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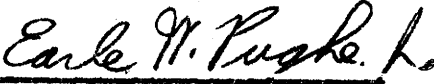
M E M O R A N D U M

M-5001-2

TO: TX-0 Computer Users

FROM: Earle W. Pughe, Jr.

SUBJECT: WORDS RECOGNIZED BY UT-3

DATE: October 16, 1958

Appendix 3 of Memorandum M-5001-1 dated July 23, 1958, described the direct input routine, "UT-3". The attachment to this memorandum lists the input words recognized by UT-3. The input words are of two kinds: (1) the basic orders and, (2) combinations of operate class commands. If the user has any doubt as to what happens on a particular basic order or operate class command, he should refer to Appendix 1 of M-5001-1.

Earle W. Pughe, L.
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Encl.

cc - Ad Hoc Committee on
     Experimental Computation

        Professors Reintjes, Brown, Shannon,
                   Fano, Rosenblith, Arden,
                   Fletcher, Susskind and
                   Mr. Wesley Clark

     W.N. Papian

EWP/men

Word	Octal Value	Description
sto	0	)
add	200000	) SEE APPENDIX 1 of M-5001-1
trn	400000	)
opr	600000	)
cll	700000	Clear Left 9 bits of the accumulator.
clr	640000	Clear Right 9 bits of the accumulator.
cla	740000	Clear accumulator.
clc	740040	Clear and compliment the accumulator; i.e., make the accumulator all ones.
cal	740200	Clear accumulator and live register.
lro	600200	Clear the live register (L R→Q).
com	600040	Compliment the accumulator; i.e., zeros become ones and ones become zeros.
lac	740022	Transfer the contents of the live register to the accumulator.
alr	600201	Transfer the contents of the accumulator to the live register.
lpd	600022	Live register partial add to accumulator.
lad	600032	Live register add to accumulator.
shr	600400	Shift right the accumulator one place; i.e., divide the number in the accumulator by 2.
cyr	600600	Cycle right the accumulator one place; i.e., move everything in the accumulator one place to the right and take the value from bit 17 and put it into bit 0.
cyl	600031	Cycle left the accumulator one place; i.e., move everything in the accumulator one place to the left and take the value from bit 0 and put it into bit 17.
tac	740004	Transfer the contents of tac to the accumulator.
tbr	740023	Transfer the contents of tbr to the accumulator.
dis	622000	Display the contents of the accumulator on the crt (bits 0-8 for x deflection; bits 9-17 for y deflection).
ios	760000	In-out-stop and clear the accumulator. (This order is not recommended for use except with special input-output equipment).
rlc	761000	Read 1 Characters into cleared accumulator; i.e., read one line of tape via the PETR.
r3c	763000	Read 3 Characters into cleared accumulator; i.e., read 3 lines of tape via the PETR.

Word	Octal Value	Description
rlr	761600	Read 1 line of tape via PETR into cleared accumulator and then cycle accumulator right.
rlL	761031	Read 1 line of tape via PETR into cleared accumulator and the cycle accumulator Left.
prt	624000	Print one flexo character specified by accumulator digits 2, 5, 8, 11, 14, and 17.
pnt	624600	Print the same as prt but also cycle the accumulator right.
pna	624021	Print the same as prt but also clear the accumulator.
pnc	624061	Print the same as prt but also clear and compliment the accumulator.
p6s	766000	Punch blank tape.
p6h	626600	Punch six holes into tape (i.e., no 7th hole) as specified by accumulator bits 0, 3, 6, 9, 12, and 15 and then cycle the accumulator right. 2, 5, 8, 11, 14, 17
p7h	627600	Punch 7 holes into tape exactly as p6h with the addition of the "7th" hole.
p6a	626021	Punch 6 holes exactly as p6h and clear the accumulator.
p7a	627021	Punch 7 holes and clear the accumulator.

Note the MBR (memory buffer register) is always cleared
on Time pulse 1, cycle 1.

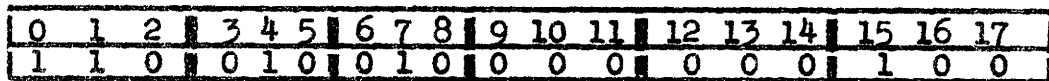| 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0

Fig. 1

Figure 1 shows how the eighteen bits of a register are
designated. As an example, the word shown is opr 22004.

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