

RECOMP II USERS' PROGRAM NO. 1070

PROGRAM TITLE: AGC-84 INSTRUCTION FORMAT TAPE PUNCH WITH LOCATIONS  
AGC-84R INSTRUCTION FORMAT TAPE PUNCH WITH LOCATIONS  
(Relocatable by RUG-1057)

PROGRAM CLASSIFICATION: Service Routine

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PURPOSE: This program punches any specified portion of  
memory in command format with the location given  
for every fourth word. The tape may be listed on  
the flexowriter or read by the photoreader.

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**TITLE:** AGC-84 INSTRUCTION FORMAT TAPE PUNCH WITH LOCATIONS  
 AGC-84R INSTRUCTION FORMAT TAPE PUNCH WITH LOCATIONS  
 (Relocatable by RUG-1057)

**LOCATIONS USED:** AGC-84: 7000-7077  
 AGC-84R: 7000-7106 (The extra locations contain the  
 minus zeroes required by RUG-1057).

**INTRODUCTION:** This program will punch the contents of memory from one  
 specified location to another specified location,  
 inclusively. The tape contains a location, four words  
 in command format, another location, four words, etc.,  
 until the last location has been punched. The final  
 group of words may contain less than four words. The  
 tape may be read into the computer or listed on a Flexo-  
 writer. Such a listing is neat and easily checked.  
 Because there are no line feed codes on such a tape, it  
 may be easily duplicated on a flexowriter. Any word  
 may be quickly located on the tape as each group of one  
 location and four words is preceded by 16 blanks. If  
 additional blocks of memory are punched on the same tape,  
 there are 32 additional blanks punched between the two  
 blocks.

**METHOD:** The following are punched in order: L/S, 16 blanks,  
 "L", F/S. A 4-octal-digit address is dissected into  
 four groups of three binary bits each and reassembled  
 as a BCD number followed by a terminate code. This  
 word is then punched by a PNW command. Then tab, L/S,  
 "C", F/S are punched. Four consecutive words from  
 memory are punched in command format. The first three  
 words are entered with a tab. The fourth word is entered  
 by L/S, C/R. This is followed by 16 blanks, "L", F/S.  
 Another 4-digit address is then punched.

**LIMITATIONS:** The tape produced will be about twice as long as it  
 would be if punched in Baudot code.

**USAGE:** Read in program tape. Set location counter to first  
 location of program (7000 for AGC-84). On console, hit:

C + 00 (XXXX)<sub>F</sub>0 + 00 (XXXX)<sub>L</sub>0 Enter

where (XXXX)<sub>F</sub> is the first location to be punched and  
 (XXXX)<sub>L</sub> is the last location to be punched. Press the  
 regular start button. When machine stops punching  
 tape, new first and last locations may be entered if  
 additional blocks of memory are to be punched on the  
 same tape.

If Sense Switch B has been turned on by the time the last word has been punched, the tape will be ended with the location  $(XXX)_F$  and a start code ("S").

OPTIONS: If it is desired to end the tape with a halt code ("H"), change the following word:

7034: + 74 00240 + 74 00330

If it is desired to start (or halt) at some address  $(XXX)_A$  other than the first one, make the following changes.

7031: + 74 00330 + 00 (YYYY)0  
 YYYY: + 00 (XXX)<sub>A</sub>0 - 00 0000 0

TIME: About  $1\frac{1}{2}$  seconds per word.

RELOCATION: Read AGC-84R into memory. Read RUG-1057 (AGC-031) into memory. The location counter should be set to 7500 and the machine should be in command mode. On the console, hit:

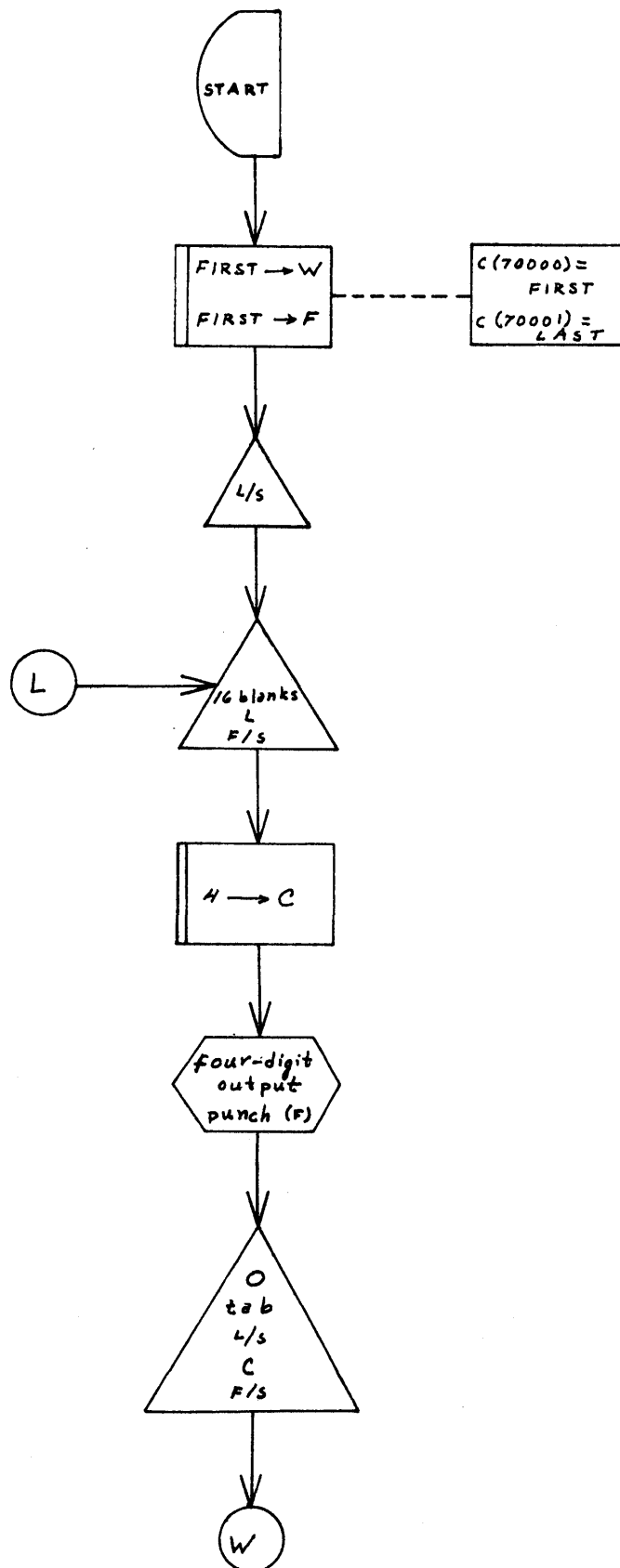
+ 00 70000 + 00 (XXX)<sub>N</sub>0 Enter

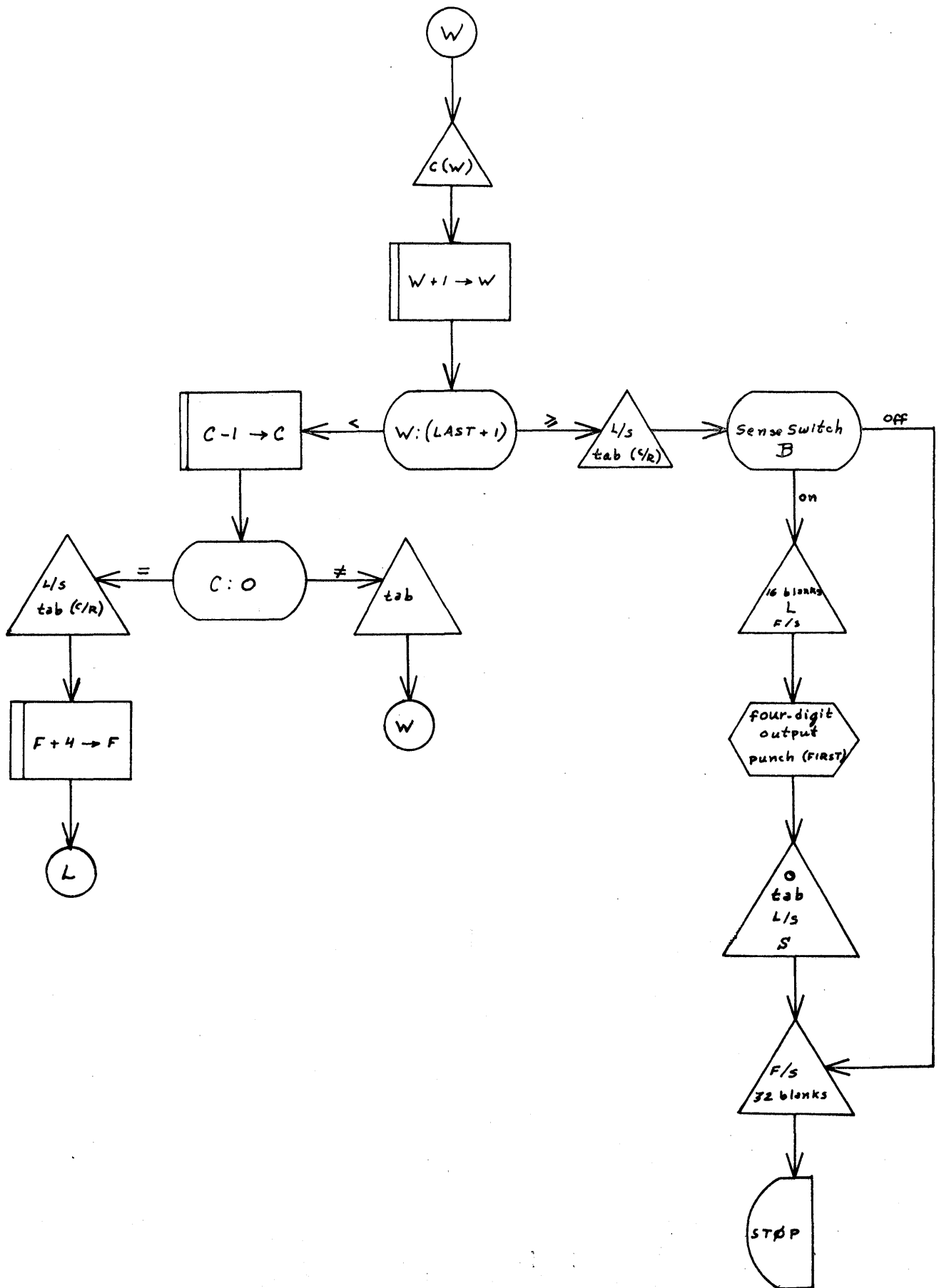
where  $(XXX)_N$  is the location where the relocated version will begin. Set the sense switches (B to punch tape; C to relocate in memory; D to end tape). Hit regular start. For further details concerning relocation, see RUG-1057.

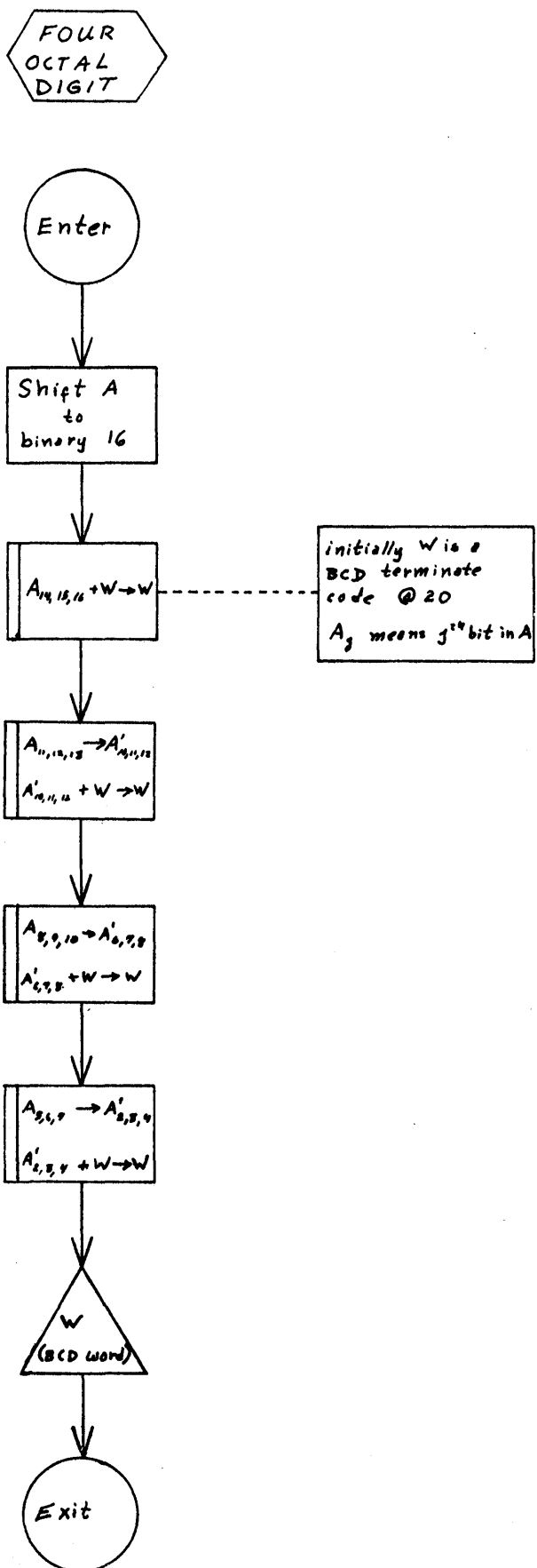
EXAMPLE: Read the tape for AGC-84 into memory. At location 7000, enter on the console:

C + 00 70000 + 00 70770

Hit the regular start button. Compare this tape with the original or list it on a flexowriter and compare the listing with the program listing.







AGC-84

L70000	C+0070000+0070770	+0070000+4270140	+6070520+0170510	+4100240+4270530
L70040	C+7400370+0270540	+7477600+7477600	+7400220+7400330	+0070550+6070570
L70100	C+0070000+5770400	+7400260+7400100	+7400370+7400160	+7400330+4000000
L70140	C+1470140+0070140	+0170560+4270140	+0370530+5270250	+0070570+0370560
L70200	C+6070570+5070220	+7400100+5770140	+7400370+7400100	+0070000+0170550
L70240	C+4270000+5770041	+7400370+7400100	+5470270+5770341	+0270540+7477600
L70300	C+7477600+7400220	+7400330+0070520	+5770400+7400260	+7400100+7400370
L70340	C+7400050+7400330	+0270540+7477600	+7477600+7477600	+7477600+7770000
L70400	C+1570720+0170510	+4270711+0070720	+4100020+6070720	+5770470+0000000
L70440	C+1570720+0170510	+4270711+0070720	+4100260+6070720	+6470600+6670700
L70500	C+0077720+5777600	+0000000-0000001	+0070000+0070770	+1470771+0070140
L70540	C+0000000-0000000	+0000040-0000000	+0000010-0000000	+0000010-0000000
L70600	C+3377770+0177730	+6077730+0077720	+3377760+4100010	+0177730+6077730
L70640	C+0077720+3377750	+4100020+0177730	+6077730+0077720	+3377740+4100030
L70700	C+0177730+6077730	+1477731+5770110	+0343410-0343740	+0000031+0000000
L70740	C+0340000-0000000	+0034000-0000000	+0003400-0000000	+0000340-0000000
L70000	CH			

AGC-8LR

L70000	C+0000000+0000000	+0070000+4270140	+6070520+0170510	-4100240+4270530
L70040	C-7400370+0270540	-7477600-7477600	-7400220-7400330	+0070550+6070570
L70100	C+0070000+5770400	-7400260-7400100	-7400370-7400160	-7400330-4000000
L70140	C-1400000+0070140	+0170560+4270140	+0370530+5270250	+0070570+0370560
L70200	C+6070570+5070220	-7400100+5770140	-7400370-7400100	+0070000+0170550
L70240	C+4270000+5770041	-7400370-7400100	+5470270+5770341	+0270540-7477600
L70300	C-7477600-7400220	-7400330+0070520	+5770400-7400260	-7400100-7400370
L70340	C-7400050-7400330	+0270540-7477600	-7477600-7477600	-7477600+7770000
L70400	C+1570720+0170510	+4270711+0070720	-4100020+6070720	+5770470+0000000
L70440	C+1570720+0170510	+4270711+0070720	-4100260+6070720	+6470600+6670700
L70500	C-0077720-5777600	-0000000-0000000	+0000000-0000001	+0000000-0000000
L70540	C-0000000-0000000	-1400000+0070140	-0000000-0000000	+0000000-0000000
L70600	C+0000040-0000000	+0000010-0000000	+0000000-0000000	-0000000-0000000
L70640	C-3377770-0177730	-6077730-0077720	-3377760-4100010	-0177730-6077730
L70700	C-0077720-3377750	-4100020-0177730	-6077730-0077720	-3377740-4100030
L70740	C-0177730-6077730	-1477731+5770110	-0000000-0000000	+0000000-0000000
L71000	C+0000031+0000000	+0340000-0000000	+0034000-0000000	+0003400-0000000
L71040	C+0000340-0000000	-0000000-0000000	-0000000-0000000	H