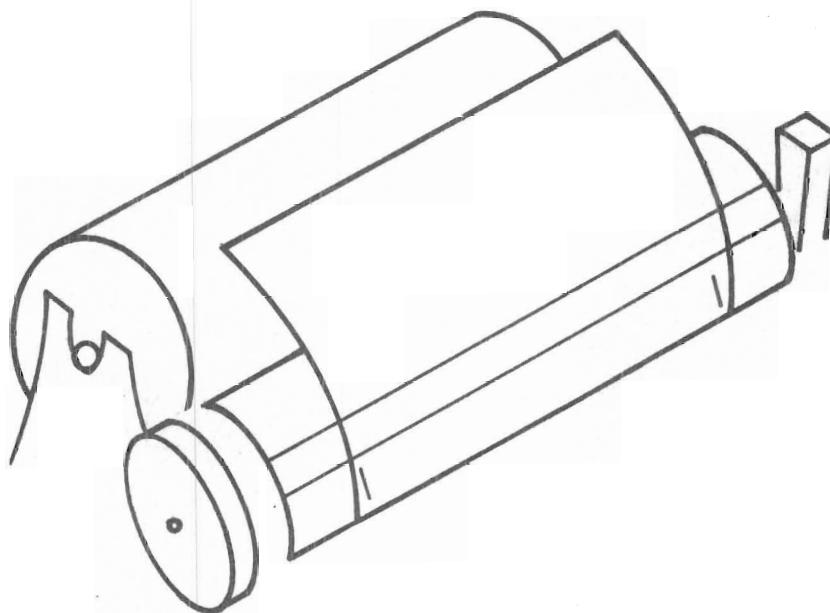
To set up DR-70's printer for operation:

A. Install Paper

Press the safety shut-off button (on the front panel of the printer) to the right and open the printer box. It opens from front-to-back. The printer will not function while the box is open.

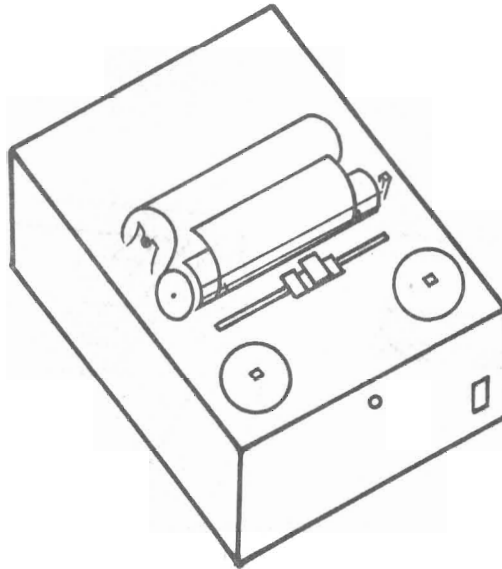


Insert the plastic spool spindle through the center of a roll of $3\frac{7}{8}$ " adding machine tape. Place the roll of paper and the spindle together onto the spool carriage so that the paper unrolls upward:



Thread the paper under the roller and upward through the space between the roller and the clear plastic paper guide. Note that two lines have been scribed on the paper guide. Use them as guides for centering the paper.

Gently pull the centering knob forward and position the paper so that it runs straight over the roller. Release the centering knob when the paper is properly positioned. When you are finished, the paper should pass through the roller mechanism as illustrated below:



Now close the printer box securely and go on to step B.

B. Attach Electrical Cord

Attach the female end of the electrical cord to the power supply outlet at the rear of the printer box. It only fits one way. If it doesn't fit the first time you try it, turn it over and try again. Plug it in securely!

C. Pre-test the Printer

Plug the male end of the electric cord securely into any standard 110-volt three-pronged outlet. When the printer is on, the yellow switch in the lower right hand corner of the front panel will be lighted. Put this switch into the "On" position; the paper will begin to advance through the roller mechanism.

If the paper is not running straight, use the centering knob and make it do so. (You can reach the centering knob through the hole in the top of the printer; there is no need to open the box again.)

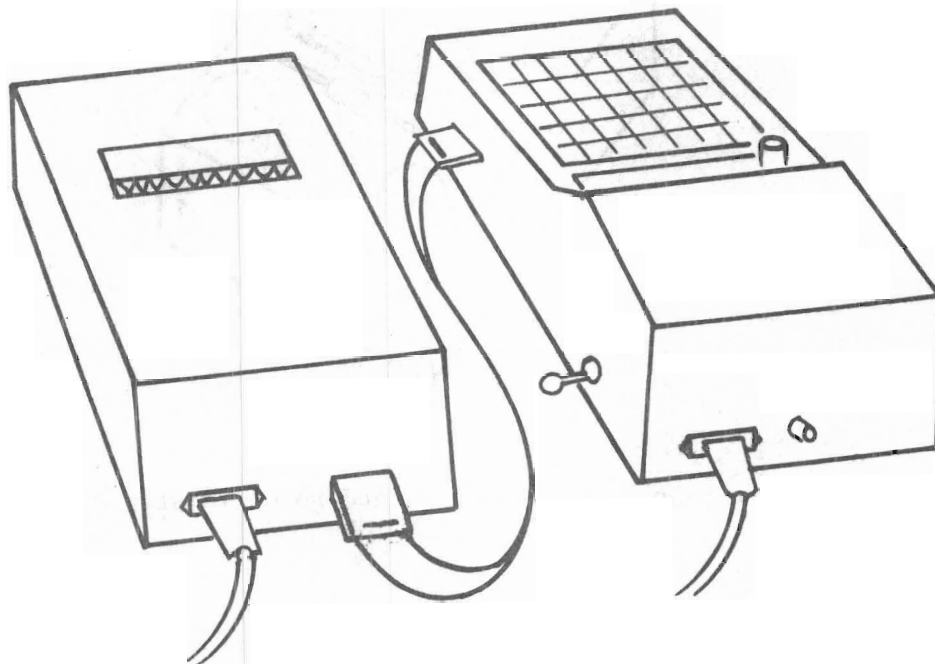
Now, switch the printer off and go on to step D.

D. Interface Printer with DR-70

DR-70 "interfaces" (connects for companion use) with the printer as follows:

- 1) Attach either end of the blue interface belt securely to the blue interface outlet at the left center of the rear panel of the printer. Note that the trapezoidal belt-ends are wider along one edge; the wider edge goes at the top of the interface outlet.
- 2) Attach the other end of the interface cord in the same manner to the blue interface outlet on the right side panel of DR-70.

When the interface procedure is completed, the belt should connect DR-70 and the printer illustrated below (view from left rear):



The printer is now ready for companion use with DR-70. Put the yellow switch on the printer in the "On" position. It will light to tell you that the printer is all set to go.

Printer Maintenance

Two items inside the printer require occasional maintenance:

- 1) The metal rod along which the printer-head moves
- 2) The drive cylinder which moves the printer-head.

- 1) The metal rod

This rod should be cleaned occasionally with alcohol on a cotton swab. (Use as much as you need to get the rod clean.) Then lubricate it with one drop of sewing machine oil (or any other lightweight machine oil).

- 2) The drive cylinder

If your printer is not operating properly, first clean and lubricate the metal rod as instructed above. If that doesn't take care of the problem, then the drive cylinder (the grooved plastic drum beneath and in front of the metal rod) may require lubrication.

Should this cylinder require lubrication, apply a small amount of petroleum jelly (on a cotton swab) to the inside of the groove. Do not use too much! An excessive application may result in a gummed-up printer.

When applying the lubricant, move the printer-head manually from side-to-side along the metal rod to get access to the entire groove in the drive cylinder.

B. Example: Natal Chart / Aspects / Progressions / Transits

DR-70's printer has four basic functions:

- CHART prints out cusps, planets, ♌, ♍ and ⊕ for any type of horoscope on the DR-70.
- TABLE prints positions, aspects, midpoints and Arabian parts in tabular form.
- PRINT performs direct single-step printing of operations actually executed on the keyboard.
- LIST prints out time-incremented data, such as a planet's position every "n" hours or "n" days.

The present example will demonstrate CHART and TABLE functions only. It is designed to demonstrate the speed and ease of getting basic information from DR-70 and printer. With a little practice, most astrologers will be able to combine CHART and TABLE to get a natal chart, its aspects/midpoints/ or parts, a set of progressions, and all the transits to both charts - in less than twelve minutes.

If this is your first time using the DR-70, the first two pages of section II should be read as background.

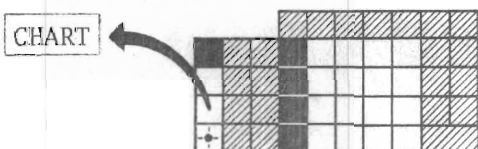
Example: What is Alan Leo's natal chart ?
 What are his natal aspects ?
 What were his secondary progressions and transits for August 7, 1895 ?

We will first run through the basic procedure for printing out this information. No explanations will be given the first time through; the point is to demonstrate the speed and ease of the operation. Then we'll back up, explain, provide details, and show other ways these functions can be used.

If, in following the examples in this section, you press a wrong key, press the C key (upper case) in the upper section of the right column of the keyboard. Then begin with the key sequence again with the proper keys. If there is still a problem, refer to section V.

Step one: Enter the natal information as demonstrated in Steps one through four of section VI.

Step two: To use the CHART function, the shift key (in the lower left-hand corner of the keyboard) must be pressed down and LIGHTED. Then press:



(shift lighted)

CHART

ENTER

In 7-10 seconds, DR-70 will print out a header for a natal chart cast in a tropical zodiac:

CHART TYPE ZODIAC TYPE COORDINATE HOUSE SYSTEM

CHART NUMBER → C1 NATAL TROP P.LONG PLAC

DATE 8.7.1860 GMT 5.51.35

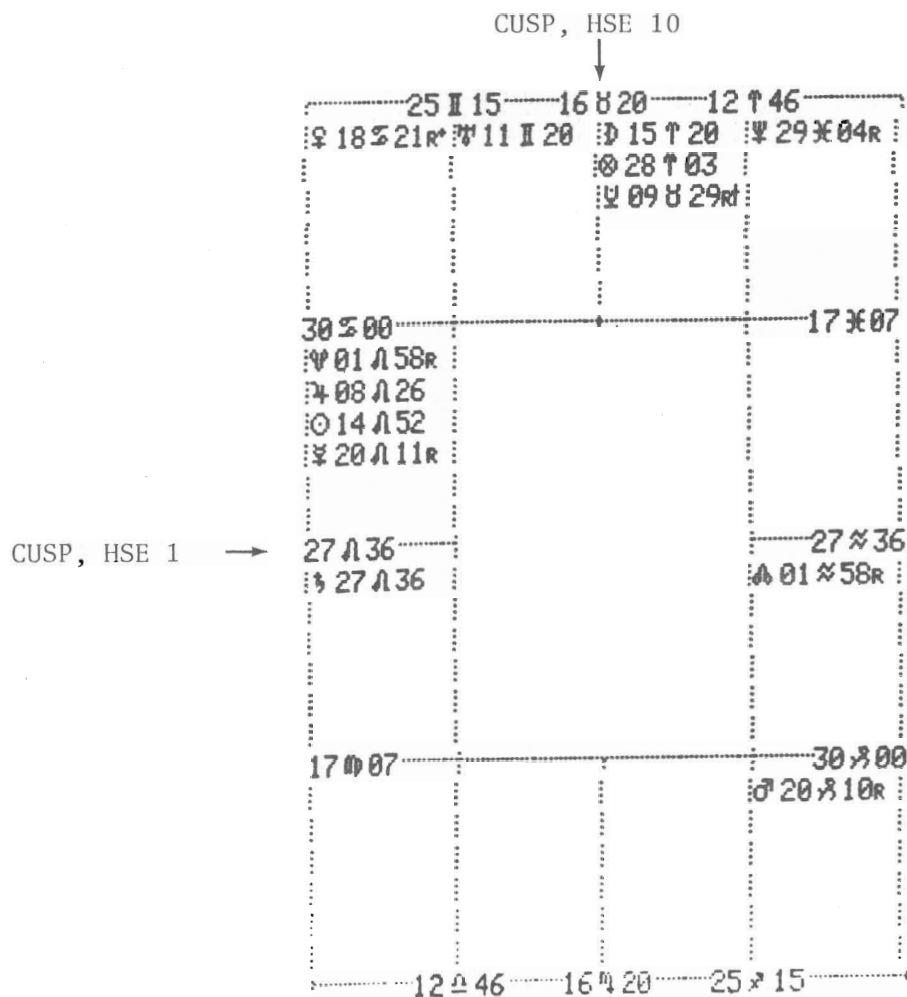
LAT 51°29'30"N LONG 0°00'30"W

14 152 45

↑

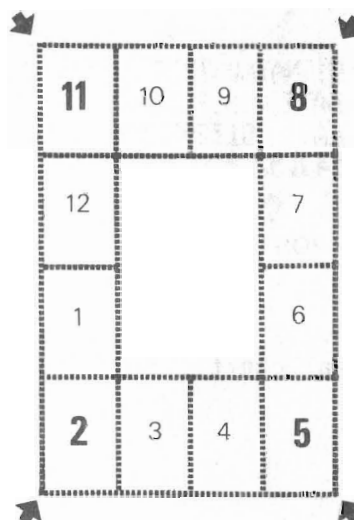
SUN POSITION

The printer will be inactive for about one minute while DR-70 calculates and sorts the natal chart. Then the chart will be printed out in one step as it appears below:



A simple way to read the houses on this square chart is to remember that the succedent houses appear on the four corners:

succedent
(2, 5, 8, 11)

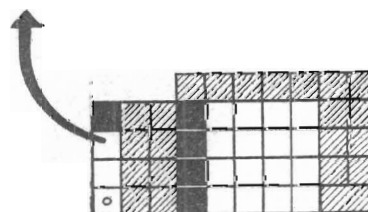


Step three: Aspects

Now let's table Mr. Leo's natal aspects. There are three ways to go; for the present example, we'll use SCAN.

With the shift key in its normal (unlighted) position, press:

TABLE only



Then put the shift key into its lighted position and press:

(shift lighted)



SCAN



ENTER

(explanation on
p.XIX-26,
methods for midpoints,
parts, p.XIX-31)

Step four: Secondary Progressions

A. The Chart

First, select SECondary as the chart type and enter the new date as shown on pages 06 and 07 of section VI (steps one and two there).

Then, put the shift back to its lighted position and press:

(shift lighted) CHART ENTER

DR-70 will print out a header and chart as before. But now the chart is of SECondary progressions for August 7, 1895. (See p.XIX-16)

B. The Table of Aspects by Progression

First, set the ORB key to 1⁰ as demonstrated on page VI-08 (step one there). Next, press:

(shift normal) TABLE only

Then shift again and press:

(shift lighted) SEC ⦿ SCAN NATAL ⦿ ENTER

DR-70 will print out the 10 aspects by progression:

C1 SEC TROP P. LONG PLAC 108 0
SCAN NATAL 0

ORB

100 10.01 11.11
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Progressed Planets →

← Natal Planets

(explanation p.XIX-28)

Step five: Transits

First, perform steps one through four under "Transits" on pages 09 and 10 of section VI.

Then, press:

(shift normal) TABLE (shift lighted) C2 ☉ SCAN C1 ☉ ENTER

DR-70 will print out a table of aspects formed by transiting planets to natal planets. It is still using the 1⁰ orb we set before:

C2 NATAL TROP F LONG PLAC 100
0 SCAN C1 0

| ORB | 1 ⁰⁰ | 10.01 | 11.11 | Natal Planets |
|-----|-----------------|---------|---------|---------------|
| ☉ | ♈ | ♉ | ♊ | ♋ |
| 0 | 0 0 12 39 | | 0 37 | |
| ♈ | | 0 28 | | |
| ♉ | | | 0 57 | |
| ♊ | | | | |
| ♋ | | 0 44 | | |
| ♌ | | | | |
| ♍ | 0 42 | | 0 29 | |
| ♎ | 0 35 | | | |
| ♏ | | 0 49 | 0 32 | 0 34 |
| ♐ | | | | |
| ♑ | | | | |

☉ ♈ ♉ ♊ ♋ ♌ ♍ ♎ ♏ ♐ ♑

Transiting Planets →

Transits to natal chart (1⁰ orb)

Now, to print the transits to the progressed planets press:

(shift normal) **TABLE** (shift lighted) **C2** **NATAL**  **SCAN** **C1**

SEC**ENTER**

C2 NATAL TROP P. LONG PLAC 108
 0 SCAN C1 SEC 0

| ORB | 1°00' | 10.01 | 11.11 |
|-----|-------------------------|-------|-------|
| 0 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 1 | | | |
| 2 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 3 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 4 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 5 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 6 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 7 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 8 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 9 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 10 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 11 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 12 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 13 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 14 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 15 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 16 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 17 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 18 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 19 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 20 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 21 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 22 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 23 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 24 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 25 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 26 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 27 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 28 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 29 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 30 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 31 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 32 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 33 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 34 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 35 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 36 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 37 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 38 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 39 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 40 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 41 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 42 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 43 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 44 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 45 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 46 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 47 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 48 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 49 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 50 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 51 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 52 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 53 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 54 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 55 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 56 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 57 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 58 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 59 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 60 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 61 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 62 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 63 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 64 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 65 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 66 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 67 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 68 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 69 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 70 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 71 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 72 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 73 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 74 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 75 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 76 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 77 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 78 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 79 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 80 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 81 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 82 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 83 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 84 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 85 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 86 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 87 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 88 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 89 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 90 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 91 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 92 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 93 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 94 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 95 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 96 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 97 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 98 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 99 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| 100 | 0 0 0 0 0 0 0 0 0 0 0 0 | | |

Transiting
Planets

Progressed Planets

Transits to
Secondary Progressions
(1st orb)

If the positions of the transiting planets are desired, press:

(shift normal) TABLE (shift lighted) ENTER

*Note: C2 and NATAL do not need to be pressed as their lights are already lit.

DR-70 will print:

C2 NATAL TROP P. LONG PLAC 108

0

0 = 14 11 41 14

1 = 05 11 38

2 = 03 11 42

3 = 26 11 26

4 = 05 11 55

5 = 24 11 11

6 = 01 11 29

7 = 15 11 56⁰⁰

8 = 17 11 32

9 = 12 11 32

A = 12 11 57⁰⁰

Transiting Positions

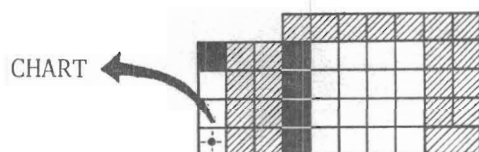
8.7.1895

12:00 GMT

The examples we set out to provide are completed. Now let's back up and explain what we did. Leave your computer running; we'll add more information as we go.

Leave your computer running throughout the explanations that follow.

C. CHART Function



For reference:

Chart Number: I-06

Chart Type: I-02,03

Zodiac Type: I-03,04,05

Coordinate: VII-02, XV-02,03

House System: I-05, VII-09

The CHART function prints out any type of horoscope on the DR-70. It first prints a header indicating Chart Number, Chart Type, Zodiac Type, Coordinate, date, time, latitude and longitude for the chart in use. (Refer to the pages listed above if any of these terms are unfamiliar.) Then, after a short delay for calculating and sorting, it prints out cusps, planets, ♌, ♍ and ⊕ in one step.

Planets are sorted only according to house position; their actual position within the house (i.e., distance from the cusps) is not spatially indicated. Printing simply starts at the top of the space provided for each house and works down. Note, for example, the position of Mr. Leo's ♌ in the sixth house of the natal chart on p. XIX-07; it appears as if it were conjunct the descendent, but it is actually conjunct the cusp of the sixth house.

Let's review what we've already done with the CHART function. First, you entered a date, time, latitude and longitude. You didn't indicate anything about a natal chart, a tropical zodiac, or planetary longitude as a coordinate. How did you get them?

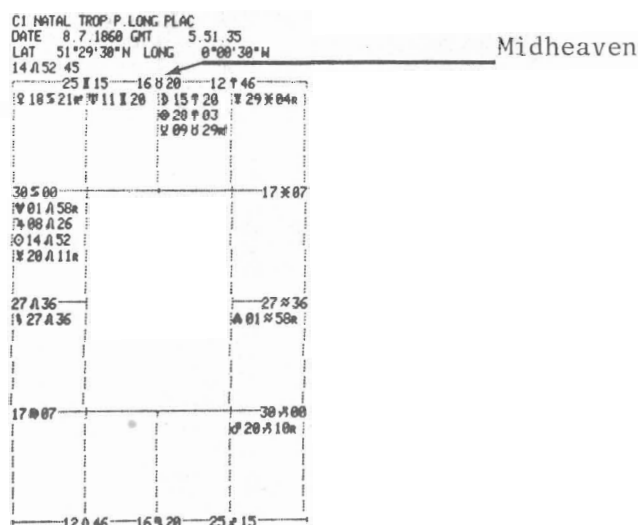
Natal, tropical and planetary longitude are three of the DR-70's "cold-start" values. If you haven't already, refer now to the first two pages of section II for an explanation of "cold-start" values. Then review the pages listed for reference above.

With these terms properly understood, the meaning of the header for the chart on p. XIX-07 should be clear. Now let's go on to discuss the notation used in the chart itself. (A full table of printer notation as used in the CHART function appears on p. XIX-23)

Sun's position to
seconds of arc

Ascendant →

Second house cusp →



The houses, again, are read as follows:

| | | | |
|----|----|---|---|
| 11 | 10 | 9 | 8 |
| 12 | | | 7 |
| 1 | | | 6 |
| 2 | 3 | 4 | 5 |

Succedent houses appear on the four corners.

Mr. Leo's Ascendant is 27 Ω 36. His second house cusp is 17 \mathbb{M} 07, his third house cusp is 12 \cong 46, etc., in a counterclockwise direction around the chart. His Saturn is in the first house, his Mars is retrograde in the fifth, and his \mathbb{S} is retrograde in the sixth, etc..

Two items of special interest with respect to printer notation appear in this first example chart. First, note the "†" (dagger) that follows the ninth-house retrograde Pluto. This 'dagger' indicates 'Stationary retrograde'. "R†", then, means the same as "RSR" on p. IV-04.

Secondly, note the "+" (plus) that follows the retrograde Venus in the eleventh house. This 'plus' indicates 'Stationary direct'. "R+", then, means the same as "RSD" on p. IV-04.

This 'dagger' (or SR on the display board) and 'plus' (or SD on the display board) are two symbols DR-70 has added to assist in determining motions with respect to these elusive "station points".

The following is provided as an example of how to remind yourself of what these notations mean. Press:

C1 NATAL ♀ ENTER

Note that both the "R" and the "SD" appear in red on the display panel. Checking this against the "R+" on the chart, you know that "plus" means "stationary direct". Likewise, press:

♀ ENTER

The R and SR lights appear on the display. You know that the "dagger" means "stationary retrograde".

Summary of "†" and "+"

- † - the dagger - means stationary retrograde
- + - the plus - means stationary direct
- R† - means "retrograding from station-point"
- R+ - means "retrograding toward station-point"
- D† - means "direct, approaching SR-point"
- D+ - means "direct, just leaving SD-point"

Now, compare DR-70's print out with the more standard format of Mr. Leo's natal chart on p. VI-04. It should be apparent that the same information is presented in both formats.

Let's go on to discuss the secondary chart.



First, consider the header. Note that only two terms have changed from the header of the natal chart. You are still in C1; the zodiac, coordinate, house system, time, latitude and longitude are the same as they were. The two changes are the date and the 'Chart Type', both of which you indicated in step four of the example. All other data was "carried over" from the natal chart. For details on this "derived chart comparison" see section XII.

But something new has been added:

DR DT means "derived date", i.e., the "as if" birthday for which the chart is actually cast. Refer to p. XII-06.

The next number is the GMT for which the derived chart is cast.

Now let's talk about the chart itself. The chart format is always the same as has already been explained above for the natal chart. The succedent houses are on the corners.

Two items of notation appear in the secondary chart which were not in the natal chart. Note the "+" that follows Mr. Leo's fourth-house Mars. "D+" means, DSD, indicating that this Mars has progressed past its station-point and is now moving in a forward direction through the zodiac.

Note also the "D+" appended to the ninth-house Uranus. "D+" means DSR, indicating that this planet is still moving direct toward the point at which it will station to go retrograde.

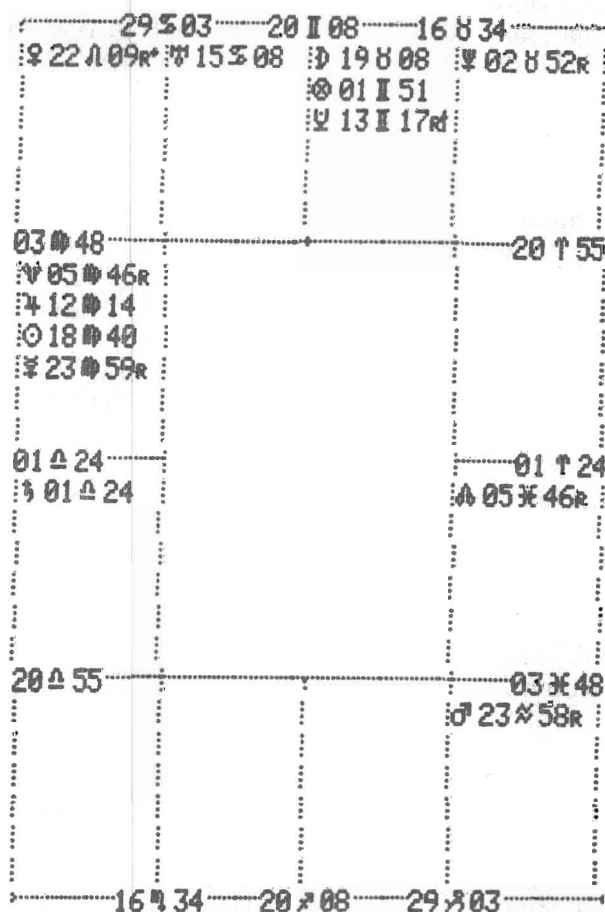
Subsequent derived charts for the same date, time and location can be cast simply. For example, to cast a solar arc chart now, simply press:

(shift lighted)

In 7-10 seconds the header will appear:

```
C1 ⊙ ARC TROP P. LONG PLAC
DATE  8.7.1895 GMT    5.51.35
LAT   51°29'30"N LONG 0°00'30"W
DRDT 08.07.1860      5.51.35
1840 44
```

Then, in about one minute, the chart will be printed as it appears below:



You can now go on to print any* other derived chart type on the keyboard for the same date, time and location by simply pressing:

(shift lighted) CHART TYPE CHART ENTER

*Exception: DR-70 does not print a chart of primary directions.

For example, to get a tertiary progressed chart, press:

(shift lighted) TERT CHART ENTER

To get a lunar return, press:

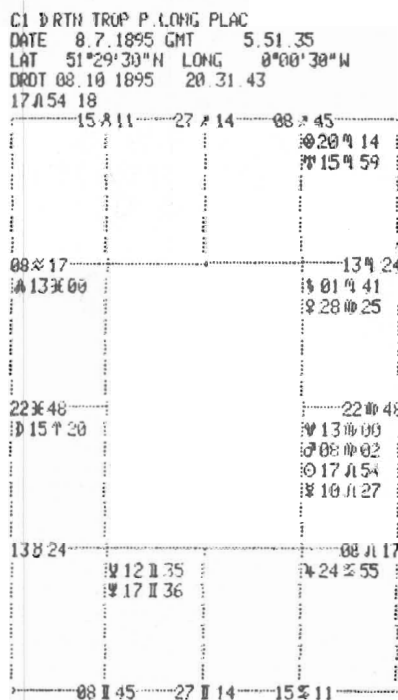
(shift lighted)

RTN

CHART

ENTER

In 30-60 seconds DR-70 will print the header. Then, in about 1½-2 minutes it will print the chart:



To get a solar return, press:

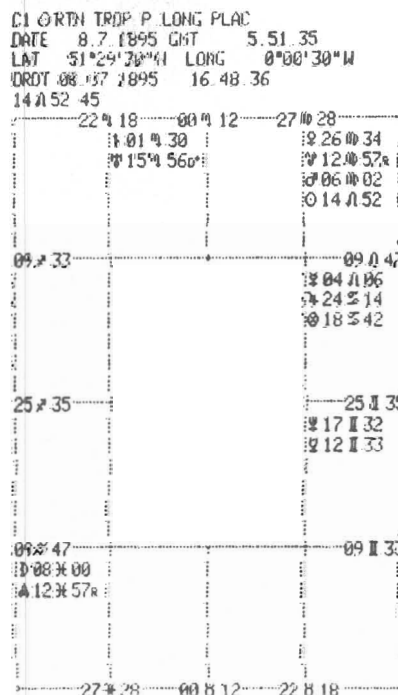
(shift lighted)

RTN

CHART

ENTER

In 15-30 seconds the header will appear. Then, in about 1½ minutes, the solar return chart will be printed:



The first two pages of section VII discuss how to select options in chart type, zodiac type and coordinate. The general form for printing charts is:

- 1) Check the display to see that DR-70 is operating in the Chart Number and Chart Type you mean to print.
- 2) Check the display to see that DR-70 is operating in the zodiac you mean to use. If not, press:

(shift lighted) TROP SIDL or HELIO

as necessary. The appropriate zodiac light will be illuminated on the display.

- 3) Check the display to see that DR-70 is operating with the planetary coordinate you mean to use. If not, press:

(shift lighted) P LON P LAT RA or DECL

as necessary. See p. IV-05, TERREStial light, for how to tell which coordinate is in use. If you are uncertain, simply press the key that indicates the coordinate you want.

- 4) a. For a natal chart, horary or transits:

Enter date, time, latitude, longitude. Go to step 5.

- b. For the first derived chart in each chart number:

Enter the date for which you want to know the progressions. If you want to use the same time, location, coordinate as was used in the natal chart, go to step 5.

If changes from the natal - time, location, zodiac or coordinate are required, press the appropriate keys (same as in steps 2,3,4a). Then go to step 5.

- c. For subsequent derived charts in each chart number:

If the same date, etc., as were used for the most recent derived chart (not the natal chart) in the same chart number are to be used, simply press the chart type key that indicates the type of chart you mean to use. Go to step 5.

If changes of date, etc., from the most recent derived chart in the same chart number are required, first put DR-70 into the chart type you want it to print (press the appropriate chart type key). Then make your changes (same as steps 2,3,4a) before going to step 5.

If in doubt about what date, time, latitude or longitude are being used:

- a) Put DR-70 into the chart type you want to print (press the appropriate chart type key - the chart type will be illuminated on the display).
- b) Use the RECL key to recall the information in question. See p. V-04.

If in doubt about what zodiac or coordinate are in use:

- a) Put DR-70 into the chart type you mean to print.
- b) Check the display. See p. IV-05. Do not use the RECL key.

5) Press:

(shift lighted)

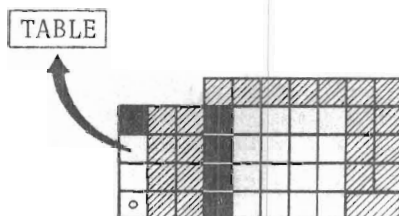
CHART

ENTER

A full listing of printer notation as used in the CHART function is here provided:

| | |
|------------------------------|--------|
| Chart One | C1 |
| Chart Two | C2 |
| Natal | NATAL |
| Primary Directions | PRIM |
| Secondary Progressions | SEC |
| Tertiary Progressions | TERT |
| Solar Return | ⊙RTN |
| Lunar Return | ☾RTN |
| Solar Arc | ⊙ARC |
| Tropical Zodiac | TROP |
| Sidereal Zodiac | SIDL |
| Heliocentric Zodiac | HELIO |
| Planetary Longitude | P.LONG |
| Planetary Latitude | P.LAT |
| Right Ascension | RA |
| Declination | DECL |
| Placidus | PLAC |
| Dalton | DALTON |
| Koch | KOCH |
| Porphyry | PORP |
| Regiomontanus..... | REGIO |
| Meridian | MER |
| Campanus | CAMP |
| Stationary Retrograde | † |
| Stationary Direct | + |

B. TABLE FUNCTION




For reference: Section VIII
 Section IX (see
 note, p. XIX-32)
 Section X

The TABLE function prints positions, aspects, midpoints and parts in tabular form.

1. Tabling Positions

Alan Leo's natal chart (8.7.1860), time (5.51.35), latitude (51.29.30) and longitude (0.0.30) should be in C1 on your DR-70. (We are in a Tropical zodiac, with P LON as a coordinate).

To print a table of the planets in his natal chart, press:

(shift normal) **TABLE** (shift lighted)  **ENTER**

In a few seconds, DR-70 will print the table that appears below:

C1 NATAL TROP P.LONG PLAC 108

0

☉ = 14.152 45
 ☿ = 15.120
 ♀ = 20.111R
 ♁ = 18.521R
 ♂ = 20.810R
 ♃ = 08.126
 ♄ = 27.136
 ♅ = 11.120
 ♆ = 29.804R
 ♇ = 09.829R
 ♈ = 01.858R

To print a table of his natal Placidus cusps, first make sure the house dial is set to PLACID, then press:

(shift normal) TABLE HSE 1 ENTER

In a few seconds, the table will appear:

C1 NATAL TROP P.LONG PLAC 100
H01

H01 = 27 136
H02 = 17 07
H03 = 12 46
H04 = 16 20
H05 = 25 15
H06 = 30 00
H07 = 27 36
H08 = 17 07
H09 = 12 46
H10 = 16 20
H11 = 25 15
H12 = 30 00

SUMMARY:

To TABLE positions:

- 1) Select zodiac type and coordinate.
- 2) Enter date and time.
- 3) If cusps are being calculated, enter latitude and longitude, and rotate house dial to appropriate house system.
- 4) Press:

TABLE PLANET OR HOUSE # ENTER

(shift as necessary)

2. Tabling Aspects

a. SCAN

Let's examine our first table in the example subsection, p. XIX- 09.
You pressed:

(shift normal)

TABLE

(shift lighted)

⊙

SCAN

D

ENTER

and got:

C1 NATAL TROP P. LONG PLAC 100
O SCAN D

| ORB | 10°00' | 10.01 | 11.11 |
|-----|-------------------|-----------|-------|
| ♈ | 0 51 3 5 61 | 3 01 5 | |
| ♉ | Δ 11 28 18 27 | 33 49 124 | |
| ♊ | 4 13 4 61 2 4 | 15 1 | |
| ♋ | Δ 10 50 55 145 01 | 151 22 | |
| ♌ | 1 0 17 0 0 | | |
| ♍ | 150 01 | 125 31 53 | |
| ♎ | 1 91 9 7 18 | | |
| ♏ | 50 55 115 01 | 152 | |
| ♐ | 17 0 0 | | |
| ♑ | 125 31 53 | | |
| ♒ | 2 91 1 6 | | |
| ♓ | 54 22 103 27 | | |
| ♈ | 4 11 4 | | |
| ♉ | 0 16 20 22 | | |
| ♊ | 0 1 9 | | |
| ♋ | 0 16 151 22 | | |
| ♌ | 4 2 | | |
| ♍ | 135 54 | | |
| ♎ | 7 | | |
| ♏ | 31 | | |

10 0 51 3 5 61 3 01 5 33 49 124 15 1 151 22 1 0 17 0 0 150 01 125 31 53 1 91 9 7 18 50 55 115 01 152 17 0 0 125 31 53 2 91 1 6 54 22 103 27 4 11 4 0 16 20 22 0 1 9 0 16 151 22 4 2 135 54 7 31

Alan Leo
Natal Aspects
"SCAN" format

The Header

C1 NATAL tells you that the table is of data from "Chart One, Natal."
TROP means that this chart is in a Tropical zodiac. P LONG means that the coordinate in use is Planetary Longitude (zodiacal degrees). PLAC means that the cusps of C1 Natal are calculated according to Placidus.

Sun - Scan - Moon is the operation. This is a binary operation in which:

☉ = "first operand"

SCAN = "function key"

☾ = "second operand"

Refer to pages IX-02,03 for an explanation of the terms "operand", "binary operation", and "function key."

On the third line of the header, there are four terms:

ORB 10 °00' 10.01 11.11

The first two terms identify the orb in use. It is the "cold-start" orb setting of 10 degrees.

The second two terms identify the aspects DR-70 will search for in the SCAN:

| | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|
| ☿ | ♂ | ☐ | △ | * | Q | § | π | ∨ | ∠ | ☽ |
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |

10.01 says "start the SCAN with conjunctions" (aspect #01).

11.11 says "end the SCAN with sesquiquadrates" (aspect #11).

10.01 - 11.11 includes in its range the whole of DR-70's standard aspect list. (It is possible, however, to select out only certain aspects in a SCAN, e.g. major aspects only, conjunctions only, etc. See Appendix I, p.09 for details on "Selective Aspect Search." The aspects searched are the ones included between the 10.?? setting and the 11.?? setting.)

The Table

Now let's look at the table itself. It is in the "SCAN" format.

To read this aspectarian, begin at the top left and read to the right. The first aspect found is:

| | |
|----|----------------|
| 0 | degrees of orb |
| △ | type of aspect |
| 28 | minutes of orb |

It is read as "Sun - trine - Moon, with an orb of 0°28'. Continuing to the right, the next aspect is "Sun - conjunct - Mercury, with an orb of 5°18'.

To read the Moon's remaining aspects, drop down one line and read to

the right. The first aspect found on the second line is "Moon - trine - Mercury, with an orb of 4°51'."

The remainder of this triangular aspectarian is read in the same manner.

Now let's look to the second table generated in the Example section (p. XIX-10). In this table, the operands are from two different charts. The "first operand" is "Chart One, Secondary": the planets from this chart are listed vertically at the left of the table. The "second operand" is "Chart One, Natal": the natal planets are listed horizontally across the top of the table. The orb here is 10. Again, the whole aspect list is included in the range 10.01 = 11.11.

C1 SEC TROP P. LONG PLAC 10B 0
SCAN NATAL 0

ORB 1°00' 10.01 11 11

Natal Planets

Secondary Planets

Alan Leo
SEC aspects
to NATAL
"SCAN" format
8.7.1895

The ASP function prints out all aspects in degrees and minutes. The first aspect on this table, for example, shows the Sun - Moon angle as:

| | | | |
|------------------|----|-------------|----------------------|
| 100 ⁰ | 1 | 119 degrees | |
| 19 ⁰ | 19 | | 119 ⁰ 32' |
| 32' | 32 | 32 minutes | |

If an angle is less than 100⁰, the top number in a box reads as degrees, and the lower number reads as minutes. Take the Sun - Mercury angle here for an example:

| | |
|----|---------|
| 5 | degrees |
| 18 | minutes |

But if the angle is 100⁰ or more, then it is printed in three parts, as for the Sun - Moon angle above. The "1" at the top means 100⁰; the "19" in the middle means 19⁰; the 32 at the bottom means 32'.

Refer to pp. VIII-01,02 and IX-05,07 for a discussion of the Aspect function. All the examples in section IX can be TABLED; simply begin the key sequence with:

(shift normal) TABLE

c. A ORB

See pp. VIII-07-09 and IX-08-10 for a discussion of the A ORB function. All of the examples from section IX are printer-compatible; simply precede the sequences given there with:

(shift normal) TABLE

Set your orb to 10⁰ and press:

(shift normal) TABLE (shift lighted) ⊙ A ORB ⌋ ENTER

You'll get the same answers as are given on pp. IX-08,09:

| | | | |
|-----|-----------------|----------|-------|
| ORB | 10°00' | 10.01 | 11.11 |
| | ☉ ☽ ♀ ♄ ☿ ♃ ♅ ♁ | | |
| | 0 5 3 5 6 | 3 0 5 | |
| ☉ | ♈ ♉ ♊ ♋ ♌ ♍ | ♎ ♏ ♐ ♑ | |
| | 28 18 28 18 27 | 33 49 24 | |
| | ☉ ☽ ♀ ♄ ☿ ♃ ♅ ♁ | | |

When used with the printer, the A ORB function never uses the degree-minute format. It prints only the aspects within the orb in use.

SUMMARY:

To TABLE aspects:

- 1) Aspects within a single chart or between two charts may be tabled. When comparing two charts, both charts should be in the same zodiac type and coordinate system; either chart may be used as first operand.
- 2) If using SCAN or A ORB, set an orb.
- 3) Press:

| | | | | |
|-----------------|-----------------|--------------------|--------------------|----------------------|
| TABLE | CHART NUMBER | CHART TYPE | PLANET OR HSE # | SCAN ASP A ORB |
| CHART NUMBER | CHART TYPE | PLANET OR HSE # | ENTER | |

(shift as necessary)

*Note: In many operations, Chart Number and/or Type can be "implied" for one or both operands: see sections XIV, XVII.

3. Tabling Midpoints

Midpoints are tabled in the same manner as aspects. Simply substitute MDPT for SCAN/ASP/A ORB in the general formula given for aspects on the preceding page. All the examples on pp. VIII-03 and IX-10,11 are printer-compatible; simply precede the sequences there with:

(Shift normal) TABLE

See also section XIV.

Example: What are Alan Leo's natal midpoints?

With Alan Leo's date, time, etc. on C1 (zodiac = TROP, coordinate = P LON), press:

(shift normal) TABLE (shift lighted) C1 NATAL ⊙ MDPT D ENTER

In the standard manner, DR-70 will first print a header. Then, allow about a minute for the table of midpoints to appear:

C1 NATAL TROP P LONG PLAC 100
⊙ MID PT D

| | | | | | | | | | | |
|--|----|----|----|----|----|----|----|----|----|----|
| | 15 | 17 | 01 | 02 | 11 | 21 | 13 | 06 | 27 | 08 |
| | I | A | I | A | I | A | I | A | I | A |
| | 07 | 32 | 37 | 32 | 39 | 14 | 06 | 58 | 11 | 25 |
| | 17 | 01 | 02 | 11 | 21 | 13 | 06 | 27 | 08 | |
| | I | I | A | I | A | I | I | A | I | A |
| | 46 | 51 | 45 | 53 | 28 | 28 | 12 | 25 | 29 | |
| | 04 | 05 | 14 | 23 | 15 | 09 | 29 | 11 | | |
| | A | A | A | A | I | A | I | A | I | A |
| | 16 | 11 | 18 | 53 | 45 | 37 | 50 | 05 | | |
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The midpoints are printed in the zodiac format. The Sun-Moon midpoint, for example, is at 15°07' Gemini.

Midpoints can also be drawn between two charts.

Example: What are the midpoints formed between Alan Leo's natal chart and the transiting planets for Noon GMT, 8.7.1895 ?

Keep Mr. Leo's information in C1, and enter Noon GMT, 8.7.1895 into C2, NATAL. Both charts should be tropical with planetary longitude as a coordinate. Then press:

(shift normal) TABLE (shift lighted) C2 ☉ MDPT C1 ☉ ENTER

DR-70 will first print a header for the operation. Then, in about a minute, the table will appear:

```

C2 NATAL TROP P LONG PLAC 189
O MID PT C1 O

  O D E Z J K L M N O P Q R
-----
14 15 17 01 02 11 21 13 06 27 08
O  A I A A A A A A A I I A
147 01 26 31 26 33 09 01 53 05 20
-----
25 25 27 11 12 22 01 23 17 07 18
D  B K L L L L L L L L L L
15 29 54 59 54 02 37 29 21 33 48
-----
09 09 11 26 26 06 15 07 01 21 02
S  A I A A A A A A A I I A
18 31 57 02 56 04 39 31 23 36 50
-----
05 05 08 22 23 02 12 03 27 17 29
Q  B K L L L L L L L L L L
40 53 19 24 19 26 01 53 45 50 12
-----
25 25 28 12 13 22 01 23 17 07 18
D  A I A A A A A A A I I A
24 38 03 00 03 10 45 37 29 42 57
-----
04 04 07 21 22 01 10 02 26 16 20
K  A I A A A A A A A I I A
32 46 11 16 11 18 54 46 38 50 05
-----
23 23 25 09 10 19 29 21 15 05 16
L  B K L L L L L L L L L L
11 25 50 55 50 57 33 25 17 29 44
-----
00 00 03 17 18 27 06 28 23 12 23
M  A A A A A A A A A A A A
24 38 04 00 03 11 46 39 30 47 57
-----
16 16 18 02 03 12 22 14 09 20 09
S  B K L L L L L L L L L L
12 26 51 55 51 59 34 26 18 30 45
-----
13 13 16 00 01 10 20 11 05 26 07
L  A I A A A A A A A I I A
43 56 22 27 21 29 04 56 48 01 15
-----
28 29 01 15 16 25 05 27 21 11 22
A  B K L L L L L L L L L L
55 09 24 39 34 41 16 08 00 13 29
-----
  O D E Z J K L M N O P Q R

```

C2 planets were used as first operand; they appear along the left side of the table. C1 planets were used as second operand; they are listed horizontally across the top.

SUMMARY:

To TABLE midpoints:

- 1) Midpoints within a single chart or between two charts may be tabled. When comparing two charts, both should be in the same zodiac type and co-ordinate system; either chart may be used as first operand.

2) Press:

| | | | | |
|-----------------|-----------------|--------------------|--------------------|------|
| TABLE | CHART NUMBER | CHART TYPE | PLANET OR HSE # | MDPT |
| CHART NUMBER | CHART TYPE | PLANET OR HSE # | ENTER | |

(shift as necessary)

*Note: In many operations, Chart Number and/or Type can be "implied" for one or both operands. See sections XIV, XVII.

4. Tabling Arabian Parts

See section VIII, pp.04-06, section IX, pp.11-13, and section XIV, pp. 09-13,17 for discussions of Arabian Parts. All of the examples on these pages are printer-compatible: simply precede any of the given key sequences with:

(shift normal) TABLE

(Note: ○ in key sequences means "shift normal"; ◆ means "shift lighted")

Example: What are the Arabian parts in Alan Leo's Natal Chart ?

With Mr. Leo's natal data in C1 NATAL (Tropical zodiac, P LON Coordinate), press:

(shift normal) TABLE (shift lighted) ○ PART) ENTER

DR-70 will first print a header. In about a minute, the table of Arabian parts will appear (in the zodiac format):

C1 NATAL TROP P.LONG PLAC 100
0 PART 3 PART H01

| | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|---|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|
| 0 | 28 | 02 | 01 | 02 | 21 | 10 | 24 | 11 | 22 | 14 | | | | | | | | | | | | | |
| | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | | | | | | | | | | | | | |
| | 03 | 54 | 04 | 53 | 00 | 19 | 03 | 47 | 12 | 41 | | | | | | | | | | | | | |
| 1 | 27 | 02 | 00 | 02 | 20 | 09 | 23 | 11 | 21 | 14 | | | | | | | | | | | | | |
| | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | | | | | | | | | | | | | |
| | 00 | 26 | 36 | 26 | 41 | 51 | 35 | 19 | 44 | 13 | | | | | | | | | | | | | |
| 2 | 22 | 22 | | 25 | 27 | 15 | 05 | 18 | 06 | 16 | 09 | | | | | | | | | | | | |
| | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | | | | | | | | | | | | | |
| | 17 | 45 | | 45 | 35 | 50 | 00 | 44 | 29 | 54 | 23 | | | | | | | | | | | | |
| 3 | 24 | 24 | 29 | | 29 | 17 | 06 | 20 | 08 | 10 | 11 | | | | | | | | | | | | |
| | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | | | | | | | | | | | | | |
| | 00 | 35 | 26 | | 25 | 41 | 51 | 35 | 19 | 44 | 13 | | | | | | | | | | | | |
| 4 | 22 | 22 | 27 | 25 | | 15 | 05 | 18 | 06 | 16 | 09 | | | | | | | | | | | | |
| | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | | | | | | | | | | | | | |
| | 18 | 46 | 36 | 46 | | 51 | 01 | 45 | 29 | 54 | 23 | | | | | | | | | | | | |
| 5 | 04 | 04 | 09 | 07 | 09 | | 16 | 00 | 18 | 20 | 21 | | | | | | | | | | | | |
| | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | | | | | | | | | | | | | |
| | 03 | 30 | 21 | 31 | 20 | | 46 | 30 | 14 | 39 | 00 | | | | | | | | | | | | |
| 6 | 14 | 15 | 20 | 18 | 20 | 08 | | 11 | 29 | 09 | 01 | | | | | | | | | | | | |
| | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | | | | | | | | | | | | | |
| | 53 | 20 | 11 | 20 | 10 | 25 | | 20 | 04 | 29 | 58 | | | | | | | | | | | | |
| 7 | 01 | 01 | 06 | 04 | 06 | 24 | 13 | | 15 | 25 | 18 | | | | | | | | | | | | |
| | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | | | | | | | | | | | | | |
| | 09 | 36 | 27 | 36 | 26 | 41 | 52 | | 20 | 45 | 14 | | | | | | | | | | | | |
| 8 | 13 | 13 | 18 | 16 | 18 | 06 | 26 | 09 | | 00 | 00 | | | | | | | | | | | | |
| | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | | | | | | | | | | | | | |
| | 24 | 52 | 43 | 52 | 42 | 57 | 07 | 52 | | 01 | 30 | | | | | | | | | | | | |
| 9 | 02 | 03 | 00 | 06 | 00 | 26 | 15 | 29 | 17 | | 20 | | | | | | | | | | | | |
| | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | | | | | | | | | | | | | |
| | 99 | 27 | 18 | 27 | 17 | 32 | 42 | 26 | 11 | | 05 | | | | | | | | | | | | |
| A | 10 | 10 | 15 | 13 | 15 | 04 | 23 | 06 | 24 | 05 | | | | | | | | | | | | | |
| | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | | | | | | | | | | | | | |
| | 30 | 50 | 48 | 58 | 48 | 03 | 13 | 57 | 41 | 06 | | | | | | | | | | | | | |
| | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | | | | | | | | | | | | |

Alan Leo
Arabian Parts

This table should be read from left to right, e.g., the top line reads: Sun - part - Moon, etc.. The second line reads: Moon - part - Sun, Moon - part - Mercury, Moon - part - Venus, etc..

SUMMARY

To TABLE Arabian Parts:

- 1) Arabian Parts for a single chart or between two charts may be tabled. When using two charts, both should be in the same zodiac type and co-ordinate system; either chart may be used as first operand.

2) Press;

| | | | | | |
|-------|-----------------|---------------|--------------------|------|-----------------|
| TABLE | CHART NUMBER | CHART TYPE | PLANET OR HSE # | PART | CHART NUMBER |
|-------|-----------------|---------------|--------------------|------|-----------------|

| | | |
|---------------|--------------------|-------|
| CHART TYPE | PLANET OR HSE # | ENTER |
|---------------|--------------------|-------|

(shift as necessary)

Or,
2b)

| | | | | | |
|-------|-----------------|---------------|--------------------|------|-----------------|
| TABLE | CHART NUMBER | CHART TYPE | PLANET OR HSE # | PART | CHART NUMBER |
|-------|-----------------|---------------|--------------------|------|-----------------|

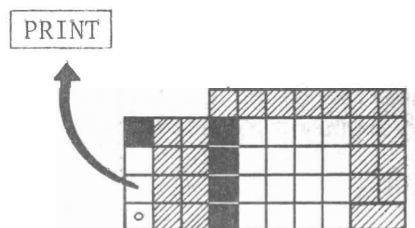
| | | | | | |
|---------------|--------------------|------|-----------------|---------------|-------|
| CHART TYPE | PLANET OR HSE # | PART | CHART NUMBER | CHART TYPE | HSE # |
|---------------|--------------------|------|-----------------|---------------|-------|

| |
|-------|
| ENTER |
|-------|

(SHIFT AS NECESSARY)

*Note: In many operations, Chart Number and/or Type can be implied for one or both operands. See sections XIV, XVII.

C. PRINT Function



The PRINT function provides direct single-step printing of operations actually performed on the keyboard. Precede any standard key sequence with (shift normal) **PRINT** answers will be printed simultaneously with their appearance on the display. The PRINT function will continue to operate until you press **PRINT** a second time.

The PRINT function prints operations which cannot be printed with other printer functions:

- Harmonics
- Primary Directions
- Arithmetic Functions
- 'Hard Copy' of Experimental Sequences
- Isolated Factors (Ayanamsha setting, DYF, etc.)
- Recall and Memory Operations

Examples:

1) Harmonics

Harmonics can be printed rapidly with the general formula:

(shift normal) **PRINT** **ZOD** **1** **.** **#** **X** (shift lighted)
PLANET **ENTER** ... **ENTER** ... **ENTER** ... etc.

in the sequence above indicates the harmonic to be calculated. It can be any number, i.e., 3rd, 5th, 12th, 128th harmonic, etc.

To print our Alan Leo's third harmonics, for example, press:

(shift normal) **PRINT** **DATE** **8** **.** **7** **.** **1** **8** **6** **0** **ENTER**

The date will be printed. Then press:

(shift normal) TIME 5 . 5 1 . 3 0 ENTER

The time will be printed. Note that it is not correct to press PRINT a second time; once the PRINT function is engaged, it remains in operation until the PRINT key is pressed a second time.

If harmonics of cusps are desired, make latitude and longitude entries in the standard manner. These entries will also be printed as you make them.

To calculate the third harmonics of the natal planets, press:

(shift normal) ZOD 1 . 3 X (shift lighted) ☉ ENTER

The first answer to be printed is :

1 3 X ☉ = 14 ♋ 38 16

This is the third harmonic of the natal Sun. Now press:

ENTER

1 3 X ♃ = 16 ♏ 01 11 will be printed as the position of the third harmonic Moon. Press ENTER again: 1 3 X ♄ = 00 ♐ 32 58 will be printed as the third harmonic Mercury. Each time you press ENTER, DR-70 will print the third harmonic of the next planet on the Planet Line (see p. IX-04). After you get the third harmonic of the natal ♏, press ENTER again; DR-70 will advance to start calculating the fourth harmonic chart. The next item printed will be:

1 4 X ☉ = 29 ♏ 31 02

This is the fourth harmonic of the natal Sun. Press ENTER again and 1 4 x ♃ = 01 ♐ 21 44 will appear as the fourth harmonic of the natal Moon, etc.. DR-70 will continue to advance ad infinitum through the harmonics in response to ENTER.

To calculate aspects within a harmonic chart, see section XVI, pp.22-24. The sequences given there will be printed if the PRINT function is engaged.

TO disengage the PRINT function, press PRINT a second time.

2) Primary Directions

The methods for calculating primary directions are given in section XIII. All of the sequences given there can be printed. Simply precede your operations with PRINT.

Enter the date for Alan Leo's primary directions as:

(shift lighted) PRIM (shift normal) PRINT 8 . 7 .
1 8 9 5 ENTER

DR-70 will print:

C1 PRIM TROP DIR P.LONG PLAC 108
DATE = 8.7.1895

To recall the 90-dial setting, press:

(shift normal) 90D RECL

90D = 360°00' will be printed. 360 is less than 399: you're in Method One.
 Now press:

(shift lighted) PRIM ⊙ ASP NATAL ⊙ ENTER

Allow 30 seconds for calculating time. Then DR-70 will print:

⊙ ASP NATAL ⊙ = 28°12'09"

Press ENTER

In 15-20 seconds, DR-70 will print:

⊙ ASP NATAL ⊔ = 74°39'

Continue the standard Auto-Entry procedure; DR-70 will print out all answers as they appear on the display.

All of the methods and sequences illustrated in section XIII may be printed in this manner.

3) Arithmetic Functions

A variety of arithmetic functions are presented in section XV. They can all be printed when the PRINT function is engaged. For example, press:

(shift lighted) NATAL (shift normal) PRINT 10B 1 + 1 ENTER

The whole operation and its answer will be printed.

4) 'Hard copy' of Experimental Sequences

As long as the PRINT function is engaged, nearly everything* you try will be printed.

*Exception: sequences that result in "ERROR" on the display will not be printed.

5) Isolated Factors

If the PRINT function is engaged, all user-defined options will be printed as they are entered. They will also be printed when recalled with the RECL key.

Example: Press:

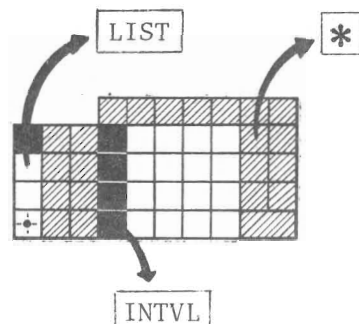
AYAN RECL = 23°20'56" is printed.

Now redefine it to another value, say:

AYAN = 21°50' is printed.

| |
|---------------------------------------------------------------------------------------------------------------------------|
| Summary of PRINT |
| 1. Precede any sequence with PRINT |
| 2. Keyboard operations and their answers will be printed simultaneously with the appearance of the answer on the display. |
| 3. To disengage the PRINT function, press PRINT a second time. |

D. LIST FUNCTION



The LIST function lists 1-100 changes in position (of planets, cusps, etc.). Each two items on the list are separated by a uniform interval of decimal hours or decimal days; this interval is specified by the user with the INTVL and * keys. The number of items (1-100) on the list is user-specified through the * key.

LIST may be used, for example, to print ephemerides. It serves both as a separate printer function and in combination with either TABLE or CHART.

When used with TABLE, it prints 1-100 uniformly advancing tables of positions, aspects, midpoints or parts. This combination is well-suited to producing full ephemerides and to listing aspects formed by the transiting Moon.

When used with CHART, it prints a series of 1-100 charts, each one separated from its prior in the series by the interval in use.

1. Listing positions of a single planet or cusp:

a. Planets

1) In days:

Example 1: What is the zodiacal position of the Sun at Noon GMT each day for the month of February, 1979 ?

Step one: Enter the date and time for the first item on the list:

DATE 2 . 1 . 1 9 7 9 ENTER
TIME 1 2 ENTER

Step two: Check the display to see that DR-70 is using the zodiac and coordinate you want. If not, press TROP, HELIO, SIDL (zodiacs) and/or P LON, P LAT, RA or DECL (coordinates) as necessary. We want TROP and P LON. Press (shift lighted) TROP, P LON to be sure. Chart type, for this example, should be NATAL.

Step three: Set the INTVL key. We want to use one day as an interval between items on the list. Press:

(shift lighted) INTVL (shift normal) 1 ENTER

To check the interval setting at any time, press:

INTVL RECL

The current setting should be: 1

Step four: Identify the INTVL setting as either "hours" or "days". The units (hours or days) to be associated with the INTVL setting are indicated through * -series #33. * 3300 labels the INTVL as decimal days; * 3301 labels the INTVL as decimal hours. We want days. Press:

(shift lighted) [*] (shift normal) [3] [3] [0] [0] [ENTER]

The value of star-series #33 can be recalled at any time. Simply press:

(shift lighted) [*] (shift normal) [3] [3] [RECL]

The current setting, when recalled, should appear as:

33.00

Step five: Indicate the length of the list. The length of the list is specified with * -series #12. We want a listing for each of the 28 days in February, 1979. * -series #12 should be set to 28. Press:

(shift lighted) [*] (shift normal) [1] [2] [2] [8] [ENTER]

The value of * -series #12 can be recalled at any time. Simply press:

(shift lighted) [*] (shift normal) [1] [2] [RECL]

The current setting, when recalled, should appear as:

12.28

Step six: List the series. Press:

(shift lighted) [LIST] [⊙] [ENTER]

In a few seconds, DR-70 will print a header indicating chart number, type, date and GMT

| | | | | |
|----|-------|-------|------------|-------|
| | | | DATE | GMT |
| | | | ↓ | ↓ |
| C1 | NATAL | DR DT | 02.01.1979 | 12.00 |

Then in a few more seconds, it will print the first item on the list:

0 = 12⁰⁰01 52

At Noon GMT on February 1, 1979, the Sun is at 12⁰⁰01'52" of Aquarius.

Then, in a few more seconds, DR-70 will print another header:

C1 NATAL DROT 02.02.1979 12.00

In about 10 seconds, it will print the second item on the list:

0 = 13⁰⁰02 46

At Noon GMT on February 2, 1979, the Sun is at 13⁰⁰02'46" of Aquarius.

DR-70 will now proceed in the same manner as above to print out the Sun's position at Noon GMT for February 3, February 4, February 5, etc. ... to February 28. Then it will stop.

To interrupt the list at any point, simply press the clear key:

(shift lighted) C

Press C only if you want to interrupt the list. Otherwise, DR-70 will proceed to the end of the list as indicated through * -series #12.

1.a.2) Listing the planets' position by hourly increments:

Example 2: Where is the Moon every hour from Noon GMT March 26, 1979 until Noon GMT March 27, 1979 ?

Step one: Enter a starting date and time.

DATE 3 . 2 6 . 1 9 7 9 ENTER

TIME 1 2 ENTER

Step two: Same as example 1.

Step three: Set INTVL key. We still want a value of 1, as in example 1.

Step four: Identify the INTVL setting as "hours". Press:

(shift lighted) (shift normal)

Review step four of example 1. The current setting for

(shift lighted) (shift normal) should be:

: decimal hours.

Step five: Indicate the length of the list. We want a listing for each of the 24 hours between Noon GMT on the 26th and Noon GMT on the 27th. Set * -series #12 to 24 by pressing:

(shift lighted) (shift normal)

The RECL key may be used as in the previous example. Your current answer should be:

Step six: List the series. Press:

(shift lighted)

In a few seconds, the first header will be printed:

| DATE | GMT |
|--------------------------|-------|
| C1 NATAL DROT 03.26.1979 | 12.00 |

Then, in 7-10 seconds, the first position will be printed:

= 12~~X~~54

At Noon GMT on March 26, 2979, the Moon is at 12⁰54' of Pisces.*

In a few more seconds, the next header will be printed. Then in 10 seconds, 13 ~~X~~31 will be printed as the Moon's position at 13.00 GMT on March 26, 1979.

DR-70 will now proceed to print the Moon's position for 14,00, 15,00, 16.00, etc. GMT in the same manner as before.

To interrupt the list, press the key. Press only if you want to interrupt the list.

Any planet can be used in place of either the Sun or the Moon in the examples above. At step six, press:

1.b. Listing motions of the cusps

Example 3: What is the Ascendant every 4 minutes - starting at 7 A.M. EST for 42N30, 76W30 on March 26, 1979 ?

Step one: Enter the date, starting time, latitude and longitude in the normal manner.

*Note: 7 A.M. EST should be entered as 12:00 GMT:

Step two: Same as example 1.

Step three: Set INTVL key. To set the interval to 4 minutes, we have to convert "four minutes" into a decimal fraction of an hour. The calculation can be done on DR-70. Press:

(shift normal)

appears on the display.

To enter this value as the interval to be used, press:

(shift lighted)

┌ will appear in the left-hand corner of the number register when the entry is completed.

Step four: Identify the INTVL setting as decimal hours. Press:

(shift lighted)

(shift normal)

Step five: Specify the length of the list. We'll go for the maximum. Set * -series #12 to 00. Press:

(shift lighted) (shift normal)

The list will include 100 positions.

Step six: Rotate house dial to the house system you want to use. We'll use PLACIDUS.

Step seven: List the series. Press:

(shift lighted) (shift normal)

In a few seconds, DR-70 will print the first header:

| | | |
|---------------|------------|-------|
| | DATE | GMT |
| | ↓ | ↓ |
| C1 NATAL DROT | 03.26.1979 | 12.00 |

*Note: 1200 GMT = 7 A.M. EST for the location in use.

Then the first listing will appear as:

H01 = 29° 26'

The Ascendant for 42N30, 76W30 at 7 A.M. EST on March 26, 1979 is 29°26' Aries.

In another few seconds, the next header will be printed. Then 1°04' Taurus will be printed as the Ascendant at 7:04 A.M. (12:04 GMT) for the location in use.

DR-70 will now proceed to list the Ascendant for this location at 12:08 GMT, 12:12 GMT, etc., as in the previous examples.

Any house cusp may be used in place of HSE 1 above. At step seven press:

(shift lighted) (shift normal)

SUMMARY

To LIST single positions:

- 1) Enter the starting date and time. Enter latitude and longitude only if cusps are being used.
- 2) Set DR-70 into the proper zodiac and coordinate system.
- 3) Set the INTVL key.
- 4) Identify the INTVL setting as decimal days (* 3300) or hours (* 3301)
- 5) Indicate the length of the list (* 12 ??)
- 6) If cusps are being listed, rotate house dial to the appropriate house system.
- 7) Press:

LIST PLANET OR HOUSE # ENTER
(shift as necessary)

NOTE: Steps 3, 4, and 5, are only necessary when using new values.

2. Listing Tables of Positions, Aspects, Parts

a. Positions: full ephemerides.

Example 4: What are the zodiacal positions of all the planets at Noon GMT for the month of March, 1979 ?

Step one: Enter the starting date and time in the usual manner (DATE: 3.1.1979, TIME: 12 GMT).

Step two: Same as example 1.

Step three: Same as example 1.

Step four: Same as example 1.

Step five: Indicate the length of the list. March has 31 days. Press:

(shift lighted) * (shift normal) 1 2 3 1 ENTER

Step six: List the series of tables. Press:

(shift normal) TABLE (shift lighted) LIST ⊙ ENTER

In a few seconds, the first header will appear. Then the positions of the planets at Noon GMT for March 1, 1979 will be printed. Then DR-70 will advance one day and print the planets' positions for Noon GMT on March 2, 1979. It will continue in this manner until it completes the positions for March 31, 1979. The first two tables appear below:

C1 NATAL DROT 03.01.1979 12.00

C1 NATAL TROP P.LONG PLAC 108

⊙

⊙ = 10^h 18^m 22^s
 ♃ = 18^h 47^m
 ♄ = 26^h 23^m
 ♅ = 27^h 25^m
 ♆ = 01^h 19^m
 ♁ = 29^h 57^m
 ♂ = 10^h 33^m
 ♀ = 20^h 59^m
 ♄ = 20^h 22^m
 ♅ = 18^h 48^m
 ♆ = 17^h 27^m

C1 NATAL DROT 03.02.1979 12.00

C1 NATAL TROP P.LONG PLAC 108

⊙

⊙ = 11^h 18^m 35^s
 ♃ = 02^h 47^m
 ♄ = 27^h 57^m
 ♅ = 28^h 35^m
 ♆ = 02^h 06^m
 ♁ = 29^h 53^m
 ♂ = 10^h 29^m
 ♀ = 20^h 59^m
 ♄ = 20^h 23^m
 ♅ = 18^h 47^m
 ♆ = 17^h 28^m

2.b. Listing Tables of Aspects (SCAN, A ORB, ASP)

1) SCAN

Example 5: What were Alan Leo's transits each day at Noon GMT for the month of August, 1895 ? (Tropical zodiac, P LON, PLACIDUS cusps).

Step one: Put DR-70 into C1 NATAL and enter Alan Leo's natal date (8.7.1860), time (5.51.35), latitude (51.29.30) and longitude (0.0.30).

Step two: Same as example 1.

Step three: Same as example 1.

Step four: Same as example 1.

Step five: Indicate length of list. August has 31 days. Press:

(shift lighted) * (shift normal) 1 2 3 1 ENTER

Step six: Put DR-70 into C2 NATAL and enter 8.1.1895 as a date and 12 GMT as a time. This is the starting date and time for the list. This is the chart we want to have incremented as the list progresses.

Step seven: Set the orb key to 2°. Press:

(shift normal) ORB 2 ENTER

Step eight: List the advancing tables of aspects. Press:

(shift normal) TABLE (shift lighted) LIST C2 ☉

SCAN C1 ☉ ENTER

In a few seconds, DR-70 will print the header:

C2 NATAL DROT 08.01.1895 12.00

This indicates Noon GMT on August 1, 1895 as the time and date of the first table.

The rest of the header is in the standard format as explained on p. XIX-26.

In about one minute, the first table will appear:

C2 NATAL TROP P LONG PLAC 108

① SCAN C1 ①

Transiting planets

| ORB | 2°00' | 10.01 | 11.11 | |
|-----|-------|-------|-------|---|
| | 0 | 1 | 2 | 3 |
| 0 | | 0 | 0 | |
| 1 | | 1 | 1 | |
| 2 | | 2 | 2 | |
| 3 | | 3 | 3 | |
| 4 | | 4 | 4 | |
| 5 | | 5 | 5 | |
| 6 | | 6 | 6 | |
| 7 | | 7 | 7 | |
| 8 | | 8 | 8 | |
| 9 | | 9 | 9 | |
| 10 | | 10 | 10 | |
| 11 | | 11 | 11 | |
| 12 | | 12 | 12 | |
| 13 | | 13 | 13 | |
| 14 | | 14 | 14 | |
| 15 | | 15 | 15 | |
| 16 | | 16 | 16 | |
| 17 | | 17 | 17 | |
| 18 | | 18 | 18 | |
| 19 | | 19 | 19 | |
| 20 | | 20 | 20 | |
| 21 | | 21 | 21 | |
| 22 | | 22 | 22 | |
| 23 | | 23 | 23 | |
| 24 | | 24 | 24 | |
| 25 | | 25 | 25 | |
| 26 | | 26 | 26 | |
| 27 | | 27 | 27 | |
| 28 | | 28 | 28 | |
| 29 | | 29 | 29 | |
| 30 | | 30 | 30 | |
| 31 | | 31 | 31 | |
| 32 | | 32 | 32 | |
| 33 | | 33 | 33 | |
| 34 | | 34 | 34 | |
| 35 | | 35 | 35 | |
| 36 | | 36 | 36 | |
| 37 | | 37 | 37 | |
| 38 | | 38 | 38 | |
| 39 | | 39 | 39 | |
| 40 | | 40 | 40 | |
| 41 | | 41 | 41 | |
| 42 | | 42 | 42 | |
| 43 | | 43 | 43 | |
| 44 | | 44 | 44 | |
| 45 | | 45 | 45 | |
| 46 | | 46 | 46 | |
| 47 | | 47 | 47 | |
| 48 | | 48 | 48 | |
| 49 | | 49 | 49 | |
| 50 | | 50 | 50 | |
| 51 | | 51 | 51 | |
| 52 | | 52 | 52 | |
| 53 | | 53 | 53 | |
| 54 | | 54 | 54 | |
| 55 | | 55 | 55 | |
| 56 | | 56 | 56 | |
| 57 | | 57 | 57 | |
| 58 | | 58 | 58 | |
| 59 | | 59 | 59 | |
| 60 | | 60 | 60 | |
| 61 | | 61 | 61 | |
| 62 | | 62 | 62 | |
| 63 | | 63 | 63 | |
| 64 | | 64 | 64 | |
| 65 | | 65 | 65 | |
| 66 | | 66 | 66 | |
| 67 | | 67 | 67 | |
| 68 | | 68 | 68 | |
| 69 | | 69 | 69 | |
| 70 | | 70 | 70 | |
| 71 | | 71 | 71 | |
| 72 | | 72 | 72 | |
| 73 | | 73 | 73 | |
| 74 | | 74 | 74 | |
| 75 | | 75 | 75 | |
| 76 | | 76 | 76 | |
| 77 | | 77 | 77 | |
| 78 | | 78 | 78 | |
| 79 | | 79 | 79 | |
| 80 | | 80 | 80 | |
| 81 | | 81 | 81 | |
| 82 | | 82 | 82 | |
| 83 | | 83 | 83 | |
| 84 | | 84 | 84 | |
| 85 | | 85 | 85 | |
| 86 | | 86 | 86 | |
| 87 | | 87 | 87 | |
| 88 | | 88 | 88 | |
| 89 | | 89 | 89 | |
| 90 | | 90 | 90 | |
| 91 | | 91 | 91 | |
| 92 | | 92 | 92 | |
| 93 | | 93 | 93 | |
| 94 | | 94 | 94 | |
| 95 | | 95 | 95 | |
| 96 | | 96 | 96 | |
| 97 | | 97 | 97 | |

Alan Leo
Transits to Natal
12:00 GMT
8.1.1895

Then a second header will be printed, indicating Noon GMT, August 2, 1895 as the date of the table that will follow. In about a minute, the second table appears:

C2 NATAL DRDT 08.02.1895 12.00

C2 NATAL TROP P.LONG PLAC 108
0 SCAN C1 0

ORB 2°00' 10.01 11.11

0 1 2 3 4 5 6 7 8 9 A ← Natal Planets

| | | | | | | | | | | |
|---|----|----|----|----|----|----|---|---|---|---|
| | | | | 1 | 1 | 0 | | | | |
| 0 | | | | ✓ | ✕ | □ | | | | |
| | | | | 28 | 26 | 25 | | | | |
| 1 | | 0 | | | | | | | | |
| | | 19 | | | | | | | | |
| 2 | | | | | 2 | | | | | |
| | | | | | 20 | | | | | |
| 3 | | | | 0 | | 1 | | | | |
| | | | | 20 | | 24 | | | | |
| 4 | | | 0 | | | 0 | | | | |
| | | | 35 | | | 48 | | | | |
| 5 | | | | | | 1 | | | | |
| | | | | | | 37 | | | | |
| 6 | | 0 | | | | 0 | | | | |
| | | 57 | | | | 44 | | | | |
| 7 | 1 | 0 | | | | 1 | | | | |
| | 01 | 33 | | | | 49 | | | | |
| 8 | | | 0 | 0 | 1 | | | | | |
| | | | 56 | 25 | 49 | | | | | |
| 9 | | | | | 1 | 1 | | | | |
| | | | | | 09 | 25 | | | | |
| A | 1 | | | 1 | 1 | | | | | |
| | 37 | | | 40 | 56 | | | | | |
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Alan Leo
Transits to Natal
12:00 GMT
8.2.1895

DR-70 will now advance to print tables of transiting aspects for August 3, August 4, August 5, etc., in the same manner.

2.b. (Tables of Aspects, continued)

2) A ORB

Example 6: Print me a list of the aspects the transiting Moon makes to other transiting planets for the afternoon of March 26, 1979. I'm in California, and I want to know the lunar aspects every 45 minutes from Noon onward here. (Tropical zodiac).

Step one: Enter a starting date and time. (For this example we'll use C1.) The date is 3.1.1979. The time we want to enter is 20 GMT (Noon plus eight hours time zone adjustment).

Step two: Same as example 1.

Step three: Set INTVL key to 45 minutes. Press:

(shift normal) 4 5 10B ÷ 6 0 ENTER

0.75 appears on the display. 45 minutes = 0.75 decimal hours.

Enter this as the interval by pressing:

(shift lighted) INTVL ENTER

Step four: Identify the interval as "decimal hours" by pressing:

(shift lighted) * (shift normal) 3 3 0 1 ENTER

Step five: Indicate the length of the list. We'll go for ten listings. Press:

(shift lighted) * (shift normal) 1 2 1 0 ENTER

Step six: Set an orb of 30' by pressing:

(shift normal) ORB . 3 0 ENTER

Step seven: List the series of tables. Press:

(shift normal) TABLE (shift lighted) LIST D A ORB ⊙

ENTER

The next aspect to appear doesn't show up until the 23:00 GMT (= 3 P.M. PST) listing: a sesquiquadrate to Saturn. By the time of the next listing (23:45 GMT = 3:45 P.M. PST), the sesquiquadrate is separating, and a semi-square to the Sun is forming. By rough interpolation, we know that the sesquiquadrate to Saturn was exact at about 3:20 P.M. PST. (More accuracy can be had by setting a smaller orb.)

DR-70 will now advance to 0:30 GMT (= 4:30 P.M. PST), etc., in the normal manner.

2.b. (Tables of Aspects, continued)

3) ASpect key

Repeat steps one through six of example 5 (p. XIX- 49). Skip step seven - there is no orb required with ASP. Then press:

(shift normal)

TABLE

(shift lighted)

LIST

C2

⊙

ASP

C1

⊙

ENTER

Allow at least a minute for each table. The first two you will get are:

C2 NATAL ORDT 00 01 1895 12 00

C2 NATAL TROP P. LONG PLAC 100
0 ASP C1 0

| | 10 | D | 11 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | A |
|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|----|----|---|
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 5 | 13 | 11 | 20 | 61 | 0 | 18 | 57 | 29 | 89 | 73 | | | | |
| 2 | 56 | 36 | 14 | 36 | 14 | 31 | 39 | 37 | 53 | 28 | 02 | | | | |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 4 | 128 | 12 | 22 | 54 | 27 | 34 | 115 | 68 | 96 | 136 | 38 | | | | |
| 5 | 108 | 20 | 58 | 40 | 10 | 35 | 125 | 19 | 03 | 128 | 58 | | | | |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 7 | 122 | 97 | 27 | 4 | 77 | 15 | 34 | 41 | 13 | 173 | 70 | | | | |
| 8 | 116 | 17 | 34 | 116 | 33 | 49 | 59 | 17 | 33 | 108 | 39 | | | | |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 10 | 137 | 57 | 32 | 164 | 17 | 43 | 24 | 81 | 73 | 132 | 29 | | | | |
| 11 | 129 | 82 | 11 | 101 | 49 | 56 | 146 | 82 | 18 | 153 | 36 | | | | |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 13 | 117 | 36 | 11 | 143 | 38 | 23 | 1 | 80 | 53 | 112 | 49 | | | | |
| 14 | 116 | 48 | 57 | 148 | 02 | 43 | 133 | 49 | 04 | 139 | 50 | | | | |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 16 | 122 | 97 | 27 | 4 | 77 | 15 | 34 | 41 | 13 | 173 | 70 | | | | |
| 17 | 108 | 32 | 18 | 132 | 18 | 33 | 143 | 33 | 49 | 124 | 54 | | | | |
| 18 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 19 | 176 | 64 | 71 | 102 | 78 | 82 | 163 | 39 | 47 | 171 | 90 | | | | |
| 20 | 119 | 09 | 08 | 51 | 59 | 46 | 136 | 52 | 52 | 143 | 47 | | | | |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 22 | 191 | 49 | 85 | 117 | 64 | 97 | 178 | 54 | 33 | 173 | 76 | | | | |
| 23 | 100 | 29 | 42 | 102 | 18 | 27 | 117 | 33 | 11 | 136 | 05 | | | | |
| 24 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 25 | 157 | 62 | 62 | 130 | 47 | 51 | 170 | 6 | 78 | 137 | 35 | | | | |
| 26 | 130 | 83 | 48 | 158 | 13 | 83 | 113 | 83 | 19 | 154 | 25 | | | | |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 28 | 162 | 37 | 67 | 135 | 41 | 55 | 175 | 1 | 73 | 132 | 38 | | | | |
| 29 | 125 | 07 | 43 | 153 | 17 | 58 | 188 | 88 | 24 | 159 | 38 | | | | |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 31 | 151 | 31 | 56 | 124 | 53 | 45 | 164 | 87 | 15 | 156 | 41 | | | | |
| 32 | 131 | 59 | 49 | 159 | 11 | 84 | 114 | 58 | 42 | 187 | 23 | | | | |
| 33 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 34 | 10 | D | 11 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | |

Natal
Planets

C2 NATAL ORDT 00 02 1895 12 00

C2 NATAL TROP P. LONG PLAC 100
0 ASP C1 0

| | 10 | D | 11 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | A |
|----|-----|----|----|-----|----|----|-----|-----|----|-----|-----|----|----|----|---|
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 1 | 1 | 4 | 14 | 18 | 21 | 68 | 1 | 17 | 58 | 38 | 98 | 72 | | | |
| 2 | 158 | 33 | 17 | 33 | 17 | 28 | 142 | 31 | 58 | 125 | 64 | | | | |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 4 | 140 | 99 | 35 | 167 | 14 | 47 | 27 | 53 | 83 | 123 | 25 | | | | |
| 5 | 137 | 51 | 19 | 109 | 41 | 84 | 154 | 50 | 34 | 159 | 29 | | | | |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 7 | 128 | 99 | 25 | 1 | 6 | 75 | 14 | 133 | 43 | 15 | 174 | 72 | | | |
| 8 | 133 | 08 | 51 | 108 | 58 | 85 | 116 | 80 | 16 | 156 | 22 | | | | |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 10 | 138 | 57 | 32 | 164 | 17 | 44 | 121 | 86 | 74 | 133 | 28 | | | | |
| 11 | 112 | 45 | 54 | 145 | 85 | 48 | 129 | 45 | 81 | 36 | 53 | | | | |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 13 | 117 | 37 | 12 | 144 | 37 | 24 | 1 | 81 | 53 | 112 | 49 | | | | |
| 14 | 153 | 26 | 35 | 125 | 24 | 28 | 118 | 26 | 42 | 117 | 12 | | | | |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 16 | 121 | 97 | 27 | 4 | 77 | 15 | 34 | 41 | 13 | 173 | 71 | | | | |
| 17 | 147 | 45 | 85 | 145 | 85 | 28 | 130 | 46 | 82 | 137 | 68 | | | | |
| 18 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 19 | 176 | 64 | 71 | 102 | 78 | 82 | 163 | 39 | 47 | 171 | 90 | | | | |
| 20 | 121 | 86 | 83 | 154 | 56 | 49 | 238 | 54 | 58 | 119 | 4 | | | | |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 22 | 191 | 49 | 85 | 117 | 64 | 97 | 178 | 54 | 33 | 173 | 76 | | | | |
| 23 | 181 | 27 | 42 | 102 | 17 | 28 | 117 | 33 | 11 | 136 | 05 | | | | |
| 24 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 25 | 157 | 62 | 62 | 130 | 47 | 51 | 170 | 6 | 78 | 137 | 35 | | | | |
| 26 | 129 | 84 | 46 | 156 | 14 | 81 | 114 | 89 | 21 | 154 | 26 | | | | |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 28 | 162 | 37 | 67 | 135 | 41 | 55 | 175 | 1 | 73 | 132 | 38 | | | | |
| 29 | 124 | 08 | 42 | 152 | 16 | 57 | 188 | 89 | 25 | 188 | 38 | | | | |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 31 | 151 | 31 | 56 | 124 | 53 | 45 | 164 | 87 | 15 | 156 | 41 | | | | |
| 32 | 137 | 04 | 55 | 104 | 8 | 89 | 120 | 84 | 48 | 113 | 18 | | | | |
| 33 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 34 | 10 | D | 11 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | |

SUMMARY OF 2b - Listing Tables of Aspects

- 1) Set the INTVL key.
- 2) Identify the interval as decimal days or decimal hours (* 3300 = days; * 3301 = hours).
- 3) Determine the length of the list (* 12 ??)
- 4) Relate the operands with the general "formula".

| | | | | |
|-------|------|-----------------|---------------|----------------------|
| TABLE | LIST | CHART NUMBER | CHART TYPE | PLANET OR HOUSE # |
|-------|------|-----------------|---------------|----------------------|

| | | | | |
|-------------------------|-----------------|---------------|----------------------|-------|
| SCAN A ORB OR ASP | CHART NUMBER | CHART TYPE | PLANET OR HOUSE # | ENTER |
|-------------------------|-----------------|---------------|----------------------|-------|

(shift as necessary)

NOTE: Steps 1, 2, and 3 are only necessary when using new values.

Then it will advance one day, print a header for 8.02.1895, and begin calculating the midpoints for that day, etc., through August 31, 1895. Allow 1-1½ minutes calculating time between listings.

C2 NATAL DROT 08.02.1895 12.00

C2 NATAL TROP P.LONG PLAC 108
O MID PT C1 O

| | O | D | E | F | G | H | I | J | K | L | M | N |
|---|----|----|----|----|----|----|----|----|----|----|----|---|
| | 12 | 12 | 15 | 29 | 00 | 09 | 18 | 10 | 04 | 24 | 05 | |
| O | A | I | A | S | M | A | A | S | I | I | M | |
| | 23 | 37 | 02 | 07 | 02 | 10 | 45 | 37 | 29 | 41 | 56 | |
| | 25 | 25 | 27 | 11 | 12 | 21 | 01 | 23 | 17 | 07 | 18 | |
| D | A | S | A | A | M | A | M | M | S | M | M | |
| | 11 | 25 | 50 | 55 | 50 | 58 | 33 | 25 | 17 | 29 | 44 | |
| | 04 | 04 | 07 | 21 | 22 | 01 | 10 | 02 | 26 | 16 | 28 | |
| E | A | I | A | S | A | A | A | S | S | I | T | |
| | 36 | 50 | 16 | 20 | 15 | 23 | 58 | 50 | 42 | 55 | 09 | |
| | 03 | 04 | 06 | 20 | 21 | 00 | 10 | 02 | 26 | 16 | 27 | |
| F | M | S | M | A | M | M | M | A | I | S | M | |
| | 59 | 13 | 38 | 43 | 38 | 45 | 21 | 13 | 05 | 17 | 32 | |
| | 23 | 24 | 26 | 10 | 11 | 20 | 00 | 22 | 15 | 06 | 17 | |
| G | A | I | A | A | M | A | M | S | I | S | M | |
| | 49 | 03 | 29 | 33 | 28 | 36 | 11 | 03 | 55 | 08 | 22 | |
| | 03 | 04 | 06 | 20 | 21 | 00 | 10 | 02 | 26 | 16 | 27 | |
| H | A | I | A | S | A | A | A | S | S | I | T | |
| | 59 | 13 | 38 | 43 | 38 | 46 | 21 | 13 | 05 | 17 | 32 | |
| | 23 | 23 | 25 | 09 | 10 | 19 | 29 | 21 | 15 | 05 | 16 | |
| I | M | M | M | M | M | M | M | A | M | A | M | |
| | 04 | 17 | 43 | 47 | 42 | 50 | 25 | 17 | 09 | 22 | 36 | |
| | 00 | 00 | 03 | 17 | 18 | 27 | 06 | 28 | 22 | 12 | 23 | |
| J | A | S | A | M | M | M | A | A | M | S | M | |
| | 23 | 37 | 02 | 07 | 02 | 09 | 45 | 37 | 29 | 41 | 56 | |
| | 16 | 16 | 18 | 02 | 03 | 12 | 22 | 14 | 08 | 28 | 09 | |
| K | S | S | S | S | T | S | S | I | S | S | T | |
| | 09 | 23 | 48 | 53 | 48 | 55 | 30 | 22 | 14 | 27 | 41 | |
| | 13 | 13 | 16 | 00 | 01 | 10 | 20 | 11 | 05 | 25 | 07 | |
| L | S | S | S | S | T | S | S | I | S | S | T | |
| | 41 | 55 | 20 | 25 | 20 | 27 | 02 | 54 | 46 | 59 | 13 | |
| | 29 | 29 | 01 | 15 | 16 | 25 | 05 | 27 | 21 | 11 | 22 | |
| A | S | M | I | S | S | S | I | T | M | T | S | |
| | 04 | 18 | 44 | 48 | 43 | 51 | 26 | 18 | 10 | 23 | 37 | |
| | O | D | E | F | G | H | I | J | K | L | M | N |

2d. Listing Tables of Arabian Parts

In the TABLE subsection (section XIX, pp. 35-36), instructions were given of how to print a table of Arabian parts. By combining the TABLE and LIST functions, a series of such tables can be generated.

Example 8: What Arabian parts are formed by secondary progression to Alan Leo's natal chart each birthday from 1861 to 1900 ?

Step one: same as example 5 (p. XIX-49).

Step two: same as example 1 (p. XIX-41).

Step three: same as example 1.

Step four: same as example 1.

Step five: We want forty listings. Press:

(shift lighted) * (shift normal) 1 2 4 0 ENTER

Step six: Enter 8.7.1861 as the date for the first set of progressions. Press:

(shift lighted) SEC (shift normal) DATE 8 . 7 . 1 8
6 1 ENTER

Step seven: LIST the tables of Arabian parts. For the present example, we want to calculate the direct planetary parts formed by the progressed planets to the natal planets, as projected from the natal Ascendant. Press:

(shift normal) TABLE (shift lighted) LIST ⊙ PART NATAL ⊙
PART NATAL (shift normal) HSE 1 ENTER

DR-70 will first print a header which indicates the "derived date" of the first progressed chart as 8.08.1860. (See p.XII-06 for a discussion of "derived date" in the context of calculating derived charts.) DR-70 has here printed the same date that would appear as if you had pressed DR DT ENTER . 8.08.1860 is the "as-if" birthdate used in calculating the progressed chart for 8.07.1861.

In 1½-2 minutes, the first table of parts will be printed:

C1 SEC DRDT 08.08.1860 5.51.35

C1 SEC TROP P LONG PLAC 108 @
PART NATAL @ PART NATAL H01

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A |
|---|----|----|----|----|----|----|----|----|----|----|----|
| 0 | 26 | 27 | 01 | 00 | 01 | 20 | 09 | 23 | 10 | 21 | 13 |
| | 11 | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 1 | 1 | 2 |
| | 38 | 06 | 56 | 06 | 56 | 11 | 21 | 05 | 49 | 14 | 44 |
| 1 | 15 | 15 | 20 | 18 | 20 | 08 | 27 | 11 | 29 | 09 | 02 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 10 | 38 | 28 | 38 | 28 | 43 | 53 | 37 | 21 | 46 | 15 |
| 2 | 23 | 23 | 28 | 26 | 28 | 16 | 05 | 19 | 07 | 17 | 10 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 05 | 33 | 23 | 33 | 23 | 38 | 48 | 32 | 16 | 41 | 11 |
| 3 | 24 | 24 | 29 | 27 | 29 | 17 | 06 | 20 | 08 | 18 | 11 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 12 | 40 | 31 | 40 | 30 | 45 | 55 | 39 | 23 | 49 | 18 |
| 4 | 22 | 22 | 27 | 25 | 27 | 15 | 05 | 18 | 06 | 17 | 09 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 27 | 54 | 45 | 54 | 44 | 59 | 10 | 54 | 38 | 03 | 32 |
| 5 | 03 | 04 | 09 | 07 | 09 | 27 | 16 | 00 | 18 | 28 | 20 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 50 | 17 | 08 | 17 | 07 | 22 | 33 | 17 | 01 | 26 | 55 |
| 6 | 14 | 15 | 20 | 18 | 20 | 08 | 27 | 11 | 29 | 09 | 01 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 45 | 13 | 03 | 13 | 03 | 18 | 28 | 12 | 56 | 21 | 50 |
| 7 | 01 | 01 | 06 | 04 | 06 | 24 | 13 | 27 | 15 | 25 | 18 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 07 | 34 | 25 | 34 | 24 | 39 | 50 | 34 | 18 | 43 | 12 |
| 8 | 13 | 13 | 18 | 16 | 18 | 06 | 26 | 09 | 27 | 08 | 00 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 26 | 53 | 44 | 53 | 43 | 58 | 09 | 53 | 37 | 02 | 31 |
| 9 | 02 | 03 | 08 | 06 | 08 | 26 | 15 | 29 | 17 | 27 | 20 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 59 | 27 | 18 | 27 | 17 | 32 | 42 | 26 | 11 | 36 | 05 |
| A | 10 | 10 | 15 | 13 | 15 | 04 | 23 | 06 | 24 | 05 | 27 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 31 | 59 | 50 | 59 | 49 | 04 | 15 | 59 | 43 | 08 | 37 |
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A |

These are the direct planetary parts formed by progression for 8.7.1861. The progressed planets are listed vertically at the left. The table should be read from left-to-right. The first line should be read "Progressed Sun-part-Natal Sun equals 26°38' Leo, Progressed Sun-part-Natal Moon equals 27°06' Aries, etc."

After this table has been printed, DR-70 will advance the derived date for the secondary chart to 8.09.1860 and calculate a set of parts for Mr. Leo's second birthday *8.7.1862), etc..

Note that the tables thus generated are the parts from progressed to natal only. To get a table of the parts from natal to progressed, but still projected from the natal Ascendant, the preceding procedure must be slightly modified.

Example 8a: Steps one through six: same as example 8.

Step seven: Set *-series #30 to increment the second operand only of the sequence to be given in step eight. This is done by pressing:

(shift lighted)



(shift normal)

3

0

0

2

ENTER

* -series #30 tells DR-70 which of the two operands to increment in a two-chart operation:

*3000 or 3001 says "increment first operand only."

*3002 says "increment second operand only"

*3003 says "increment both operands."

In the present example, we want to increment the second operand, which will be the progressed chart.

(shift lighted) * (shift normal) 3 0 RECL should now display:

30.02

Step eight: List the tables of natal-progressed parts. Press:

(shift normal) TABLE (shift lighted) LIST NATAL ⊙
PART SEC ⊙ ENTER

Note that the "short-form" chart comparison parts formula (p.XIV-09) is used here; the parts will automatically be projected from the natal Ascendant.

DR-70 will first print a header indicating 8.08.1860 as the derived date used in calculating C1 secondary. Then, in 1½-2 minutes, it will print a table of natal-to-progressed parts for 8.7.1861:

C1 SEC DROT 08.08.1860 5.51.35

C1 NATAL TROP P LONG PLAC 108
 0 PART SEC 0 PART NATAL 101

| IO | D | U | I | S | P | N | I | P | M | A |
|-----|----|----|-----|----|----|-----|----|----|-----|----|
| 120 | 10 | 02 | 00 | 02 | 21 | 19 | 24 | 11 | 22 | 14 |
| 1A | U | 0 | A | S | A | 10 | I | 1 | U | S |
| 133 | 01 | 06 | 15 | 45 | 22 | 26 | 05 | 46 | 11 | 46 |
| 120 | 09 | 01 | 00 | 02 | 20 | 09 | 23 | 11 | 21 | 14 |
| 1A | U | 0 | A | S | A | 10 | I | 1 | U | S |
| 105 | 34 | 38 | 13 | 17 | 54 | 15 | 37 | 10 | 44 | 12 |
| 123 | 04 | 26 | 125 | 27 | 16 | 05 | 18 | 06 | 116 | 09 |
| 1A | U | 0 | A | S | A | 10 | I | 1 | U | S |
| 115 | 43 | 48 | 141 | 26 | 03 | 00 | 46 | 27 | 154 | 22 |
| 125 | 06 | 28 | 127 | 29 | 17 | 06 | 20 | 08 | 118 | 11 |
| 1A | U | 0 | A | S | A | 10 | I | 1 | U | S |
| 105 | 33 | 38 | 131 | 17 | 54 | 15 | 37 | 10 | 44 | 12 |
| 123 | 04 | 26 | 125 | 27 | 16 | 05 | 18 | 06 | 116 | 09 |
| 1A | U | 0 | A | S | A | 10 | I | 1 | U | S |
| 115 | 44 | 48 | 141 | 27 | 04 | 00 | 47 | 28 | 154 | 22 |
| 105 | 16 | 08 | 107 | 09 | 27 | 115 | 00 | 10 | 120 | 21 |
| 1A | U | 0 | A | S | A | 10 | I | 1 | U | S |
| 100 | 29 | 33 | 126 | 12 | 49 | 133 | 32 | 13 | 139 | 97 |
| 115 | 27 | 19 | 118 | 20 | 08 | 127 | 11 | 29 | 109 | 01 |
| 1A | U | 0 | A | S | A | 10 | I | 1 | U | S |
| 150 | 18 | 23 | 116 | 02 | 39 | 143 | 22 | 03 | 129 | 57 |
| 102 | 13 | 05 | 104 | 06 | 24 | 113 | 27 | 15 | 125 | 10 |
| 1A | U | 0 | A | S | A | 10 | I | 1 | U | S |
| 106 | 34 | 39 | 132 | 18 | 55 | 159 | 38 | 19 | 145 | 13 |
| 114 | 25 | 17 | 116 | 18 | 07 | 126 | 07 | 27 | 108 | 00 |
| 1A | U | 0 | A | S | A | 10 | I | 1 | U | S |
| 122 | 50 | 55 | 140 | 34 | 10 | 115 | 53 | 35 | 101 | 29 |
| 103 | 15 | 07 | 106 | 08 | 26 | 115 | 29 | 17 | 127 | 20 |
| 1A | U | 0 | A | S | A | 10 | I | 1 | U | S |
| 157 | 25 | 30 | 123 | 08 | 45 | 150 | 20 | 09 | 136 | 04 |
| 111 | 22 | 15 | 113 | 15 | 04 | 123 | 06 | 24 | 105 | 27 |
| 1A | U | 0 | A | S | A | 10 | I | 1 | U | S |
| 120 | 56 | 01 | 153 | 39 | 16 | 121 | 59 | 40 | 106 | 34 |
| 10 | D | U | I | S | P | N | I | P | M | A |

This time the natal planets are listed at the left. The first line of the table now reads, "Natal Sun-Part-Progressed Sun equals 28⁰33' Leo, Natal Sun-Part-Progressed Moon equals 10⁰01' Taurus, etc." All parts are as projected from the natal Ascendant.

After this table has been printed, DR-70 will advance the derived date for the secondary chart to 8.09.1860 and print a new header. Then it will begin calculating the natal-progressed parts for the second birthday (8.7.1862), etc..

IMPORTANT

Note: In this example (8a), you set * -series 30 to 3002. DR-70 will continue to increment the second operand in all two-chart lists until

- * -series 30 is set to another value. Return
- * -30 to 3000 or 3001 for all other examples in this section. (See Appendix I, p. 16)

Listing Charts

The LIST and CHART functions can be combined to produce a series of 1-100 charts; each chart is separated from its prior in the series by the interval (decimal days or hours) in use.

Example: I have a client who wants to start a business that will have an Aries Sun in the tenth house. When can I give him an 11:00 AM opening and have no interception in the chart ? (location: Hyde Park, MA)

Step one: Enter into C1 Natal the first date for which the Sun can be in Aries at 11 AM EST. Press:

(shift normal) DATE 3 . 2 1 . 1 9 7 9 ENTER

11 AM EST is 16:00 GMT. Press:

TIME 1 6 . 0 0 ENTER

Enter the latitude (42N15) and longitude (71W07) in the standard manner.

Step two: INTV should be set to 1. Press:

(shift lighted) INTVL (shift normal) 1 ENTER

Step three: Identify INTVL setting as days. Set:

(shift lighted) * (shift normal) 3 3 0 0 ENTER

Step four: Specify the number of charts desired. Press:

(shift lighted) * (shift normal) 1 2 0 0 ENTER

Step five: List the series of charts. Press:

(shift lighted) LIST CHART ENTER

In about a minute, DR-70 will print the first chart, for 16:00 GMT (11 AM EST) on March 21, 1979.

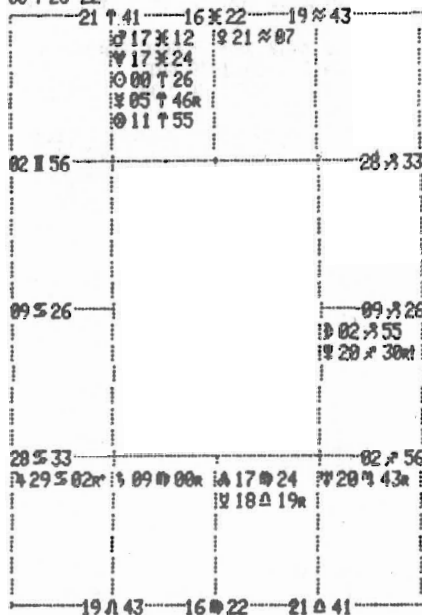
C1 NATAL DROT 03.21.1979 16.00

C1 NATAL TROP P.LONG PLAC

DATE 3.21.1979 GMT 16

LAT 42°15'N LONG 71°07'W

00 ↑ 26 22



We see that the fifth and eleventh houses are intercepted. In another minute, DR-70 will print the chart for 16:00 GMT on March 22:

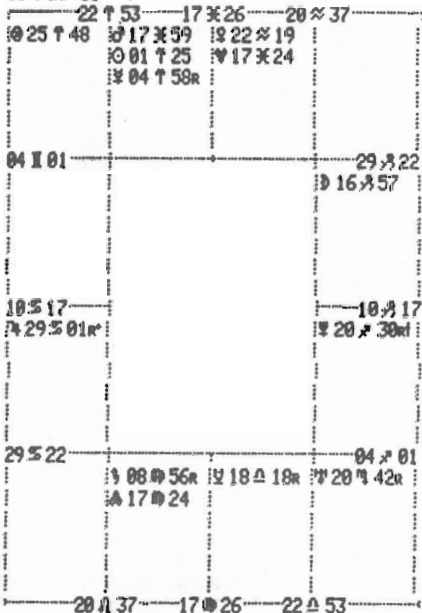
C1 NATAL DROT 03.22.1979 16.00

C1 NATAL TROP P.LONG PLAC

DATE 3.21.1979 GMT 16

LAT 42°15'N LONG 71°07'W

01 ↑ 25 56



The interception remains.

DR-70 will continue to list charts. The first chart to appear without a fifth-eleventh interception is for March 28; but now we have a fourth-tenth interception:

CI NATAL DROT 03.28.1979 16.00

CI NATAL TROP P. LONG PLAC

DATE 3.21.1979 GMT 16

LAT 42°15'N LONG 71°07'W

07 ↑ 22 42



This interception remains in effect for 11 AM at the location in question until April 3, when finally we get:

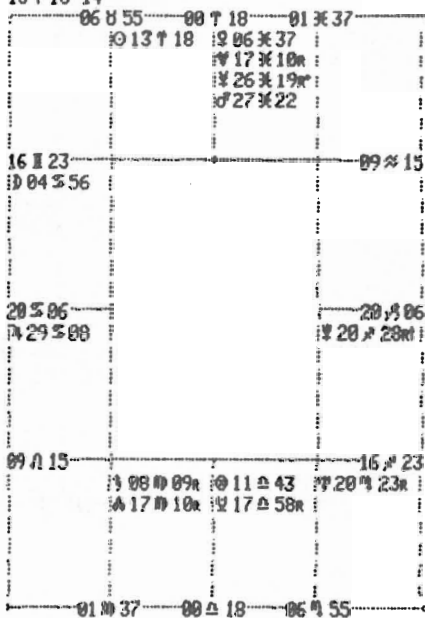
CI NATAL DROT 04.03.1979 16.00

CI NATAL TROP P. LONG PLAC

DATE 3.21.1979 GMT 16

LAT 42°15'N LONG 71°07'W

13 ↑ 18 14



On April 16, we start having a sixth-twelfth interception:



The business should open between April 3 and April 15. Pick the best of the charts without interceptions.



TRANSIT SEARCH will replace the old index as section XX. The new index, when issued, will be paginated IN-01, IN-02, etc.

CONTENTS OF SECTION XX

| | |
|-----------------------------------------------|-------|
| Introduction/Overview of TRANSIT SEARCH | 02-06 |
| I. General TRANSIT SEARCH, Examples | |
| A. All transits to natal | 07 |
| B. Specific Searches | |
| 1. By one planet/house only | 10 |
| 2. To one planet/house only | 12 |
| 3. By some selection | 13 |
| 4. To some selection | 14 |
| 5. By some selection to some selection | 15 |
| 6. Adding to first operand | 16 |
| 7. Adding to second operand | 17 |
| 8. Matching operands | 17 |
| 9. Subtracting from first operand | 17 |
| 10. Subtracting from second operand | 18 |
| 11. Summary of planet-select options | 18 |
| C. Aspect-select options | 19 |
| Summary | 21 |
| II. Aspects within transiting | |
| A. All planets/houses | 22 |
| B. Single planet aspectarian | 24 |
| C. Selection of planets | 25 |
| D. Aspect-select | 25 |
| E. Summary | 26 |
| III. Enter-exact-leave option | |
| A. Enter-exact-leave | 27 |
| B. Enter-leave only | 29 |
| IV. Secondary Progressions | |
| A. To natal | 30 |
| B. Within secondary progressed | 31 |
| V. Transits to secondary progressions | 32 |
| VI. Special considerations | |
| A. Sign entrances | 34 |
| B. Time zone for print-out | 35 |
| C. Change in planet's direction | 35 |
| D. Summary of notation | 37 |

XX. TRANSIT SEARCH

Introduction.

A. What TRANSIT SEARCH does.

1. Gives the date and time* of
 - Transits to a natal chart
 - Aspects formed between transiting planets
 - Transits to secondary progressions
 - (*You select the time zone for which answers will be printed.)
2. Gives the date of
 - Exact aspects to natal from secondary progressions
 - Exact aspects formed within the secondary progressions
3. Shows when any of the above "enters-exacts-leaves" within a user-specified orb.
4. Calculates "approaches" for all the above.
(A planet may "approach" an aspect and change direction before coming exact. Whether or not it exacts, DR-70 will indicate the period for which it is within a user-specified orb.)
5. Indicates when each planet stations, and when it enters a new sign.
6. Performs "general" searches (i.e., all transits to all planets, cusps, etc.) and "specific" searches (e.g., "When are my Mars aspects this month?" "Is the progressed Moon doing anything important this year?" etc.).

B. Accuracy.

DR-70 calculates planet positions within one minute of arc. The accuracy of printed times for TRANSIT SEARCH will vary according to the speed of the planet(s) involved, i.e., how long the planet(s) in question will take to travel that one minute of arc on that particular day. Calculations involving only fast-moving planets will naturally yield times more accurate than those involving only slow-moving ones. A table of example accuracies appears at the end of this section.

C. Keys used:

SCAN
A ORB
LIST
TABLE
*
A-B-C-D
INTVL
DYF

TRANSIT SEARCH is designed for use with the printer only; some familiarity with the LIST and TABLE functions (see section XIX) is required for using it properly. The search is carried out through either SCAN or A ORB, and is specified through various combinations of the *, INTVL, A-B-C-D, and DYF keys.

D. Overview of TRANSIT SEARCH Options

Table 1. Planet/House Select Options

| TRANSIT SEARCH *27 | | Set *-series #27 = 27.01 (* 27.00 deactivates TRANSIT SEARCH) | |
|----------------------------------------------------------|--------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| First Operand - A key - | Second Operand - B key - | Additional * Requirements | |
| 1 All planets* | → 2 All planets | → 3 | * 25 = 25.00 (cold-start) |
| | → 4 One planet | → 5 | a) * 25 = 25.01 b) * 01 = 1.03 c) PLANET B ENTER d) 21 A ENTER |
| | → 6 Some selection of planets | → 7 | a) * 25 = 25.01 b) * 01 = 1.03 c) PLANET B... NEXT PLANET B... NEXT PLANET B... ... etc. ... ENTER d) 21 A ENTER |
| 8 One planet | → 9 All planets | → 10 | a) * 25 = 25.01 b) * 01 = 1.03 c) PLANET A ENTER d) 21 B ENTER |
| | → 11 One planet | → 12 | a) Box 10, steps a, b & c. b) PLANET B ENTER |
| | → 13 Some selection of planets | → 14 | a) Box 10, steps a, b & c. b) Box 7, step c. |
| 15 Some selection of planets | → 16 All planets | → 17 | a) * 25 = 25.01 b) * 01 = 1.03 c) PLANET A... NEXT PLANET A... NEXT PLANET A... ... etc. ... d) 21 B ENTER |
| | → 18 One Planet | → 19 | a) Box 17, steps a, b & c. b) PLANET B ENTER |
| | → 20 Some selection of planets | → 21 | a) Box 17, steps a, b & c. b) Box 17, step c. |
| 22 To display current first operand planet(s) | | → 23 | 20 A ENTER |
| 24 To display current second operand planet(s) | | → 25 | 20 B ENTER |
| 26 To <u>add</u> planet(s) to first operand list | | → 27 | 20 A PLANET A... NEXT PLANET A... etc., ENTER |
| 28 To <u>add</u> planet(s) to second operand list | | → 29 | 20 B PLANET B... NEXT PLANET B... etc., ENTER |
| 30 If A and B are (to be) same planet(s) | | → 31 | a) Set A as in Box 10 (if one only) or Box 17 (if selection), then b) 20 A B ENTER sets second operand planet(s) to same as first operand planet(s). |
| 32 To <u>subtract</u> planet(s) from first operand list | | → 33 | 20 A PLANET C... NEXT PLANET C... etc., ENTER |
| 34 To <u>subtract</u> planet(s) from second operand list | | → 35 | 20 B PLANET D... NEXT PLANET D... etc., ENTER |

*Note: House cusp(s) may be substituted for planet(s) anywhere in this table.
However, TRANSIT SEARCH does not work with asteroids.

Table 2.

| Angle(s) to be Searched | * - Function Settings |
|-------------------------------------|-------------------------------------------------------------------------|
| All angles | *10 = 10.01 (cold-start) *11 = 11.11 (cold-start) |
| Major aspects only | *10 = 10.01 (cold-start) *11 = 11.05 |
| Minor aspects only | *10 = 10.06 *11 = 11.11 (cold-start) |
| One aspect only | Set *10 and *11 to same number code. See Appendix I, pp. 09, <u>14</u> |
| Some combination of major and minor | a) Set *10 - "start" b) Set *10 - "end" See Appendix I, pp. 09ff. |

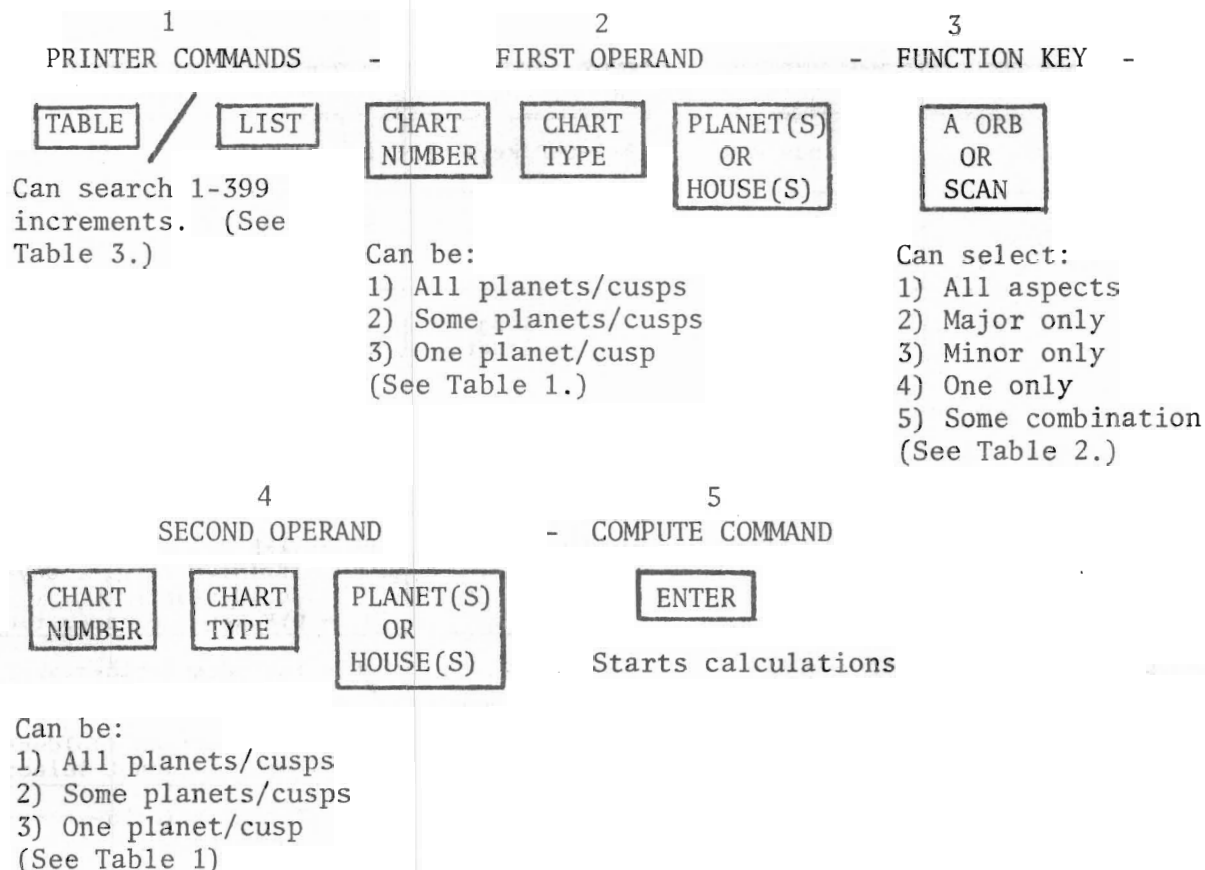
Full mastery of TRANSIT SEARCH involves several simple DR-70 functions: throughout this section, you will be referred for background material to other sections of this manual.

Table 3. Other * Functions Associated with TRANSIT SEARCH

(Details on most of these are in Appendix I. See especially the table on p. AI-04.)

| *-Series # | Function | Tissue |
|------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 01 | Defines mode for A-B-C-D keys | 03 - Sets A-B-C-D to "planet-select" |
| 12 | Defines length of list, i.e., # of days or hours (see *-33) to be searched | See p. AI-04 |
| 20 | Used with * 12 to allow long lists. (* 12 + * 20 = length of list) | 00 = 0 (cold-start) 01 = 100 02 = 200 03 = 300 |
| 22 | Includes or excludes "exacts" in "enter-exact-leaves" option (Used with * 26) | 00 - Exacts included (cold-start) 01 - No exacts |
| 23 | Used to select/set time zone in TRANSIT SEARCH | 00 - TIME key indicates time zone if INTVL integer days (cold-start) 01 - DYF key indicates time zone |
| 24 | Includes or excludes "approaches" | 00 - includes (cold-start) 01 - excludes |
| 25 | Planet select mode | 00 - No selection (cold-start) 01 - Enables planet-select |
| 26 | Includes or excludes "enters, leaves" in "enters-exacts-leaves" option. (Used with * 22) | 00 - Excludes (cold-start) 01 - Includes |
| 30 | Tells printer which of the two operands to increment when listing two-chart operations. | 00 or 01 - first only (cold-start) 02 - second only 03 - both |
| 32 | Includes/excludes sign-entrances | 00 - Excludes (cold-start) 01 - Includes |
| 33 | Identifies INTVL as decimal days or decimal hours | 00 - decimal days (cold-start) 01 - decimal hours |
| 35 | Tells printer where to begin list | 00 - Start with date/time entered (cold-start) 01 - Start with first increment |

Tables 1, 2 and 3 contain, in concise form, all your TRANSIT SEARCH options. Each of them will play a role in shaping the final 5-part command sequence to suit your needs.



The examples that follow will show you how simple it is to have all these options at your fingertips.

I. General TRANSIT SEARCH

A. All Transits to Natal Chart for a Given Period of Time

Example 1. Give me the dates and times of Alan Leo's transits for the first two weeks of August, 1895.

Step one: Enter the natal information (DATE 8.7.1860; TIME 5.51.35; LATitude N.51.29.30; LONGitude W.0.0.30) in the normal manner. We will use C1 NATAL in a TROPical zodiac with Planetary LONGitude as a co-ordinate, and will work in the PLACidus house system. (If necessary, review steps one through nine (A) of section VII.)

Step two: Activate TRANSIT SEARCH by pressing:

(shift lighted) * (shift normal) 2701 ENTER

(To turn off TRANSIT SEARCH later, you will press * 27.00. For now, * 27 should be set to 27.01.)

Check * 27 setting by pressing

(shift lighted) * (shift normal) 27 RECL

If you get 27.01, go on to step three. If not, repeat step two until you do.

Step three: Set * 12 to the number of days you want to search. We want fourteen days. Set * 12 to fourteen by pressing

(shift lighted) * (shift normal) 1214 ENTER
} number of days

Note: * 12 sets list length from 1-100. Longer lists (up to 399) can be obtained through the use of * 20. See p.XX-05 when longer lists are required.

Step four: Enter the first date for which you want to know transits as the date of C2 NATAL. We want to start with August 1, 1895. Press

(shift lighted) C2 NATAL (shift normal) DATE8.1.
1895 ENTER

Step five: Specify the time zone for which times should be printed.

Times will be printed in clock time for a user-indicated time zone. TIME 0 ENTER, for example, sets the time zone to Greenwich; TIME 5 ENTER would set times to be read as

either EST or CDT, etc.

Since Alan Leo was born in Westminster, we will set the times of his transits to Greenwich time zone. Press

(shift normal) TIME 0 ENTER

Note: To indicate time zones east of Greenwich, enter time here as minus. Standard time for two time zones east of Greenwich, for example, would require:

TIME - 2 ENTER

Step six: List the transits. Press

(shift normal) TABLE (shift lighted) LIST C2 ⊙ SCAN C1 ⊙
ENTER

DR-70 will print a header. The first line tells you a "list" is being generated. The second and third lines indicate the operation and its background information (TROPical zodiac, planetary LONGitude as coordinate, PLACIDUS houses). The fourth line indicates both the increment between searches (here INTVL = 1 day) and the number of times that increment is to be applied, i.e., the length of the search (* 12 = 14). The fifth line tells you the orb in use = 10°00", and the types of aspects included in the * 10 - * 11 range (see Appendix I, pp. 09-14). A full explanation of TRANSIT SEARCH headers will be given in Part VI of this section.

LIST

C2 NATAL TROP P. LONG PLAC 10B

⊙ SCAN C1 ⊙

INTVL 1 12.14

ORB 10°00' 10.01 11.11

30.00 27

About 1 minute after the header appears, DR-70 will print the date of the first search (8.1.1895) and the time zone (0.00) for which the answers will be presented. In another three minutes, the first day's transits will appear, followed by a date/time zone header for the second day.

| | | | | |
|--------------------------|-------|-------|-------|------|
| C2 NATAL DROT 08.01.1895 | | | | 0.00 |
| 00- | 03- | 05- | 06- | |
| ♂ ∠ ♀ | ♂ ⋈ ♀ | ♂ ⋈ ♀ | ♂ ∼ ♂ | |
| 32- | 10- | 32- | 39- | |
| 06- | 12 | 14- | 20 | |
| ♂ Δ ♀ | ♂ ♀ ♀ | ♂ ♀ ♀ | ♂ Δ ♀ | |
| 40- | 51 | 52- | 48 | |
| 23- | | | | |
| ♂ □ ♀ | | | | |
| 36- | | | | |

C2 NATAL DROT 08.02.1895 0.00

Reading from left to right, the transiting planet appears first. The first transit is a semisquare of the transiting Moon to the natal North Node. It is exact at 00 hours 32 minutes GMT (0.00 time zone). The "minus" sign above and below the Node indicates that it is retrograde. The next transit is a quincunx of the Moon to the retrograde natal Venus at 3:10, etc. The last transit for the day is Moon square retrograde natal Neptune, at 23:36 (11:36 PM).

Subsequent sets of answers will appear at intervals of $3\frac{1}{4}$ - 4 minutes.

B. Specific TRANSIT SEARCH - Planet-Select Options

1. By One Planet Only

Example 2: What aspects does the transiting Moon make to Alan Leo's natal chart during the first two weeks of August, 1895?

Steps one through five: Same as Example 1. (Note: Re-enter the date in step four. A date must be entered for each transit search, even if you mean to use the same starting date as for the previous search.

A starting date must be entered for each TRANSIT SEARCH, even if it is to be the same as for a previous search.

Step six: Activate 'planet-select' mode by pressing

(shift lighted) * (shift normal) 2 5 0 1 ENTER

(Note: To deactivate this mode later, press * 25.00)

Step seven: Set A-B-C-D keys to operate compatibly with "planet-select" by pressing

(shift lighted) * (shift normal) 0 1 0 3 ENTER

A-B-C-D keys can now be used to specify which planets you want to use.

- A includes planets in operand 1
- B includes planets in operand 2
- C excludes planets from operand 1
- D excludes planets from operand 2

Step eight: Specify the single planet for operand 1, i.e., the transiting planet. We want the Moon. Press

(shift lighted) D A ENTER

Step nine: Specify the planets for operand 2, i.e., the natal planets. We want to include all the natal planets. Instead of pressing all the planets, simply press

(shift normal) 2 1 (shift lighted) B ENTER

21 B ENTER sets operand 2 planets to all planets.

Step ten: List the transits. Press

(shift normal) TABLE (shift lighted) LIST C2 ☉ SCAN
C1 ☉ ENTER

DR-70 will first print a header. LIST

```

C2 NATAL TROP P. LONG PLAC 188
☉ SCAN C1 ☉
INTUL      1      12.14
ORB      10°00'    10.01    11.11
          30.00 25 27
C2 NATAL ☉
C1 NATAL ☉ ☿ ♀ ♄ ♃ ♅ ♁ ♂ ♀ ♄ ♃ ♅ ♁ ♂ ♀ ♄ ♃ ♅ ♁

```

Note that "25" has been added to line 6, indicating 25 = 25.01,
 and planet-select mode is activated. C2 Natal = A = Moon;
 C1 Natal = B = all planets.

Then, in about one minute, it will print:

```

C2 NATAL DROT 08.01.1895      0.00
  00-      03-      06-      06-
  ☉ ♄ ♀      ☉ ♄ ♀      ☉ ♄ ♀      ☉ ♄ ♀
  32-      10-      39-      40-

  12      14-      20      23-
  ☉ ♄ ♀      ☉ ♄ ♀      ☉ ♄ ♀      ☉ ♄ ♀
  51      52-      48      36-

C2 NATAL DROT 08.02.1895      0.00

```

The first transit is Moon-North Node, at 0 hours, 32 minutes, etc.
 Subsequent tables of transits will appear at intervals of 25-30 seconds.

In this example, you have used boxes 8, 9 and 10 of Table 1.

2. To One Planet Only

Example 3. What are the transits to Alan Leo's natal Uranus during the first two weeks of August, 1895?

Steps one through seven: Same as example 2. (Note: Re-enter 8.1.1895 as starting date in step four).

Step eight: Specify all transiting planets for operand 1 by pressing

(shift normal) 2 1 (shift lighted) A ENTER

Step nine: Specify the natal planet for operand two. We want Uranus. Press

(shift lighted) H
0 B ENTER

Step ten: Same as examples 1 and 2.

DR-70 will print a header. In about one minute, the first answer will appear: no aspects on 8.01.1895. The first aspect is Moon quincunx Uranus, at 23.21 on 8.02.1895. It will be printed in 1½ - 2 minutes.

LIST

C2 NATAL TROP P. LONG PLAC 10B

☉ SCAN C1 ☉

INTVL 1 12.14

ORB 10°00' 10.01 11.11

30.00 25 27

C2 NATAL ☉ ☽ ☿ ☿ ☿ ☿ ☿ ☿ ☿ ☿ ☿ ☿

C1 NATAL ☿

C2 NATAL DRDT 08.01.1895 0.00

← no aspects

C2 NATAL DRDT 08.02.1895 0.00

23

☽ ☿ ☿

21

Subsequent sets of answers will be printed at intervals of about one minute, ten seconds.

In this example, you used boxes 1, 4 and 5 of Table 1.

3. By Some Selection of Planets

Example 4. Give me times and dates for transits of the Sun, Moon and Mercury to Alan Leo's natal chart for the first two weeks of August, 1895.

Steps one through five: Same as example 1. (Note: Re-enter C2 date.)

Steps six and seven: Same as example 2.

Step eight: Specify Sun, Moon and Mercury as operand 1 planets by pressing

(shift lighted) ☉ A D A ☾ A ENTER

Step nine: Same as example 2.

Step ten: List the transits with the same key sequence as given in examples 1 and 2.

DR-70 will print a header; the first set of answers will appear in about 90 seconds.

LIST

```

C2 NATAL TROP P.LONG PLAC 10B
☉ SCAN C1 ☉
INTVL      1      12.14
ORB      10°00'    10.01    11.11
      30.00 25 27
C2 NATAL ☉ D ♄
C1 NATAL ☉ D ♄ ♀ ☿ ♄ ♃ ♅ ♆ ♇ ♈
C2 NATAL DROT 08.01.1895      0.00
      00-      03-      06-      06-
      D ☿ ♄    D ♄ ♀    D ♄ ☿    D ♄ ♄
      32-      10-      39-      40-

      12      14-      20      23-
      D ♄ ♄    D ♄ ♄    D ♄ ♄    D ☿ ♄
      51      52-      48      36-

```

Subsequent sets of answers will be printed at 90-second intervals.

In this example, you used boxes 15, 16 and 17 of Table 1.

4. To Some Selection of Planets

Example 5. Give me times and dates of transits to Alan Leo's Saturn and Jupiter for the first two weeks of August, 1895.

Steps one through five: Same as example 1. (Note: Re-enter 8.1.1895 as C2 date even if you have already entered it for a prior example.)

Steps six and seven: Same as example 2.

Step eight: Same as example 3.

Step nine: Specify the natal planets as operand 2. We want Saturn and Jupiter. Press

(shift lighted) h B 2 B ENTER

Step ten: Same key sequence as examples 1 & 2.

DR-70 will print a header, followed in about 90 seconds by:

LIST

```

C2 NATAL TROP P.LONG PLAC 10B
  O SCAN C1 O
INTUL      1      12.14
ORB      10°00'   10.01   11.11
          30.00 25 27
C2 NATAL O D E F G H I J K L M N O P
C1 NATAL 4 5
C2 NATAL DRDT 08.01.1895      0.00
          12      20
          D E F      D A 5
          51      48

C2 NATAL DRDT 08.02.1895      0.00

```

Subsequent sets of answers will appear at 85-90 second intervals.

In this example, you used boxes 1, 6 and 7 of Table 1.

5. By Some Selection to Some Selection

Example 6. Give me the times and dates of Sun, Mercury and Moon transits to Alan Leo's natal Saturn and Jupiter for the first two weeks of August, 1895.

Steps one through five: Same as example 1. (Note: Re-enter 8.1.1895 as the starting date in C2, even if you already did so for a previous example.)

Steps six and seven: Same as example 2.

Step eight: Same as example 4.

Step nine: Same as example 5.

Step ten: Same as example 1.

About 35 seconds after the header is printed, the first set of answers will appear:

LIST

```

C2 NATAL TROP P.LONG PLAC 10B
O SCAN C1 O
INTVL      1      12.14
ORB      10°00'    10.01    11.11
          30.00 25 27
C2 NATAL O D 3
C1 NATAL 4 1
C2 NATAL DROT 08.01.1895      0.00
          12      20
          D 7 4      D 4 1
          51      48

C2 NATAL DROT 08.02.1895      0.00

```

Subsequent sets of answers will appear at intervals of about 25 seconds.

6. Adding Planet(s) to First Operand

One planet can be added to the first operand list by pressing
 20 A PLANET A ENTER. To add more than one planet, press
 20 A PLANET A NEXT PLANET A NEXT PLANET A... etc. ENTER.

Example 7. Let's say you are doing example 4, and you have completed it as far as the end of step nine. Then you realize that you want to include the transits from Mars as well. In step eight, you specified only Sun, Moon and Mercury. To display the current first operand planets, press

(shift normal) 2 0 (shift lighted) A ENTER

Sun, Moon and Mercury will appear on the computer's display panel.

To add Mars, press

(shift normal) 2 0 (shift lighted) A ♂ A ENTER

Now, when you go on to step ten, you will be searching the transits of Sun, Moon, Mercury and Mars. ☉ ☾ ♀ ♂ will appear on the display.

Example 8. Say you're doing example 2. After having completed step eight, you decide you want to include Sun and Mercury transits as well. (Note: As in the previous example, you can display the current first operand list with 20 A ENTER.) To add Sun and Mercury to the first operand list, press

(shift normal) 2 0 A ☉ A ♀ A ENTER

See Table 1, boxes 22-23, 26-27.

7. Adding Planet(s) to Second Operand

The procedure is the same as for adding to the first operand, except the B key is used in place of the A key above.

Example 9. Say you're doing example 3. Having completed step nine, you decide to include transits to Saturn and Jupiter as well. (To see current B planets, use 20 B ENTER.)
Press

(shift normal) 2 0 (shift lighted) B ♄ B ♅ B ENTER

Transits to natal Uranus, Saturn and Jupiter will now be searched when you complete step ten, as indicated on the display panel.

See Table 3, boxes 24-25, 28-29.

8. Matching First and Second Operand Planets

Once you have selected certain transiting planets for A, the same planets can be selected for B by pressing 20 A B ENTER.

Example 10. Say you're doing example 4. Having completed step eight, you decide that you don't really need to know the transits to all the natal planets, but just to natal Sun, Moon and Mercury. You've already selected Sun, Moon and Mercury as first operand (transiting) planets. To make the same selection for the natal (operand 2) planets, press

(shift normal) 2 0 (shift lighted) A B ENTER

Now you'll be searching the transits of Sun, Moon and Mercury to the natal Sun, Moon and Mercury.

9. Subtracting Planets from First Operand

When *01=1.03, the C key can be used to subtract planets from the first operand. Given, -A- set to a certain selection, subtract by pressing 20 A PLANET C ENTER, or 20 A PLANET C NEXT PLANET C... etc. ENTER.

Example 11. Suppose that you have completed example 3 through step nine. Then you decide that you want to exclude the transiting Uranus, Neptune and Pluto. Press

(shift normal) 2 0 (shift lighted) A ♅ C ♆ C
♇ C ENTER

Uranus, Neptune and Pluto will now be excluded from the display panel.

See Table 1, boxes 32-33.

10. Subtracting Planets from Second Operand

When *01 = 1.03, the D key can be used to subtract planets from the second operand (B) list. Given a selection of planets in B, subtract one by pressing 20 B PLANET ENTER or by pressing 20 B PLANET B NEXT PLANET B... etc. ... ENTER.

Example 12. Suppose that you have completed example 4 through step nine. Then you decide that you would prefer to exclude transits to the natal trans-Saturnians. To exclude the natal (second operand) trans-Saturnians, press

(shift normal) 2 0 (shift lighted) B H D ♄ D
♅ D ENTER

Again, the display excludes Uranus, Neptune and Pluto.

See Table 1, boxes 34-35.

11. Summary of Planet-Select Options

Examples 1-12 should suffice to demonstrate your planet-select options as contained in Table 1. Note that house cusps can be substituted for planets in either operand. Do not, however, mix planets and cusps within an operand. -A- can be all planets, and -B- can be all houses, or vice-versa; but do not, for example, try to put both planets and houses in A.

Exception: do not use 21 B ENTER or 21 A ENTER if the operand in question is house cusps. Each house must be specifically indicated.

Do not mix planets and houses within an operand.

Table 1 contains all your planet-select options in a concise form.

C. Specific TRANSIT SEARCH / Aspect-Select Options

Pages 09-14 of Appendix I demonstrated in detail how to use * 10 and * 11 series for a selective aspect search. The examples given here will demonstrate only how to apply them to TRANSIT SEARCH.

Example 13. Give me the dates and times for transits of the Sun, Moon and Mercury to Alan Leo's natal Saturn and Jupiter for the first two weeks of August, 1895. Show major aspects only.

Step one through seven: Same as example 2.

Step eight: Same as example 4.

Step nine: Same as example 5.

Step ten: Specify major aspects as * 10.01 through * 11.05. * 10 is already set (from cold-start) to 10.01. Set * 11 to 11.05 by pressing

(shift lighted) * (shift lighted) 1 1 0 5 ENTER

wait for ┐

Step eleven: Same as step ten, examples 1 and 2.

Note the change in the header. * 11 now reads 11.05. The range 10.01 - 11.05 indicates that major aspects only are being searched. The first set of answers will appear in 20 - 25 seconds.

LIST

```

C2 NATAL TROP P.LONG PLAC 10B
O SCAN C1 O
INTVL      1    12.14
ORB      10°00'  10.01  11.05
          30.00 25 27
C2 NATAL O D %
C1 NATAL 4 %
C2 NATAL DROT 08.01.1895      0.00
          20
          D Δ %
          48

C2 NATAL DROT 08.02.1895      0.00
C2 NATAL DROT 08.03.1895      0.00

```

Subsequent sets of answers will appear at intervals of 20-25 seconds.

Example 14. Show me dates and times that the transiting Moon trines Alan Leo's natal planets during the first two weeks of August, 1895.

Steps one through nine: Same as example 2.

Step ten: To indicate trines only, set both * 10 and * 11 to code #04. (See p. AI-09.) Press

(shift lighted) [*] (shift normal) [1] [0] [0] [4] [ENTER]

then,

(shift lighted) [*] (shift normal) [1] [1] [0] [4] [ENTER]

After this example is completed, return * 10 to 10.01 and * 11 to 11.11 before going on to other examples.

DR-70 will now select only trines, as indicated by 10.04 - 11.04 on the header. The first set of answers will appear in 10 - 15 seconds.

LIST

```

C2 NATAL TROP P.LONG PLAC 10B
O SCAN C1 O
INTVL      1      12.14
ORB      10°00'    10.04    11.04
          30.00 25 27
C2 NATAL D
C1 NATAL 4 1/2
C2 NATAL DRDT 08.01.1895    0.00
          20
          D Δ 1/2
          48

```

Summary of Aspect-Select Options

See Table 2 in this section and pp.09-14 of section XIX.

Summary of TRANSIT SEARCH to Natal

1. Enter the natal data in C1 NATAL. Pick your zodiac, planetary coordinate, house system, etc.
2. Activate TRANSIT SEARCH with * 27.01.
3. Set * 12 to the number of days you want to search. Longer lists can be obtained through use of * 20 in combination with * 12.
4. Enter the first date for which you want to know transits as the date of C2 NATAL. The starting date must be entered anew for each TRANSIT SEARCH, even if it is the same date as used for the previous search.
5. Specify the time zone by setting C2 TIME to a number corresponding to the number of time zones from GMT. (+ for west of Greenwich; - for east of Greenwich.)

EXCEPTION: If time entry is not integer days, see p.XX-35.

6. If using "planet-select", set * 25 = 25.01.
7. If using "planet-select", set * 01 = 1.03.
8. If using "planet-select", put transiting planets in A.
9. If using "planet-select", put natal planets in B.
10. If using "aspect-select", set * 10 and * 11 accordingly.
11. Press

(shift normal) TABLE (shift lighted) LIST C2 ⊖ SCAN

C1 ⊖ ENTER

Note: A ORB may be used instead of SCAN in single-planet searches.

II. Aspects within the Transiting Planets

A. General Aspectarian for All Transiting Planets

Example 15. Give me an aspectarian of transiting planets for the first two weeks of June, 1980.

Step one: Activate TRANSIT SEARCH with

(shift lighted) * (shift normal) 2 7 0 1 ENTER

Step two: Set * 12 to the number of days you want to search. We want fourteen. Press

(shift lighted) * (shift normal) 1 2 1 4 ENTER

Step three: Enter the starting date in C1 NATAL. We're starting with 6.1.1980. Enter it in the normal manner.

Step four: Specify the time zone for printed times. We'll use EST. Press

(shift normal) TIME 5 ENTER

Step five: List the transiting aspects. Press (shift normal) TABLE

(shift lighted) LIST C1 ☉ SCAN D ENTER

DR-70 will first print a header:

LIST

C1 NATAL TROP P. LONG PLAC 108

☉ SCAN D

INTVL 1 12.14

ORB 10°00' 10.01 11.11

30.00 27

If your header does not correspond to this one, you may have * 01 and * 25 still active from prior examples. Re-set them to 00 and try again.

The first set of answers will appear in about 3 minutes.

| | | | |
|--------------------------|-------|--------|---------|
| C1 NATAL DROT 06.01.1980 | | 5.00 | |
| 02 | 04 | 10- | 11- |
| D Δ σ | ○ × D | D \$ W | \$ \$ A |
| 55 | 22 | 10- | 29- |
| 12- | 15 | 19- | - 20- |
| \$ σ 9 | D Q 4 | D □ 2 | 9 \$ A |
| 25- | 31 | 04- | - 06- |
| 21 | 23- | | |
| D Δ 3 | D × 2 | | |
| 06 | 26- | | |

C1 NATAL DROT 06.02.1980 5.00

Note the "minus" signs above and below Venus in the eighth given:
Venus was retrograde on both 6.01 and 6.02.

Subsequent sets of answers will follow at intervals of approximately 3 minutes.

B. Aspectarian for a Single Planet

When searching one planet only, use A ORB instead of SCAN.

Example 16. Give me a lunar aspectarian for the first two weeks of June, 1980.

Step one: Same as example 15.

Step two: Same as example 15.

Step three: Enter the starting date (here, 6.1.1980) into C1 NATAL.

Step four: Same as example 15.

Step five: Use the single planet as first operand in an A ORB search.
For the Moon, press

(shift lighted)

LIST D A ORB ☉ ENTER

After printing the header, DR-70 will print the first set of answers in about two minutes.

```

C1 NATAL DRDT 06.01.1980      5.00
  02          04          10-      15
  D Δ ♂      D × ☉      D ♄ ♀      D ♀ ♄
  55          22          10-      31

  19-        21          23-
  D □ ♀      D Δ ♀      D × ♀
  04-        06          26-

```

```

C1 NATAL DRDT 06.02.1980      5.00

```

Subsequent sets of answers will appear at intervals of about 1½ minutes.

```

  01-        01-        06          09
  D × ♄      D × ♀      D ♀ ♂      D ♀ ☉
  21-        35-        52          27

  16-        18          20          22-
  D × ♀      D × ♄      D × ♀      D ♀ ♀
  09-        35          40          36-

  23
  D ♀ ♄
  56

```

```

C1 NATAL DRDT 06.03.1980      5.00

```

etc.

C. Aspectarian for Some Selection of Planets

Example 17. Show me times and dates of aspects formed by the transiting Sun, Moon and Mercury to the transiting Saturn and Jupiter for the first two weeks of June, 1980.

Steps one through four: Same as example 15.

Step five: Activate "planet-select" with

(shift lighted) * (shift normal) 2 5 0 1 ENTER

Step six: Set A-B-C-D to "planet-select" with

(shift lighted) * (shift normal) 1 0 3 ENTER

Step seven: Same as step eight, example 4.

Step eight: Same as step nine, example 5.

Step nine: Same as example 15.

The first set of answers will appear in 35-40 seconds.

LIST

```

C1 NATAL TROP P.LONG PLAC 108
  O SCAN D
INTVL      1      12.14
ORB      10°00'    10.01    11.11
      30.00 25 27
C1 NATAL O D %
C1 NATAL 4 %
C1 NATAL DROT 06.01.1980      5.00
      15      21
      D Q 4      D A %
      31      06

C1 NATAL DROT 06.02.1980      5.00
      01      18      23
      % X 4      D X 4      D Q %
      46      35      56

```

D. Aspectarian. For Selected Transiting Aspects

Set 10 - 11 range to desired aspect(s) with the same methods as demonstrated in section I-C, p. XX-19.

E. Summary of TRANSIT SEARCH within Transiting Planets

1. Activate TRANSIT SEARCH with * 27.01.
2. Set list length to * 12.?? (* 20 may be used for longer lists).
3. Enter the starting date in C1 NATAL.
4. Specify time zone (if integer) with TIME ? ENTER. (If time is not integer days, see p. XX-35.
5. If including all planets/houses, and all aspects, go to step 9 and use SCAN key.
6. If searching only one planet/house, but for all its aspects, go to step 9 and use A ORB key.
7. If selecting planets or houses:
 - a) Set * 25 = 25.01
 - b) Set * 01 = 1.03
 - c) Put first operand planets/houses in A.
 - d) Put second operand planets/houses in B.
8. If selecting aspects, set * 10 - * 11 to desired range.
9. Press (shift normal) **TABLE** Then

(shift lighted)

LIST**C1****☉**
**SCAN
OR
A ORB**
☾**ENTER**

III. "Enter - Exact - Leave" Option

TRANSIT SEARCH will also tell you when a transit or an aspect enters a user-specified orb, when it exacts, and when it leaves that orb. All the planet-select and aspect-select options are at your disposal for this option as well.

When used to include all the aspects of all planets, "enter-exact-leaves" involves long calculating times. But the information it delivers - as will be seen in the following examples - is well worth waiting for.

A. "Enter - exact - leave"

Example 18. Show me Alan Leo's transits for the first two weeks of August, 1895. I want to know:

- 1) the period for which the transits are within one degree of exact, and
- 2) the time that they are exact.

Steps one through five: Same as example 1.

Step six: Activate "enter-exact-leave" option by setting * 26 to 26.01. Press

(shift lighted) [*] (shift normal) [2] [6] [0] [1] [ENTER]

(To deactivate "enter-exact-leave" later, return * 26 to its cold-start value of 26.00).

Step seven: Set orb. We want one degree. Press

(shift normal) [ORB] [1] [ENTER]

Step eight: List the transits. Press

(shift normal) [TABLE] (shift lighted) [LIST] [C2] [⊖] [SCAN]
[C1] [⊖] [ENTER]

DR-70 will print a header and then begin the extensive number of calculations involved in this operation. It will take about ten minutes for the first set of answers to appear. When they do, "enter" will be indicated by "E", "exact" will be indicated by the absence of any letter, and "leave" will be indicated by "L".

LIST

C2 NATAL TROP P.LONG PLAC 108

O SCAN C1 O

INTVL 1 12.14

ORB 1°00' 10.01 11.11

30.00 27 26

C2 NATAL DRDT 08.01.1895 0.00

| | | | |
|---------|---------|---------|---------|
| 00- | 00- | 01- | 02- |
| 0 □ ♀ E | ♂ ∠ ♀ | ♂ ∞ ♀ E | ♂ ∠ ♀ L |
| 29- | 32- | 15- | 27- |
| 03- | 04- | 04- | 05- |
| ♂ ∞ ♀ | ♂ ∞ ♂ E | ♂ ∆ ♀ E | ♂ ∞ ♀ L |
| 10- | 44- | 45- | 04- |
| 05- | 06- | 06- | 06- |
| ♂ ∞ ♀ | ♂ □ ○ L | ♂ ∞ ♂ | ♂ ∆ ♀ |
| 32- | 02 | 39- | 40- |
| 07- | 08- | 08- | 09- |
| ♂ □ ♀ E | ♂ ∞ ♂ L | ♂ ∆ ♀ L | ♂ □ ♀ L |
| 28- | 33- | 34- | 59- |
| 10 | 12 | 12- | 14 |
| ♂ □ ♀ E | ♂ □ ♀ | ♂ □ ♀ E | ♀ ∠ ♀ E |
| 56 | 51 | 57- | 03 |
| 14 | 14- | 16- | 18 |
| ♂ □ ♀ L | ♂ □ ♀ | ♂ □ ♀ L | ♂ ∆ ♀ E |
| 45 | 52- | 46- | 53 |
| 19- | 20 | 21- | 22 |
| ♂ ∠ ♀ E | ♂ ∆ ♀ | ♂ □ ♀ E | ♂ ∆ ♀ L |
| 50- | 48 | 41- | 42 |
| 23 | 23- | | |
| ♂ □ ○ E | ♂ □ ♀ | | |
| 14 | 36- | | |

To interrupt the operation in order to begin another example, press the Clear key in the upper right-hand corner of the keyboard.

All the various planet-aspect-select options can be used with "enters-exacts-leaves". Simply add two steps:

- 1) set * 26 to 26.01
- 2) set orb

before the final command sequence of any of the previous examples in this section.

B. "Enters-Leaves" Only

"Enters-exacts-leaves" actually involves two * functions. As indicated in Table 3,

- * 22.00 includes "exacts" in TRANSIT SEARCH, and
- * 22.01 excludes them.
- * 26.00 excludes "enters-leaves", and
- * 26.01 includes them.

What the various combinations of * 22 and * 26 yield is indicated below.

Table 4.

| * 22 set to | and * 26 set to | yields |
|--------------------|--------------------|------------------------|
| 22.00 (cold-start) | 26.00 (cold-start) | "exacts" only |
| 22.00 | 26.01 | "enters-exacts-leaves" |
| 22.01 | 26.00 | nothing |
| 22.01 | 26.01 | "enters-leaves" only |

For all the previous examples in this section, * 22 has been operating at its cold-start value of 22.00: "exacts" have been automatically included in the searches. For all but example 18 - where we set * 26 to 26.01 - * 26 was operating at its cold-start value of 26.00: "enters-leaves" was excluded from the searches. By setting * 26 to 26.01 in example 18, we had the second line of Table 4 above: "enters-exacts-leaves".

To see how "enters-leaves" only works, repeat example 18 with the addition of one step. Before the final command sequence, set * 22 to 22.01 by pressing

(shift lighted) * (shift normal) 2 2 0 1 ENTER

The calculating time will be reduced by approximately a third, and "exacts" will be excluded from the print-out.

IV. Secondary Progressions For A Given Period

A. To Natal

The date(s) for which exact angles form to the natal chart by secondary progression can be obtained in a manner similar to that used for transits. Simply use C1 SEC instead of C2 NATAL as first operand.

Example 19. Show me the dates of exact progressions to Alan Leo's natal planets from August 1, 1894 to August 1, 1897.

Steps one and two: Same as example 1.

Step three: Enter the starting date of the search as the date for C1 SEC. Press

(shift lighted) **SEC** Then press

(shift normal) **DATE** **8** **.** **1** **.** **1** **8** **9** **5** **ENTER**

Step four: Set *-12 to a number corresponding to the number of years you want to search. We want three. Press

(shift lighted) ***** (shift normal) **1** **2** **0** **3** **ENTER**

Step five: List the progressions. Press

(shift normal) **TABLE** (shift lighted) **LIST** **C1** **SEC** **☉** **SCAN**
NATAL **☉** **ENTER**

The header will now include the "derived date" in use for C1 SEC. (See p. XII-06, if necessary, for DR DT explanation.) In about three minutes, the first set of answers will appear.

```

LIST
C1 SEC TROP P.LONG PLAC 10B ☉
SCAN NATAL ☉
INTVL      1      12.03
ORB      10°00'    10.01    11.11
          30.00 27
C1 SEC DRDT 09.10.1860    5.27.06
          08-          09          10
01.01.1894 D X Y      D X Y      D X Y
          08-          26          30

          12
          D X Y
          30

          01          04-          04-
01.01.1895 D ☐ D      X X A      D X Y
          11          01-          01-

          04-          04-          04          05-
D X Y      ☉ X Y      X X Y      D X Y
          01-          04-          09          19-

          05-          05-          06-
D X Y      D X Y      D X Y
          19-          19-          23-

```

01.01.1894 at the left of the first section of the answer list indicates the year of the aspects that follow it. Month appears above the aspect; day appears below it.

The first aspect is progressed-Moon-sextile-natal-(retrograde) Pluto. It is exact on the eighth day of the eighth month, i.e., August 8, 1984. The last progression in 1894 is progressed-Moon-semisextile-natal-Sun on December 30th. The remaining answers are for 1895. The first is progressed-Moon-square-natal-Moon on January 11, 1895, etc.

All the planet-select and aspect-select options are at your disposal here as they were for simple transits. Simply experiment on your own with *-25, *-01, *-10 & *-11 as shown in previous examples and summarized in tables 1,2,3.

B. Within The Secondary Progressions

Dates of exact angles forming within the secondary progressed chart itself can be obtained in a manner similar to that used for generating a transiting aspectarian. Simply use C1 SEC in place of C2 NATAL.

Example 20. Show me the dates of exact angles formed between Alan Leo's progressed planets from August 1, 1894 to August 1, 1897.

Steps one through four: Same as example 19.

Step five: Press

(shift normal) **TABLE** (shift lighted) **LIST** **C1** **SEC** **☉** **SCAN** **▷** **ENTER**

The first set of answers will appear in about 3½ minutes.

```

LIST
C1 SEC TROP P.LONG PLAC 10B ☉
SCAN ▷
INTVL      1      12.03
ORB      10°00'   10.01   11.11
          30.00 27
C1 SEC DRDT 09.10.1860   5.27.06
          08-          09          10
01.01.1894  ▷ × ♀      ▷ $ ♀      ▷ × ♀
          04-          04          14

```

```

12
$ ♀ ♂
03

```

```

          01          02          02
01.01.1895  ▷ × ♀      ▷ $ ♀      ▷ ∠ ♀
          22          17          23

```

```

          02          03          06-          08
$ ♀ ♀      ○ × ♀      ▷ ♀ ♀      ▷ ♀ ♂
          28          31          18-          01

```

The first aspect is progressed-Moon-sextile-progressed (retrograde) Pluto (all planets in this example are progressed) on August 4, 1894. The next is Moon-septile-Saturn on September 9th, etc.

Subsequent sets of answers will appear at intervals of about 2½ minutes.

V. Transits To Secondary Progressed For A Given Period

The method is similar to that used for transits to a natal chart, but with two additions. First, C1 SEC must be generated for a date matching the date on which the TRANSIT SEARCH is to begin. Second, *-30 must be set to 30.03 to increment both operands, as both the transiting planets and the progressed planets will change their positions during the period being searched.

Example 21. Show me dates and times of exact transits to Alan Leo's secondary progressions for the first two weeks of August, 1895.

Steps one through five: Same as example 1.

Step six: Enter the C2 NATAL date (i.e., the starting date for the TRANSIT SEARCH) as the date of C1 SEC. Press

(shift lighted) [C1] [SEC] Then press:

(shift normal) [DATE] [8] [.] [1] [.] [1] [8] [9] [5] [ENTER]

Step seven: Set *-30 to 30.03 to tell DR-70 to increment both operands.

(shift lighted) [*] (shift normal) [3] [0] [0] [3] [ENTER]

(Note: To reset *-30 to 30.00 after you have completed this example, press * 3 0 0 0 ENTER)

When this example is completed, set *-30 back to 30.00.

Step eight: List the transits to the progressions. Press

(shift normal) [TABLE] (shift lighted) [LIST] [C2] [NATAL] [⊙] [SCAN] [C1] [SEC]
[⊙] [ENTER]

Answers will take about six minutes to appear (see next page). The transiting planets were used as first operand, and will appear to the left of the aspect symbol. Progressed planets, used as second operand, will appear to the right of the aspect symbol. The hour appears above; the minutes appear below. The first aspect given reads transiting-Moon-square-progressed-Sun at 3:46 in the Greenwich time zone on August 1, 1895. The last is transiting Jupiter-conjunct-progressed-Moon at 22:53 of the same day.

LIST

C2 NATAL TROP P. LONG PLAC 10B

O SCAN C1 SEC O

INTVL 1 12.14

ORB 10°00' 10.01 11.11

30.03 27

C2 NATAL DROT 08.01.1895 0.00

C1 SEC DROT 09.11.1860 5.25.40

| | | | |
|-------|-------|-------|-------|
| 03 | 03 | 07 | 07 |
| D □ O | D Q ♀ | ♂ / ♀ | ♂ □ ♀ |
| 46 | 59 | 07 | 51 |

| | | | |
|-------|-------|-------|-------|
| 11 | 11 | 13 | 14- |
| D √ ♂ | D × D | O √ ♀ | D Q ♀ |
| 58 | 59 | 45 | 30- |

| | | | |
|-------|-------|-------|-------|
| 16 | 17 | 20- | 21 |
| ♀ ♂ ♂ | ♀ ♂ D | O □ ♀ | ♀ ♂ ♂ |
| 52 | 00 | 48- | 45 |

| | |
|-------|-------|
| 22- | 22 |
| D □ ♀ | ♀ ♂ D |
| 02- | 53 |

VI. Special Considerations

A. Sign Entrances

The time and date of any planet's entry into a new sign may be included in any TRANSIT SEARCH that involves either a "square" or a "rectangle" flow system (see section IX for a discussion of flow systems).

*32.00 (cold-start) excludes sign-entries;

*32.01 includes them

Example 22. Say you're doing example 2. To add sign-entries, insert

(shift lighted) [*] (shift normal) [3] [2] [0] [1] [ENTER]

before the final command sequence (step ten). The time of the Moon's entry into each new sign will now be included in the print-out. Note the second answer for the second day of the search: the Moon enters Capricorn at 1:24 on August 2, 1895. (To deactivate sign entrances, return *-32 to 32.00.)

LIST

C2 NATAL TROP P.LONG PLAC 10B

○ SCAN C1 ○

INTVL 1 12.14

ORB 10°00' 10.01 11.11

30.00 25 27 32

C2 NATAL D

C1 NATAL ○ D ♄ ♀ ♂ ♃ ♅ ♆ ♇ ♈ ♉ ♊ ♋ ♌ ♍ ♎ ♏ ♐ ♑ ♒ ♓

C2 NATAL DRDT 08.01.1895 0.00

| | | | |
|-------|-------|-------|-------|
| 00- | 03- | 06- | 06- |
| D ♄ ♈ | D ♄ ♉ | D ♄ ♊ | D ♄ ♋ |
| 32- | 10- | 39- | 40- |

| | | | |
|-------|-------|-------|-------|
| 12 | 14- | 20 | 23- |
| D ♄ ♌ | D ♄ ♍ | D ♄ ♎ | D ♄ ♏ |
| 51 | 52- | 48 | 36- |

C2 NATAL DRDT 08.02.1895 0.00

| | | | |
|-------|-------|-------|-------|
| 01 | 01 | 05- | 11- |
| D ♄ ♐ | D ♄ ♑ | D ♄ ♒ | D ♄ ♓ |
| 10 | 24 | 13- | 27- |

| | | |
|-------|-------|-------|
| 17 | 19- | 23 |
| D ♄ ♓ | D ♄ ♐ | D ♄ ♑ |
| 44 | 46- | 21 |

B. Time Zone Selection

In all the examples so far in this section, we have used the TIME key to indicate the time zone for which answers will be printed. This method works only if the INTVL in use = "integer days" (which it does in all of our examples). By "integer days" is meant:

- 1) * 33 = 33.00 (see Table 3), and
- 2) INTVL = integer, not fraction (see Appendix I, p.15).

When these two conditions are satisfied, and * 23 (see Table 3) is at its cold-start value of 23.00, then time zones for the print-out are indicated by the TIME key.

If, however, the search is to be carried out in hourly increments, or in increments of some fractional number of days, a second method must be used: time zones for the print-out must then be indicated by means of the DYF key.

Insert DYF TIME ZONE # ENTER , in place of TIME
TIME ZONE # ENTER in any of the examples in this section.

Method One

- If a) INTVL = integer
 b) * 33 = 33.00, and
 c) * 23 = 23.00

Use TIME key to specify time zone for print-out.

Method Two

- If a) INTVL \neq integer OR
 b) * 33 = 33.01, OR
 c) * 23 = 23.01

Use DYF key to specify time zone for print-out.

C. Change Of Planet's Direction

If a planet changes direction during the period of one of your searches, DR-70 will tell you so. Another item of printer notation must be explained.

Example 23. Use 6.28.1980 as the date for example 15. Set *-12 to 12.02, as two days will suffice for this illustration.

Answers will appear in about three minutes. Note the addition of $\odot 25 \odot 06 R$ to the header:

LIST

```

C1 NATAL TROP P. LONG PLAC 10B
O SCAN D
INTUL      1      12.02
ORB      10°00'    10.01    11.11
          30.00 27
C1 NATAL DROT 06.28.1980      5.00
C1 NATAL  $\Sigma$  25 $\Sigma$ 06 $\pi$ 
    01      02-      04      04-
    D  $\Delta$   $\gamma$     D  $\gamma$   $\Delta$     O  $\rho$  D    D  $\angle$   $\gamma$ 
    55      24-      01      14-

    06-      - 12-      15-      22-
    O  $\gamma$   $\gamma$      $\Sigma$   $\Delta$   $\Delta$     D  $\Sigma$   $\gamma$     D  $\pi$   $\gamma$ 
    58-      - 36-      41-      39-

```

25 Σ 06 is Mercury's position on the date in question. R indicates that it is retrograde at the end of that day (i.e., at the beginning of the next listing, which here is 6.29.1980.)

Example 24. Same as example 23, but this time use 3.19.1980 as the date. This time γ 07 Σ 26 will be added to the header. The absence of R indicates that Mercury is direct at the end of 3.19.1980 (beginning of 3.20.1980.) Note also the minus sign above the Moon-Mercury sextile: it indicates that Mercury was retrograde at the beginning of 3.19.1980. The absence of a minus sign below it indicates that Mercury is direct at the end of the day (beginning of the next day).

In change of direction print-outs:

R indicates planet stations to go retrograde;
No R indicates planet stations to go direct.

LIST

```

C1 NATAL TROP P. LONG PLAC 10B
O SCAN D
INTUL      1      12.02
ORB      10°00'    10.01    11.11
          30.00 27
C1 NATAL DROT 03.19.1980      5.00
C1 NATAL  $\Sigma$  07 $\Sigma$ 26 $\pi$ 
    00      05-      07-      07
    O  $\angle$   $\gamma$     O  $\pi$   $\Delta$     D  $\times$   $\gamma$     D  $\gamma$   $\Sigma$ 
    25      13-      18      43

    08-      18      19
    D  $\gamma$   $\Sigma$     O  $\angle$  D    D  $\gamma$   $\gamma$ 
    35-      56      03

```

D. Summary Of Printer Notation In TRANSIT SEARCH

1. LIST will always appear.
2. General key sequences will appear as in any table headers (see section XIX).
3. INTVL and *-12 settings will always appear. *-20 will only appear if $\neq 20.00$.
4. *-30 setting will always appear.
5. *-27 will always appear.
6. *-10 & *-11 settings will always appear.
7. Other associated *-functions will only appear if user-selected.
8. If *-25 = 25.01 and *-01 = 1.03, the planet(s) selected for "A" will appear on one line and those selected for "B" will appear on the following line.
9. If a planet changes direction during an increment, its position on the increment being searched will be indicated before the first aspects appear. If followed by R, the planet is retrograde at the beginning of the next increment; if no R, the planet is direct at the beginning of the next increment.
10. First operand planets appear to the left of the aspect symbol; second operand planets appear to the right of it.
11. If date and time are being searched, "hours" appear above the aspect symbol and "minutes" appear below it.
12. If dates only are being searched, "month" appears above the aspect symbol and "day" appears below it. The applicable year will precede the answers.
13. A "minus" sign above a planet indicates that that planet is retrograde at the beginning of the increment being searched.
14. A minus sign below a planet indicates that it is retrograde at the end of the increment being searched, i.e., at the beginning of the next increment.
15. If no "minus" sign, planet is direct.

1000 1000
1000 1000

1000 1000
1000 1000

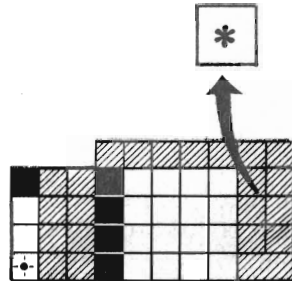
1000 1000
1000 1000
1000 1000

1000 1000
1000 1000

1000 1000
1000 1000
1000 1000

Appendix I: Star * Functions (User-Definable Options)

Star functions are one of the most versatile features of DR-70. They tell the computer to perform a variety of operations which are not specifically shown on the keyboard. For example, with the shift key in the lighted position, press:

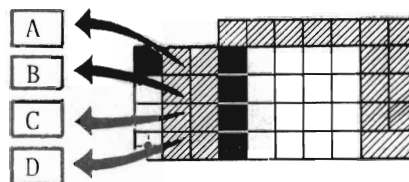


This tells DR-70 that you want to access a "star" function. Now press:

(shift normal)



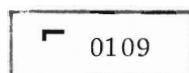
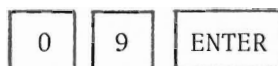
This tells DR-70 that you want access to *-series #01. Series #01 defines the A-B-C-D keys.



A-B-C-D can have a variety of meanings. The next two keys you press will select one of the meanings these keys can have.

In this example, we want to use A-B-C-D to calculate the four major asteroids. Press:

(shift normal)



will appear on the display when this entry is completed.

A-B-C-D may now be included in any standard DR-70 operation (position, SCAN, ASP, A ORB, MDPT, PART, +, -, etc.).

If Alan Leo's natal date is not yet on your machine, enter it before you continue (date: 8.7.1860, time: 5.51.35, latitude: 51.29.30N, longitude: 0.0.30W). Review pp. VI-01,02,03 if necessary to make these entries.

Then press,

(shift lighted)

A

ENTER

3 10.03

appears on the display to tell you that Ceres is at 10°03' of Gemini in Mr. Leo's natal chart.

Because of the way you defined the * "star" function,

A now means CERES
B now means PALLAS
C now means JUNO
D now means VESTA

Press ENTER again, and you get:

1 25.56

B is also illumined on the display; Mr. Leo's natal Pallas is at 25°56' of Aries.

ENTER again gives you:

10 03.18

C - Juno in Mr. Leo's natal chart

ENTER again gives you:

4 07.26

D - Vesta

Details on how to include A-B-C-D in standard DR-70 operations appear on pages 05-06 of this section. For now, we want to focus on the * key itself.

General Form for Defining * :

(shift lighted) * (shift normal)
X X
Y Y
ENTER

"Series" "Tissue"

"Series" indicates the general character of the
* -function you want to access or define.

"Tissue" specifies a particular variable within
the chosen series.

Each is indicated by a two-digit number code (XX=
series; YY = tissue).

The first step in accessing or defining a * -function is to light the shift and press the * key. Then you have a variety of options, as presented in the table on p. AI-04.

Next, return the shift to its normal position and specify a two-digit number (use white keys 0-9; do not use grey keys 10-11-12). DR-70 will take the first two digits you press after the * key as specifying the * -series you want to access. The first column in the table on p. AI-04 shows the two-digit number code used to activate each series. The second column of the table tells you what each series does.

In the example above, your first two digits after * were 0 1 . As the second column of the table tells you, * -series #01 "defines A-B-C-D keys."

The first two digits pressed after * indicate the "series" to be activated.

The next step in defining a * -function is to specify one of the variables within the series already selected. These variables make up the "tissue" of the series in use. The last two digits pressed after * activate a particular variable within the series. The third column of the table on p. AI-04 itemizes these variables within each series according to the number code which activates them.

In the example above, the last two digits that you pressed after the *-key were 0 9 . This specified A-B-C-D as the four major asteroids.

The last two digits pressed after * indicate the "tissue", i.e., a variable within the series already selected.

Note that only * -series #01 is related to A-B-C-D keys. Other series interact with a variety of other keyboard functions. The fourth column of the following table refers you to pages in this section on which each of the various series-tissue combinations are discussed in detail.

NOTE: (P) indicates series is used only with printer functions.

| Series # | Function | Tissue | Page |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 01 | Defines A-B-C-D keys. Function variable according to tissue in use. | 01-08: Not yet programmed. 09: Asteroids A = Ceres; B = Pallas C = Juno; D = Vesta | 05 |
| 10 | Selective Aspect Search: First aspect for SCAN/A ORB. | 01: conjunction (cold start for series #10) | 09 |
| 11 | Selective Aspect Search: Last aspect for SCAN/A ORB. | 02: opposition 03: square 04: trine 05: sextile 06: quintile 07: septile 08: quincunx 09: semisextile 10: semisquare 11: sesquiquadrate (cold-start for series #11). | |
| 12 (P) | Defines length of LIST. Not to be confused with #33, which identifies INTVL applied in LIST. | 00-99: number pressed = length of LIST (00=100, cold-start; 01 = 1; 02 = 2, etc.) | 15 |
| 50 (P) | Tells printer which of two operands to increment when LISTing two-chart opera- tions. | 00 or 01 : increment first operand only (cold-start) 02: increment second operand only. 03: increment both operands. | 15 |
| 33 (P) | Identifies INTVL as decimal days or decimal hours. | 00: decimal days 01: decimal hours | 15 |
| 34 (P) | Tells printer whether or not to print number of zodiacal signs in cases where the number is not between 1-12 (used in harmonics). | 00: No (cold-start) 01: Yes | 15 |
| 55 (P) | Tells printer whether to begin a LIST with date/ time entered or to go immediately to first increment. | 00: Start with date/ time entered (cold- start) 01: go to first increment | 17 |
| 46 | Indicates origin of first- house cusp when Equal House system is in use. | 00: same as Placidus cusp for date/time/ location in use (cold- start). 01: first-house cusp= number in MEM | 18 |
| 47 | Sets PORPH on house dial to either Porphyry or Equal House system. | 00: Porphyry (cold-start) 01: Equal House | 18 |

A. Series 01: Define A-B-C-D

Tissue: 01-08 not yet programmed
 09 - ASTEROIDS

Asteroids can be included in any standard DR-70 operation when
 *-series #01 = 0109. Press:

(shift lighted) * (shift normal) 0 1 0 9 ENTER

Now, A = Ceres
 B = Pallas
 C = Juno
 D = Vesta

The example at the beginning of this section has already demonstrated how to display the positions of the four major asteroids. When *-01 is set to 01.09, A-B-C-D may be included in any standard DR-70 operation. For Example, to TABLE Mr. Leo's natal asteroids, press:

(shift normal) TABLE (shift lighted) A ENTER

C1 NATAL TROP P. LONG PLAC 108

A

A = 10 1 03
 B = 25 1 56
 C = 03 1 18
 D = 07 1 26

will be printed.

The following general formula may be used to include asteroids in standard DR-70 operations:

First, set *-01 to 01.09

Then, press:

| | | | |
|-------------------------|-----------------|---------------|-------------------------------------|
| Printer Functions(s) | Chart Number | Chart Type | A-B-C or D or Planet or HSE # |
| FUNCTION KEY | Chart Number | Chart Type | A-B-C-D or Planet or HSE # |
| | | | ENTER |

Comments:

- 1) Asteroids may be calculated either with or without the printer engaged. If working without a printer, include A-B-C-D in any of the general formulas in sections VII-XVI. If working with a printer, include A-B-C-D in general formulas given in section XIX.

Note: Use asteroids (A-B-C-D) as first operand in binary operations (see section IX, pp. 02,03) whenever possible.

- 2) Chart Number and/or Chart Type may be "implied" in many operations. See section XVII, pp. 02,03.

Example: What aspects are formed by the four major asteroids in Alan Leo's natal chart ?

Step one: Enter Alan Leo's date (8.7.1860), time (5.51.35), latitude (51.29.30N) and longitude (0.0.30W) in the normal manner.

Step two: Check to see that * -series 01 is set to 01.09 (or 1.09). Press:

(shift lighted) * (shift normal) 0 1 RECL

01.09 should be displayed.

If not, make the entry as shown on p. AI-01.

Step three: Set ORB key to two degrees.

Step four: If working without a printer, press:

(shift lighted) A SCAN ⊖ ENTER

In about 15-20 seconds,

-72 1.52

will appear on the display. The A and ⊖ lights are illumined, indicating a quintile between Ceres and Mercury. Continue the Auto-Entry in the normal manner.

Step five: If working with a printer, press:

(shift normal) TABLE (shift lighted) A SCAN ⊖ ENTER

The Table will be printed:

C1 NATAL TROP P.LONG PLAC 10B
A SCAN 0

| ORB | 2°00' | 10.01 | 11.11 | |
|-----|-----------------------|----------------------|--------------------------|--------------|
| | 0 1 2 3 4 5 6 7 8 9 A | | | |
| A | 1 Q 52 | 1 X 37 | 1 1 0 ✓ Q 17 01 34 | |
| B | | 1 0 Δ 40 24 | | |
| C | 1 P 53 | | | 1 X 20 |
| D | | 0 1 X \$ 59 16 | | |
| | 0 1 2 3 4 5 6 7 8 9 A | | | |

IMPORTANT: If working with printer, always use A-B-C-D as first operand.
Never press, for example, TABLE SCAN A.

Next, to compute aspects between the asteroids.

Step 6. If working without a printer, press:

(shift lighted)

A

SCAN

B

ENTER

In about 15-20 seconds,

45 0.53

will appear on the display. The A and B lights are illuminated, indicating a semi-square between Ceres and Pallas. Continue the Auto-Entry in the normal manner.

Step 7. If working with a printer, press:

(shift normal)

TABLE

(shift lighted)

A

SCAN

B

ENTER

The table will be printed:

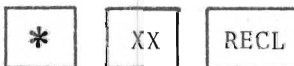
C1 NATAL TROP P.LONG PLAC 100
A SCAN B

| ORB | 2°00' 10.01 11.11 | | | |
|-----|-------------------|---|----|---|
| | A | B | C | D |
| A | 0 | 2 | 53 | |
| B | | | 0 | |
| | | | 0 | |
| | | | 29 | |
| C | | | | |
| | A | B | C | D |

Recalls with Functions.

The tissue-variable to which each series is set can be recalled at any time by pressing:

(shift lighted)



series

Example: Press:

(shift lighted)



(shift normal)



10.01

will be displayed as the current value of *-series #10 (see p. 09)

To recall the tissue-variable to which a
*-series is set, press:

(shift lighted)



(shift normal)

series #

RECL

B. Series 10 and 11: Selective Aspect Search

*-series 10 and 11 define which aspects will be searched out by DR-70's SCAN and A ORB functions.

| Aspect | Symbol | Degrees | Tissue Code |
|----------------|--------|---------|-------------|
| Conjunction | ♌ | 0 | 01 |
| Opposition | ♍ | 180 | 02 |
| Square | □ | 90 | 03 |
| Trine | △ | 120 | 04 |
| Sextile | * | 60 | 05 |
| Quintile | Q | 72 | 06 |
| Septile | \$ | 51°26' | 07 |
| Quincunx | ⋈ | 150 | 08 |
| Semisextile | ∨ | 30 | 09 |
| Semisquare | ∠ | 45 | 10 |
| Sesquiquadrate | ⊞ | 135 | 11 |

Each aspect is associated with a two-digit number code, as indicated in the table above.

*-series #10 determines where the aspect search will begin.

*-series #11 determines where the aspect search will end.

The aspects included between the *-series #10 setting and the *-series #11 setting will be included in the SCAN and A ORB aspect searches.

*-10 cold-starts at 10.01

*-11 cold starts at 11.11

The entire aspect list is included in the cold-start range, i.e., 10.01 - 11.11. The search begins with conjunctions and ends with sesquiquadrates.

To limit the search to particular aspects, redefine *-10 and/or *-11.

Example: What are the major aspects in Alan Leo's natal chart ?

Step one: Enter Alan Leo's natal date (8.7.1860), time (5.51.35), latitude (51.29.30N), and longitude (0.0.30W) in the standard manner.

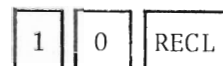
Step two: Set the *-series #10 to the first aspect to be included in the aspect search. We want to start with conjunctions. *-series #10 cold-starts at 10.01; no new setting is required.

To be sure that your DR-70 is set at 10.01, press:

(shift lighted)



(shift normal)



10.01 should be displayed.

If any other value for *-series #10 appears, press:

(shift lighted) * (shift normal) 1 0 0 1 ENTER

┌ 1001

will appear when the entry is complete. (Note that the decimal point may be omitted in * entries.)

DR-70 will begin the aspect search with conjunctions.

Step three: Set *-series #11 to the last aspect to be included from the aspect list. We want to stop with sextiles. Press:

(shift lighted) * (shift normal) 1 1 0 5 ENTER

The major aspects (01-05, i.e., conjunction through sextile) are now included in the range * 10.01 - * 11.05.

Step four: Set an orb. We'll allow 7° in this example. Press:

(shift normal) ORB 7 ENTER

┌ 7

will appear on the display when the entry is complete.

Step five: If working without a printer, go to step six. If working with a printer, press:

(shift normal) TABLE (shift lighted) ⊙ SCAN D ENTER

The following table will be printed:

[illegible]

Alan Leo, Natal
Major aspects
(Orb = 7°)

10.01 and 11.05 above the table indicate the aspects included in the SCAN.

Step six: If working without a printer, press:

(shift lighted)



The first aspect to appear is:

120 0.28

a trine between the Sun and Moon.

Continue the auto-entry in the standard manner. DR-70 will display only the major aspects, as printed in step five.

To limit SCAN or A ORB to major aspects:

Set *-10 to 10.01

Set *-11 to 11.05

Example: What are Alan Leo's minor aspects ?

Step one: Same as previous example.

Step two: Set *-series #10 to 10.06. Press:

(shift lighted) [*] (shift normal) [1] [0] [0] [6] [ENTER]

Wait for ␣. DR-70 will start the search with quintiles.

Step three: Set *-series #11 to 11.11. Press:

(shift lighted) [*] (shift normal) [1] [1] [1] [1] [ENTER]

When ␣ appears, the entry is completed. DR-70 will end the search with sesquiquadrates.

The minor aspects are now included in the range * 10.06- * 11.11.

Step four: Set an orb. We'll allow $1\frac{1}{2}^0$. Press:

(shift normal) [ORB] [1] [.] [3] [0] [ENTER]

Wait for ␣.

Step five: If working without a printer, go to step six. If working with a printer, press:

(shift normal) [TABLE] (shift lighted) [⊙] [SCAN] [D] [ENTER]

DR-70 will print:

CI NATAL TROP P. LONG PLAC 100
0 SCAN 0

| ORB | 1°30' | 10.06 | 11.11 |
|-----|-------|-------|-------|
| 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 |

Alan Leo, Natal
Minor aspects
(orb = 1°30')

Step six: If working without a printer, press:

(shift lighted)



SCAN



ENTER

The first aspect to appear on the display is:

135 0.49

Continue the auto-entry in the standard manner. DR-70 will display only the minor aspects, as printed in the table in step five.

To limit SCAN or A ORB to minor aspects:

Set *-10 to 10.06

Set *-11 to 11.11

To limit SCAN and A ORB to a particular aspect, set both *-10 and *-11 to the same number code. For example, to search for septiles only, press:

(shift lighted) (shift normal)

and

(shift lighted) (shift normal)

Now only septiles (aspect #07) are included in the range * 10.07 through * 11.07. DR-70 will print or display only septiles (within the user-defined orb).

To limit SCAN and A ORB to a particular aspect:

Set both *-10 and *-11 to the number code of the aspect to be searched.

To return DR-70 to searching the full aspect list, set *-10 to 10.01, and *-11 to 11.11

The current value of either *-10 or *-11 can be recalled at any time. Press:

(shift lighted) (shift normal)

to display the value of *-series 10.

Press:

(shift lighted) (shift normal)

to display the value of *-series 11.

The *10 and *11 settings will determine the first aspect and the last aspect (from the list on p. AI-10) included in SCAN and A ORB aspect searches.

Note: Selective aspect search, using *-10 and *-11, does not apply to primary direction aspects calculated using methods 2A or 2B (p. XIII-08).

C. Printer-Associated Star Functions - Series 12, 30, 33, 34, 35.

1. Series #12

Series 12 determines the length of the list when the LIST function is in use. Examples of this function are given in section XIX, pp. 41-65 (Cold-start value 12.00 sets list length at 100.)

2. Series #30

Series 30 tells DR-70 which of two operands to increment when the LIST function is in use. When set to either 30.00 (cold-start) or 30.01, this function cycles the first operand only, in two-chart operations. Examples of using series 30 to increment the first operand only, are given throughout the LIST subsection of section XIX.

When set to 30.02, DR-70 increments the second operand only, in two-chart operations. An example of using 30.02 is given on p.XIX-59

When set to 30.03, DR-70 increments both operands in two-chart operations.

3. Series #33

Series 33 is used with the INTVL key. 33.00 identifies the INTVL setting as "decimal days". 33.01 identifies the INTVL setting as "decimal hours".

Examples of using 33.00 are given in section XIX, p. 42

Examples of using 33.01 are given in section XIX, p. 44

4. Series #34

Series 34 is used when harmonics are calculated. It tells DR-70 whether or not to print the number of zodiacal signs in cases where the number of signs is not between 1-12.

34.00 (the cold-start value) says, "No, do not print the number of signs."

34.01 says, "Yes, print them."

Example: What are the ninth harmonics of Alan Leo's natal planets ?

Step one: Enter Alan Leo's natal date (8.7.1860), time (5.51.35), latitude (51.29.30N), and longitude (0.0.30W) in the normal manner.

Step two: Determine whether or not to print the number of zodiacal signs.

- a. *-34 cold-starts to 34.00. For the first part of the example, we will not print the number of signs. No new setting is necessary; go to step three.
- b. Set *-34 to 34.01 by pressing:

(shift lighted)



(shift normal)



* = 3401 will be printed, telling you that now DR-70 will print the number of zodiacal signs. Go to step four.

Step three: Press:

(shift normal) PRINT 1 . 9 ZOD X (shift lighted) ☉ ENTER

DR-70 will print:

C1 NATAL TROP P.LONG PLAC ZOD
1 9 * ☉ = 13/54 49

Press: ENTER :

DR-70 will print:

1 9 X ☽ = 18 ♈ 03 53

Continue to press ENTER as in a normal auto-entry and the remainder of the ninth harmonics will appear. First:

1 9 X ♀ = 01 ♊ 38 52

Then

1 9 X ♀ = 15 ♈ 06 07 etc.

Now go back to step two, b.

Step four: Press:

(shift normal) 1 . 9 ZOD X (shift lighted) ☉ ENTER

DR-70 will print:

1 9 * ☉ = 13/41/54 49

number of signs

Press ENTER :

DR-70 prints:

1 9 X ☽ = 18 ♈ 03 53

This time the number of signs is between 1-12, and is not printed. Continue to press ENTER as in a normal auto-entry; signs greater than 12 will be printed. The next answer you get is:

1 9 X ♀ = 01 ♊ /43/38 52

5. Series #35

Series 35 is used with the LIST function. It tells DR-70 whether to start a LIST with the date/time entered or to go immediately to the first increment.

35.00 is the cold-start value; it tells DR-70 to start listing with the date/time entered. Examples of using 35.00 appear throughout the LIST subsection of section XIX.

35.01 tells DR-70 to go immediately to the first increment. For example:

Step one: Enter 12 GMT on 3.1.1979 as a starting time and date.

Step two: Set INTVL to 1.

Step three: Identify INTVL as decimal days by setting *-33 to 33.00.

Step four: Set list length to ten. (*-12 = 12.10)

Step five: Set series 35 to 35.01. Press:

(shift lighted) * (shift normal) 3 5 . 0 1 ENTER

Step six: List the Sun's position for the next ten days. Press:

(shift lighted) LIST ⊙ ENTER

The list will begin with 3.02.1979 :

C1 NATAL DROT 03.02.1979 12.00

⊙ = 11~~h~~18 35

C1 NATAL DROT 03.03.1979 12.00

⊙ = 12~~h~~18 47

etc.

DR-70 will return to 35.00 if:

- a) Redefined by user (* (shift) 3 5 . 0 0)
- b) Reset is pressed
- c) Machine is shut off.

D. Series 46 and 47: Equal House System

The PORPHYRY setting on the house dial can be used to calculate house cusps according to either the Porphyry or the Equal House system of houses.

*-47.00 (cold-start value) sets PORPH on the house dial to calculate houses according to Porphyry's system.

*-47.01 sets PORPH on the house dial to calculate houses according to the Equal House method.

Series #46 indicates the origin of the first-house cusp when the Equal House system is in use. (Series #46 is used only when series 47 is set to 47.01.)

*-46.00 sets the first house of the Equal House system to the Placidian first-house cusp for the date/time/location in question.

*-46.01 sets the first-house cusp in the Equal House system to the (user-defined) number in MEMORY.

Examples: 1. What are Alan Leo's natal cusps according to Porphyry ?

Step one: Enter Mr. Leo's date (8.7.1860), time (5.51.35), latitude (51.29.30N), and longitude (0.0.30W) in the normal manner.

Step two: Rotate house dial to PORPH.

Step three: If working without printer, go to step four. If working with printer, press:

(shift normal)

TABLE

HSE

1

ENTER

DR-70 will print out the Porphyry cusps:

C1 NATAL TROP P.LONG PORP 100
H01

H01 = 27 A 36
H02 = 23 Q 50
H03 = 20 A 05
H04 = 16 M 20
H05 = 20 J 05
H06 = 23 A 50
H07 = 27 X 36
H08 = 23 X 50
H09 = 20 T 05
H10 = 16 B 20
H11 = 20 I 05
H12 = 23 S 50

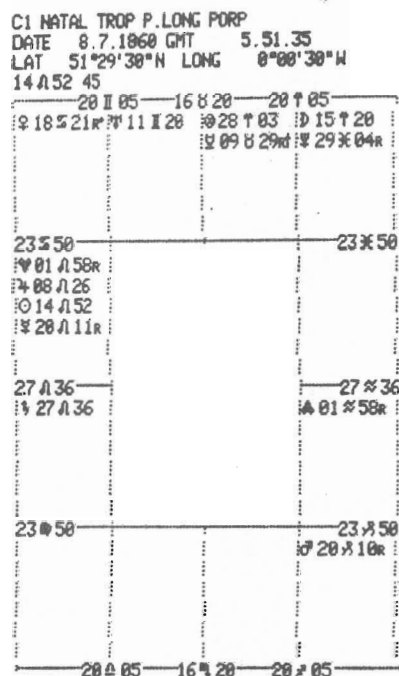
Or press:

(shift lighted)

CHART

ENTER

DR-70 will print:



You are working with 47.00, the cold-start setting for series #47.

Step four: If working without the printer, auto-enter the houses in the normal manner:

HSE 1 ENTER ... ENTER ... ENTER ... etc.

The answers will be the same as given in step three above.

Examples: 2. Where do Alan Leo's natal planets fall in the Equal House system based on his Placidus first-house cusp?

Step one: Same as previous example.

Step two: Same as previous example.

Step three: Set tissue 47 to 01.

(shift lighted) * (shift normal) 4 7 0 1 ENTER

Step four: If working with a printer press:

(shift normal)

TABLE

HSE

1

ENTER

C1 NATAL TROP P.LONG PORP 100
H01

H01 = 27 1 36
H02 = 27 2 36
H03 = 27 3 36
H04 = 27 4 36
H05 = 27 5 36
H06 = 27 6 36
H07 = 27 7 36
H08 = 27 8 36
H09 = 27 9 36
H10 = 27 10 36
H11 = 27 11 36
H12 = 27 12 36

Or press:

(shift lighted)

CHART

ENTER

If working without a printer auto-enter the houses in the normal manner:

HSE

1

ENTER

...

ENTER

...

ENTER

... etc.

Examples: 3. Where do Alan Leo's natal planets fall in the Equal House system based on using 20 & 30 as his first house cusp.

Step 1: Same as example #1.

Step 2: Same as example #1.

Step 3: Same as example #2.

Step 4: Set tissue 46 to 01:

(shift lighted)

*

(shift normal)

4

6

0

1

ENTER

Step 5: Store 1st house cusp in memory.

(shift normal)

MEM

2

.

2

0

.

3

0

ZOD

ENTER

Step 6: If working with a printer press:

(shift normal)

TABLE

HSE

1

ENTER

C1 NATAL TROP P.LONG PORP ZOD
H01

H01 = 20 8 30
H02 = 20 11 30
H03 = 20 5 30
H04 = 20 11 30
H05 = 20 10 30
H06 = 20 12 30
H07 = 20 9 30
H08 = 20 7 30
H09 = 20 8 30
H10 = 20 8 30
H11 = 20 8 30
H12 = 20 1 30

Or press:

(shift lighted)

CHART

ENTER

If working without a printer auto-enter the houses in the normal manner:

HSE

1

ENTER

...

ENTER

...

ENTER

... etc.

SUMMARY OF EQUAL HOUSE SYSTEM

- 1) Turn house knob to Porphyry
- 2) Set tissue 47 to 01

(shift lighted)

*

(shift normal)

4

7

0

1

ENTER

Houses will now be 30^0 each with the 1st cusp being equal to the Placidian ascendant.

If a different value for the 1st house cusp is desired do steps 3) and 4) as well.

- 3) Enter value in memory

MEM (desired value for ascendant) ENTER

- 4) Set tissue 46 to 01

(shift lighted)

*

(shift normal)

4

6

0

1

ENTER



INDEX

(NOTE: See also Section III for information on specific keys.)

A-ORB, I-07; in display IV-03; VIII-07ff., 10; auto-enter IX-08
 Accuracy of calculations, i.
 Analysis, def. VIII-01
 Arabian parts, I-07; VIII-04ff.; summary VIII-06, 10; auto-enter IX-11; XIV-09, 17
 Ascendant, I-05; to get in seconds IX-12; planet on XVI-26
 ASPECT key, VIII-01
 Aspects, I-06; VI-05; orb setting VI-08; VIII-01, 09; auto-enter IX-05;
 emphasizes major, IX-09
 Auto-enter function, VI-03; VI-07ff.; IX-02ff.; when working without printer IX-14
 AYANamasha, def. I-04; II-03; V-05; XVI-25

Binary operations, def. IX-02,3

C-D (converse/direct), XIII-04; XIII-08,9,11
 Carry-over DTLL for derived charts, XII-01ff.
 Celestial equator, XV-03
 Chain mathematics, XVI-11
 Chart comparison, I-07; XIV-01ff.
 Chart number, I-06; VII-01; cold start II-02
 Chart types, VII-01
 Natal I-02; VII-01
 Derived XII; and Natal XIV
 Lunar Return I-03; XII
 Primary Directions XIII
 Secondary Progressed I-02; VI-06; XII
 Solar ARC I-03; XII
 Solar Return I-03; XII
 Tertiary Progressions I-02; XII
 Clear-entry key (CE), V-03
 Clear key (C), V-03f.
 Cluster analysis, XI-01
 Cold-start, II-01ff.
 Composite charts, XVI-16ff.
 Contra-parallels, XV-08
 Coordinate exchange (CRDX), I-07; XV-03; summary XV-06
 Coordinates, XV-01ff.
 Cosmobiological functions, I-07; XI-01; see also X-03
 Cusps, VII-09,10; auto-enter IX-03

DALTON, I-05
 Date, entering, VII-03; carry-over XII-02
 Decimal, in number display IV-01ff.
 Declination XV-02
 Degree/year factor (DYF) II-03; V-05
 Derived charts -- see 'Chart types'
 Derived date, V-02; XII-06
 Direct parts, VIII-04
 Display, IV; II-01

Equatorial system, XV-02,3
Errors, IV-04, V-01ff.

Flow systems, Line IX-03,4; Triangle IX-05; Rectangle IX-06; Square without diagonal IX-12; Chart comparison planet square XIV-03; Chart comparison house square XIV-05; Chart comparison rectangle XIV-07, XIV-08

GMT, VII-03,6; XII-07; XVI-26

Harmonics, I-07; XVI-21ff.
Heliocentric/tropical longitude, XVI-25
Heliocentric Zodiac, I-05
House cusps, VII-09,10; auto-enter IX-03; special note IX-14
House line, IX-04
House systems, I-05; VI-03; VII-09

Idle feature, XVII-01
Implied Keys, VII; XIV-01; XVII-02
Implied number formats, XVI-12
INTVL, II-03; V-05
Inverse parts, VIII-04

Julian date (JLDT), V-06; XII-07

Keyboard, III

Latitude/longitude, cold start II-02; entering VI-02; VII-02; VII-07; XV;
and derived chart XII-02; XV-01ff.; "mixed" XVI-20; XVI-25; and MC, XVI-26
Line flow system, IX-03; midstream entry XVIII-01
Lorenz, Dona Marie, I-05
Lunar return, I-03; XIV-13

Mathematical functions, I-07; XVI-01ff.
MEMory, II-03; V-05; example of use in chain math XVI-18ff.; used to
change number formats XVI-14
Meridian (Zariel) system, I-05
Midpoints, I-07; VIII-03,10; auto-enter IX-10; XIV-06,16; auto-entering
aspects to X-03
Midstream entry, XVIII-01ff.
Minus sign, and declination, XV-06
Mod, XI-01ff.
Multiple Stage Procedures (MSCO), def. IX-02,3

90D, II-03; V-05; XI-01; and primary directions, XIII
Natal chart, I-02; cold start II-02; construction VI-01ff.; secondary progressions
VI-06; aspectarian VI-06; VII; synopsis VII-08,11; aspects VIII; X;
auto-enter IX; midpoints VIII-03; Arabian parts VIII-04; cluster
analysis XI; harmonics XVI; parallels XV-07; comparison XIV-13

Number formats, XVI-01ff.; 60 base XVI-03; ZODIAC XVI-06; and chain math XVI-11;
implied XVI-12; and operands XVI-13; changing XVI-14

O'flow (overflow), IV-03,4
Operand, def. IX-02,3,9
ORB key, V-05
Orb, I-06, II-03, and composite chart XVI-20

Parallels, I-07; XV-07,8
Parts, I-07; VIII-04ff.; summary VIII-06,10
PLACIDus, I-05
Planet line, IX-04
Planet positions, generating, VI-03; VII-10; auto-enter IX-04
Planetary coordinate, VII-02; and derived charts XII-02
Plus-or-minus twelve, VII-06
Primary directions, XIII

RECL (Recall) key, V-04
Rectangle flow system, IX-06; midstream entry XVIII-02
RESET, V-06
Retrograde, display IV-04
Right ascension, XV-02,3
Rising time of planet, XVI-26

SCAN function, VI-05; X
Secondary progressions, I-02; VI-06; construction XII; comparison with natal XIV
Shift key light, V-01ff.; II-01
Sidereal time (ST), V-06; XII-06; XVI-26
Sidereal Zodiac, I-04
Simple operation, def. IX-02,3
60-Base, XVI-03
Solar ARC chart, I-03; note XII-05; XIV-03
Solar return chart, I-03; XII-04; XIV-12
Square without diagonal flow, IX-12; midstream entry XVIII-04
Starting, II-01; VI-01
Stationary, display IV-04

Terrestrial light, XV-07
Tertiary progressions, I-02
Time, entering VII-03; adjustments for VII-04,5; notation VII-04;
daylight savings VII-05; plus-or-minus twelve VII-06; and
derived chart XII-01,2
Timesavers XVII-01
Transits, Construction VI-09ff.; to secondary progressions VI-12; XIV-17;
Comparison with natal XIV-12
Triangle flow system, IX-05; midstream entry XVIII-01
Tropical zodiac, I-03; II-02

Zariel system, I-05
ZODiac number format, XVI-06ff.
Zodiac, VII-02;

Heliocentric, I-05
Sidereal, I-04
Tropical, I-03
and derived charts, XII-01