MACHINE OPERATION AID (G-15D)

A. Standard loading procedure.

   1. Hit p (number track read in) (not necessary if number track not on the tape)
   2. Hit p (loader is read in, control to line 23, word 00)
   3. Compute switch to Go or BP

B. To return to PPR after having left it for code checking.

   1. Hit sc5f; enable off, compute to Go

C. A list of most used PPR Commands.

1.	Decimal number input:	cvab tab s
2.	Read tape, type check sum:	w00 tab s
3.	Clear line 18:	x00 tab s
4.	Line kl to line 18, type word ij:	klij x02 tab s
5.	Line 18 to line kl:	lk x03 tab s
6.	Punch line 18:	x06 tab s
7.	Next command from line c. word ij:	cij x04 tab s
8.	Decimal command input:	yab tab s
9.	Hex input:	zab tab d_1 d_2 d_3 d_4 d_5 d_6 d_7 tab s

D. To type out any cell in memory.

   1. Compute to neutral
   2. Hit msc7q
   3. Type in command:

      T Location in hex of number to be typed (add 8 to first position)
      N 80

Translate to (C 0
hex with table (S Line of number to be typed
      (D 28

   4. Hit tab
   5. Hit fisa. Enable off.
   6. Hit scLr (where L = line # of marked place) to return to marked place of routine

E. Hex translations of source-destinations useful for code checking.

1.	20 → 28:	29w
2.	21 → 28:	2vw
3.	22 → 28:	2xw
4.	MQ → 28:	31w
5.	ID → 28:	33w
6.	PN → 28:	35w

F. To type out "N" number of next command in hex.

   1. Hit mitar; enable off

G. <u>To send control to word 00 of any command line.</u>

  1. Hit <u>scLf</u> (compute in neutral)
      where L is the command line; L = 0, 1, 2, 3, 4, 5, 6, 7
      (6 is command line 19 and 7 is command line 23)

H. <u>To perform any short sequence of operations without using PPR, such as</u>
<u>entering a different command into a program or changing a hex number.</u>

  1. Compose commands, translate to hex form
  2. Compute switch to neutral
  3. Hit <u>mc7qf</u>
  4. Type in commands, with a tab between commands, typing in commands
    in <u>opposite</u> order of location in line 23.
  5. Compute switch to BP

Note: Commands will be in line 23 with last command typed in word time 00.
That is, they will occupy words 00 - 03. It is probably best to put break
points in all commands so you can see what the machine is doing on lights by
switching in and out of BP the required number of times.

I. <u>Meaning of keys.</u>

  <u>q</u> To gate typing into L 23
  <u>p</u> To start tape reader, set N=00, command line to 23
  <u>f</u> Take first command from 00
  <u>t</u> Transfer location of next command to AR (in hex)
  <u>m</u> Mark word position
  <u>r</u> Return to marked word
  <u>i</u> Execute next command
  <u>a</u> Type out AR
  <u>s</u> Set ready (stop input or output)
  <u>s</u> Set ready after typing in numbers

J. <u>To type number track sum.</u>

  1. Compute to neutral
  2. Push clear 19 button; push set 19 button
  3. Hit <u>sa</u> (clears accumulator)
  4. Type <u>c7q</u>
  5. Type 018067x tab <u>fisa</u>

K. <u>Test routines 1 & 2.</u>

  1. Hit <u>p</u> (reads past number track; omit if number track was just
    read in by turn-on cycle)
  2. Hit <u>p</u> (reads loader in); (omit if loader was just read in by
    turn-on cycle)
  3. Compute switch to Go (type out occurs)
  4. (a) Type in 0000002 tab s for test #1 or
    (b) Type in 0000005 tab s for test #2
  5. If Test #1 was first performed, hit <u>p</u> key (compute in neutral)
    to read in loader for Test #2. Compute to Go.
  6. To start the computer on Test #2, hit 000000N tab s where N-1
    is the number of times each test is to be performed.