>CURSOR

THE TINY MICRO COMPUTER NEWS SERVICE

BIO-RHYTHM BY FRED CORNETT
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Reference for this program was primarily "BIO-RHYTHM, A Personal Science" by Bernard Gittelson; Published by ARCO Publishing Co.

NOTE: This program is accurate in every way except one, the chart will be off one day every 400 years (Current century is correct).
Other than that, leap years are included in all computations!

INSTRUCTIONS: This program will load & run automatically after you have keyed in :INPUT. The screen will clear, and BIRTH M-D-YYYY? will be displayed; the computer is asking you to input your birthdate, if your birthdate is July 27, 1950, you will at this time, key-in the month which is "7" and hit GO, the screen will display "D", key-in "27", hit GO. Screen will display "Y", key-in "1950", hit GO. Screen will display CHART M (it is asking what month and year you wish to see charted); let us say we wanted April 1980, key-in "4", hit GO, screen will then display YYYY, key-in "1980", hit GO (always input full year, i.e., 4 digits).

Your computer will start making noises to let you know it is computing, screen will clear, and a chart will be displayed. Each Vertical line represents 1 day in the month you have selected (for your convenience, every fifth (5th) line is elongated, which simplifies finding a particular day on the chart (1st day is leftmost--last day is rightmost).

Next, the computer will plot three (3) seperate and distinctly different lines across the chart. These lines represent the three cycles that are plotted in a "Bio-Rhythm". To interpret these lines they are coded differently: 1. PHYSICAL CYCLE=ZEBRA LINE; 2. EMOTIONAL CYCLE=WHITE LINE; 3. MENTAL (or INTELLECTUAL) CYCLE=BLACK LINE. The black horizontal line running through the middle of the chart designates CRITICAL AREA. Whenever one of the cycle lines intersect the CRITICAL LINE, this day is considered potentially troublesome.

Using the example (BIRTH=7/27/1950 PLUS CHART 4/1980) if you wish to see the Physical Critical Days highlighted, press the CYCLE # of your choice, i.e., press "1" for PHYSICAL and all Physical Critical Days for the selected month will be progressively highlighted by flashing the critical day on and off, (in this case, April 4,16 and 27). To highlight the other cycles press the appropriate key (2 or 3). If you wish to see a chart for a different month, but retain the same birthdate, press "4"; Pressing "5" will restart program from beginning. Please refer to the referenced book for additional biorhythm analysis meaning and information

THANK YOU FOR YOUR ORDER AND PATIENCE!

```
  5 CLEAR ;C=2Ø;K=9ØØ;W=1ØØØ;U=W+C;R=38;J=6xW
 1Ø INPUT "BIRTH M-D-YYYY?"M,D,Y
 3Ø INPUT "CHART M"N,"YYYY"Z
1ØØ T=Ø;FOR A=YTO Z-1;B=A+4;IF RM B=365;GOTO 13Ø
12Ø B=366
13Ø MU=A;T=T+B;NEXT A;B=Y;IF M=12GOTO 295
2ØØ FOR A=M+1TO 12;GOSUB A+W;T=T+F;MU=A;NEXT A
295 B=Z;IF N=1GOTO 4ØØ
3ØØ FOR A=1TO N-1;GOSUB A+W;T=T+F;MU=A;NEXT A
4ØØ B=Y;GOSUB M+W;F=(F-D)+1;T=T+F+1;CLEAR
7ØØ GOSUB W;GOSUB W+W
7Ø2 IF P=2L=Ø;GOTO 71Ø
7Ø5 A=1-P;GOSUB K
71Ø GOSUB U
72Ø LINE L+11,C+13,3;LINE L+33,C-13,3;LINE L+57,C+13,3;
    LINE L+79,C-13,3;LINE L+93,C,3;LINE L+1Ø3,C+13,3
736 FOR E=1TO 12;@(E)=Ø;NEXT E;E=Ø
745 FOR A=1TO 5;GOSUB K+A;IF (X<2)+(X>64)GOTO 76Ø
755 E=E+1;@(E)=X
76Ø NEXT A
8ØØ IF S=2L=Ø;GOTO 81Ø
8Ø5 A=1-S;GOSUB K
81Ø GOSUB U
815 LINE L+14,C+14,1;LINE L+42,C-14,1;LINE L+7Ø,C+14,1;
    LINE L+85,C,1;LINE L+98,C-14,1;LINE L+115,C,1;LINE
    L+126,C+14,1
84Ø GOSUB W;G=E
845 FOR A=6TO 1Ø;GOSUB K+A;IF (X<2)+(X>64)GOTO 86Ø
855 G=G+1;@(G)=X
86Ø NEXT A;IF I=2L=Ø;GOTO 869
867 A=1-I;GOSUB K
869 GOSUB U
871 LINE L+15,C+17,2;LINE L+49,C-17,2;LINE L+66,C,2;LINE
    L+81,C+17,2;LINE L+98,C,2;LINE L+115,C-17,2;LINE L+
    132,C,2
873 Q=G;FOR H=11TO 15;GOSUB K+H;IF (X<2)+(X>64)GOTO 88Ø
875 Q=Q+1;@(Q)=X
88Ø NEXT H
885 GOSUB 3xW;BOS -39,C,82,R,2;GOTO 92Ø
9ØØ L=(Ax2)+2;RETURN
9Ø1 X=L+1;RETURN
9Ø2 X=L+23;RETURN
9Ø3 X=L+47;RETURN
9Ø4 X=L+69;RETURN
9Ø5 X=L+93;RETURN
9Ø6 X=L-1;RETURN
9Ø7 X=L+29;RETURN
9Ø8 X=L+57;RETURN
9Ø9 X=L+85;RETURN
91Ø X=L+115;RETURN
911 X=L;RETURN
912 X=L+33;RETURN
913 X=L+67;RETURN
914 X=L+99;RETURN
915 X=L+132;RETURN
92Ø PRINT "CRIT. DAYS";PRINT ;PRINT " 1-PHYS";PRINT ;PRINT
    " 2-EMOT";PRINT ;PRINT " 3-MENT
925 PRINT ;PRINT " 4-NEW MONTH";PRINT " 5-NEW BIRTH
93Ø O=KP;O=O-48;IF O=1GOSUB J;GOSUB 95Ø
931 IF O=3GOSUB J;GOSUB 97Ø
932 IF O=4 CLEAR ;GOTO 3Ø
934 IF O=5RUN
936 IF O=2GOSUB J;GOSUB 96Ø
945 GOTO 93Ø
95Ø FOR A=1TO E;IF @(A)=ØGOTO 959
955 GOSUB 4xW
959 NEXT A;GOSUB J;RETURN
96Ø FOR A=E+1TO G;IF @(A)=ØGOTO 969
965 GOSUB 4xW
969 NEXT A;GOSUB J;RETURN
97Ø FOR A=G+1TO Q;IF @(A)=ØGOTO 98Ø
975 GOSUB 4xW
98Ø NEXT A;GOSUB J;RETURN
1ØØØ LINE 2,C,4;RETURN
1ØØ1 F=31;RETURN
1ØØ2 GOSUB 1Ø15;RETURN
1ØØ3 F=31;RETURN
1ØØ4 F=3Ø;RETURN
1ØØ5 F=31;RETURN
1ØØ6 F=3Ø;RETURN
1ØØ7 F=31;RETURN
1ØØ8 F=31;RETURN
1ØØ9 F=3Ø;RETURN
1Ø1Ø F=31;RETURN
1Ø11 F=3Ø;RETURN
1Ø12 F=31;RETURN
1Ø15 P=B+4;IF RM F=28;RETURN
1Ø16 F=29;RETURN
1Ø2Ø LINE L,C,4;RETURN
2ØØØ B=T+23;P=RM;B=T+28;S=RM;B=T+33;I=RM;B=Z;GOSUB N+W
2Ø1Ø FOR A=2TO Fx2STEP 2;MU=A;BOX A,C,1,R,1;BOX A+1,C,2,1,1;
    NEXT A
2Ø3Ø FOR A=1ØTO Fx2STEP 1Ø;MU=A;BOX A,1,1,2,1;BOX A,39,1,2,1;
    NEXT A;RETURN
3ØØØ IF F=31BOX 71,C,17,R,2
3Ø1Ø IF F=3ØBOX 7Ø,C,19,R,2
3Ø12 IF F=29BOX 68,C,19,R,2
3Ø14 IF F=28BOX 68,C,23,R,2
3Ø15 RETURN
4ØØØ FOR V=1TO C;BOX @(A)-1,C,1,R,2;MU=A;BOX @(A)-1,C,1,R,1;
    NEXT V;RETURN
6ØØØ BOX -55,4Ø-Ox16,4Ø,11,3;RETURN
```

> When inputting this tape, DO NOT turn tape off until you see: "BIRTH-M-D-YYYY"

MOON LANDING
Instructions

This program will LOAD & RUN itself after you do
a :INPUT. The machine language will load in right
after the BASIC. Basically, you are trying to land
a lunar lander on the surface of the moon. When run,
the program asks for a LEVEL of play. You input a
1,2,or 3. '1' is the easiest level, the gravity will
always pull at your ship with a factor of '1'. Level
'2' will have a gravity of 2 G's, & Level '3' is the
toughie with a gravity of 3. You control the beginning
operations by dis-connecting from the MotherCraft,
just pull back on the joystick to launch your ship.
You will immediately see the effect the gravity has
on your ship. Pressing the trigger will fire your
rockets and compensate for the gravity. To aim at a
target (landing site), just push the joystick left
and right to adjust your horizontal direction. Your
fuel is limited and you will be stranded in space if
you use too much and run out. Each time you move the
joystick to the side you use one unit of fuel. When
you fire your rockets you use 2 units of fuel. At
level 1 you get 160 units of fuel. Level 2 gets 140
units, and Level 3 gets 120 units of fuel (you'll
need more at high gravity). Try to land over any flat
surface at the slowest possible speed. You plant the
flag and wait for the countdown and blastoff (use the
trigger to keep going up), keep going until you reach
the top of the screen, a new setup will appear, you
are 2x size and the other object is the mothercraft.
Try to dock onto this craft directly underneath (slowly
or you'll explode). As you can see, this game is a dy-
namic one much faster than any other BASIC graphics
game, just experiment with it. There are many checkpoints
to watch out for, so many things can happen. Many of the
true mechanics of space flight are incorporated in this
program. Make sure you don't go off the side of the screen
and expect to land on the other side, the X & Y values will
change if you do this, & result in an explosion. The num-
bers at the bottom of the screen are spots intended to
land at, 1 to 5 , one is the widest (easiest), 5 is the
smallest (hardest). The rubble at the bottom is the moon
surface (foreground). Be careful not to land or dock at a
speed higher than your burn rate, and make sure your ship
has ZERO horizontal speed (left & right). Your fuel is
your point rating, try to compete for the highest remain-
ing fuel. When landing, the execution speed slows down when
you are just about to land, this is because the program has
to keep checking to see if you hit something. Notice the 3
colors? This gives a better feeling of contrast & movement
(not to mention the spectacular explosions). It may take a
bit of getting used to, but this program is probably more
fun than any other Basic game on the market, if you practice!
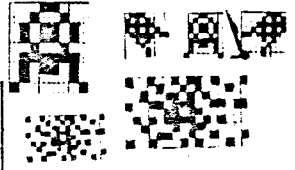TIM HAYS   Copyright (C) April 1980 SEBREE'S COMPUTING

Moon Landing-Listing

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1 &(23)=0;KT=0;K=0;CLEAR;INPUT " GRAVITY
  LEVEL? (1-3)"L;F=180-(1x20);CLEAR;N=0
  GOTO100
2 CT=40;PRINT " YOU MADE A NEW CRATER!!"
  ;IF K CT=40;PRINT " COLLISION! YOU NEED
  MORE TRAINING!
3 &(23)=0;PRINT " TRY AGAIN?";A=KF;RUN
10 IF V<71GOTO50
20 CALL8;%(20213)=131;&(16)=255;&(19)=255
  &(23)=255;FOR A=1TO 27;CALL8;XT=(-7+39
  x256+H-80;IF V<1V=V+2
30 LINE 2ND (30)+H-88,2ND (30)-V+27,3;H=H
  +8;V=V=1;CALL8;%(20203)=Vx256+H;&(2)=7
  xRND952);IF A=1&%(20204)=26624+V
40 NEXT A;&(2)=7;FOR A=255TO 0STEP -3;&(23
  )=A;NEXT A;&(16)=0;&(19)=0;GOTO 2
50 X=H-80;Y=-V+43;IF (PX(X,Y-5))+(PX(X+7,Y
  -5))GOTO20
60 IF (PX(X,Y-9))+(PX(X+7,Y-9))#2GOTO 330
70 PRINT " LANDED!!";IF M<LPRINT " TOO HAR
  D, RADIO IS OUT!";GOTO 5
80 IF N#0PRINT " BUT STILL MOVING ",;TV=96
  +N;PRINT " WAT";GOTO3
90 GOTO 390
100 FOR A=1TO 99;BOX 2ND (159)-30,RND (43),
  1,1,1;NEXT A;V=0;N=0;N=0;%(20204)=10240+V
130 CT=29;CX=-67;PRINT "2";CT=-40;CX=-33;
  PRINT "1",;CT=-21;Cx=3;PRINT "3";CT=-28;
  CX=56;PRINT "4";CT=-11;CX=71;PRINT "5
160XY=-6735;LINE -73,-24,1;LINE -42,-24,1;LINE
  -50,-27,1;LINE -40,-35,1;LINE -24,-35,1;
  LINE-12,-29,1;LINE -2,+16,1;LINE 8,-16,1
170 FOR A=1TO 47STEP 3;LINE A,-17-RND (A)=2
  ,1;NEXT A;LINE 52,-23,1;LINE 61,-23,1;LINE
  67,-6,1;LINE 75,-6,1;LINE 79,-18,1
200 FOR A=6ATO -77STEP -2;CX=A;CT=40;TV=60;CX
  =A+4;TV=79;CX=A+9;TV=60;H=A+79;IF &(16)
  GOTO 210
205 NEXT A;PRINT " ABORTED!",;GOTO3
210 CX=4;PRINT " .
220 %(20213)=128;IF JX(1)=1 %(20213)=129;P=P-1
230 N=N+JX(1);IF JX(1)=-1%(20213)=130;P=P-1
240 CALL8;IF VIF 7<1GOTO 610
250 IF KGOTO 640
260 IF V>38GOTO10
330 &(23)=0;IF TR(1)M=M-L=1;&(23)=255;P=P-2;IF
  P<2PRINT " NO MORE FUEL";GOTO 3
340 M=M+LIH=H+N;V=V+M;CALL8;%(20203)=Vx256+H;
  GOTO220
390 CT=40;PRINT "PLANT FLAG & GATHER ROCKS";BOX
  H-68,-7+39,1,12,1;BOX H-65,-7+43,5,3,3
400 &(23)=0;CT=24;ST=2;PRINT " FUEL=",P;PRINT "
  COUNTDOWN";FOR A=30TO 0STEP-1;CT=6;PRINT A
  ;FOR J=1TO 99;NEXT J;NEXT A;VT=0
600 CT=32;&(23)=255;PRINT "BLASTOFF!";V=
  1;N=-6;V=V-5;CALL8;%(20203)=Vx256+H;
  GOTO220
610 CLEAR ;N=-L-1;V=62;%(20204)=26624+V;
  N=0;K=RND (140)-70
630 CX=K-2;CT=40;TV=H7;CX=K+3;TV=92;BOX
  K,24,8,4,2;BOX K,27,4,2,2;GOTO220
640 IF PX(K-72,-V+44)IF 7#16GOTO 20
650 IF V=16IF H=K72CT=-10;CX=-77;PRINT "
  DOCKED! FUEL LEFT=",P;IF M>-L CT=0;P
  RINT " TOO FAST!";GOTO20
660 IF V=16IF H=K+72GOTO #3
670 GOTO 330
```

VARIABLES:

A	Looping Control
B	Indexing
F	Fuel
H	Horizontal position
J	Looping (nested)
K	Position of Mothercraft
L	Level of gravity
M	Vertical speed
N	Horizontal speed
V	Vertical position
W	TRUE if in locking mode
X	Pixel checks & Positions
Y	"" "" for vertical

CHARACTERS PRODUCED:

MACHINE LANGUAGE Listing

```
D5 FF 35 13 00 28 72 48
D1 C9 70 F8 4E 33 00 41
80 10 09 02 C9 FF 42 13
00 24 00 5A 00 5A 00 24
00 73 00 5A 00 42 00 81
00 07 00 0A 80 1F 30 2A
80 DF 00 0A 00 34 00 08
00 08 00 70 00 48 00 FC
00 4A 00 7D 30 28 00 10
00 08 00 08 00 92 01 09
44 26 A0 98 98 06 00 57
A8 22 00 0C 91 91 44 00
00 FF 00 FF 00 FF 00 FF

&(21)=255
%(20080)=20200
3C=0;&(9)=0
&(1)=0;&(2)=7
&(3)=141
&(10)=200
&(0)=0
:RETURN :RUN
```

NOTE: This Program, MOON
LANDING is copy-protected,
the copied program will
automatically RESET when RUN.