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1. Introduction

The maintenance program described herein has been designed to:

(a) thoroughly test the General Purpose Computer, and

(b) to be used as a tool in isolating a detected fault.

The programs then, can be used by maintenance personnel for the routine exercising of the GP during scheduled (preventive) maintenance periods or troubleshooting the GP after a malfunction has been noted in order to minimize time-to-repair.

To accomplish these objectives the computer is used to test and diagnose itself for the purpose of isolating a defect to a small number of logic cards (S-Pacs) and with a minimum of operator participation.

2.0 General Design Philosophy

The maintenance program may be logically separated into two functions: a testing function and a diagnostic function. A testing function is defined as those program steps needed to determine whether a particular unit is or is not operating properly. The term "unit" is used here quite generally, and may denote a register, an instruction, a flip-flop, a gate, etc. The operation of a testing function results in one of two conditions: either the unit has successfully passed all tests performed by the subroutines, indicating that the unit is in proper operation condition; or it has failed one or more of the tests, indicating that a defect exists. A diagnostic function is defined as those program steps required to isolate the cause of a detected failure within a unit and provide this detailed information to the maintenance technician.

2.1 Testing Function

The testing function has been designed to detect failures in gates and/or flip-flops which exhibit symptoms of being improperly on or improperly off. The testing function exercises, in sequence, each unit of the Mark I to determine whether it is functioning properly. The performance of testing functions through the use of programs implies that certain portions of the equipment are used

to test other portions. The logic used to test each capability is carefully limited to the minimum essential for the performance of the test. The underlying philosophy is that any given gate or flip-flop is suspect to failure unless previously tested by the program. The performance of the tests have, therefore, been sequenced so as to assure that only features that have already been proven reliable will be used for further testing of other capabilities.

2.2 Diagnostic Function

The diagnostic function is initiated whenever a failure is detected by the testing function. The diagnostic functions are those program steps required to isolate the cause of a detected failure and provide this information to the maintenance personnel. The technique used in isolating a fault is similar to that used by maintenance personnel for manual diagnosis - except the order is reversed. In manual diagnosis the engineer notes the symptoms or effect and traces back through the logic diagrams to determine those S-Pacs which if faulty, could be the cause. The designer of a programmed diagnostic, on the other hand, assumes a component is failing then traces forward through the logic diagrams to determine the effect. The computer is then programmed to "look" for the effect, and remember the cause. In most (almost all) instances more than one fault can cause identically the same effect. In order to keep the number of suspect

gates and/or flip-flops to a minimum the program makes use of a second technique which is essentially a process of elimination. The program eliminates suspected elements by noting those which were previously tested and by trying other operations which use the remaining elements. In this way if a particular element or group of elements is used for more than one operation, it is possible to further isolate a defect to the element(s) which causes two operations to fail.

2.3 Assumptions

In the interest of reducing the task to manageable proportions the following assumptions have been adhered to:

(a) The program is not responsible for the diagnosis of transient or intermittent type failures. If a transient or intermittent type failure occurs during execution of the program it will be detected; that is the program will not come to its normal error free conclusion - it will come to an error stop, however the diagnosis will not be correct. It is for this reason that the program should be executed more than once (see looping options sec.3.3) when an error stop occurs, for transient or intermittent type failures are characterized by yielding different diagnosis (varying stop codes).

(b) Any detected errors are caused by component failures only. The assumption is made that the computer has been initially "de-bugged" and therefore eliminates the possibility of design or wiring errors.

(c) No more than one defect is present. It is expected that frequent exercise of the computer by means of the maintenance program will result in detection of a defect before another defect can occur. It should be noted, however, that if a second defect is present, it will not hamper diagnosis of the first defect providing the diagnosis of the first defect is independent of the circuit containing the second defect.

2.4 Operator Communications

Any information which must be conveyed to operating personnel is done so via the System Instruction nixies of the Mark I console. Whenever operator action is required the program executes a STOP. The address portion of each STOP instruction has been uniquely coded and is defined in the Stop Codes List. A detailed description on the use of Stop Codes is contained in Section 4.

3. Operating Instructions for GP Diagnostic Program

3.1 Program Loading

1. Enter Single Step Mode at location 00 0037.
2. Perform the Lamp Test.*
3. Mount the GP Program Tape.
4. Turn Drum Write ON.
5. Turn Reader Power ON
   If program begins to load see Stop Code 1026
6. Select Short Block Mode.
7. Select Write/Check Mode.
8. 2^{10} switch may be in either position.
9. Depress GP LOAD button.
10. Set Drum Address to 000.
11. Master Clear
    If LOAD failure is ON, see Stop Code 1022.
    If COUNT failure is ON, see Stop Code 1023.
    If LOAD and COUNT failures are ON, see Stop Code 1024.
    If Core Memory Add. Reg. $\neq$ 0000, see Stop Code 1025.
12. Depress START LOAD - Photo Electric reader should stop at the first Reel End Code (note on paper tape says "End of GP Program").
    If the photo electric reader doesn't start or starts and stops immediately (prior to reading the first character) see Stop Code 1027.
    If photo electric reader stops anywhere else see Stop Code 1030.
    If photo electric reader doesn't stop on reel end code see Stop Code 1031.
13. Master Clear

14. Depress INT LOAD button.

15. Depress START LOAD - Photo electric reader should stop at the second Reel End Code (note on paper tape says "End of INT Program").

    If it stops anywhere else see Stop Code 1040.

16. Master Clear

17. Depress DP LOAD button.

18. Depress START LOAD button - Photo Electric Reader should stop at the third and final Reel End Code (note on paper tape says "End of Tape").

    If photo electric reader stops anywhere else see Stop Code 1040.

3.2 Start-Up Procedure

1. Place 00 0042 into Address Replace Switches.
   Place 12 0000 into Instruction Replace Switches.
   Turn Instruction Replace OFF.

2. Depress Single Step Advance

   If Sys. Ins. nixies ≠ 25 3777 see Stop Code 1050.

3. Depress Single Step Advance

   If Sys. Ins. nixies ≠ 12 0000 see Stop Code 1050.

4. Place Conditional Stop ON.

5. If Boolean Acc is ON, place single replace ON.

6. Depress NORMAL RUN.

7. If no failures are encountered, the program will stop (after several seconds) with a 27 0000 in the system instruction nixies. Looping option # 1 or # 3 may be selected at this time.

   If a STOP 27 XXXX occurs, where XXXX ≠ 0000, a failure has been detected. For a diagnosis of the fault refer to Stop Code XXXX in Section 4. Looping option # 2 should be selected at this time. *

   If the program does not stop after several seconds then the MARK I is either in an endless skip loop or a failure exists in the STOP logic (see Stop Code 1011).

3.3 Looping Options

1. Execute Continuously (this option may be initiated only when the MARK I stops with a 27 0000).

   (a) Continuous Replace location 00 7773 with a 12 0000
   (b) Depress Operation Continue

   The program can be conveniently stopped by turning Instruction Replace OFF.

2. Execute Once More (this option may be initiated after any stop, 27 XXXX) **

   (a) Place 00 7773 into Single Step Address Switches
   (b) Enter Single Step Mode
   (c) Depress Operation Continue
   (d) Enter Normal Run Mode

3. No Error - Execute Once More (this option may be initiated only when the MARK I stops with a 27 0000).

   (a) Depress Operation Continue

* The program should always be executed at least twice whenever an error stop occurs. This will establish whether the fault is transient or intermittent in which case the diagnosis is not reliable.

** This option may cause erratic operation of the program if initiated when XXXX ≠ 0000 and less than 1200. If this occurs (0000 < XXXX < 1200) a restart of the program is recommended.

4. Stop Codes List

Upon detection and diagnosis of a failure the program will stop. The address portion of the stop instruction is uniquely coded and can be found in the list which follows. Next to each stop code is the diagnosis of the detected fault. As a cross check the list also provides the location at which the stop should occur. Note that the band address listed, is the physical band address and bears no relationship to the sequence in which the bands are executed. In some instances the fault is not detected by the program but is detected by a manual procedure, in this case a drum address is not applicable, and is indicated as N/A. The diagnosis should not be relied upon if the stop code occurs at a location different than that listed. A more detailed description of this condition appears in section 5.

The diagnosis specifies the S-Pac(s), the gate or flip-flop on the S-Pac, the card type and the logic drawing number which contains the S-Pac. For example:

5C19 (9, 13) DN-30, 041-3

indicates that the gates associated with pins 9 and 13 of S-Pac 5C19 are suspect. Note that the pin numbers are used only to identify the suspect gate or flip-flop on the card. DN-30 is the card type and the logic is shown on drawing number 041, sheet 3.

Stop Code	Stop Locs.	Diagnosis
0000	00 7773	The GP diagnostic has been successfully completed. No faults have been encountered. You may at this time initiate option # 1 or option # 3 as described in the operating instructions.

1001	00 0045	If (A_B = 1) · (SKP. CNT = 000)
		5A2 (26, 31) BC-30, 214
		5A4 (7) DI-30, 214
		5D26 (33) DI-30, 183-2
		5D25 (22, 26) 183-2
		
		If A_B = 1) · (SKP. CNT = 177)
		5A1 (9) DN-30, 214
		
		If A_B = 1) · (SKP. CNT = 001)
		5A1(21) DN-30, 214
		4C24 (14) FF 30, 214
		
		If (A_B = 0) · (SKP. CNT = 000)
		5C17 (23) UF-30, 041-3
		5D23 (17, 32, 35, 13, 9) DN-30, 183-2
		5C16 (9) DN-30, 183-2
		5D21 (17) DN-30, 183-1
		5D28 (23, 34) DI-30, 183-2
		5D27 (26) DC-30, 183-2
		5D22 (26) DC-30, 183-2
		6L1 (16, 12, 34, 33) DI-30, 231-1
		6L3 (18, 20) BC-30, 231-1
		6L2 (18, 22, 33) , 231-1

1002	00 0046	5A2 (10) BC-30, 214 5A4 (23, 16) DI-30, 214
1003	00 0050	5A2 (14) BC-30, 214 5A4 (6) DI-30, 214

Stop Code	Stop Locs.	Diagnosis
1004	00 0054	5A3 (31, 19, 20), BC-30, 214 5A4 (12) DI-30, 214
1005	00 0064	5A3 (26, 27, 34) BC-30, 214 5A4 (27) DI-30, 214
1006	00 0104	5A3 (10, 18, 15) BC-30, 214 5A4 (33) DI-30, 214
1007	00 0144	5A3 (14, 6, 17) BC-30, 214 5A4 (34) DI-30, 214
1010	00 0243	5A4 (16) DI-30, 214
1011	N/A	5A2 (27, 18, 6) BC-30, 214 5A3 (20, 27, 18, 6, 22) BC-30, 214 5A1 (17, 25, 29, 13) DN-30, 214 5A4 (7, 23, 6) DI-30, 214 4C24 (6) FF-30, 214 6L15 (20) BC-30, 231-3 6L16 (17, 25) DN-30, 231-3 5D26 (34) DI-30, 183-2 6L8 (22) DC-30, 231-2 6L7 (8) DN-30, 231-2

Stop Code	Stop Locs.	Diagnosis
1012	00 0235	5A2(19) BC-30, 214
1014	00 0402 00 1003 00 2003 00 2012 00 2022	6L19 (9,11,12,13,24,23,29,28,27) DC-30,351-1
1015	N/A	1G7 (16) DI-30, 311 1G6 (17, 32) DN-30, 311 1G23 (16) DI-30, 426 1G22 (31) DC-30, 426
1016	00 7730	A band sequencing failure has been detected. Thirty-three (33) drum revolutions have been monitored. The number of times each hand (00-10) has been executed is not correct. The program has during the 33 band sequencing passes, generated a table which can provide the sequence in which the bands were executed. This table is a matrix containing 11 rows and 33 columns. The program is capable of displaying each row of the matrix in the Accumulator and Salvage Registers. For this display the bits 0-8 of the Salvage Register should be considered to be an extension of the Accumulator.

Stop Code	Stop Locs.	Diagnosis
1016 (Cont'd)		Each row of the matrix ($Acc_{S,\ 1-23}$ and $Sal._{0-8}$) should be copied as it is displayed. The procedure for displaying the matrix is as follows: (a) Insert the current contents of the Instruction Location counter into the Single Step Add. Digit Switches (b) Enter Single Step Mode (c) Depress Operation Continue (d) Depress Single Step Advance (e) Depress Single Step Advance (f) Depress Single Step Advance The Accumulator and Salvage Register contain a row of the matrix-copy it down (g) If Sys. Ins. $\neq$ 27 1017 repeat (e) and (f) If Sys. Ins. = 27 1017 see stop code 1017
1017	00 7757	The matrix if copied correctly, should contain 11 rows and 33 columns. The first row corresponds to physical band 00, the second to physical band 01,...., the eleventh to physical band 10. The 33 columns correspond to the 33 drum revolutions necessary to perform the tests. For each band then, you can determine the revolution during which it was performed, by noting the columns in which a one appears. Due to the variable nature of band sequencing, it was not possible to insure that the first of the 33 revolutions occurred at band counter address 00. You can be sure, however, that the first of the 33 revolutions occurred at physical band 00. Note that if an error did not occur then each column should contain one, and only one, one. Furthermore the number and frequency of ones in each row is predictable. The number of ones in each row is a function of the repetition rate of each band, i.e., for a Fast Band, 17 Med. Fast Band, 8 Medium Band, 4 Medium Slow Band, 2 Slow Band, 1

Stop Code	Stop Locs.	Diagnosis
1021	N/A	6L22 (9, 13) DN-30, 351-1 6L 19 (14, 18, 30, 33) DC-30, 351-1 6L12 (30) 351-1
1022	N/A	1G17 (11) FF-30, 426 1G16 (12) DI-30, 426 1G10 (13) DN-30, 426 1G11 (16, 7, 33) DI-30, 426 1H20 (6) BC-30, 426 1G21 (23, 16) FF-30, 426 1G25 (27, 34) DI-30, 426 1G5 (22) DC-30, 426 1G22 (8) DC-30, 426 1G4 (11) FF-30, 426 1G19 (22) DC-30, 426
1023	N/A	1H20 (18) BC-30, 446 1H19 (10) DC-30, 446 1G14 (12, 7) DI-30, 446 1G19 (8) DC-39, 426 1G18 (15, 26) UF-30, 426 1G16 (16, 7, 6) DI-30, 426-446
1024	N/A	1G21 (28, 11) FF-30, 426 1G25 (22) DI-30, 426 1G11 (20) DI-30, 426

Stop Code	Stop Locs.	Diagnosis
1025	N/A	If core memory address = 0000001111, 1G9 (14) DC-30, 435 If core memory address = 1111110000, 1G9 (10) DC-30, 435 If core memory address = 1000000000, 1H15 (12) BC-30, 435 1H18 (34) DI-30, 435 If core memory address = 0100000000, 1H15 (25) BC-30, 435 1H18 (33) DI-30, 435 If core memory address = 0010000000 1H14 (6) BC-30, 435 1H18 (27) DI-30, 435 If core memory address = 0001000000, 1H14 (18) BC-30, 435 1H18 (12) DI-30, 435 If core memory address = 0000100000, 1H14 (27) BC-30, 435 1H18 (6) DI-30, 435 If core memory address = 0000010000, 1H14 (20) BC-30, 435 1H18 (23) DI-30, 435 If core memory address = 0000001000 1H13 (6) BC-30, 435 1H18 (16) DI-30, 435

Stop Code	Stop Locs.		Diagnosis
1025 (Cont'd)			If core memory address = 0000000100, 1H13 (18) BC-30, 435 1H18 (7) DI-30, 435 If core memory address = 0000000010 1H13 (20) BC-30, 435 1G11 (23) DI-30, 435 If core memory address = 0000000001, 1H13 (27) BC-30, 435 1G11 (6) DI-30, 435
1026	N/A		1G25 (33) DI-30, 426 1G16 (23) DI-30, 426 1G19 (18) DC-30, 426 1G10 (9, 32) DN-30, 426 1G5 (6) DC-30, 311 1G4 (27) FF-30, 311
1027	N/A		1G4 (27) FF-30, 311 1G5 (6, 10) DC-30, 311 1G3 (33) DI-30, 311 1G2 (6) DC-30, 311
1030	N/A	(a)	If the photo electric reader stops within the first 12 characters on the tape; 1G2 (12, 13, 15, 16, 17) DC-30, 311

Stop Code	Stop Locs.	Diagnosis
1030 (Cont'd)		(b) If the photo electric reader stops at the end of the first block and the LOAD and COUNT failure indicators are ON; 1G19 (33) DC-30, 435 1G8 (17) DM-30, 435 1G9 (6, 11) DC-30, 435 1G25 (33, 16, 23, 6, 12) DI-30, 426 1G21 (29) FF-30, 426 1G26 (30) DC-30, 426
		(c) If the photo electric reader stops at the end of the first block and the COUNT failure indicator is ON; 1G3 (33, 6, 23) DI-30, 311 1G2 (18, 22, 33) DC-30, 311 1G1 (16, 23) DI-30, 311 1H15 (27, 9) BC-30, 311 1G25 (34) DI-30, 426 1G19 (22) DC-30, 426 1G21 (19, 25) FF-30, 426 1G11 (16) DI-30, 426
		(d) If the photo electric reader stops at the end of the first block and the LOAD failure is ON, eliminate the possibility of a core failure by attempting to load again using the other half of core (2^{10} switch), 1. If the LOAD failure persists, try loading same block into a different band, say 0 10. If this loads correctly then the fault is unique to loading band 00. Check the read/write logic of this band as well as, 1G28 (29) DI-30, 251-1 1H28 (34) DI-30, 277 1H26 (9) DN-30, 277 1G17 (16) FF-30, 251-1

Stop Code	Stop Locs.	Diagnosis
1030 (Cont'd)		2. If LOAD failure appears again 1G16 (15, 7) DI-30, 426 1G10 (12, 33) DN-30, 426 1G22 (33) DC-30, 426 1G12 (30, 6) DI-30, 446 1G24 (27, 23, 34, 33, 16, 7) DI-30, 426 1G25 (7) DI-30, 426 Also check the compare logic (dwg. # 251) and the common data transfer logic in the drum (data register, amplifiers, etc.)

(e) If the photo electric reader STOPS on the first block end code and the LOAD FAILURE and COUNT FAILURE are "OFF",

1. Copy down contents of CM Address Reg.
2. Turn DRUM WRITE OFF.
3. Via an Instruction Replace at any location, execute a 20 1754 if 2^{10} or a 20 3754 if 2^{10}.
4. If the ACCUMULATOR ≠ 27 1315 then the data has not reached core.
   1G18 (15, 26) UF-30, 426
   1G27 (26) , 426
   1G19 (6) DC-30, 426
   1H13 (27, 20, 18, 6) BC-30, 435
   1H14 (20, 27, 18, 6) BC-30, 435
   1H15 (25, 12) BC-30, 435
   1G16 (16) DI-30, 426
5. If the ACCUMULATOR = 27 1315, then the data has reached core, but the loader has "hung-up".
6. Place 00 1754 into Address digit switches - Depress single step advance - the Ins. Loc. Nixies should be = 00 1755.
7. If the Sys. Ins. ≠ 27 1315, then the loader hung-up prior to writing on drum.

   If CM ADD. REG. (from step 1) = 1776
   1G16 (27) DI-30, 446
   1G15 (26) DC-30, 446
   1G17 (28) FF-30, 446

Stop Code	Stop Locs.	Diagnosis
1030 (Cont'd)		1G14 (16, 14) DI-30, 446 1H19 (6) DC-30, 435 1H16 (30, 22, 18) , 435 If CM ADD. REG. (from step 1) = 1777 1G15 (6, 22) DC-30, 446 1G23 (7) DI-30, 435 1G4 (11) FF-30, 426 1G11 (7) DI-30, 426 1G21 (12) FF-30, 426 If CM ADD. REG. (from step 1) = 0000 1G22 (6, 11) DC-30, 426 1G21 (11) FF-30, 426 1G11 (34, 33, 27, 12) DI-30, 426 1G16 (6, 7) DI-30, 426 1G18 (14) UF-30, 426 1G25 (7) DI-30, 426 1G26 (6, 10, 14, 33) DC-30, 426 1G24 (16) DI-30, 426 1G23 (34) DI-30, 426 1G22 (14) DC-30, 426 8. If Sys. Ins. = 27 1323, then the data was written on drum but the loader hung-up in the comparison control logic. 1H20 (6) BC-30, 426 1G11 (16) DI-30, 426 1G21 (28, 23) FF-30, 426 1G25 (27, 33, 12, 6, 23, 16) DI-30, 426 1G10 (9) DN-30, 426 1G16 (23) DI-30, 426 1G4 (29) FF-30, 311 1G26 (18, 22, 26) DC-30, 426 1G24 (33, 34, 27, 12, 6, 23) DI-30, 426 1G2 (9) DC-30, 311 (f) If the photo electric reader stops at the end of the second or third block and LOAD failure indicator is ON, 1G24 (6, 12) DI-30, 426

Stop Code	Stop Locs.		Diagnosis
1030 (Cont'd)		(g)	If the photo electric reader stops at the end of the second, third or fourth block and LOAD and COUNT failure indicators are OFF, 1G23 (33, 27, 12) DI-30, 426 1G22 (18, 22, 26) DC-30, 426
		(h)	If the photo electric reader stops at the end of the 5th, 9th, 13th, 17th, 21st, 25th, 29th, 33rd, 37th or 41st block and the LOAD failure indicator is ON, 1H28 (34, 33, 27, 12, 6, 23, 16, 7) DI-30, 277 1H26 (9, 13, 17, 21) DN-30, 277 1H25 (9, 13, 17, 21) DN-30, 277 1H27 (34, 33, 27) DI-30, 277 1H24 (9, 13, 17) DN-30, 277 1H22 (34, 33, 27, 12, 6, 23, 16, 7) DI-30, 277 1H21 (20, 27, 18, 6) BC-30, 277 Also check the drum logic unique to the band which contains the incorrect block.
1031	N/A		1G5 (9) DC-30, 311 1G4 (12) FF-30, 311 1G2 (6, 10, 14, 30) DC-30, 311
1032	05 0124		1G1 (34) DI-30, 311 1G3 (20) DI-30, 311
1033	01 0124		1G1 (33) DI-30, 311 1G3 (21) DI-30, 311

Stop Code	Stop Locs.	Diagnosis
1034	02 0124	1G1 (27) DI-30, 311 1G2 (27) DC-30, 311
1035	03 0124	1G1 (12) DI-30, 311 1G2 (28) DC-30, 311
1036	04 0124	1G1 (6) DI-30, 311 1G2 (29) DC-30, 311
1040	N/A	This tape does not provide a facility for diagnosing loading failures associated with the Linear Function Interpolator or the Radio Aids Preselector. Both of these programs essentially do nothing more than clear the INT and RAP.

Stop Code	Stop Locs.	Diagnosis
1050	00 0040	(a) If system instruction = 00 0000; note the skip counter and LFI zone counter and depress single step advance.

1. If skp. cnt. advances,
   5A2 (20) BC-30, 214

2. If skp. cnt. does not advance and system introduction = 12 0000
   6L19 (25) DC-30, 351-1

3. If skp. cnt. does not advance and sys. ins. = 00 0000 and LFI zone counter advances
   4C24 (6) FF-30, 214
   6L10 (18) PA-30, 231-2
   6L7 (13, 17, 21) DN-30, 231-2
   6L8 (26) DC-30, 231-2
   6L9 (12) BC-30, 231-2
   6L19 (6, 14, 18, 30, 33) DC-30, 351-1
   6L20 (6, 14, 18, 30, 26) DC-30, 351-1
   1G7 (33) DI-30, 311
   1G5 (14) DC-30, 311
   1G23 (18) DI-30, 426
   Drum Write Relay

4. If skp. cnt. does not advance and sys. ins. = 00 0000 and LFI zone counter does not advance.
   1H15 (27) BC-30, 311
   1H16 (6) DC-30, 311
   1G3 (7, 12, 16, 27, 34) DI-30, 311
   1G4 (28) FF-30, 311
   1G5 (33) DC-30, 311
   1G8 (10, 6) DM-30, 311
   1G1 (7) DI-30, 311
   1G17 (28) FF-30, 446
   1G14 (7, 16) DI-30, 446
   1G16 (27) DI-30, 446

Stop Code	Stop Locs.	Diagnosis
1050 (Cont'd)		(b) If system instruction = 12 0000 6L9 (6, 14, 8) BC-30, 231-2 6L7 (17, 21) DN-30, 231-2 6L8 (6, 18) DC-30, 231-2 6L11 (27) DI-30, 231-2
		(c) If system instruction = 37 3777 6L10 (26) PA-30, 231-2 6L11 (34, 20) DI-30, 231-2 6L9 (6) BC-30, 231-2 1H17 (8) PA-30, 426 1G14 (23) DI-30, 426
		(d) If system instruction = 12 0340 1H17 (16) PA-30, 426
		(e) If system instruction = 05 3777 or 32 0000, I^{15} is incorrect. 5D11 (25) PA-30, 124-1 5D9 (25) PA-30, 124-1 5D8 (22) DC-30, 124-1 5D7 (33) DI-30, 124-1 6F2 (33) DI-30, 324 1H6 (23) FF-30, 252-1 1H1 (27) DI-30, 252-1 3D28 (6) BD, 437-1 3D25 (7) BDL, 437-1 Also core memory data logic associated with 2^{-1} bit and sys. ins. nixie logic.
		(f) If system instruction = 21 3777 or 16 0000, I^{13} is incorrect. 5D10 (35) PA-30, 124-1 5D9 (30) PA-30, 124-1 5D8 (18) DC-30, 124-1 5D7 (27) DI-30, 124-1

Stop Code	Stop Locs.	Diagnosis
1050 (Cont'd)		1H6 (16) FF-30, 252-1 1H1 (6) DI-30, 252-1 3D28 (29) BD, 437-1 3D25 (8) BDL, 437-1 Also core memory data logic associated with 2^{-3} bit and sys. ins. nixie logic.

(g) If system instruction = 27 3777 or 10 0000, I^{12} is incorrect.
5D10 (30) PA-30, 124-1
5D9 (35) PA-30, 124-1
5D8 (14) DC-30, 124-1
5D7 (12) DI-30, 124-1
6F2 (23) DI-30, 324
1H6 (11) FF-30, 252-1
1H1 (16) DI-30, 252-1
3D28(7) BD, 437-1
3D25 (9) BDL, 437-1
Also core memory data logic associated with 2^{-2} bit and sys. ins. nixie logic.

(h) If system instruction = 24 3777 or 13 0000, I^{11} is incorrect.
5D10 (25, 16) PA-30, 124-1
5D8 (6, 10) DC-30, 124-1
1H7 (28) FF-30, 252-1
1H2 (34) DI-30, 252-1
3D28 (22) BD, 437-1
3D25 (10) BDL, 437-1
Also core memory data logic associated with 2^{-4} bit and sys. ins. nixie logic.

(i) If system instruction = 24 3777 or 13 0000, I^{11} is incorrect.
5D10 (25, 16) PA-30, 124-1
5D8 (6, 10) DC-30, 124-1
1H7 (28) FF-30, 252-1
1H2 (34) DI-30, 252-1

Stop Code	Stop Locs.	Diagnosis
1050 (Cont'd)		3D28 (22) BD, 437-1 3D25 (10) BDL, 437-1 Also core memory data logic associated with 2^{-4} bit and sys. ins. nixie logic.

(j) If system instruction = 25 3776 or 12 0001, I^0 is incorrect.
5D6 (35) PA-30, 124-2
5D5 (35) PA-30, 124-2
5D3 (34, 27) DI-30, 124-2
6F1 (6) DI-30, 324
6F22 (34) DI-30, 129
1H9 (11) FF-30, 252-2
1H4 (16) DI-30, 252-2
3D27 (16) BD, 347-2
3D25 (26) BDL, 437-2
Also core memory data logic associated with 2^{-15} bit and sys. ins. nixie logic.

(k) If system instruction = 25 3775 or 12 0002, I^1 is incorrect.
5D3 (12, 33) DI-30, 124-2
5D5 (26) PA-30, 124-2
5D6 (30) PA-30, 124-2
6F1 (7) DI-30, 324
6F22 (33) DI-30, 129
1H9 (16) FF-30, 252-2
1H4 (6) DI-30, 252-2
3D27 (20) BD, 437-2
3D25 (24) BDL, 437-2
Also core memory data logic associated with 2^{-14} bit and sys. ins. nixie logic.

Stop Code	Stop Locs.	Diagnosis
1050 (Cont'd)		(l) If system instruction = 25 3773 or 12 0004, I^2 is incorrect. 5D2 (7) DI-30, 124-2 5D4 (12) DI-30, 124-2 5D5 (18) PA-30, 124-2 5D6 (25) PA-30, 124-2 6F1 (12) DI-30, 324 6F22 (27) DI-30, 129 1H9 (23) FF-30, 252-2 1H4 (27) DI-30, 252-2 3D27 (14) BD, 437-2 3D25 (24) BDL, 437-2 Also core memory data logic associated with 2^{-13} bit and sys. ins. nixie logic.
		(m) If system instruction = 25 3767 or 12 0010, I^3 is incorrect. 5D2 (16) DI-30, 124-2 5D4 (27) DI-30, 124-2 5D5 (8) PA-30, 124-2 5D6 (16) PA-30, 124-2 6F1 (16) DI-30, 324 6F22 (12) DI-30, 129 1H9 (28) FF-30, 252-2 1H4 (34) DI-30, 252-2 3D27 (22) BD, 437-1 3D25 (23) BDL, 437-1 Also core memory data logic associated with 2^{-12} bit and sys. ins. nixie logic.
		(n) If system instruction = 25 3757 or 12 0020, I^4 is incorrect. 5D2 (23, 27) DI-30, 124-2 5D1 (27) DI-30, 124-2 6F1 (23) DI-30, 324 1H8 (11) FF-30, 252-2 1H3 (16) DI-30, 252-2

Stop Code	Stop Locs.	Diagnosis
1050 (Cont'd)		3D27 (7) BD, 437-1 3D25 (17) BDL, 437-1 Also core memory data logic associated with 2^{-11} bit and sys. ins. nixie logic.

(o) If system instruction = 25 3737 or 12 0040, I^5 is incorrect.
5D2 (33, 6) DI-30, 124-2
5D1 (33) DI-30, 124-2
6F1 (27) DI-30, 324
1H8 (16) FF-30, 252-2
1H3 (6) DI-30, 252-2
3D27 (29) BD, 437-1
3D25 (16) BDL, 437-1
Also core memory data logic associated with 2^{-10} bit and sys. ins. nixie logic.

(p) If system instruction = 25 3677 or 12 0100, I^6 is incorrect.
5D1 (34) DI-30, 124-2
5D2 (34, 12) DI-30, 124-2
6F1 (33) DI-30, 324
1H8 (23) FF-30, 252-2
1H3 (27) DI-30, 252-2
3D27 (6) BD, 437-1
3D25 (15) BDL, 437-1
Also core memory data logic associated with 2^{-9} bit and sys. ins. nixie logic.

(q) If system instruction = 25 3577 or 12 0200, I^7 is incorrect.
5D12 (7) DI-30, 124-2
5D13 (7) DI-30, 124-2
5D7 (7) DI-30, 124-2
6F1 (34) DI-30, 324
1H8 (28) FF-30, 252-2

Stop Code	Stop Locs.	Diagnosis
1050 (Cont'd)		1H3 (34) DI-30, 252-2 3D27 (30) BD, 437-1 3D25 (14) BDL, 437-1 Also core memory data logic associated with 2^{-8} bit and sys. ins. nixie logic.

(r) If system instruction = 25 3377 or 12 0400, I^8 is incorrect.

5D12 (16) DI-30, 124-2
5D13 (16) DI-30, 124-2
5D7 (16) DI-30, 124-2
6F2 (6) DI-30, 324
1H7 (11) FF-30, 252-1
1H2 (16) DI-30, 252-1
3D28 (16) BD, 437-1
3D25 (13) BDL, 437-1
Also core memory data logic associated with 2^{-7} bit and sys. ins. nixie logic.

(s) If system instruction = 25 2777 or 12 1000, I^9 is incorrect.

5D12 (23) DI-30, 124-2
5D13 (23) DI-30, 124-2
5D7 (23) DI-30, 124-2
6F2 (7) DI-30, 324
1H7 (16) FF-30, 252-1
1H2 (6) DI-30, 252-1
3D28 (20) BD, 437-1
3D25 (12) BDL, 437-1
Also core memory data logic associated with 2^{-6} bit and sys. ins. nixie logic.

(t) If system instruction = 25 1777 or 12 2000, I^{10} is incorrect.

5D12 (6) DI-30, 124-2
5D13 (6) DI-30, 124-2
5D7 (6) DI-30, 124-2
6F2 (12) DI-30, 324
1H7 (23) FF-30, 252-1

Stop Code	Stop Locs.	Diagnosis
1050 (Cont'd)		1H2 (27) DI-30, 252-1 3D28 (14) BD, 437-1 3D25 (11) BDL, 437-1 Also core memory data logic associated with 2^{-5} bit and sys. ins. nixie logic.

Stop Code	Stop Locs.	Diagnosis
1100	00 0250	5C17 (23) UF-30, 041-3 5D28 (16, 33) DI-30, 183-2 5D27 (26, 22) DC-30, 183-2
1101	00 0251	5C17 (23) UF-30, 041-3 5D23 (17),32,35,13,9) DN-30, 183-2 5C16 (21) DN-30, 041-3 5D21 (13) DN-30, 183-1 5D27 (26,22) DC-30, 183-2 5D28 (16,33,23,34) DI-30, 183-2
1102	00 0265	5C17 (24, 25, 15) UF-30, 041-3 5C19 (9, 25) DN-30, 041-3 5D28 (16, 33) DI-30, 183-2 5C16 (17, 29) DN-30, 041-3 5C20 (13) DN-30, 041-3 5D27 (22) DC-30, 183-2 5C18 (29) SR-30, 041-3 5C15 (9) DN-30, 041-3 5D19 (17, 13) DN-30, 183-2
1103	00 0266	5C20 (17) DN-30, 041-3 5C16 (13, 32, 17, 29) DN-30, 041-3 5D28 (23, 34, 16, 33) DI-30, 183-2 5D27 (26, 22) DC-30, 183-2 5C17 (21, 22, 24, 25) UF-30, 041-3

Stop Code	Stop Locs.	Diagnosis
1104	00 0271 00 0274	5C20 (17, 25) DN-30, 041-3
1105	00 0300	5C16 (21, 25) DN-30, 041-3 5D23 (13, 9) DN-30, 183-2 5D22 (26) DC-30, 183-2 5C17 (28) UF-30, 041-3
1106	00 0316	5C19 (32,9,13,17,21,29) DN-30, 041-3 5C20 (13,9,17,25,29) DN-30, 041-3 5C17 (33, 15) UF-30, 041-3 5C18 (29) SR-30, 041-3 5C16 (9, 35) DN-30, 041-3 5C15 (9) DN-30, 041-3 5D27 (26, 22) DC-30, 183-2 5D28 (16, 33, 23, 34) DI-30, 183-2
1107	00 0311	5C16 (9, 35) DN-30, 041-3 5C17 (33) UF-30, 041-3 5D23 (13, 9) DN-30, 183-2 5D22 (26) DC-30, 183-2
1110	00 0312	5C16 (13, 32) DN-30, 041-3 5D28 (23, 34) DI-30, 183-2 5D27 (26) DC-30, 183-2 5C17 (21, 22) UF-30, 041-3 5C19 (29) DN-30, 041-3

Stop Code	Stop Locs.	Diagnosis
1111	00 0326	5C18 (19) SR-30, 041-3
1112	00 0327	5C19 (13, 29) DN-30, 041-3
1113	00 0334	5C18 (10) SR-30, 041-3
1114	00 0335	5C19 (17) DN-30, 041-3 5C20 (25) DN-30, 041-3
1115	00 0340	5C18 (6) SR-40, 041-3 5C20 (29) DN-30, 041-3 5C19 (21) DN-30, 041-3
1116	00 0361	5C19 (11) DN-30, 041-3 5C18 (19) SR-30, 041-3
1117	00 0362	5C18 (19) SR-30, 041-3 5C20 (25) DN-30, 041-3

Stop Code	Stop Locs.	Diagnosis
1120	00 0365	5C19 (15) DN-30, 041-3 5C18 (10) SR-30, 041-3
1121	00 0366	5C18 (10) SR-30, 041-3
1122	00 0367	5C19 (19) DN-30, 041-3 5C18 (6) SR-30, 041-3
1123	00 0375	5C19 (25) DN-30, 041-3

Stop Code	Stop Locs.	Diagnosis
1200	00 0433	5F21 (23) DI-30, 215 5D21 (17) DN-30, 183-1
	00 0472	5C17 (32) UF-30, 041-3
	00 0474	
1201	00 0430	5F21 (23) DI-30, 215 5D21 (13) DN-30, 183-1 5C17 (27) UF-30, 041-3
1203	00 0617	5F21 (33, 27) DI-30, 215 5L26 (34) DI-30, 044-1 5L27 (12) FF-30, 044-1 5N21 (25) FF-30, 044-1
1205	00 0427	5D19 (21) DN-30, 183-1 5F22 (35) UF-30, 215 5K15 (12) DI-30, 127 5D20 (6) DC-30, 183-1 5D26 (16) DI-30, 215 5D16 (34) DI-30, 183-1 5D17 (16) DI-30, 183-1

Stop Code	Stop Locs.	Diagnosis
1206	00 0473	5F22 (26) UF-30, 215 5F27 (9) DN-30, 215
1207	00 0432	5F25 (7, 12, 27) DI-30, 215 5D13 (9) DI-30, 215
	00 0436	5D16 (6, 12, 33) DI-30, 183-1 5C25 (34) DI-30, 183-2
	00 0454	
1210	00 0431	5F25 (12, 27) DI-30, 215 5F26 (30) DC-30, 215
	00 0451	5D18 (6) DC-30, 183-1 5F22 (23) UF-30, 215
	00 0462 00 0466	
1211	00 0505	5F23 (24) DN-30, 215 5D19 (21) DN-30, 183-1 5D16 (10) DI-30, 183-1 5C24 (16) DC-30, 183-2

Stop Code	Stop Locs.	Diagnosis
1212	00 0514	5F23 (23) DN-30, 215 5F27 (23) DN-30, 215 5D17 (16) DI-30, 183-1
1215	00 0655	5K15 (6) DI-30, 184 5K11 (8) PA-30, 184 5C25 (23) DI-30, 184
1216	00 0612	5L27 (27) FF-30, 044-1 5L24 (34) DI-30, 044-1 5L28 (6, 16) DI-30, 044-1 5N21)9) DN-30, 044-1
1217	00 0616	5K13 (26) PA-30, 184 5K15 (23) DI-30, 184 5C25 (6, 33) DI-30, 184
1220	00 0642 00 0654	5F19 (25) PA-30, 215 5K10 (26) PA-30, 184 5F20 (30) PA-30, 184 5K12 (7,16,12,23,27,34) DI-30, 184 5D28 (6) DI-30, 183-2 5K14 (6) DC-30, 184 5F23 (9, 17) DN-30, 215 5K11 (8) PA-30, 184 5D24 (25) PA-30, 183-2 5K13 (26, 8) PA-30, 184 5K15 (6, 23) DI-30, 184

Stop Code	Stop Locs.	Diagnosis
1221	00 0656	5F27 (9) DN-30, 215
1222	00 0636	5L27 (6) FF-30, 044-1 5N21 (17, 21) DN-30, 044-1 Also see Stop Code: 1220
1224	00 1034	5C22 (6,7,12,16,23,27) DI-30, 184 5C24 (19,31,34,23) DC-30, 184 5C23 (6, 18, 27) BC-30, 184 5C25 (33) DI-30, 184
1230	00 2570	5C2 (17, 21) DN-30, 041-1 5C3 (14) DC-30, 041-1 5C8 (17) DN-30, 041-2 5C5 (17) DN-30, 041-1
1231	00 2577	5C1 (17) DN-30, 041-1 5C3 (22) DC-30, 041-1 5C2 (17) DN-30, 041-1 5C4 (17) DN-30, 041-1 5C9 (17) DN-30, 041-2 5C5 (21) DN-30, 041-1

Stop Code	Stop Locs.	Diagnosis
1232	00 2606	5C2 (21) DN-30, 041-1 5C4 (17) DN-30, 041-1 5C1 (17) DN-30, 041-1 5C6 (17) DN-30, 041-1 5C9 (21) DN-30, 041-2
1233	00 2615	5C4 (17) DN-30, 041-1 5C2 (17, 21) DN-30, 041-1 5C3 (14) DC-30, 041-1 5C7 (17) DN-30, 041-1 5C11 (17) DN-30, 041-2
1234	00 2624	5C5 (17, 21) DN-30, 041-1 5C3 (22) DC-30, 041-1 5C6 (17) DN-30, 041-1 5C1 (17) DN-30, 041-1 5C12 (17) DN-30, 041-2
1235	00 2633	5C5 (21, 17) DN-30, 041-1 5C7 (17) DN-30, 041-1 5C2 (17) DN-30, 041-1 5C12 (21) DN-30, 041-2 5C10 (26) DC-30, 041-2

Stop Code	Stop Locs.	Diagnosis
1236	00 2642	5C6 (17) DN-30, 041-1 5C7 (17) DN-30, 041-1 5C5 (17) DN-30, 041-1 5C2 (21) DN-30, 041-1 5C13 (17) DN-30, 041-2
1237	00 2651	5C7 (17) DN-30, 041-1 5C6 (17) DN-30, 041-1 5C5 (21) DN-30, 041-1 5C4 (17) DN-30, 041-1 5C14 (17) DN-30, 041-2
1240	00 2660	5C8 (17) DN-30, 041-2 5C9 (17, 21) DN-30, 041-2 5C12 (17) DN-30, 041-2 5C1 (17) DN-30, 041-1
1241	00 2667	5C9 (17) DN-30, 041-2 5C8 (17) DN-30, 041-2 5C11 (17) DN-30, 041-2 5C12 (21) DN-30, 041-2 5C2(17) DN-30, 041-1

Stop Code	Stop Locs.	Diagnosis
1242	00 2676	5C9 (21) DN-30, 041-2 5C8 (17) DN-30, 041-2 5C11 (17) DN-30, 041-2 5C13 (17) DN-30, 041-2 5C2 (21) DN-30, 041-1 5C3 (14) DC-30, 041-1
1243	00 2705	5C11 (17) DN-30, 041-2 5C9 (21, 17) DN-30, 041-2 5C14 (17) DN-30, 041-2 5C4 (17) DN-30, 041-1
1244	00 2714	5C12 (17, 21) DN-30, 041-2 5C13 (17) DN-30, 041-2 5C8 (17) DN-30, 041-2 5C5 (17) DN-30, 041-1
1245	00 2723	5C12 (21, 17) DN-30, 041-2 5C14 (17) DN-30, 041-2 5C9 (17) DN-30, 041-2 5C5 (21) DN-30, 041-1 5C3 (22) DC-30, 041-1

Stop Code	Stop Locs.	Diagnosis
1246	00 2732	5C13 (17) DN-30, 041-2 5C14 (17) DN-30, 041-2 5C12 (17) DN-30, 041-2 5C9 (21) DN-30, 041-2 5C6 (17) DN-30, 041-1
1247	00 2741	5C14 (17) DN-30, 041-2 5C13 (17) DN-30, 041-2 5C12 (21) DN-30, 041-2 5C11 (17) DN-30, 041-2 5C7 (17) DN-30, 041-1
1250	00 2755	5C1 (17) DN-30, 041-1
1251	00 2762	5C2 (17) DN-30, 041-1
1252	00 2767	5C2 (21) DN-30, 041-1
1253	00 2774	5C4 (17) DN-30, 041-1 5C14 (19) DN-30, 041-1

Stop Code	Stop Locs.	Diagnosis
1254	00 3001	5C5 (17) DN-30, 041-1
1255	00 3006	5C5 (21) DN-30, 041-1
1256	00 3013	5C6 (17) DN-30, 041-1 5C15 (34) DN-30, 041-1
1257	00 3020	5C7 (17) DN-30, 041-1
1260	00 3025	5C8 (17) DN-30, 041-2 5C15 (34) DN-30, 041-1
1261	00 3032	5C9 (17) DN-30, 041-2
1262	00 3037	5C9 (21) DN-30, 041-2 5C15 (26) DN-30, 041-2

Stop Code	Stop Locs.	Diagnosis
1263	00 3044	5C11 (17) DN-30, 041-2
1264	00 3051	5C12 (17) DN-30, 041-2 5C15 (28) DN-30, 041-2
1265	00 3056	5C12 (21) DN-30, 041-2
1266	00 3063	5C13 (17) DN-30, 041-2 5C15 (27) DN-30, 041-2
1267	00 3070	5C14 (17) DN-30, 041-2
1300	00 1663	5F7 (7) DI-30, 052-1 5F15 (34, 33) DI-30, 127 3D25 (6) BDL, 437-1 5D25 (10) DC-30, 183-2 5F17 (13) DN-30, 127 5D24 (8) PA-30, 183-2 5D17 (7) DI-30, 183-1 3D1 (34) DI-30, 437-1

Stop Code	Stop Locs.	Diagnosis
1300 (Cont'd)		5F14 (10) PA-30, 127 3D28 (30) BD, 437-1 5D26 (12, 23) DI-30, 183-2 5F18 (6,23,12,27) DI-30, 127 5F21 (34) DI-30, 215 5D19 (9) DN-30, 183-1 3D2 (34) DI-30, 437-1 Also core memory data logic associated with 2^{-0} bit.
1301	00 1667	3D25 (7) BDL, 437-1 3D8 (9) DN-30, 437-3 5F15 (34, 33) DI-30, 127 5F7 (17) DI-30, 052-1 5D25 (10) DC-30, 183-2 3D1 (33) DI-30, 437-1 3D28 (6) BD, 437-1 3D10 (10) BO, 437-1 5F14 (10) PA-30, 127 5L26 (16) DI-30, 044-1 5D26 (12, 23) DI-30, 183-2 3D2 (33) DI-30, 437-1 Also core memory data logic associated with 2^{-1} bit.
1302	00 1674	3D1 (27) DI-30, 437-1 3D25 (8) BDL, 437-1 5L20 (16) DI-30, 044-1 3D2 (27) DI-30, 437-1 3D28 (29) BD, 437-1 5F7 (23) DI-30, 052-1 Also core memory data logic associated with 2^{-2} bit.

Stop Code	Stop Locs.	Diagnosis
1303	00 1700	3D1 (12) DI-30, 437-1 3D25 (9) BDL, 437-1 5L20 (7) DI-30, 044-2 3D2 (12) DI-30, 437-1 3D28 (7) BD, 437-1 5F7 (6) DI-30, 052-1 Also core memory data logic associated with 2^{-3} bit.
1304	00 1705	3D1 (6) DI-30, 437-1 3D25 (10) BDL, 437-1 5L14 (16) DI-30, 044-2 3D2 (6) DI-30, 437-1 3D28 (22) BD, 437-1 5F7 (12) DI-30, 052-1 Also core memory data logic associated with 2^{-4} bit.
1305	00 1711	3D1 (23) DI-30, 437-1 3D25 (11) BDL, 437-1 5L14 (7) DI-30, 044-2 3D2 (23) DI-30, 437-1 3D28 (14) BD, 437-1 5F7 (27) DI-30, 052-1 Also core memory data logic associated with 2^{-5} bit.

Stop Code	Stop Locs.	Diagnosis
1306	00 1716	3D1 (16) DI-30, 437-1 3D25 (12) BDL, 437-1 5L8 (16) DI-30, 044-3 3D2 (16) DI-30, 437-1 3D28 (20) BD, 437-1 5F7 (33) DI-30, 052-1 Also core memory data logic associated with 2^{-6} bit.
1307	00 1722	3D1 (7) DI-30, 437-1 3D25 (13) BDL, 437-1 5L8 (7) DI-30, 044-3 3D2 (7) DI-30, 437-1 3D28 (16) BD, 437-1 5F7 (34) DI-30, 052-1 Also core memory data logic associated with 2^{-7} bit.
1310	00 1727	3D3 (34) DI-30, 437-1 3D25 (14) BDL, 437-1 5L3 (16) DI-30, 044-3 3D4 (34) DI-30, 437-1 3D27 (30) BD, 437-1 5F4 (7) DI-30, 052-2 Also core memory data logic associated with 2^{-8} bit.

Stop Code	Stop Locs.	Diagnosis
1311	00 1733	3D3 (33) DI-30, 437-1 3D25 (15) BDL, 437-1 5L3 (7) DI-30, 044-4 3D4 (33) DI-30, 437-1 3D27 (6) BD, 437-1 5F4 (16) DI-30, 052-2 Also core memory data logic associated with 2^{-9} bit.
1312	00 1740	3D3 (27) DI-30, 437-1 3D25 (16) BDL, 437-1 5N3 (16) DI-30, 044-4 3D4 (27) DI-30, 437-1 3D27 (29) BD, 437-1 5F4 (23) DI-30, 052-2 Also core memory data logic associated with 2^{-10} bit.
1313	00 1744	3D3 (12) DI-30, 437-1 3D25 (17) BDL, 437-1 5N3 (7) DI-30, 044-4 3D4 (12) DI-30, 437-1 3D27 (7) BD, 437-1 5F4 (6) DI-30, 052-2 Also core memory data logic associated with 2^{-11} bit.

Stop Code	Stop Locs.	Diagnosis
1314	00 1751	3D3 (6) DI-30, 437-1 3D25 (23) BDL, 437-1 5N8 (16) DI-30, 044-5 3D4 (6) DI-30, 437-1 3D27 (22) BD, 437-1 5F4 (12) DI-30, 052-2 Also core memory data logic associated with 2^{-12} bit.
1315	00 1755	3D3 (23) DI-30, 437-2 3D25 (24) BDL, 437-2 5N8 (7) DI-30, 044-5 3D4 (23) DI-30, 437-2 3D27 (14) BD, 437-2 5F4 (27) DI-30, 052-2 Also core memory data logic associated with 2^{-13} bit.
1316	00 2030	3D3 (16) DI-30, 437-2 3D25 (25) BDL, 437-2 5N14 (16) DI-30, 044-5 3D4 (16) DI-30, 437-2 3D27 (20) BD, 437-2 5F4 (33) DI-30, 052-2 Also core memory data logic associated with 2^{-14} bit.

Stop Code	Stop Locs.	Diagnosis
1317	00 2034	3D3 (7) DI-30, 437-2 3D25 (26) BDL, 437-2 5N14 (7) DI-30, 044-6 3D4 (7) DI-30, 437-2 3D27 (16) BD, 437-2 5F4 (34) DI-30, 052-2 Also core memory data logic associated with 2^{-15} bit.
1320	00 2041	3D7 (7) DI-30, 437-2 3D25 (27) BDL, 437-2 5N20 (16) DI-30, 044-6 3D9 (7) DI-30, 437-2 3D26 (30) BD, 437-2 5F1 (7) DI-30, 052-3 Also core memory data logic associated with 2^{-16} bit.
1321	00 2045	3D25 (28) BDL, 437-2 5N20 (7) DI-30, 044-6 3D26 (6) BD, 437-2 5F1 (16) DI-30, 052-3 Also core memory data logic associated with 2^{-17} bit.
1322	00 2052	3D25 (29) BDL, 437-2 5N26 (16) DI-30, 044-7 3D26 (29) BD, 437-2 5F1 (23) DI-30, 052-3 Also core memory data logic associated with 2^{-18} bit.

Stop Code	Stop Locs.	Diagnosis
1323	00 2056	3D25 (30) BDL, 437-2 5N26 (7) DI-30, 044-7 3D26 (7) BD, 437-2 5F1 (6) DI-30, 052-3 Also core memory data logic associated with 2^{-19} bit.
1324	00 2063	3D25 (31) BDL, 437-2 5R26 (16) DI-30, 044-7 3D26 (22) BD, 437-2 5F1 (12) DI-30, 052-3 Also core memory data logic associated with 2^{-20} bit.
1325	00 2067	3D25 (32) BDL, 437-2 5R26 (7) DI-30, 044-8 3D26 (14) BD, 437-2 5F1 (27) DI-30, 052-3 Also core memory data logic associated with 2^{-21} bit.
1326	00 2074	3D25 (33) BDL, 437-2 5R21 (16) DI-30, 044-8 3D26 (20) BD, 437-2 5F1 (33) DI-30, 052-3 Also core memory data logic associated with 2^{-22} bit.

Stop Code	Stop Locs.	Diagnosis
1327	00 2106	3D25 (34) BDL, 437-2 5R23 (27) DI-30, 044-8 3D26 (16) BD, 437-2 5F1 (34) DI-30, 052-3 Also core memory data logic associated with 2^{-23} bit.
1330	00 2126	5F21 (34) DI-30, 215 3D1 (34) DI-30, 437-1 3D25 (6) BDL, 437-1 5F7 (7) DI-30, 052-1 3D2 (34) DI-30, 437-1 3D28 (30) BD, 437-1
1331	00 2133	5L26 (16) DI-30, 044-1 3D1 (33) DI-30, 437-1 3D25 (7) BDL, 437-1 5F7 (16) DI-30, 052-1 3D2 (33) DI-30, 437-1 3D28 (6) BD, 437-1
1332	00 2137	Same as Stop Code 1302
1333	00 2144	Same as Stop Code 1303

Stop Code	Stop Locs.	Diagnosis
1334	00 2150	Same as Stop Code 1304
1335	00 2155	Same as Stop Code 1305
1336	00 2162	Same as Stop Code 1306
1337	00 2167	Same as Stop Code 1307
1340	00 2173	Same as Stop Code 1310
1341	00 2207	Same as Stop Code 1311
1342	00 2213	Same as Stop Code 1312
1343	00 2220	Same as Stop Code 1313

Stop Code	Stop Locs.	Diagnosis
1344	00 2224	Same as Stop Code 1314
1345	00 2231	Same as Stop Code 1315
1346	00 2235	Same as Stop Code 1316
1347	00 2243	Same as Stop Code 1317
1350	00 2247	Same as Stop Code 1320
1351	00 2254	Same as Stop Code 1321
1352	00 2260	Same as Stop Code 1322
1353	00 2265	Same as Stop Code 1323

Stop Code	Stop Locs.	Diagnosis
1354	00 2271	Same as Stop Code 1324
1355	00 2276	Same as Stop Code 1325
1356	00 2302	Same as Stop Code 1326
1357	00 2307	Same as Stop Code 1327

Stop Code	Stop Locs.	Diagnosis
1360	00 2324	5F18 (7, 33) DI-30, 127 5D4 (6, 7) DI-30, 124-2 3D6 (13) DN-30, 437-3 3D7 (34) DI-30, 437-3 5D1 (12) DI-30, 124-2 5F18 (16) DI-30, 124-2 Also core memory address decoding logic associated with MA^0 bit.
1361	00 2340	5D4 (16, 23) DI-30, 124-2 3D6 (21) DN-30, 437-3 3D7 (33) DI-30, 437-3 Also core memory address decoding logic associated with MA^1 bit.
1362	00 2352	5D4 (33, 34) DI-30, 124-2 3D6 (17) DN-30, 437-3 3D7 (27) DI-30, 437-3 Also core memory address decoding logic associated with MA^2 bit.
1363	00 2364	5D3 (7) DI-30, 124-2 5D1 (7) DI-30, 124-2 3D6 (9) DN-30, 437-3 3D7 (12) DI-30, 437-3 Also core memory address decoding logic associated with MA^3 bit.

Stop Code	Stop Locs.	Diagnosis
1364	00 2376	5D3 (16) DI-30, 124-2 5D1 (16) DI-30, 124-2 3D8 (17) DN-30, 437-3 3D7 (6) DI-30, 437-3 Also core memory address decoding logic associated with MA^4 bit.
1365	00 2410	5D3 (23) DI-30, 124-2 5D1 (23) DI-30, 124-2 3D7 (23) DI-30, 437-3 3D8 (21) DN-30, 437-3 Also core memory address decoding logic associated with MA^5 bit.
1366	00 2422	5D3 (6) DI-30, 124-1 5D1 (6) DI-30, 124-1 3D7 (16) DI-30, 437-3 3D8 (13) DN-30, 437-3 Also core memory address decoding logic associated with MA^6 bit.
1367	00 2434	5D12 (12) DI-30, 124-1 3D9 (23, 34) DI-30, 437-3 Also core memory address decoding logic associated with MA^7 bit.

Stop Code	Stop Locs.	Diagnosis
1370	00 2446	5D12 (27) DI-30, 124-1 3D9 (27, 33) DI-30, 437-3 Also core memory address decoding logic associated with MA^8 bit.
1371	00 2460	5D12 (33) DI-30, 124-1 3D9 (6, 12) DI-30, 437-3 Also core memory address decoding logic associated with MA^9 bit.
1372	00 2472	5D12 (34) DI-30, 124-1 Also core memory address decoding logic associated with MA^{10} bit.
1373	00 2505	5P21 (14) DI-30, 127 5C1 (17) DN-30, 041-1 5C20 (9) DN-30, 041-3 5C14 (21) DN-30, 041-1 5D19 (13) DN-30, 183-1 5F17 (30) DN-30, 127 5F16 (8) DC-30, 127 5F18 (12, 21) DI-30, 127

Stop Code	Stop Locs.	Diagnosis
1374	00 2552	5D3 (6, 23, 16, 7) DI-30, 124-1,2 5D4 (6, 16, 34) DI-30, 124-2 5C1 (17) DN-30, 041-1 5F21 (14) DI-30, 127 5D19 (13) DN-30, 183-1 5F17 (30) DN-30, 127 5F16 (8) DC-30, 127 5C14 (21) DN-30, 041-1 5F18 (12, 21) DI-30, 127
1401	00 3151	5D25 (23) DC-30, 183-2 5D23 (15) DN-30, 183-2

Stop Code	Stop Locs.	Diagnosis
1402	00 3305	If Acc 2^{-1} is on: 5L21 (34) DI-30, 044-1 5N21 (28) DN-30, 044-1 If Acc 2^{-2} is on: 5L21 (33) DI-30, 044-1 5L25 (24) DN-30, 044-1 If Acc 2^{-3} is on: 5L21 (27) DI-30, 044-2 5L25 (28) DN-30, 044-2 If Acc 2^{-4} is on: 5L21 (12) DI-30, 044-2 5L18 (24) DN-30, 044-2 If Acc 2^{-5} is on: 5L21 (6) DI-30, 044-2 5L18 (28) DN-30, 044-2 If Acc 2^{-6} is on: 5L21 (23) DI-30, 044-3 5L13 (24) DN-30, 044-3 If Acc 2^{-7} is on: 5L21 (16) DI-30, 044-3 5L13 (28) DN-30, 044-3 If Acc 2^{-8} is on: 5L9 (34) DI-30, 044-3 5L7 (24) DN-30, 044-3 If Acc 2^{-9} is on: 5L9 (33) DI-30, 044-4 5L7 (28) DN-30, 044-4

Stop Code	Stop Locs.	Diagnosis
1402 (Cont'd)		If Acc 2^{-10} is on: 5L9 (27) DI-30, 044-4 5L2 (24) DN-30, 044-4 If Acc 2^{-11} is on: 5L9 (12) DI-30, 044-4 5L2 (28) DN-30, 044-4

Stop Code	Stop Locs.	Diagnosis
1403	00 3306	5D28 (6) DI-30, 183-2 5D24 (25) PA-30, 183-2
1404	00 3321	5D27 (6) DC-30, 183-2 5K15 (34) DI-30, 127 5K17 (27) DC-30, 127 5K16 (18, 25) PA-30, 127

Stop Code	Stop Locs.	Diagnosis
1405	00 3322	If Acc sign is on: 5D26 (16) DI-30, 215 5F22 (33) UF-30, 215 5K15 (12) DI-30, 127 5K17 (11) DC-30, 127 If Acc 2^{-1} is on: 5N21 (33) DN-30, 044-1 5L21 (21) DI-30, 044-1 If Acc 2^{-2} is on: 5L25 (30) DN-30, 044-1 5L21 (25) DI-30, 044-1 If Acc 2^{-3} is on: 5L25 (33) DN-30, 044-2 5L21 (29) DI-30, 044-2 If Acc 2^{-4} is on: 5L18 (30) DN-30, 044-2 5L21 (10) DI-30, 044-2 If Acc 2^{-5} is on: 5L18 (33) DN-30, 044-2 5L21 (18) DI-30, 044-2 If Acc 2^{-6} is on: 5L13 (30) DN-30, 044-3 5L21 (26) DI-30, 044-3 If Acc 2^{-7} is on: 5L13 (33) DN-30, 044-3 5L21 (13) DI-30, 044-3 If Acc 2^{-8} is on: 5L7 (30) DN-30, 044-3 5L9 (21) DI-30, 044-3

1405
(Cont'd)

If Acc 2^{-9} is on:
5L7 (33) DN-30, 044-4
5L9 (25) DI-30, 044-4

If Acc 2^{-10} is on:
5L2 (30) DN-30, 044-4
5L9 (29) DI-30, 044-4

If Acc 2^{-11} is on:
5L2 (33) DN-30, 044-4
5L9 (10) DI-30, 044-4

If Acc 2^{-12} is on:
5N4 (22) DN-30, 044-5

If Acc 2^{-13} is on:
5N4 (26) DN-30, 044-5

If Acc 2^{-14} is on:
5N10 (22) DN-30, 044-5

If Acc 2^{-15} is on:
5N10 (26) DN-30, 044-6

If Acc 2^{-16} is on:
5N15 (22) DN-30, 044-6

If Acc 2^{-17} is on:
5N15 (26) DN-30, 044-6

If Acc 2^{-18} is on:
5N22 (22) DN-30, 044-7

If Acc 2^{-19} is on:
5N22 (26) DN-30, 044-7

If Acc 2^{-20} is on:
5N27 (22) DN-30, 044-7

If Acc 2^{-21} is on:
5N27 (26) DN-30, 044-8

Stop Code	Stop Locs.	Diagnosis
1405 (Cont'd)		If Acc 2^{-22} is on: 5R25 (22) DN-30, 044-8 If Acc 2^{-23} is on: 5R25 (26) DN-30, 044-8

Stop Code	Stop Locs.	Diagnosis
1406	00 3403	If Acc sign is on: 5K16 (26, 30) PA-30, 127 If Acc 2^{-1} is on: 5L27 (6,22) FF-30, 044-1 5L28 (6,7,23,11) DI-30, 044-1 5L26 (6,17,23) DI-30, 044-1 5H23 (16) DI-30, 052-1 5H26 (27, 23) DI-30, 052-1 5H24 (29,30) FCG, 052-1 5H25 (32,17) DN-30, 052-1 5H27 (27) DI-30, 052-1 If Acc 2^{-2} is on: 5L22 (12, 25) FF-30, 044-1 5L24 (6,7,16,26) DI-30, 044-1 5L20 (27, 34, 31) DI-30, 044-1 5H23 (23) DI-30, 052-1 5H26 (16, 33) DI-30, 052-1 5H27 (34) DI-30, 052-1 5H24 (20, 29) FCG, 052-1 5H25 (13, 29) DN-30, 052-1 If Acc 2^{-3} is on: 5L22 (6, 22) FF-30, 044-2 5L23 (6,7,23,11) DI-30, 044-2 5L20 (6,17,23) DI-30, 044-2 5H23 (6) DI-30, 052-1 5H24 (10, 28) FCG, 052-1 5H26 (34, 14) DI-30, 052-1 5H25 (9, 25) DN-30, 052-1 5H20 (16) DI-30, 052-1 If Acc 2^{-4} is on: 5L15 (12, 33) FF-30, 044-2 5L17 (6,7,16,23) DI-30, 044-2 5L14 (27,33,34) DI-30, 044-2 5H21 (6,12) DI-30, 052-1 5H23 (12) DI-30, 052-1 5H22 (35, 21) DN-30, 052-1 5H24 (10, 9) FCG, 052-1 5H20 (6) DI-30, 052-1

Stop Code	Stop Locs.	Diagnosis
1406 (Cont'd)	00 3403	If Acc. 2^{-5} is on: 5L15 (6,27) FF-30, 044-2 5L16 (6,7,16,23) DI-30, 044-2 5L14 (6,12,23) DI-30, 044-2 5H21 (23,27) DI-30, 052-1 5H23 (27) DI-30, 052-1 5H22 (17,32) DN-30, 052-1 5H24 (8,9) FCG, 052-1 5H20 (27) DI-30, 052-1 If Acc. 2^{-6} is on: 5L10 (12,33) FF-30, 044-3 5L12 (6,7,16,23) DI-30, 044-3 5L8 (27,33,34) DI-30, 044-3 5H21 (16,33) DI-30, 052-1 5H23 (33) DI-30, 052-1 5H22 (13,29) DI-30, 052-1 5H24 (5,8) FCG, 052-1 5H20 (34) DI-30, 052-1 If Acc. 2^{-7} is on: 5L10 (6,27) FF-30, 044-3 5L11 (6,7,16,23) DI-30, 044-3 5L8 (6,12,23) DI-30, 044-3 5H21 (7,34) DI-30, 052-1 5H23 (34) DI-30, 052-1 5H22 (25,9) DN-30, 052-1 5H24 (5) FCG, 052-1 5H14 (32) FCG, 052-2 5H18 (12,27) DI-35, 052-2 5H17 (16) DI-30, 052-2 If Acc. 2^{-8} is on: 5L4 (12,33) FF-30, 044-3 5L6 (6,7,16,23) DI-30, 044-3 5L3 (27,33,34) DI-30, 044-3 5H13 (7) DI-30, 052-2 5H16 (6,12) DI-30, 052-2 5H15 (21,35) DN-30, 052-2 5H14 (30,32) FCG, 052-2 5H17 (6) DI-30, 052-2

Stop Code	Stop Locs.	Diagnosis
1406 (Cont'd)	00 3403	If Acc. 2^{-9} is on: 5L4 (6,27) FF-30, 044-4 5L5 (6,7,16,23) DI-30, 044-4 5L3 (6,12,23) DI-30, 044-4 5H13 (16) DI-30, 052-2 5H16 (23,27) DI-30, 052-2 5H15 (17,32) DN-30, 052-2 5H14 (29,30) FCG, 052-2 5H17 (27) DI-30, 052-2 If Acc. 2^{-10} is on: 5N2 (12,33) FF-30, 044-4 5L1 (6,7,16,23) DI-30, 044-4 5N3 (27,33,34) DI-30, 044-4 5H13 (23) DI-30, 052-2 5H16 (16,33) DI-30, 052-2 5H15 (13,29) DN-30, 052-2 5H14 (28,29) FCG, 052-2 5H17 (34) DI-30, 052-2 If Acc. 2^{-11} is on: 5N2 (6,27) FF-30, 044-4 5N1 (6,7,16,23) DI-30, 044-4 5N3 (6,12,23) DI-30, 044-4 5H13 (6) DI-30, 052-2 5H16 (7,34) DI-30, 052-2 5H15 (9,25) DN-30, 052-2 5H14 (10,28) FCG, 052-2 5H10 (16) DI-30, 052-2 If Acc. 2^{-12} is on: 5N7 (12,33) FF-30, 044-5 5N5 (6,7,16,23) DI-30, 044-5 5N8 (27,33,34) DI-30, 044-5 5H13 (12) DI-30, 052-2 5H11 (6, 12) DI-30, 052-2 5H12 (21,35) DN-30, 052-2 5H14 (9,10) FCG, 052-2 5H10 (6) DI-30- 052-2

Stop Code	Stop Locs.	Diagnosis
1406 (Cont'd)	00 3403	If Acc 2^{-13} is on: 5N7 (6, 27) FF-30, 044-5 5N6 (6,7,16,23) DI-30, 044-5 5N8 (6,12,23) DI-30, 044-5 5H13 (27) DI-30, 052-2 5H11 (23, 27) DI-30, 052-2 5H12 (17, 32) DN-30, 052-2 5H14 (8,9) FCG, 052-2 5H10 (27) DI-30, 052-2 If Acc 2^{-14} is on: 5N13 (12, 33) FF-30, 044-5 5N11 (6,7,16,23) DI-30, 044-5 5N14 (27, 33, 34) DI-30, 044-5 5H13 (33) DI-30, 052-2 5H11 (16, 33) DI-30, 052-2 5H12 (13, 29) DN-30, 052-2 5H14 (5, 8) FCG, 052-2 5H10)34) DI-30, 052-2 If Acc 2^{-15} is on: 5N13 (6, 27) FF-30, 044-6 5N12 (6,7, 16, 23) DI-30, 044-6 5N14 (6,12,23) DI-30, 044-6 5H13 (34) DI-30, 052-2 5H11 (7,34) DI-30, 052-2 5H12 (9, 25) DN-30, 052-2 5H14 (5) FCG, 052-2 5H5 (32) FCG, 052-3 5H18 (33, 34) DI-35, 052-3 5H8 (16) DI-30, 052-3

Stop Code	Stop Locs.	Diagnosis
1406 (Cont'd)	00 3403	If Acc. 2^{-16} is on: 5N18 (12, 33) FF-30, 044-6 5N16 (6, 7, 16, 23) DI-30, 044-6 5N20 (27, 33, 34) DI-30, 044-6 5H4 (7) DI-30, 052-3 5H7 (6, 12) DI-30, 052-3 5H6 (21, 35) DN-30, 052-3 5H5 (30, 32) FCG, 052-3 5H8 (6) DI-30, 052-3 If Acc 2^{-17} is on: 5N18 (6, 27) FF-30, 052-3 5N17 (6, 7, 16, 23) DI-30, 052-3 5N20 (6, 12, 23) DI-30, 052-3 5H4 (16) DI-30, 052-3 5H7 (23, 27) DI-30, 052-3 5H6 (17, 32) DN-30, 052-3 5H5 (29, 30) FCG, 052-3 5H8 (27) DI-30, 052-3 If Acc 2^{-18} is on: 5N25 (12, 33) FF-30, 044-7 5N23 (6, 7, 16, 23) DI-30, 044-7 5N26 (27, 33, 34) DI-30, 044-7 5H4 (23) DI-30, 052-3 5H7 (16, 33) DI-30, 052-3 5H6 (13, 29) DN-30, 052-3 5H5 (28, 29) FCG, 052-3 5H8 (34) DI-30, 052-3 If Acc 2^{-19} is on: 5N25 (6, 27) FF-30, 044-7 5N24 (6, 7, 16, 23) DI-30, 044-7 5N26 (6, 12, 23) DI-30, 044-7 5H4 (6) DI-30, 052-3 5H7 (7, 34) DI-30, 052-3 5H6 (9, 25) DN-30, 052-3 5H5 (10, 28) FCG, 052-3 5H1 (16) DI-30, 052-3

Stop Code	Stop Locs.	Diagnosis
1406 (Cont'd)	00 3403	If Acc 2^{-20} is on: 5R27 (12, 33) FF-30, 044-7 5N28 (6, 7, 16, 23) DI-30, 044-7 5R26 (27, 33, 34) DI-30, 044-7 5H4 (12) DI-30, 052-3 5H2 (6, 12) DI-30, 052-3 5H3 (21, 35) DN-30, 052-3 5H5 (9, 10) DCG, 052-3 5H1 (6) DI-30, 052-3 If Acc 2^{-21} is on: 5R27 (6, 27) FF-30, 044-8 5R28 (6, 7, 16, 23) DI-30, 044-8 5R26 (6, 12, 23) DI-30, 044-8 5H4 (27) DI-30, 052-3 5H2 (23, 27) DI-30, 052-3 5H3 (17, 32) DN-30, 052-3 5H5 (8, 9) FCG, 052-3 5H1 (27) DI-30, 052-3 If Acc 2^{-22} is on: 5R22 (12, 33) FF-30, 044-8 5R24 (6, 7, 16, 23) DI-30, 044-8 5R21 (27, 33, 34) DI-30, 044-8 5H4 (33) DI-30, 052-3 5H2 (16, 33) DI-30, 052-3 5H3 (13, 29) DN-30, 052-3 5H5 (5, 8) FCG, 052-3 5H1 (34) DI-30, 052-3 If Acc 2^{-23} is on: 5H4 (34) DI-30, 052-3 5H2 (7, 34) DI-30, 052-3 5H3 (9, 25) DN-30, 052-3 5H5 (5, 32) FCG, 052-3, 1 5H18 (6, 23) DI-35, 052-1 5H27 (6) DI-30, 052-1 5R20 (26) UF-30, 044-8 5R22 (6) FF-30, 044-8 5R23 (6, 7, 16, 23) DI-30, 044-8 5R21 (6, 12, 23) DI-30, 044-8

Stop Code	Stop Locs.	Diagnosis
1407	00 3406	If Acc. 2^{-1} and 2^{-2} are on: 5F12 (27) DI-30, 034-1 5F27 (16) FF-30, 034-1 5K28 (27) DI-30, 034-1 5H27 (12,27) DI-30, 052-1 5F9 (18) BC-30, 052-1 5F7 (23) DI-30, 052-1 If Acc. 2^{-2} and 2^{-3} are on: 5F12 (12) DI-30, 034-1 5K27 (11) FF-30, 034-1 5K28 (12) DI-30, 034-1 5H27 (33,34) DI-30, 052-1 5F9 (6) BC-30, 052-1 5F7 (6) DI-30, 052-1 If Acc. 2^{-3} and 2^{-4} are on: 5F12 (6) DI-30, 034-1 5K26 (28) FF-30, 034-1 5K28 (6) DI-30, 034-1 5H20 (7,16) DI-30, 052-1 5F8 (20) BC-30, 052-1 5F7 (12) DI-30, 052-1 If Acc. 2^{-4} and 2^{-5} are on: 5F12 (23) DI-30, 034-1 5K26 (23) FF-30, 034-1 5K28 (23) DI-30, 034-1 5H20 (6,23) DI-30, 052-1 5F8 (27) BC-30, 052-1 5F7 (27) DI-30, 052-1 If Acc. 2^{-5} and 2^{-6} are on: 5F12 (16) DI-30, 034-1 5K26 (16) FF-30, 034-1 5K28 (16) DI-30, 034-1 5H20 (12,27) DI-30, 052-1 5F8 (18) BC-30, 052-1 5F7 (33) DI-30, 052-1

Stop Code	Stop Locs.	Diagnosis
1407 (Cont'd)		If Acc. 2^{-6} and 2^{-7} are on: 5F12 (7) DI-30, 034-1 5K26 (11) FF-30, 034-1 5K28 (7) DI-30, 034-1 5H20 (33,34) DI-30, 052-1 5F8 (6) BC-30, 052-1 5F7 (34) DI-30, 052-1 If Acc. 2^{-7} and 2^{-8} are on: 5F11 (34) DI-30, 034-2 5K24 (28) FF-30, 034-2 5K25 (34) DI-30, 034-2 5H17 (7,16) DI-30, 052-2 5F6 (20) BC-30, 052-2 5F4 (7) DI-30, 052-2 If Acc. 2^{-8} and 2^{-9} are on: 5F11 (33) DI-30, 034-2 5K24 (23) FF-30, 034-2 5K25 (33) DI-30, 034-2 5H17 (6,23) DI-30, 052-2 5F6 (27) BC-30, 052-2 5F4 (16) DI-30, 052-2 If Acc. 2^{-9} and 2^{-10} are on: 5F11 (27) DI-30, 034-2 5K24 (16) FF-30, 034-2 5K25 (27) DI-30, 034-2 5H17 (12,27) DI-30, 052-2 5F6 (18) BC-30, 052-2 5F4 (23) DI-30, 050-2 If Acc. 2^{-10} and 2^{-11} are on: 5F11 (12) DI-30, 034-2 5K24 (11) FF-30, 034-2 5K25 (12) DI-30, 034-2 5H17 (33,34) DI-30, 052-2 5F6 (6) BC-30, 052-2 5F4 (6) DI-30, 052-2

Stop Code	Stop Locs.	Diagnosis
1407 (Cont'd)		If Acc. 2^{-11} and 2^{-12} are on: 5F11 (6) DI-30, 034-2 5K23 (28) FF-30, 034-2 5K25 (6) DI-30, 034-2 5H10 (7, 16) DI-30, 052-2 5F5 (20) BC-30, 052-2 5F4 (12) DI-30, 052-2 If Acc. 2^{-12} and 2^{-13} are on: 5H10 (6,23) DI-30, 052-2 5F5 (27) BC-30, 052-2 5F4 (27) DI-30, 052-2 5F11 (23) DI-30, 034-2 5K23 (23) FF-30, 034-2 5K25 (23) DI-30, 034-2 If Acc. 2^{-13} and 2^{-14} are on: 5F11 (16) DI-30, 034-2 5K23 (16) FF-30, 034-2 5K25 (16) DI-30, 034-2 5H10 (12,27) DI-30, 052-2 5F5 (18) BC-30, 052-2 5F4 (33) DI-30, 052-2 If Acc. 2^{-14} and 2^{-15} are on: 5F11 (7) DI-30, 034-2 5K23 (11) FF-30, 034-2 5K25 (7) DI-30, 034-2 5H10 (33,34) DI-30, 052-2 5F5 (6) BC-30, 052-2 5F4 (34) DI-30, 052-2 If Acc. 2^{-15} and 2^{-16} are on: 5F10 (34) DI-30, 034-3 5K21 (28) FF-30, 034-3 5K22 (34) DI-30, 034-3 5H8 (7,16) DI-30, 052-3 5F3 (20) BC-30, 052-3 5F1 (7) DI-30, 052-3 If Acc. 2^{-16} and 2^{-17} are on: 5F10 (33) DI-30, 034-3 5K21 (23) FF-30, 034-3 5K22 (33) DI-30, 034-3 5H8 (6,23) DI-30, 052-3 5F3 (27) BC-30, 052-3 5F1 (16) DI-30, 052-3

Stop Code	Stop Locs.	Diagnosis
1407 (Cont'd)		If Acc. 2^{-17} and 2^{-18} are on: 5F10 (27) DI-30, 034-3 5K21 (16) FF-30, 034-3 5K22 (27) DI-30, 034-3 5H8 (12,27) DI-30, 052-3 5F3 (18) BC-30, 052-3 5F1 (23) DI-30, 052-3 If Acc. 2^{-18} and 2^{-19} are on: 5F10 (12) DI-30, 034-3 5K21 (11) FF-30, 034-3 5K22 (12) DI-30, 034-3 5H8 (33,34) DI-30, 052-3 5F3 (6) BC-30, 052-3 5F1 (6) DI-30, 052-3 If Acc. 2^{-19} and 2^{-20} are on: 5F10 (6) DI-30, 034-3 5K20 (28) FF-30, 034-3 5K22 (6) DI-30, 034-3 5H1 (7,16) DI-30, 052-3 5F2 (20) BC-30, 052-3 5F1 (12) DI-30, 052-3 If Acc. 2^{-20} and 2^{-21} are on: 5F10 (23) DI-30, 034-3 5K20 (23) FF-30, 034-3 5K22 (23) DI-30, 034-3 5H1 (6,23) DI-30, 052-3 5F2 (27) BC-30, 052-3 5F1 (27) DI-30, 052-3 If Acc. 2^{-21} and 2^{-22} are on: 5F10 (16) DI-30, 034-3 5K20 (16) FF-30, 034-3 5K22 (16) DI-30, 034-3 5H1 (12,27) DI-30, 052-3 5F2 (18) BC-30, 052-3 5F1 (33) DI-30, 052-3

Stop Code	Stop Locs.	Diagnosis
1407 (Cont'd)		If Acc. 2^{-22} and 2^{-23} are on: 5F10 (7) DI-30, 034-3 5K20 (11) FF-30, 034-3 5K22 (7) DI-30, 034-3 5H1 (33,34) DI-30, 052-3 5F2 (6) BC-30, 052-3 5F1 (34) DI-30, 052-3 5K12 (7) DI-30, 184 5K14 (34) DC-30, 184 5F28 (13) DN-30, 215 5K13 (16,25) PA-30, 184

Stop Code	Stop Locs.	Diagnosis
1410	00 3501	5D28 (7, 9) DI-30, 215 5F19 (14) PA-30, 215 5K16 (32) PA-30, 127 5K15 (16) DI-30, 127 5F14 (14, 18, 25) PA-30, 127 5D13 (34) DI-30, 215 5F23 (17) DN-30, 215 5F15 (27) DI-30, 127 5D17 (7, 9) DI-30, 127 5F28 (24, 9) DN-30, 215
1411	00 3520	5F23 (18) DN-30, 215 5F24 (27) FF-30, 215 5H24 (32) FCG, 052-1 5F19 (20) PA-30, 215 5F26 (6) DC-30, 215 5H27 (23, 6) DI-30, 052-1
1412	00 3537	5K16 (30) PA-30, 127
1413	00 3560	5K16 (26) PA-30, 127
1414	00 3577	5K16 (32) PA-30, 127 5F14 (14) PA-30, 127

Stop Code	Stop Locs.	Diagnosis
1415	00 3617	5K16 (35) PA-30, 127 5F14 (14) PA-30, 127
1416	00 3636	5F27 (13, 17, 21, 30) DN-30, 215 5F25 (34) DI-30, 215
1417	00 4061	See Stop Code # 1406
1420	00 4062	If Acc 2^{-22} and 2^{-23} are on: 5F10 (7) DI-30, 034-3 5K20 (11) FF-30, 034-3 5K22 (7) DI-30, 034-3 5H1 (33, 34) DI-30, 052-3 5F2 (6) BC-30, 052-3 5F1 (34) DI-30, 052-3 Otherwise, see Stop Code # 1407

Stop Code	Stop Locs.	Diagnosis
1421	00 4140	5F26 (6, 9) DC-30, 215
1422	00 4155	5F19 (26, 30) PA-30, 215
1423	00 4176	5F19 (32, 35) PA-30, 215
1424	00 4216	5F19 (26) PA-30, 215
1425	00 4236	5F19 (30) PA-30, 215
1426	00 4256	5F19 (32) PA-30, 215
1427	00 4274	5F19 (35) PA-30, 215

Stop Code	Stop Locs.	Diagnosis
1430	00 4313	5F27 (13) DN-30, 215 5F28 (18, 21) DN-30, 215
1431	00 4331	5F25 (25, 33, 23) DI-30, 215 5F24 (8) FF-30, 215
1432	00 4350	5F21 (19) DI-30, 215 5F24 (23, 31) FF-30, 215 5F25 (6, 19) DI-30, 215
1433	00 3660	5F21 (6, 18) DI-30, 215 5F25 (30, 33) DI-30, 215
1434	00 3677	5F19 (18, 25) PA-30, 215
1435	00 3720	5F19 (8, 16) PA-30, 215

Stop Code	Stop Locs.	Diagnosis
1436	00 3737	5F19 (25) PA-30, 215
1437	00 3754	5F19 (18) PA-30, 215
1440	00 4027	5F19 (16) PA-30, 215
1441	00 4044	5F19 (8) PA-30, 215
1442	00 4365	See Stop Code # 1406
1443	00 4366	See Stop Code # 1420
1444	00 4434	See Stop Code # 1406

Stop Code	Stop Locs.	Diagnosis
1445	00 4437	See Stop Code # 1420
1446	00 4457	5H24 (30, 32) FCG, 052-1
1447	00 4557	See Stop Code # 1406
1450	00 4562	See Stop Code # 1420
1451	00 4661	See Stop Code # 1406
1452	00 4664	See Stop Code # 1420
1453	00 4732	See Stop Code # 1406

Stop Code	Stop Locs.	Diagnosis
1454	00 4735	See Stop Code # 1420
1455	00 5002	See Stop Code # 1406
1456	00 5005	See Stop Code # 1420
1457	00 5047	See Stop Code # 1406
1460	00 5052	See Stop Code # 1420
1461	00 5177	If Acc sign is on: 5F25 (29) DI-30, 215 Otherwise see Stop Code # 1406
1462	00 5202	See Stop Code # 1420

Stop Code	Stop Locs.	Diagnosis
1463	00 5241	5H5 (5) FCG, 052-3
1464	00 5316	5H5 (5) FCG, 052-3
1465	00 5223	5F21 (6) DI-30, 215
1466	00 5231	5F23 (13) DN-30, 215
1467	00 5230	5F20 (14, 20) PA-30, 215

Stop Code	Stop Locs.	Diagnosis
1470	00 5352	If Acc 2^{-1} is on: 5L27 (6) FF-30, 044-1
		If Acc 2^{-2} is on: 5L22 (12) FF-30, 044-1
		If Acc 2^{-3} is on: 5L22 (6) FF-30, 044-2
		If Acc 2^{-4} is on: 5L15 (12) FF-30, 044-2
		If Acc 2^{-5} is on: 5L15 (6) FF-30, 044-2
		If Acc 2^{-6} is on: 5L10 (12) FF-30, 044-3
		If Acc 2^{-7} is on: 5L10 (6) FF-30, 044-3
		If Acc 2^{-8} is on: 5L4 (12) FF-30, 044-3
		If Acc 2^{-9} is on: 5L4 (6) FF-30, 044-4
		If Acc 2^{-10} is on: 5N2 (12) FF-30, 044-4
		If Acc 2^{-11} is on: 5N2 (6) FF-30, 044-4
		If Acc 2^{-12} is on: 5N7 (12) FF-30, 044-5
		If Acc 2^{-13} is on: 5N7 (6) FF-30, 044-5

Stop Code	Stop Locs.	Diagnosis
1470 (Cont'd)	00 5352	If Acc 2^{-14} is on: 5N13 (12) FF-30, 044-5 If Acc 2^{-15} is on: 5N13 (6) FF-30, 044-6 If Acc 2^{-16} is on: 5N18 (12) FF-30, 044-6 If Acc 2^{-17} is on: 5N18 (6) FF-30, 044-6 If Acc 2^{-18} is on: 5N25 (12) FF-30, 044-7 If Acc 2^{-19} is on: 5N25 (6) FF-30, 044-7 If Acc 2^{-20} is on: 5R27 (12) FF-30, 044-7 If Acc 2^{-21} is on: 5R27 (6) FF-30, 044-8 If Acc 2^{-22} is on: 5R22 (12) FF-30, 044-8 If Acc 2^{-23} is on: 5R22 (6) FF-30, 044-8

Stop Code	Stop Locs.	Diagnosis
1471	00 5353	5F20 (10) PA-30, 215 5F21 (12) DI-30, 215 5F23 (21) DN-30, 215 5F19 (10) PA-30, 215 5D26 (7) DI-30, 215
1472	00 5425	5F28 (22) DN-30, 215
1473	00 5434	5F28 (19) DN-30, 215
1474	00 5447	5F28 (26) DN-30, 215 5F17 (27) DN-30, 127 5D28 (27) DI-30, 183-2 5D27 (17) DC-30, 183-2
1475	00 5460	5K15 (20) DI-30, 127
1476	00 5477	5K15 (17) DI-30, 127

Stop Code	Stop Locs.	Diagnosis
1477	00 5454	5D27 (32) DC-30, 183-2
	00 5461	5D25 (15) DC-30, 183-2
		5D28 (31) DI-30, 183-2
1500	00 5537	5F28 (7) DN-30, 215
1501	00 5544	5F28 (30) DN-30, 215
1502	00 5562	5F28 (27) DN-30, 215
		5F17 (28) DN-30, 127
		5D28 (12) DI-30, 183-2
		5F18 (11) DI-30, 124-2
1503	00 5575	5K15 (21) DI-30, 127
1504	00 5611	5K15 (10) DI-30, 127

Stop Code	Stop Locs.	Diagnosis
1505	00 5571 00 5576	5D25 (12) DC-30, 183-2 5D28 (20) DI-30, 183-2
1506	00 5616	5F17 (19, 21) DN-30, 127 5F18 (16) DI-30, 124-2 5D1 (17) DI-30, 124-2
1507	00 5650	5F27 (21) DN-30, 215 5D16 (23, 30) DI-30, 183-1
1510	00 5664	5F26 (17) DC-30, 215
1511	00 5675	5F26 (12) DC-30, 215
1512	00 5704	5D17 (34) DI-30, 183-1 5F28 (23) DN-30, 215

Stop Code	Stop Locs.	Diagnosis
1513	00 5715	5D27 (9) DC-30, 183-2
1514	00 5727	5F28 (11) DN-30, 215
1515	00 5746	5F17 (7) DN-30, 127
1516	00 6324	5D15 (27) DC-30, 183-1
	00 5745	5D28 (19) DI-30, 183-2
	00 6261	
	00 6275	
	00 6305	
	00 6316	
1517	00 6237	5F25 (34) DI-30, 215
1520	00 6250	5F26 (8) DC-30, 215

Stop Code	Stop Locs.	Diagnosis
1521	00 6262	5F25 (31) DI-30, 215
1522	00 6304	5F25 (21) DI-30, 215 5F27 (10) DN-30, 215
1523	00 6317	5F27 (15, 18) DN-30, 215
1524	00 6335	5D25 (25) DC-30, 183-2
1525	00 6341	5C24 (17) DC-30, 183-2
1526	00 6361	5D25 (19) DC-30, 183-2
1527	00 6373	5F17 (18) DN-30, 127

Stop Code	Stop Locs.	Diagnosis
1530	00 6362 00 6372	5F17 (10) DN-30, 127 5D26 (18, 27) DI-30, 183-2 5D27 (19) DC-30, 183-2 5D16 (17) DI-30, 183-1
1531	00 6403	5D16 (17) DI-30, 183-1 5D27 (19) DC-30, 183-2
1532	00 6414	5C15 (13) DN-30, 041-3
1533	00 6422	5D21 (31) DN-30, 183-1
1534	00 6443	5D18 (21) DC-30, 183-1
1535	00 6455	5D26 (19) DI-30, 183-2

Stop Code	Stop Locs.	Diagnosis
1536	00 6452	5D21 (34) DN-30, 183-1
1537	00 6442	5D16 (10) DI-30, 183-1
1540	01 0322	5D16 (6) DI-30, 183-1 5K7 (32) DC-30, 185
1541	01 0334	5K6 (31) DN-30, 185 5K16 (10) PA-30, 127 5K7 (6) DC-30, 185 5K15 (33, 27) DI-30, 127 5K3 (31) BC-30, 185 5R1 (15, 6, 26, 35) UF-30, 051-4 5K1 (33, 27) DI-30, 185 5K9 (30) PA-30, 185 5K2 (25) FF-30, 185 5K11 (14) PA-30, 184 5K12 (16) DI-30, 184
1542	01 0254	5K2 (23, 31) FF-30, 185 5K1 (34) DI-30, 185 5K5 (33) DI-30, 185

Stop Code	Stop Locs.	Diagnosis
1543	01 0273	5K17 (28) DC-30, 127
1544	01 0305	5R1 (13) UF-30, 051-4 5R3 (7) DI-30, 051-4

Stop Code	Stop Locs.	Diagnosis
1545	01 0312	If Acc sign is on: 5D18 (8) DC-30, 183-1 If Acc 2^{-1} is on: 5K7 (27) DC-30, 185 If Acc 2^{-2} is on: 5R20 (8,6) UF-30, 051-1 5R16 (25) DI-30, 051-1 5R18 (6,26) UF-30, 051-1 If Acc 2^{-3} is on: 5R18 (28) UF-30, 051-1 5R16 (27) DI-30, 051-1 If Acc 2^{-4} is on: 5R18 (13) UF-30, 051-1 5R16 (12) DI-30, 051-1 If Acc 2^{-5} is on: 5R15 (33) UF-30, 051-1 5R16 (18) DI-30, 051-1 If Acc 2^{-6} is on: 5R15 (8) UF-30, 051-1 5R16 (26) DI-30, 051-1 If Acc 2^{-7} is on: 5R14 (28) UF-30, 051-2 5R16 (16) DI-30, 051-2 If Acc 2^{-8} is on: 5R14 (13) UF-30, 051-2 5R16 (7) DI-30, 051-2 If Acc 2^{-9} is on: 5R13 (33) UF-30, 051-2 5R10 (21) DI-30, 051-2 If Acc 2^{-10} is on: 5R13 (8) UF-30, 051-2 5R10 (26) DI-30, 051-2

Stop Code	Stop Locs.	Diagnosis
1545 (Cont'd)		If Acc 2^{-11} is on: 5R12 (28) UF-30, 051-2 5R10 (27) DI-30, 051-2 If Acc 2^{-12} is on: 5R12 (13) UF-30, 051-2 5R10 (12) DI-30, 051-2 If Acc 2^{-13} is on: 5R8 (33) UF-30, 051-3 5R10 (18) DI-30, 051-3 If Acc 2^{-14} is on: 5R8 (8) UF-30, 051-3 5R10 (26) DI-30, 051-3 If Acc 2^{-15} is on: 5R7 (28) UF-30, 051-3 5R10 (16) DI-30, 051-3 If Acc 2^{-16} is on: 5R7 (13) UF-30, 051-3 5R10 (7) DI-30, 051-3 If Acc 2^{-17} is on: 5R6 (33) UF-30, 051-3 5R3 (21) DI-30, 051-3 If Acc 2^{-18} is on: 5R6 (8) UF-30, 051-3 5R3 (25) DI-30, 051-3 If Acc 2^{-19} is on: 5R5 (28) UF-30, 051-4 5R3 (27) DI-30, 051-4 If Acc 2^{-20} is on: 5R5 (13) UF-30, 051-4 5R3 (12) DI-30, 051-4

Stop Code	Stop Locs.	Diagnosis
1545 (Cont'd)		If Acc 2^{-21} is on: 5R2 (33) UF-30, 051-4 5R3 (18) DI-30, 051-4 If Acc 2^{-22} is on: 5R2 (8) UF-30, 051-4 5R3 (26) DI-30, 051-4 If Acc 2^{-23} is on: 5R1 (28) UF-30, 051-4 5R3 (16) DI-30, 051-4

Stop Code	Stop Locs.	Diagnosis
1546	01 0344	5K4 (23) FF-30, 185
1547	01 0355	5K6 (28) DN-30, 185 5K4 (28) FF-30, 185
1550	01 0366	5K9 (26) PA-30, 185 5K3 (25) BC-30, 185 5R1 (26, 15) UF-30, 051-4 5K10 (25) PA-30, 184 5K12 (6) DI-30, 184 5R2 (6) UF-30, 051-4
1551	01 0401	5K13 (10) PA-30, 184 5K12 (34) DI-30, 184
1552	01 0411	5K1 (33) DI-30, 185 5K3 (31) BC-30, 185 5K7 (6) DC-30, 185 5K5 (33) DI-30, 185
1553	01 0421	5K7 (34) DC-30, 185 5K3 (25) BC-30, 185

Stop Code	Stop Locs.	Diagnosis
1554	01 0435	5K7 (32) DC-30, 185
1555	01 0447	5K13 (20) PA-30, 184 5K12 (27) DI-30, 184
1556	01 0462	5R2 (6,26,16) UF-30, 051-4 5R5 (6) UF-30, 051-4 5R1 (25) UF-30, 051-4
1557	01 0500	5R2 (26) UF-30, 051-4
1560	01 0516	5R5 (6,26) UF-30, 051-4 5R6 (6) UF-30, 051-3
1561	01 0533	5R5 (26) UF-30, 051-4

Stop Code	Stop Locs.	Diagnosis
1562	01 0546	5R6 (6,26) UF-30, 051-3 5R7 (6) UF-30, 051-3
1563	01 0564	5R6 (26) UF-30, 051-3
1564	01 0602	5R7 (6,26) UF-30, 051-3 5R8 (6) UF-30, 051-3
1565	01 0615	5R7 (26) UF-30, 051-3
1566	01 0630	5R8 (6,26) UF-30, 051-3 5R12 (6) UF-30, 051-2
1567	01 0650	5R8 (26) UF-30, 051-3
1570	01 0666	5R12 (6,26) UF-30, 051-2 5R13 (6) UF-30, 051-2

Stop Code	Stop Locs.	Diagnosis
1571	01 0703	5R12 (26) UF-30, 051-2
1572	01 0714	5R13 (6,26) UF-30, 051-2 5R14 (6) UF-30, 051-2
1573	01 0725	5R13 (26) UF-30, 051-2
1574	01 0736	5R14 (6,26) UF-30, 051-2 5R15 (6) UF-30, 051-1
1575	01 0747	5R14 (26) UF-30, 051-2
1576	01 0760	5R15 (6,26) UF-30, 051-1 5R18 (6) UF-30, 051-1
1577	01 0771	5R15 (26) UF-30, 051-1

Stop Code	Stop Locs.	Diagnosis
1602	00 0662	5L22 (12,33,6,27) FF-30, 044-1 5L28 (12,27) DI-30, 044-1 5L23 (33,34) DI-30, 044-2 5L27 (6,27,16) FF-30, 044-1 5L24 (12,27) DI-30, 044-1 5L25 (9,13) DN-30, 044-1
1603	00 0701	5L22 (6,27) FF-30, 044-2 5L23 (12,27,33,34) DI-30, 044-2 5L25 (17,21) DN-30, 044-2
1604	00 0702	5L15 (12,33) FF-30, 044-2 5L17 (12,27,33,34) DI-30, 044-2 5L18 (9,13) DN-30, 044-2
1605	00 0674	5L15 (6,27) FF-30, 044-2 5L16 (12,27,33,34) DI-30, 044-2 5L18 (17,21) DN-30, 044-2
1606	00 0700	5L10 (12,33) FF-30, 044-3 5L12 (12,27,33,34) DI-30, 044-3 5L13 (9,13) DN-30, 044-3

Stop Code	Stop Locs.	Diagnosis
1607	00 0722	5L10 (6,27) FF-30, 044-3 5L11 (12,27,33,34) DI-30, 044-3 5L13 (17,21) DN-30, 044-3
1610	00 0723	5L4 (12,33) FF-30, 044-3 5L6 (12,27,33,34) 5L7 (9,13) DN-30, 044-3
1611	00 0715	5L4 (6,27) FF-30, 044-4 5L5 (12,27,33,34) DI-30, 044-4 5L7 (17,21) DN-30, 044-4
1612	00 0721	5N2 (12,33) FF-30, 044-4 5L1 (12,27,33,34) DI-30, 044-4 5L2 (9,13) DN-30, 044-4
1613	00 0742	5N2 (6,27) FF-30, 044-4 5N1 (12,27,33,34) DI-30, 044-4 5L2 (17,21) DN-30, 044-4
1614	00 0743	5N7 (12,33) FF-30, 044-5 5N5 (12,27,33,34) DI-30, 044-5 5N4 (9,13) DN-30, 044-5

Stop Code	Stop Locs.	Diagnosis
1615	00 0735	5N7 (6,27) FF-30, 044-5 5N6 (12,27,33,34) DI-30, 044-5 5N4 (17,21) DN-30, 044-5
1616	00 0741	5N13 (12,33) FF-30, 044-5 5N11 (12,27,33,34) DI-30, 044-5 5N10 (9,13) DN-30, 044-5
1617	00 0762	5N13 (6,27) FF-30, 044-6 5N12 (12,27,33,34) DI-30, 044-6 5N10 (17,21) DN-30, 044-6
1620	00 0763	5N18 (12,33) FF-30, 044-6 5N16 (12,27,33,34) DI-30, 044-6 5N15 (9,13) DN-30, 044-6
1621	00 0755	5N18 (6,27) FF-30, 044-6 5N17 (12,27,33,34) DI-30, 044-6 5N15 (17,21) DN-30, 044-6
1622	00 0761	5N25 (12,33) FF-30, 044-7 5N23 (12,27,33,34) DI-30, 044-7 5N22 (9,13) DN-30, 044-7

Stop Code	Stop Locs.	Diagnosis
1623	00 1010	5N25 (6,27) FF-30, 044-7 5N24 (12,27,33,34) DI-30, 044-7 5N22 (17,21) DN-30, 044-7
1624	00 1011	5R27 (12,33) FF-30, 044-7 5N28 (12,27,33,34) DI-30, 044-7 5N27 (9,13) DN-30, 044-7
1625	00 0775	5R27 (6,27) FF-30, 044-8 5R28 (12,27,33,34) DI-30, 044-8 5N27 (17,21) DN-30, 044-8
1626	00 1007	5R22 (12,33) FF-30, 044-8 5R24 (12,27,33,34) DI-30, 044-8 5R25 (9,13) DN-30, 044-8
1627	00 1017	5R22 (6) FF-30, 044-8 5R23 (33,34) DI-30, 044-8 5R25 (17,21) DN-30, 044-8 5R20 (26) UF-30, 044-8
1630	01 1030	5D13 (20,34) DI-30, 215 5F25 (7,22) DI-30, 215

Stop Code	Stop Locs.	Diagnosis
1631	01 1042	5H18(26) DI-35, 052-1
1632	01 1101	5D16 (12) DI-30, 183-1
1633	01 1100	5C25 (34) DI-30, 183-2 5F22 (22) UF-30, 215 5D19 (19) DN-30, 183-1
1634	01 1157	5F15 (7) DI-30, 127 5F14 (10) PA-30, 127 5K17 (34) DC-30, 127 5K7 (11) DC-30, 185 5D25 (21) DC-30, 183-2
1635	01 1156	5F15 (6,11,26) DI-30, 127 5F17 (33) DN-30, 127
1636	01 1165	5K17 (24) DC-30, 127

Stop Code	Stop Locs.	Diagnosis
1637	01 1155	5F16 (34) DC-30, 215
1640	01 1210	5N21 (23) DN-30, 044-1
1641	01 1221	5D20 (29(DC-30, 183-1
1642	01 1231	5C25 (18) DI-30, 184 5D17 (12) DI-30, 183-1
1643	01 1247	5F28 (17) DN-30, 215 5D16 (11) DI-30, 183-1
1644	01 1241	5D28 (25) DI-30, 183-2
1645	01 1276	5D20 (34) DC-30, 183-1

Stop Code	Stop Locs.	Diagnosis
1646	01 1302	5D18 (17) DC-30, 183-1
1647	01 1312	5D16 (29) DI-30, 183-1
1650	01 1341	5F23 (22) DN-30, 215 5D20 (6) DC-30, 183-1
1651	01 1333	5K17 (29) DC-30, 127 5D21 (9) DN-30, 183-1
1652	01 1354	5F17 (14) DN-30, 127 5D22 (32) DC-30, 183-2
1653	01 1360 01 1364	5D28 (29) DI-30, 183-2
1654	01 1376	5D17 (17) DI-30, 183-1

Stop Code	Stop Locs.	Diagnosis
1655	01 1406	5F17 (15) DN-30, 127
1656	01 1414	5D28 (10) DI-30, 183-2
1657	01 1420 01 1426	5D17 (19) DI-30, 183-1

Stop Code	Stop Locs.	Diagnosis
1660	01 1527	If Acc sign is on: 5C24 (12) DC-30, 183-2 5F17 (24) DN-30, 127 5D13 (21) DI-30, 215 If Acc 2^{-1} is on: 5L27 (29) FF-30, 044-1 5R17 (33) DI-30, 051-1 If Acc 2^{-2} is on: 5L22 (20) FF-30, 044-1 5R17 (27) DI-30, 051-1 If Acc 2^{-3} is on: 5R17 (10) DI-30, 051-1 If Acc 2^{-4} is on: 5R17 (18) DI-30, 051-1 If Acc 2^{-5} is on: 5R17 (23) DI-30, 051-1 5L15 (29) FF-30, 044-2 If Acc 2^{-6} is on: 5R17 (16) DI-30, 051-2 5L10 (20) FF-30, 044-3 If Acc 2^{-7} is on: 5R17 (14) DI-30, 051-2 If Acc 2^{-8} is on: 5R11 (21) DI-30, 051-2 If Acc 2^{-9} is on: 5R11 (33) DI-30, 051-2 5L4 (29) FF-30, 044-4 If Acc 2^{-10} is on: 5R11 (27) DI-30, 051-2 5N2 (20) FF-30, 044-4

Stop Code	Stop Locs.	Diagnosis
1660 (Cont'd)		If Acc 2^{-11} is on: 5R11 (10) DI-30, 051-2 If Acc 2^{-12} is on: 5R11 (18) DI-30, 051-3 If Acc 2^{-13} is on: 5R11 (23) DI-30, 051-3 5N7 (29) FF-30, 044-5 If Acc 2^{-14} is on: 5R11 (16) DI-30, 051-3 5N13 (20) FF-30, 044-5 If Acc 2^{-15} is on: 5R11 (14) DI-30, 051-3 If Acc 2^{-16} is on: 5R4 (21) DI-30, 051-3 If Acc 2^{-17} is on: 5R4 (33) DI-30, 051-3 5N18 (29) FF-30, 044-6 If Acc 2^{-18} is on: 5R4 (27) DI-30, 051-4 5N25 (20) FF-30, 044-7 If Acc 2^{-19} is on: 5R4 (10) DI-30, 051-4 If Acc 2^{-20} is on: 5R4 (18) DI-30, 051-4 If Acc 2^{-21} is on: 5R4 (23) DI-30, 051-4 5R27 (29) FF-30, 044-8 If Acc 2^{-22} is on: 5R4 (16) DI-30, 051-4 5R22 (20) FF-30, 044-8

Stop Code	Stop Locs.	Diagnosis
1660 (Cont'd)		If Acc 2^{-23} is on: 5F26 (21) DC-30, 215 5R4 (14) DI-30, 051-4

Stop Code	Stop Locs.	Diagnosis
1661	01 1537	5D16 (33) DI-30, 183-1 5K1 (17) DI-30, 185
1662	01 1546	5D15 (24) DC-30, 183-1 5K7 (9) DC-30, 185 5K2 (14) FF-30, 185 5K12 (33) DI-30, 184 5R1 (14, 23) UF-30, 051-4 5K9 (22) PA-30, 185 5K5 (34) DI-30, 185
1663	01 1561	5K4 (8) FF-30, 185 5K12 (23) DI-30, 184 5K10 (22) PA-30, 184 5K1 (23) DI-30, 185
1664	01 1571	5K4 (31) FF-30, 185 5K14 (6) DC-30, 184 5L21 (14) DI-30, 044-1
1665	01 1602	5K1 (6) DI-30, 185 5L26 (7) DI-30, 044-1 5K12 (31) DI-30, 184

Stop Code	Stop Locs.	Diagnosis
1666	01 1612	5K13 (14) PA-30, 184
1667	01 1675	5K9 (16, 32) PA-30, 185, 184 5R14 (18, 23) UF-30, 051-2 5R13 (18, 23) UF-30, 051-2 5R12 (18, 23) UF-30, 051-2
1670	01 1625	5K9 (35) PA-30, 185
1671	01 1636	5D15 (35) DC-30, 183-1
1672	01 1475	5D26 (31) DI-30, 183-2
1673	01 1474	5C15 (22) DN-30, 041-3
1674	01 1467	5D21 (15) DN-30, 183-1

Stop Code	Stop Locs.	Diagnosis
1675	01 1661	5R20 (18) UF-30, 051-1 5R18 (18, 23) UF-30, 051-1 5R15 (18, 23) UF-30, 051-1
1676	01 1712	5R8 (18, 23) UF-30, 051-3 5R7 (18, 23) UF-30, 051-3 5R6 (18, 23) UF-30, 051-3 5K9 (18) PA-30, 184
1677	01 1642 01 1713	5R5 (18, 23) UF-30, 051-4 5R2 (18, 23) UF-30, 051-4
1700	01 2021	5D21 (11) DN-30, 183-1

Stop Code	Stop Locs.	Diagnosis
1701	01 2055	If Acc 2^{-1} is on: 5R17 (25) DI-30, 051-1 If Acc 2^{-2} is on: 5R17 (29) DI-30, 051-1 If Acc 2^{-3} is on: 5L22 (29) FF-30, 044-2 If Acc 2^{-4} is on: 5L15 (20) FF-30, 044-2 If Acc 2^{-5} is on: 5R17 (26) DI-30, 051-1 If Acc 2^{-6} is on: 5R17 (13) DI-30, 051-2 If Acc 2^{-7} is on: 5L10 (29) FF-30, 044-3 If Acc 2^{-8} is on: 5L4 (20) FF-30, 044-3 If Acc 2^{-9} is on: 5R11 (25) DI-30, 051-2 If Acc 2^{-10} is on: 5R11 (29) DI-30, 051-2 If Acc 2^{-11} is on: 5N2 (29) FF-30, 044-4 If Acc 2^{-12} is on: 5N7 (20) FF-30, 044-5 If Acc 2^{-13} is on: 5R11 (26) DI-30, 051-3 If Acc 2^{-14} is on: 5R11 (13) DI-30, 051-3

Stop Code	Stop Locs.	Diagnosis
1701 (Cont'd)		If Acc 2^{-15} is on: 5N13 (29) FF-30, 044-6
		If Acc 2^{-16} is on: 5N18 (20) FF-30, 044-6
		If Acc 2^{-17} is on: 5R4 (25) DI-30, 051-3
		If Acc 2^{-18} is on: 5R4 (29) DI-30, 051-4
		If Acc 2^{-19} is on: 5N25 (29) FF-30, 044-7
		If Acc 2^{-20} is on: 5R27 (20) FF-30, 044-7
		If Acc 2^{-21} is on: 5R4 (26) DI-30, 051-4
		If Acc 2^{-22} is on: 5R4 (13) DI-30, 051-4
		If Acc 2^{-23} is on: 5R25 (34) DN-30, 044-8

Stop Code	Stop Locs.	Diagnosis
1702	01 2073	5K17 (23) DC-30, 127 5K6 (9) DN-30, 185
1703	01 2114	5F28 (6) DN-30, 215 5K4 (17, 22) FF-30, 185 5K2 (18) FF-30, 185
1704	01 2165	5D15 (6) DC-30, 183-1 5K4 (25) FF-30, 185
1705	01 2177	5F26 (19, 20) DC-30, 215 5K6 (21) DN-30, 185
1706	01 2210	5K6 (17) DN-30, 185 5K12 (19) DI-30, 184
1707	01 2221	5K14 (35) DC-30, 184 5K6 (13) DN-30, 185

Stop Code	Stop Locs.	Diagnosis
1710	01 2231	5R20 (25) UF-30, 044-8 5K5 (27) DI-30, 185
1711	01 2244	5K7 (24) DC-30, 185 5K5 (22) DI-30, 185
1712	01 2254	5D16 (34) DI-30, 183-1
1713	01 2265	5F17 (26) DN-30, 127
1714	01 2275	5K7 (8) DC-30, 185
1715	01 2306	5K1 (10) DI-30, 185
1716	01 2317	5F22 (32) UF-30, 215

Stop Code	Stop Locs.	Diagnosis
1717	01 2130	5D26 (20) DI-30, 183-2
1720	01 2305	5K6 (23, 27) DN-30, 185
	01 2316	5D15 (20, 29) DC-30, 183-1
1721	01 2336	5D8 (35) DC-30, 215
1722	01 2363	5D19 (18) DN-30, 183-1
1723	01 2376	5D26 (29) DI-30, 183-2
1724	01 2452	5D24 (30) PA-30, 183-2
		5D11 (26) PA-30, 041-3
1725	01 2460	5C20 (21) DN-30, 041-3
		5D11 (20) PA-30, 041-3

Stop Code	Stop Locs.	Diagnosis
1726	01 2471	5D11 (30) PA-30, 041-3

Stop Code	Stop Locs.	Diagnosis
1727	01 2433	If Acc sign is on: 5C1 (9, 10) DN-30, 041-1
	01 2542	If Acc 2^{-1} is on: 5C2 (9, 10) DN-30, 041-1
	01 2616	If Acc 2^{-2} is on: 5C1 (21) DN-30, 041-1 5C3 (34) DC-30, 041-1
	01 3156	If Acc 2^{-3} is on: 5C4 (9) DN-30, 041-1
		If Acc 2^{-4} is on: 5C5 (9) DN-30, 041-1
		If Acc 2^{-5} is on: 5C4 (21) DN-30, 041-1 5C6 (31) DN-30, 041-1
		If Acc 2^{-6} is on: 5C6 (13) DN-30, 041-1
		If Acc 2^{-7} is on: 5C7 (9) DN-30, 041-1
		If Acc 2^{-8} is on: 5C8 (9) DN-30, 041-2
		If Acc 2^{-9} is on: 5C9 (9) DN-30, 041-2
		If Acc 2^{-10} is on: 5C8 (21) DN-30, 041-2 5C10 (34) DC-30, 041-2
		If Acc 2^{-11} is on: 5C11 (9) DN-30, 041-2
		If Acc 2^{-12} is on: 5C12 (9) DN-30, 041-2

Stop Code	Stop Locs.	Diagnosis
1727 (Cont'd)		If Acc 2^{-13} is on: 5C11 (21) DN-30, 041-2 5C13 (31) DN-30, 041-2 If Acc 2^{-14} is on: 5C13 (13) DN-30, 041-2 If Acc 2^{-15} is on: 5C14 (9) DN-30, 041-2

Stop Code	Stop Locs.	Diagnosis
1730	01 2640	5D26 (6) DI-30, 183-2 5F17 (31) DN-30, 127 5D24 (20) PA-30, 183-2
1731	01 2651	5D24 (26) PA-30, 183-2
1732	01 3165	5D27 (24) DC-30, 183-2

Stop Code	Stop Locs.	Diagnosis
3777	See Program Listing	This stop code logically should not occur. It has been used in the program as a safety stop. If,for example, the program has 4 choices it generally does not assume the 4th choice after eliminating the first three. Instead the program looks for the 4th condition - if it also does not exist then the program will stop with a 27 3777. This will prevent the program from continuing when unpredictable symptoms occur. Transients, intermittents or more than one failure will in many cases cause a 27 3777 stop.

5.0 Program Description

This section provides more detailed information than section 2, concerning the design of the GP Diagnostic. Used in conjunction with the Flow Charts, Appendix A, and the Program Listing, Appendix B, thorough knowledge of the GP Diagnostic may be obtained. Before studying the details, the general design philosophy, section 2 should be read. In particular section 2.3, Assumptions, should be thoroughly understood, since they have been rigidly adhered to, in the design of the program.

The bulk of the program is stored on physical bands 00 and 01. All four quadrants of the first band and the first two quadrants of the second band are used. The remaining two quadrants of the second band (01) are zeroed out. The first quadrant of each of the remaining bands, 02-10, contain programs which are used for band sequencing checkout. The remaining quadrants of bands 02-10 are zeroed out.

When the program runs to completion each instruction in the Mark I will have been exercixed utilizing different test patterns which have been chosen to detect logical failures. For example, flip-flops will have been set and reset,using every input to the set, reset and complement nodes shown on the logic drawings. This implies that in general each instruction is performed several times. Each

instruction, however, is not performed under all possible conditions. This is not necessary and, practically speaking, impossible to perform. For example, exercising the logic used by an ADD under all possible conditions would necessitate adding every number of magnitude within the Mark I capacity, to every other number. This, of course, would require a program with a running time literally measured in years. This restriction thus leads to the conclusion that the program is not responsible for the detection of failures which are sensitive to random type patterns.

At the start the program and procedures (see Start-up, sec. 3.2) are designed to checkout certain basic properties of the computer which must function correctly in order for any program to function. Thus, the first step is to check that instructions can be correctly read off the drum.

This is checked by manually single stepping through a NPB (25 3777) and a NPA 12 0000). If these instructions appear correctly in the instruction nixies then it is verified that each of the 6 stages of the instruction can carry both a one and a zero. It should be noted that in the event of failure, in the NPB or NPA, the diagnosis assumes that the timing pulse distribution, drum address counter, auxiliary drum address counter and associated logic, are functioning correctly. These assumptions are made throughout the remainder of the program.

Upon successful completion of the NPB and NPA the program checks out the SKP and BIN logic. These were chosen because, they are essential for program control (i. e. the ability of the program to make decisions) and therefore must be used for future testing.

No assumptions are made regarding the initial state of the Boolean Accumulator. The 27 3777 stop (see Stop Code, sec. 4) has been extensively used here to block any erroneous skipping which is unpredictable. Certain types of failures will at this point cause the program to enter an endless "skip-loop". This is called to your attention in the start-up procedures, section 3.2. Having checked out SKP and BIN the program begins to test the BLD, OR and AND instructions and associated logic. This includes the testing of the boolean salvage register. In fact, only the boolean salvage register is addressed by the BLD, OR and AND, because core memory addressing has not as yet been tested. These instructions are tested again using core memory bits later in the program - after core memory accessing has been tested.

The FLN, INS, ABS, SFT and associated logic is tested next. These instructions are then used to generate test patterns which are stored, via the ST instruction, into the core memory. The test patterns and core memory locations were strategically chosen to provide a logical

checkout of the core memory. In order to check the memory, a memory access type of instruction must be utilized. The ADD instruction was chosen because it involved the least amount of logic. Therefore, a partial checkout of the ADD (enough to allow memory testing) was performed prior to storing data in the memory. The ADD was then used to compare the data stored to the data retrieved. In short, the ST, part of the ADD, and the core memory are checked as a group. Certain types of core memory failures will have been detected prior to this test, in loading or NPB, NPA. The boolean addressing of core memory is then tested using the BLD instruction. The program has now checked out enough logic to make use of a subroutine, which reduces the amount of repetitive coding at the expense of running time. This was necessary in order to insure that the instructions used in checking band sequencing are tested within the first band (see below), Band Sequencing). The subroutine is used to compare test results with pre-computed results and stores any detected discrepancies. The subroutine then, is the final stage of any testing function. The flow of a testing function which uses the subroutine is as follows:

(a) Set a flag identifying the test

(b) Store pre-computed (correct) results

(c) Perform the test

(d) Store the Test results

(e) Skip to the subroutine (which is physically located in band 00)

(f) Execute the subroutine

(g) Skip to the test

(h) If comparison OK repeat (a) thru (h) for the next test

Completion of any test which makes use of the subroutine, requires more than one drum revolution. In fact the number of drum revolutions between the start and completion of a test is a function of the repetition rate of the band from which the test is executed. For example, a test executed from the Fast band requires 2 drum revolutions to complete, the same test from a Medium band requires 8 drum revolutions. The running time of the program therefore, will change if the band rep rate is changed. Prior to executing the first test which requires the subroutine, the bits which are used to sequence the tests are initialized.

The LDK, ADD, LDA, ILD, SUB and IST instructions are then tested. This brings us physically near the end of the first (00) band. Any further testing therefore will appear in the next band

(01). Before using this band we must first be sure that band 01 is selected. A band sequencing check therefore, is performed next.

The band sequencing check is comprised of essentially a common program which appears on all bands. The band sequencing program monitors 33 consecutive drum revolutions using, of course, only logic which has been previously checked out. The program during the 33 revolutions generates a table which depicts the sequence in which the bands are executed. This table is in the form of a matrix containing 11 rows and 33 columns. The first row corresponds to physical band 00, the second to physical band 01, ..., the eleventh to physical band 10. The 33 columns correspond to the 33 drum revolutions necessary to perform the tests. For each band, then the revolution during which it was performed can be determined, by noting the columns in which a one appears. The use of this matrix is described in the stop code if a band sequencing error is detected.

NOTE: Whenever the band sequencing is changed via the plugboard the program must be changed as shown in the table following. The program listing, Appendix B, shows the correct values for one fast band, 2 mediums, and 8 slows.

Location	Contents
00 7602	22 aaaa
00 7612	22 bbbb
00 7622	22 cccc
00 7632	22 dddd
00 7642	22 eeee
00 7652	22 ffff
00 7662	22 gggg
00 7672	22 hhhh
00 7702	22 kkkk
00 7712	22 llll
00 7722	22 mmmm

where $(aaaa)_8 = 2(n+1)$, n_1 = # of times band 00 is executed in 32 drum revolutions

$(bbbb)_8 = 2n_2$, n_2 = # of times band 01 is executed in 32 drum revolutions

$(cccc)_8 = 2n_3$, n_3 = # of times band 02 is executed in 32 drum revolutions

$(dddd)_8 = 2n_4$, n_4 = # of times band 03 is executed in 32 drum revolutions

$(eeee)_8 = 2n_5$, n_5 = # of times band 04 is executed in 32 drum revolutions

$(ffff)_8 = 2n_6$, n_6 = # of times band 05 is executed in 32 drum revolutions

$(gggg)_8 = 2n_7$, n_7 = # of times band 06 is executed in 32 drum revolutions

$(hhhh)_8 = 2n_8$, n_8 = # of times band 07 is executed in 32 drum revolutions

$(kkkk)_8 = 2n_9$, n_9 = # of times band 08 is executed in 32 drum revolutions

$(llll)_8 = 2n_{10}$, n_{10} = # of times band 09 is executed in 32 drum revolutions

$(mmmm)_8$ $2n_{11}$, n_{11} = # of times band 10 is executed in 32 drum revolutions

After verifying that the band sequencing is correct the program proceeds to test the MLT, NMT, SQ, SCL, ZSL, DIV, SRS, and BST instructions. These tests are executed from band 01.

In certain strategic locations of the programs there exist instructions for detection of certain types of drum loader failures and blanking memory failures. If some location other than 0-6, 2000, 4000, 6000 is blanked out, due to a single failure in resetting of the memory flip-flop, it will be detected. The program therefore should never be moved since some tests are valid only if executed from specific drum locations. The program, however, does not provide for orderly detection of a failure which does <u>not</u> blank out 0-6, 2000, 4000, and 6000. This check, however, can be manually performed, by executing any program that does not have a programmed skip over

0-6, 2000, 4000, and 6000, with an instruction replace (with a STOP) of these locations. If, for example, location 2000 has been replaced with a STOP, and a failure exists such that 2000 is executed, then the program will Stop.

Upon successful completion of the program the MarkI will STOP with a 27 0000. The program has provided the ability to continuously loop, or to execute itself once more and stop again. If either of these options is chosen, the program skips all tests until it comes to the logical beginning of the program (location 00 0042). This is noted here, because it is a departure from most simulator type programs which really have no logical beginning or end.

Upon detection and diagnosis of a failure the program stops with a uniquely coded STOP instruction. The program has no capability for distinguishing between intermittent and solid type failures. The program, however, has provided a convenient way for the operator to execute again via looping option # 2 (section 3.3). This option should always be chosen at least once and if the same STOP occurs again the failure can be safely called solid. The Stop codes list, section 4 can then be used to isolate the fault. In order for looping option # 2 to be effective it requires that certain logic function correctly. For this reason, use of the option when a Stop Code, less than 1200

occurs, is not recommended. In using the stop codes list, the Stop Code and location at which the Stop occurs must match. This is necessary due to the fact that certain failures in memory addressing during loading, will cause a stop at the incorrect location. The diagnosis does not consider this possibility. The operator, therefore, where noting an incorrect address, should not rely on the diagnosis.

The program tape consists of 44 GP blocks (all short) followed by a Reel End code, followed by 16 LFI blocks and a Reel End Code, followed by 4 DP blocks and a Reel End Code. All LFI and DP quadrants are zeroed out except location 0041 of the first LFI band. The following points on the tape are labelled:

End of 1st block

End of 2nd block

End of 3rd block

End of 4th block

End of 5th block

End of 9th block

End of 13th block

End of 17th block

End of 21st block

End of 25th block

End of 29th block

End of 33rd block

End of 37th block

End of 41st block

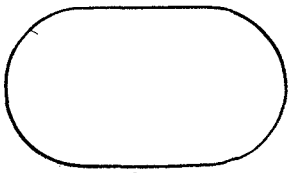
End of GP Program

End of INT Program

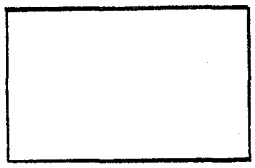
End of Tape

This labelling is not essential; however, analysis of loading failures has been included and in some instances, is dependent upon the point on the tape at which the reader stops. The program tape contains certain bit configurations specifically designed to detect failures in the loader which would preclude successful operation of the GP diagnostic program. For example, the Zone bit in location 0041 of the first LFI band is set so that certain loading failures are diagnosable. The lead instructions of bands 01-05 on the tape have been chosen such that certain failures in the loader will be detected.

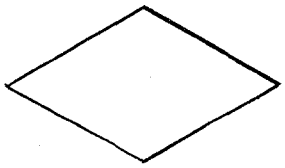
FLOW CHARTING SYMBOLS



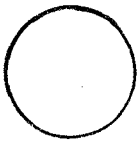
Decisions



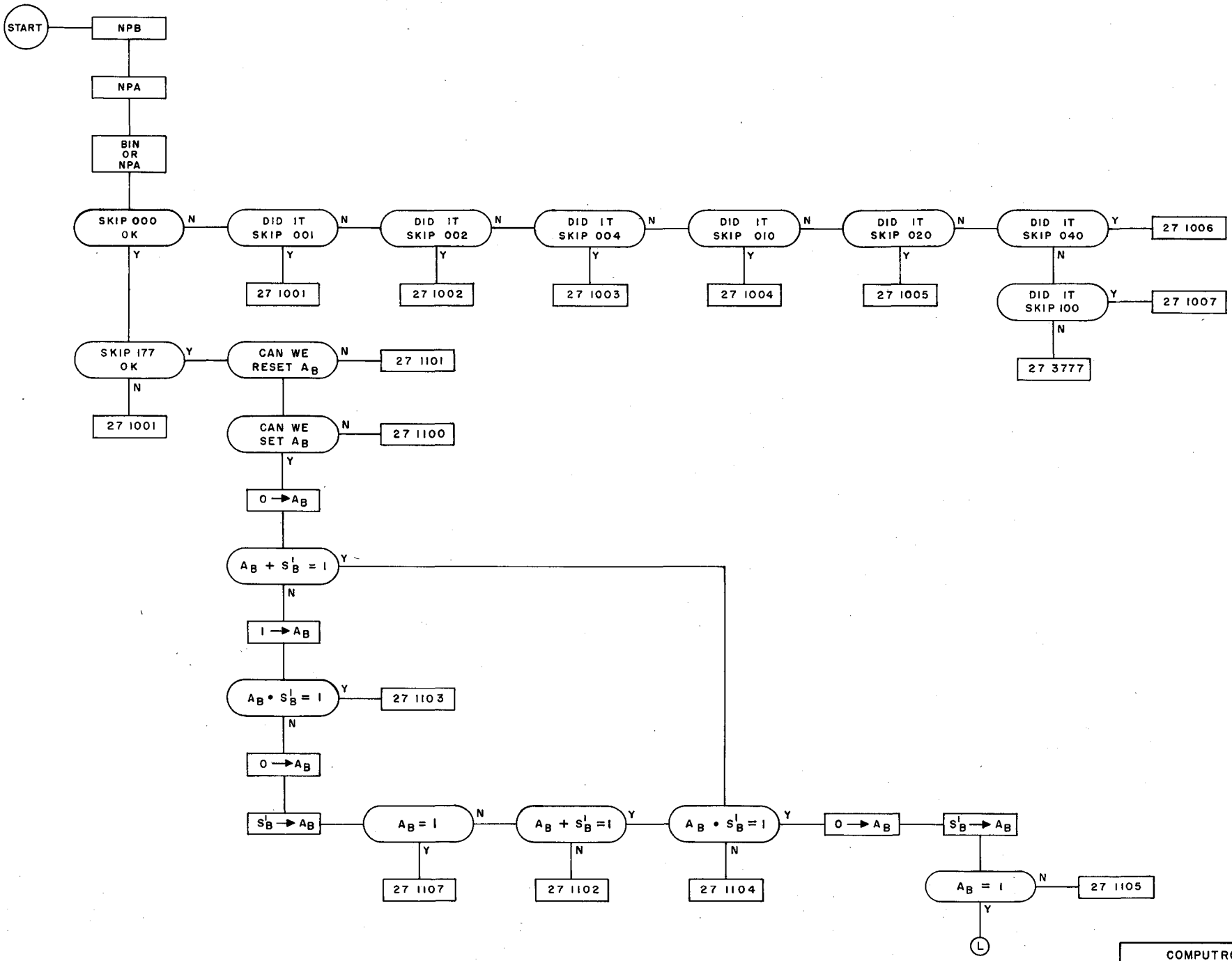
Statements



Set Variable Connector



Connector (Fixed or Variable)



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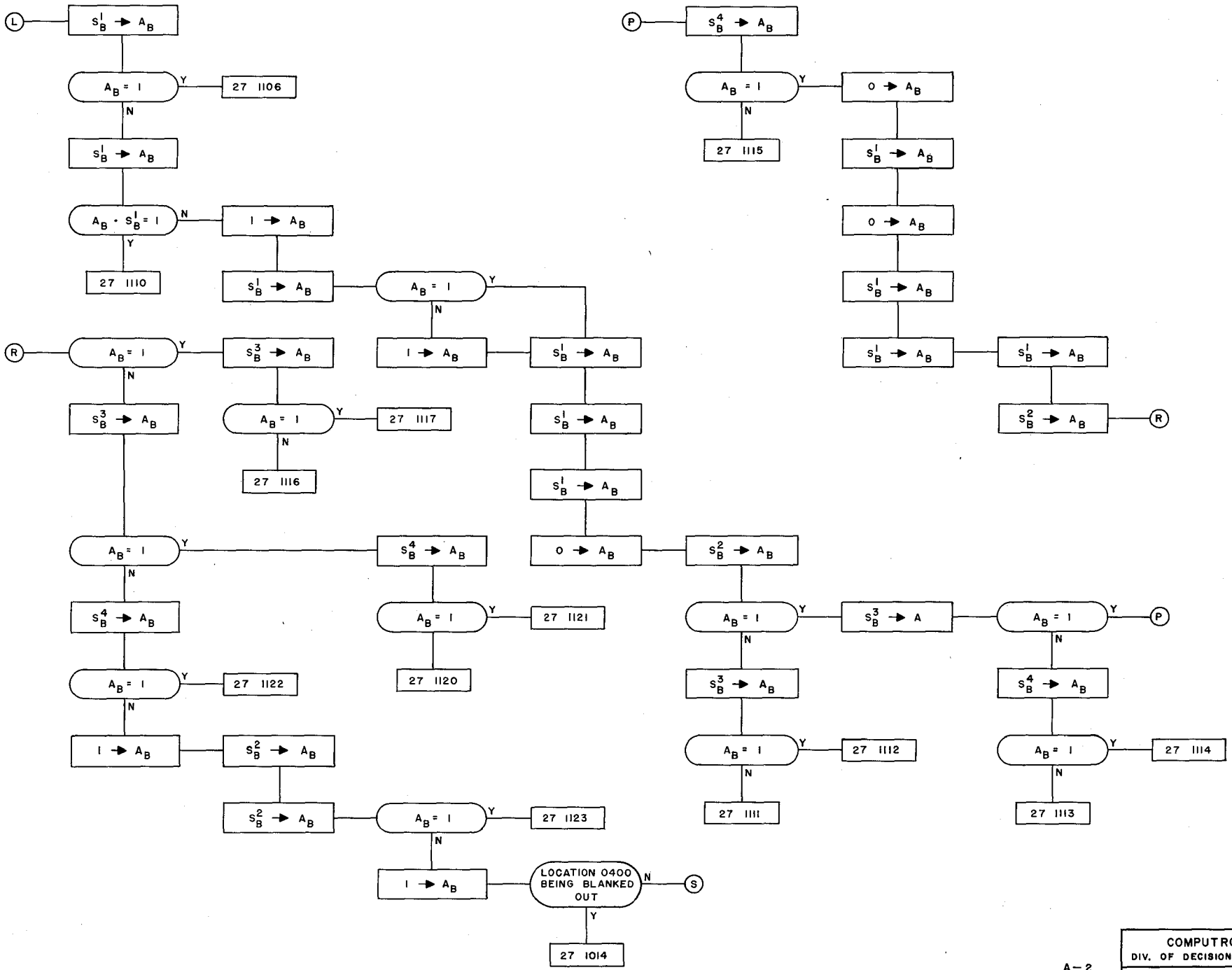
GP DIAGNOSTIC — MARK I



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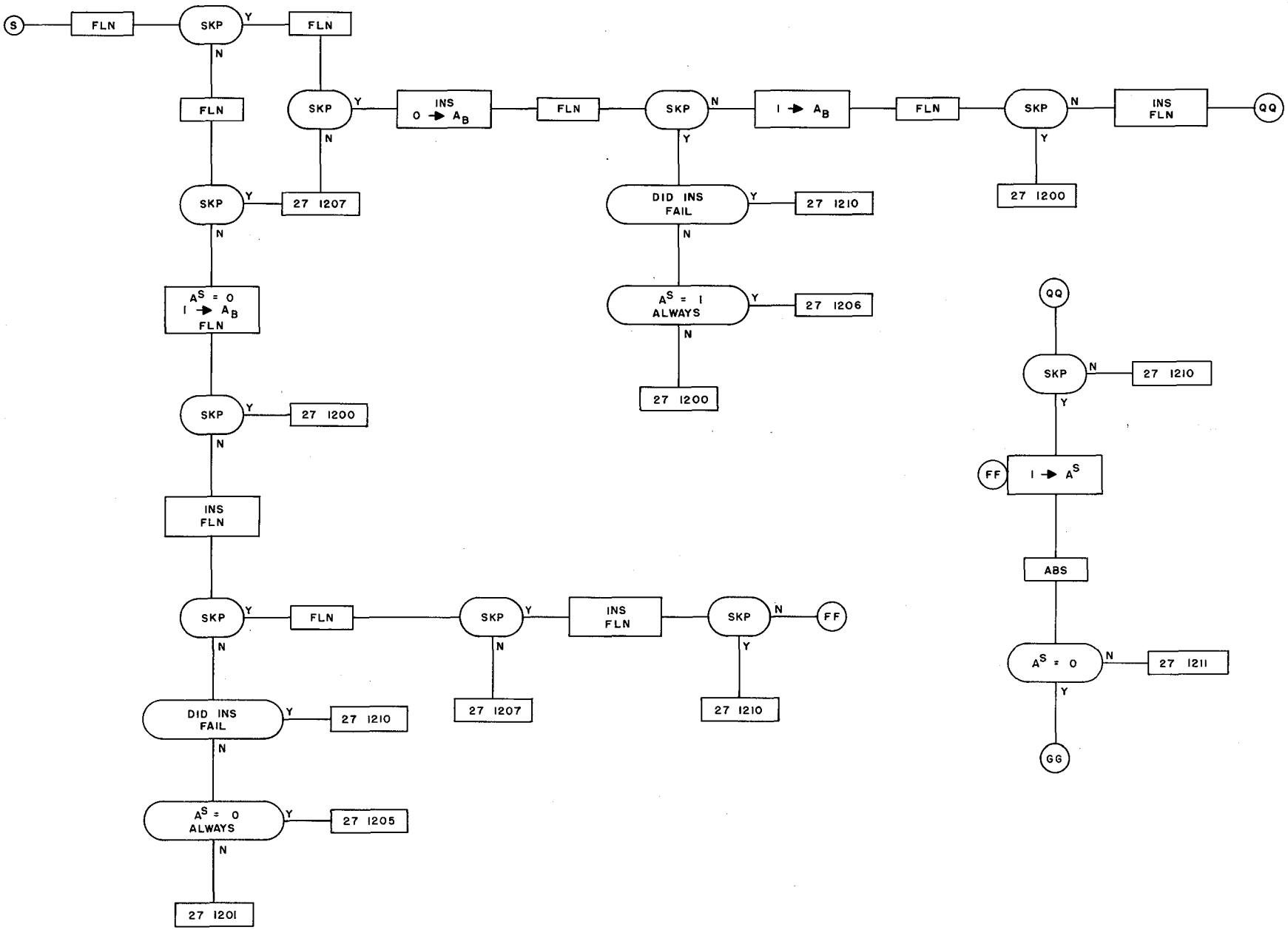

COMPUTRONICS
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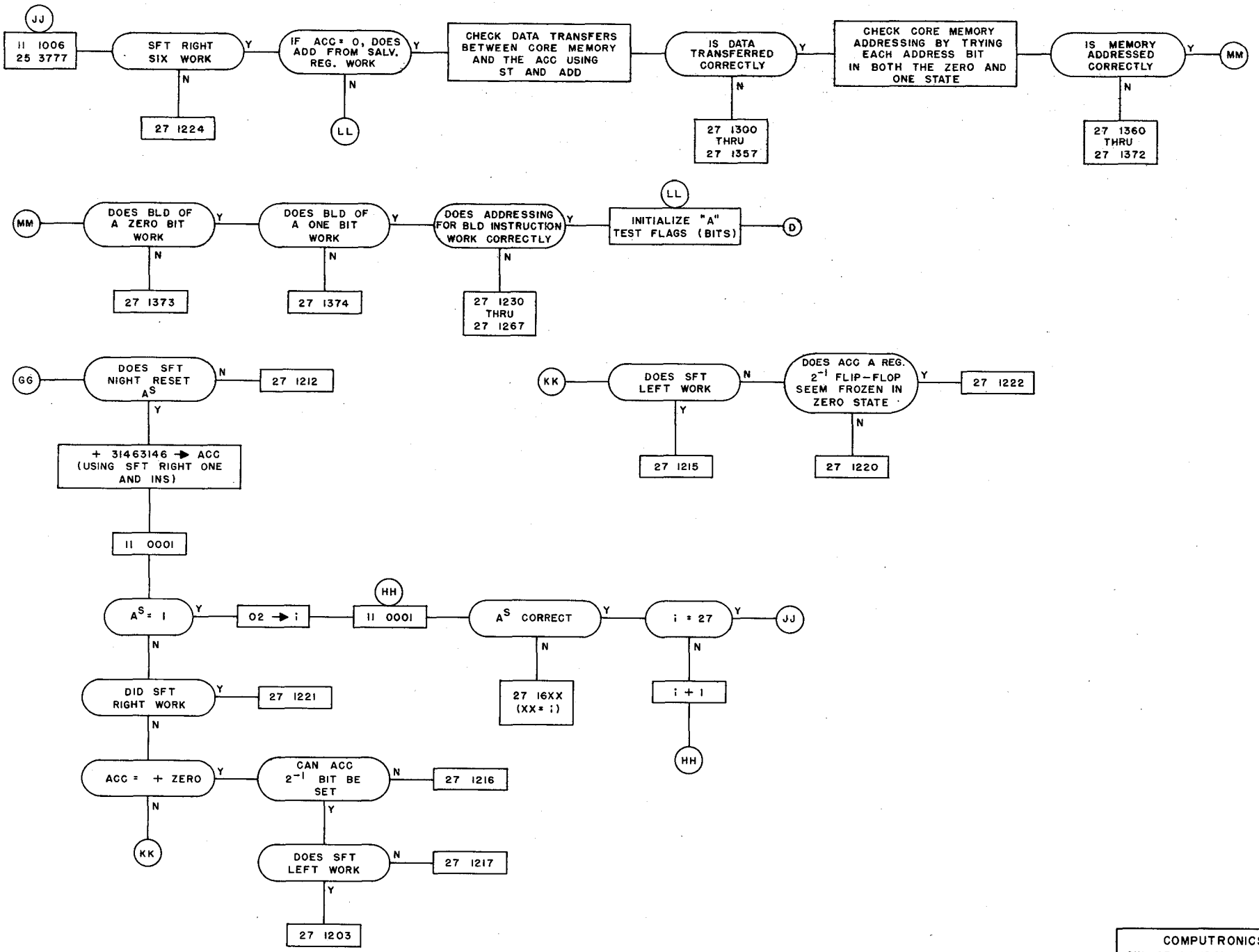
GP DIAGNOSTIC – MARK I



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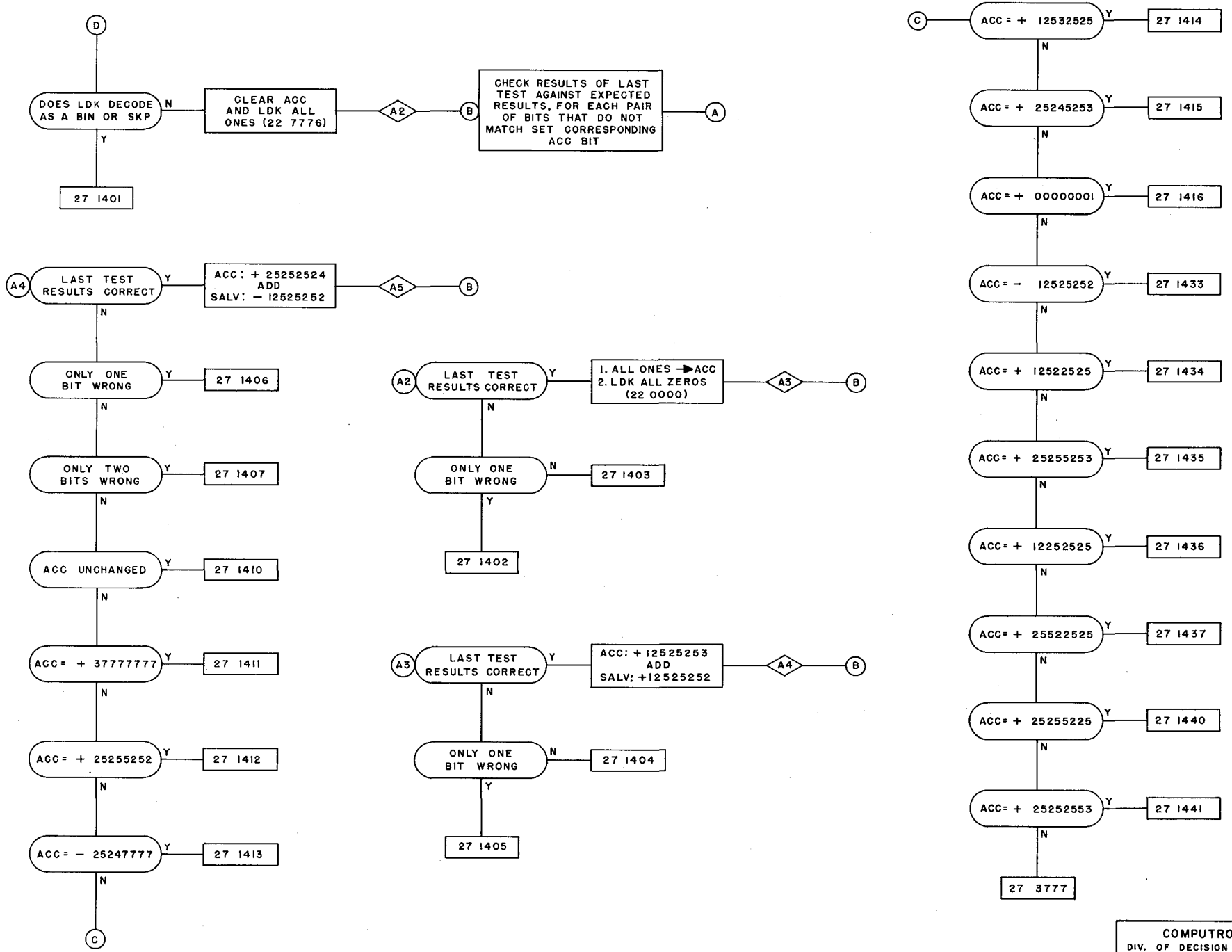
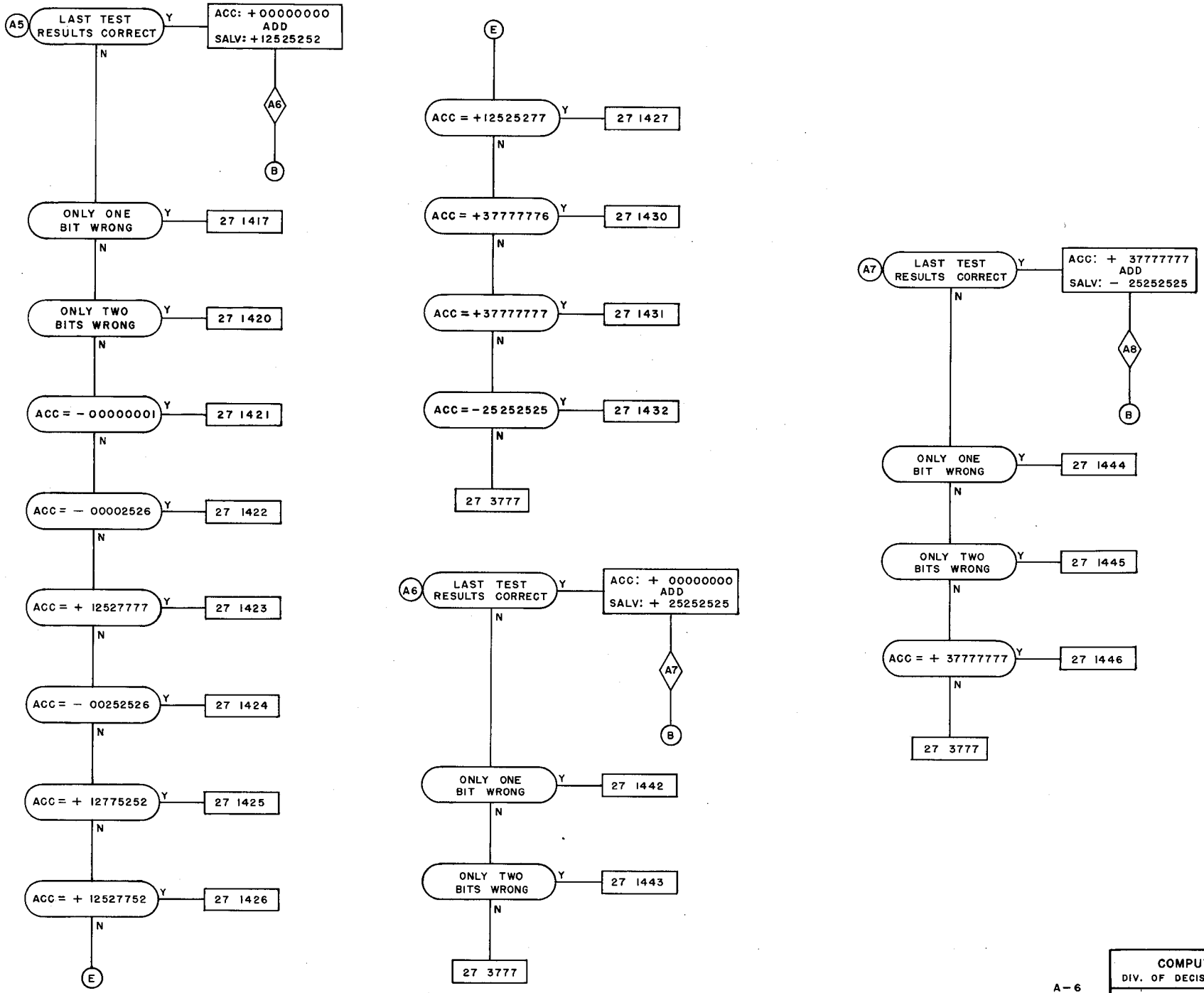
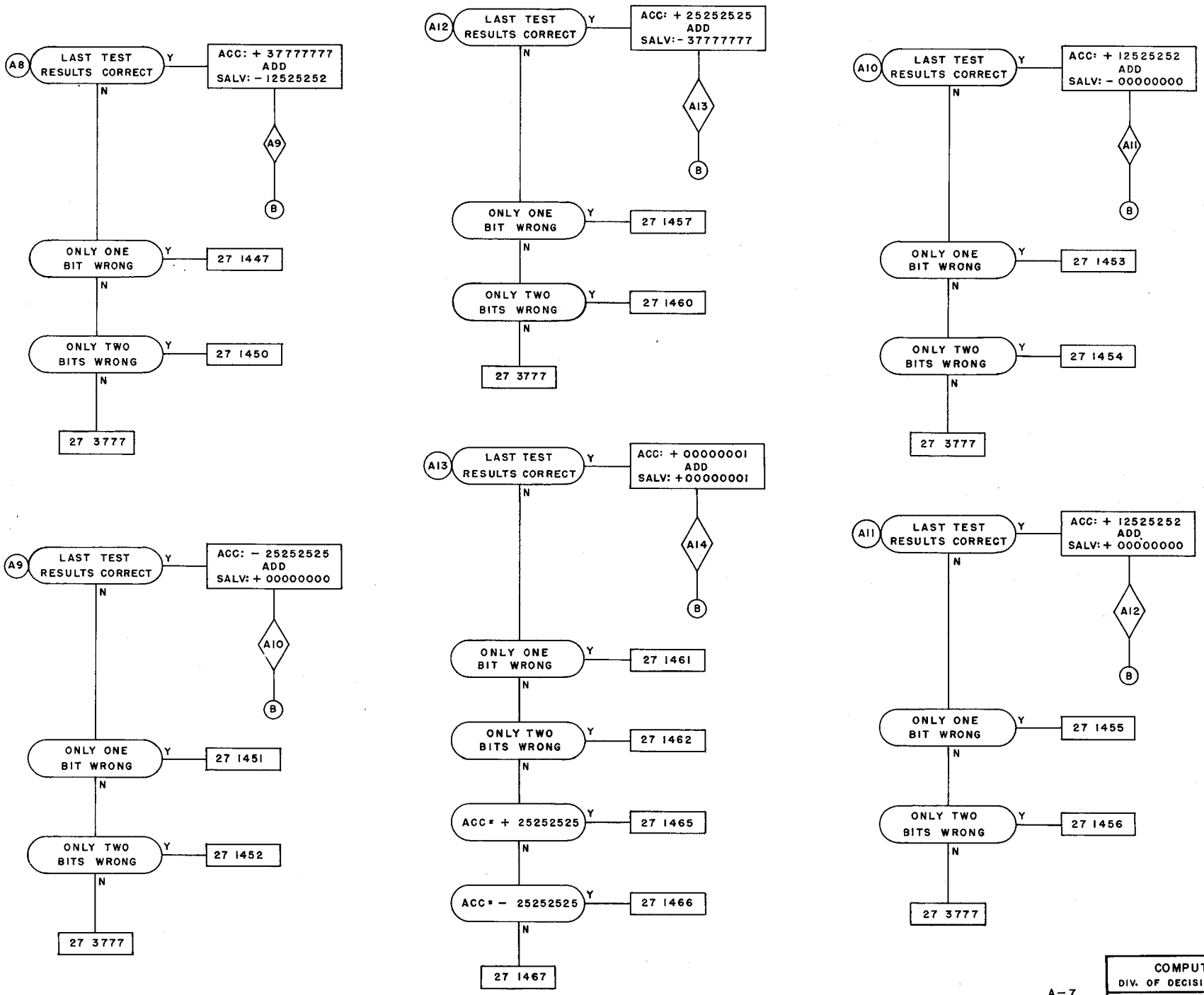
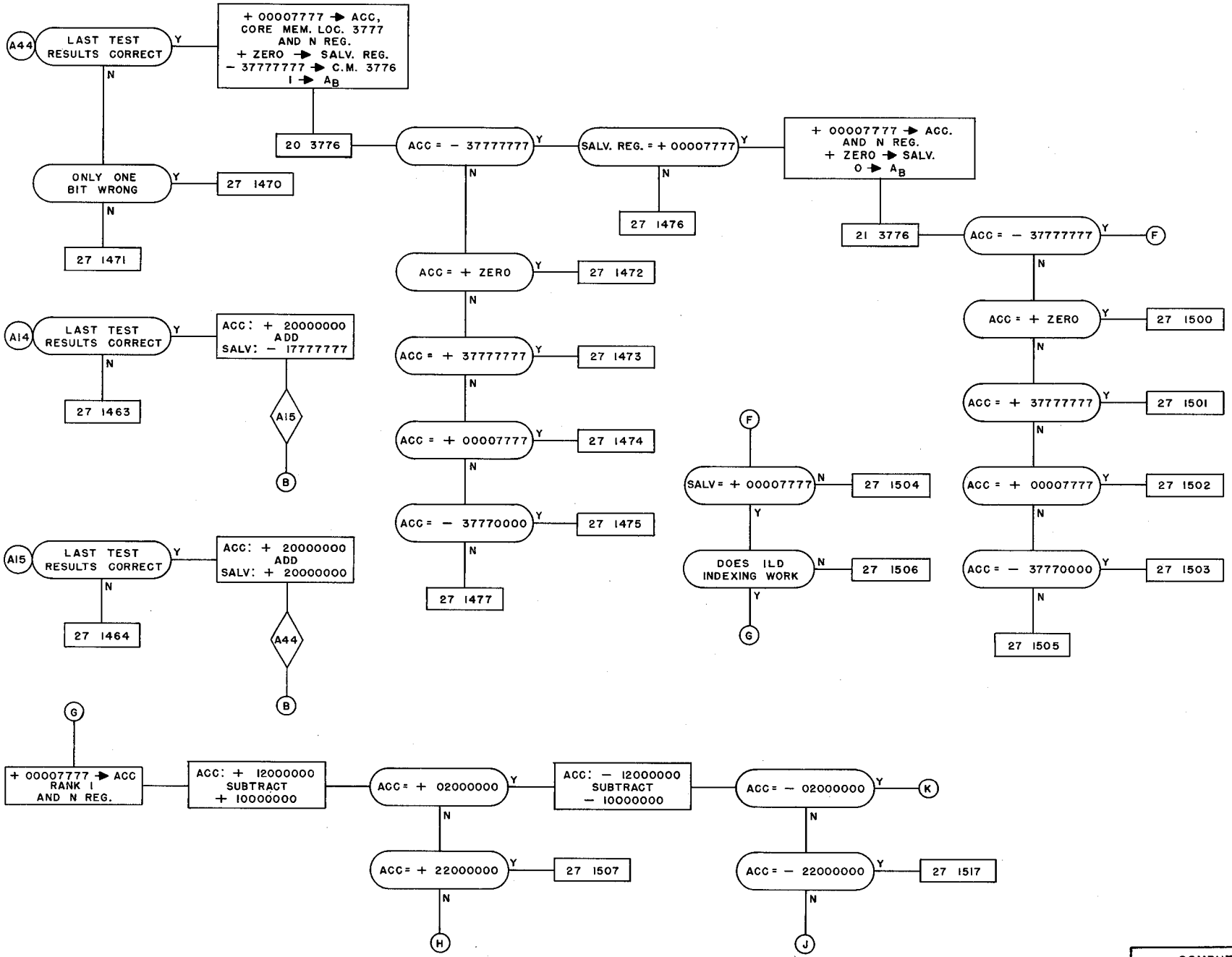
GP DIAGNOSTIC – MARK I

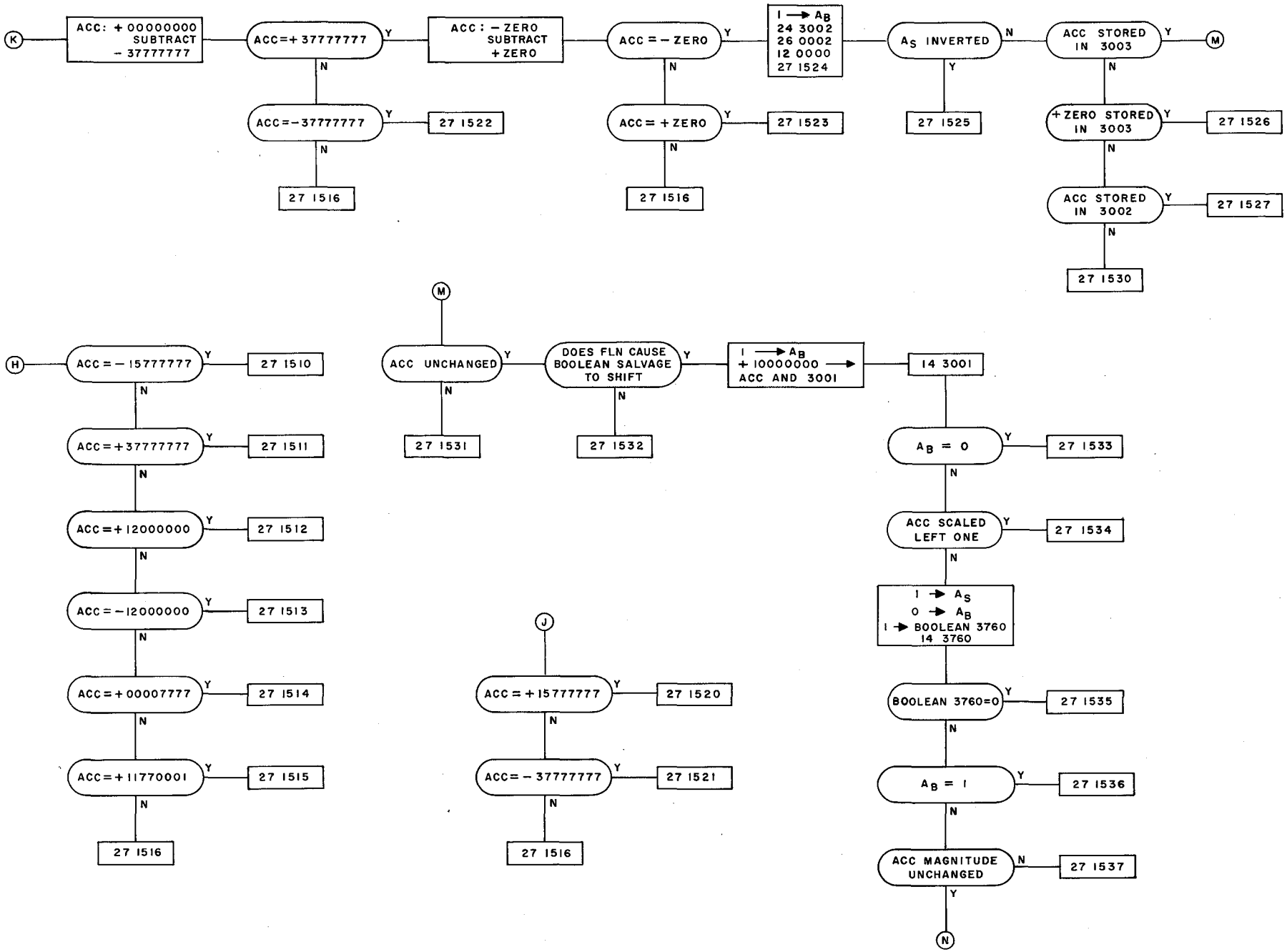

D
DOES LDK DECODE AS A BIN OR SKP
N
Y
CLEAR ACC AND LDK ALL ONES (22 7776)
A2
B
CHECK RESULTS OF LAST TEST AGAINST EXPECTED RESULTS. FOR EACH PAIR OF BITS THAT DO NOT MATCH SET CORRESPONDING ACC BIT
A
27 1401
A4
LAST TEST RESULTS CORRECT
ACC: + 25252524 ADD SALV: − 12525252
A5
B
ONLY ONE BIT WRONG
27 1406
ONLY TWO BITS WRONG
27 1407
ACC UNCHANGED
27 1410
ACC = + 37777777
27 1411
ACC = + 25255252
27 1412
ACC = − 25247777
27 1413
C
A2
LAST TEST RESULTS CORRECT
1. ALL ONES → ACC 2. LDK ALL ZEROS (22 0000)
A3
B
ONLY ONE BIT WRONG
27 1403
27 1402
A3
LAST TEST RESULTS CORRECT
ACC: + 12525253 ADD SALV: +12525252
A4
B
ONLY ONE BIT WRONG
27 1404
27 1405
C
ACC = + 12532525
27 1414
ACC = + 25245253
27 1415
ACC = + 00000001
27 1416
ACC = − 12525252
27 1433
ACC = + 12522525
27 1434
ACC = + 25255253
27 1435
ACC = + 12252525
27 1436
ACC = + 25522525
27 1437
ACC = + 25255225
27 1440
ACC = + 25252553
27 1441
27 3777

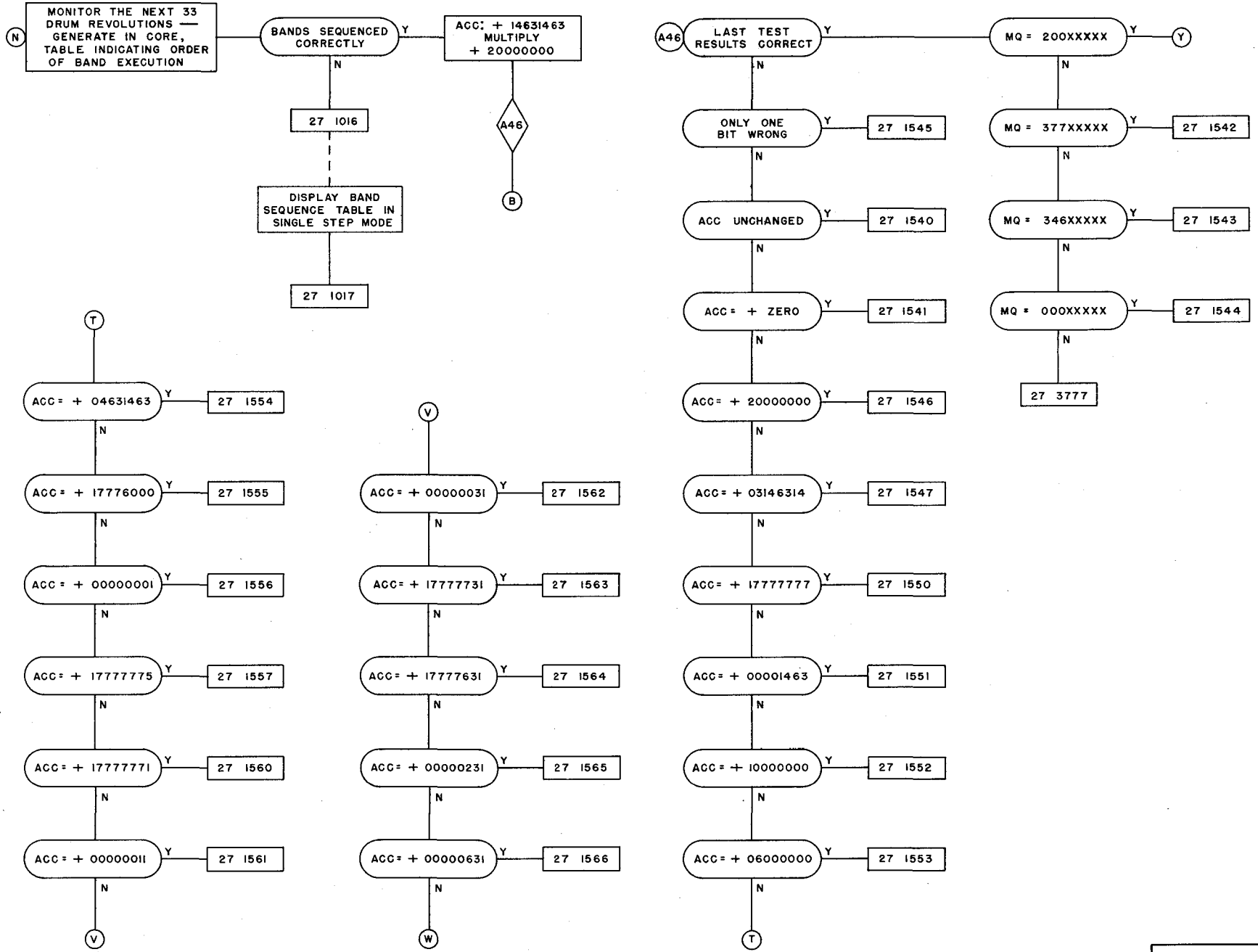

A5
LAST TEST RESULTS CORRECT
Y
ACC: +00000000 ADD SALV: +12525252
N
A6
B
ONLY ONE BIT WRONG
Y
27 1417
N
ONLY TWO BITS WRONG
Y
27 1420
N
ACC = -00000001
Y
27 1421
N
ACC = -00002526
Y
27 1422
N
ACC = +12527777
Y
27 1423
N
ACC = -00252526
Y
27 1424
N
ACC = +12775252
Y
27 1425
N
ACC = +12527752
Y
27 1426
N
E
E
ACC = +12525277
Y
27 1427
N
ACC = +37777776
Y
27 1430
N
ACC = +37777777
Y
27 1431
N
ACC = -25252525
Y
27 1432
N
27 3777
A6
LAST TEST RESULTS CORRECT
Y
ACC: +00000000 ADD SALV: +25252525
N
A7
B
ONLY ONE BIT WRONG
Y
27 1442
N
ONLY TWO BITS WRONG
Y
27 1443
N
27 3777
A7
LAST TEST RESULTS CORRECT
Y
ACC: +37777777 ADD SALV: -25252525
N
A8
B
ONLY ONE BIT WRONG
Y
27 1444
N
ONLY TWO BITS WRONG
Y
27 1445
N
ACC = +37777777
Y
27 1446
N
27 3777

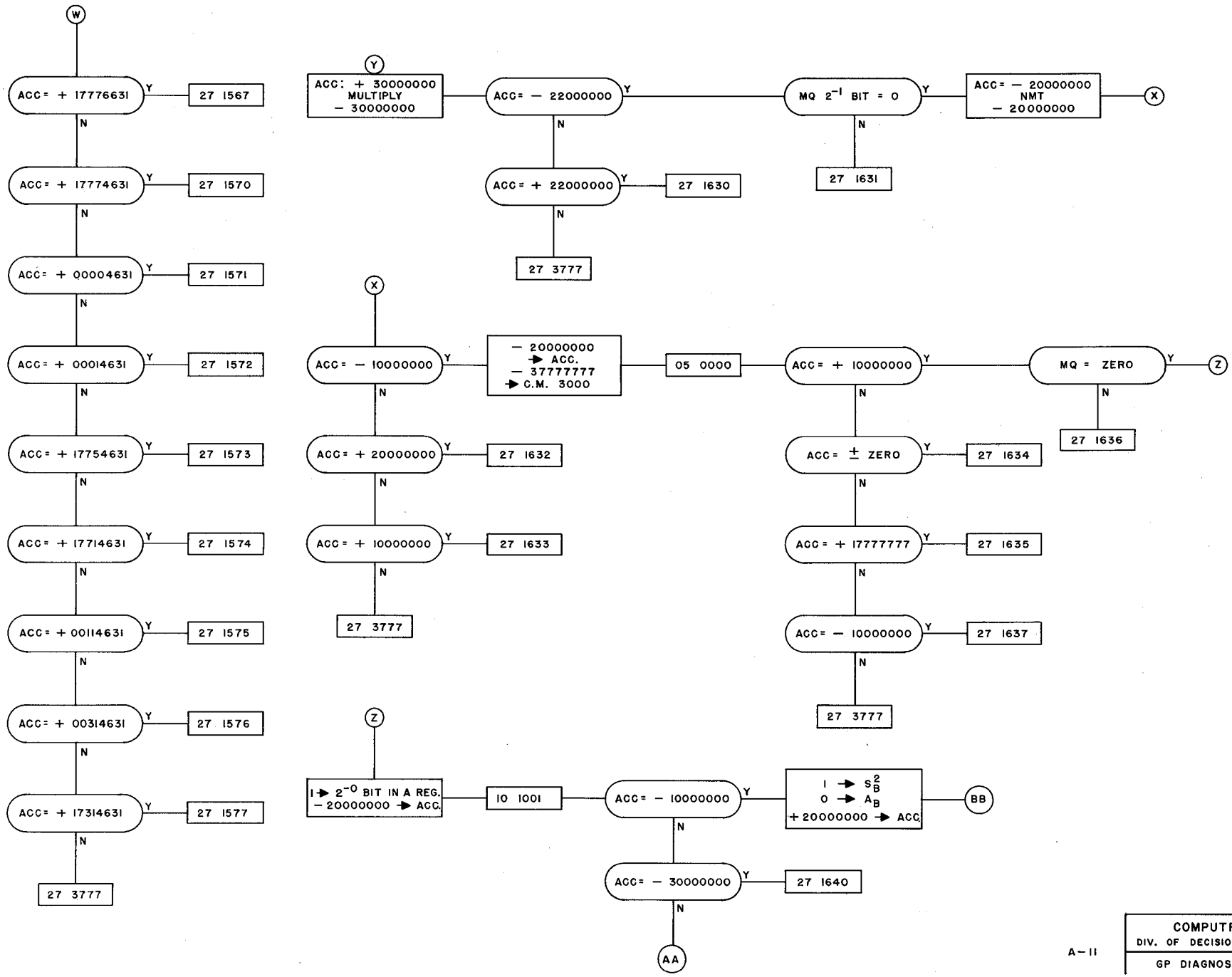


COMPUTRONICS
DIV. OF DECISION SYSTEMS, INC.
GP DIAGNOSTIC - MARK I


A44
LAST TEST RESULTS CORRECT
Y
N
+ 00007777 → ACC, CORE MEM. LOC. 3777 AND N REG.
+ ZERO → SALV. REG.
− 37777777 → C.M. 3776
1 → AB
20 3776
ACC = − 37777777
Y
N
SALV. REG. = + 00007777
Y
N
27 1476
+ 00007777 → ACC. AND N REG.
+ ZERO → SALV.
0 → AB
21 3776
ACC = − 37777777
Y
F
N
ONLY ONE BIT WRONG
Y
27 1470
N
27 1471
ACC = + ZERO
Y
27 1472
N
ACC = + 37777777
Y
27 1473
N
ACC = + 00007777
Y
27 1474
N
ACC = − 37770000
Y
27 1475
N
27 1477
ACC = + ZERO
Y
27 1500
N
ACC = + 37777777
Y
27 1501
N
ACC = + 00007777
Y
27 1502
N
ACC = − 37770000
Y
27 1503
N
27 1505
A14
LAST TEST RESULTS CORRECT
Y
N
27 1463
ACC: + 20000000 ADD SALV: − 17777777
A15
B
A15
LAST TEST RESULTS CORRECT
Y
N
27 1464
ACC: + 20000000 ADD SALV: + 20000000
A44
B
F
SALV = + 00007777
N
27 1504
Y
DOES ILD INDEXING WORK
N
27 1506
Y
G
G
+ 00007777 → ACC RANK 1 AND N REG.
ACC: + 12000000 SUBTRACT + 10000000
ACC = + 02000000
Y
N
ACC: − 12000000 SUBTRACT − 10000000
ACC = − 02000000
Y
K
N
ACC = + 22000000
Y
27 1507
N
H
ACC = − 22000000
Y
27 1517
N
J


K
ACC: +00000000
SUBTRACT
-37777777
ACC=+37777777
ACC: -ZERO
SUBTRACT
+ZERO
ACC=-37777777
27 1522
27 1516
ACC=-ZERO
1 → AB
24 3002
26 0002
12 0000
27 1524
ACC=+ZERO
27 1523
27 1516
AS INVERTED
27 1525
ACC STORED
IN 3003
M
+ZERO STORED
IN 3003
27 1526
ACC STORED
IN 3002
27 1527
27 1530
H
ACC=-15777777
27 1510
ACC=+37777777
27 1511
ACC=+12000000
27 1512
ACC=-12000000
27 1513
ACC=+00007777
27 1514
ACC=+11770001
27 1515
27 1516
M
ACC UNCHANGED
27 1531
DOES FLN CAUSE
BOOLEAN SALVAGE
TO SHIFT
27 1532
1 → AB
+10000000 →
ACC AND 3001
14 3001
AB = 0
27 1533
ACC SCALED
LEFT ONE
27 1534
1 → AS
0 → AB
1 → BOOLEAN 3760
14 3760
BOOLEAN 3760=0
27 1535
AB = 1
27 1536
ACC MAGNITUDE
UNCHANGED
27 1537
N
J
ACC=+15777777
27 1520
ACC=-37777777
27 1521
27 1516


N
MONITOR THE NEXT 33 DRUM REVOLUTIONS — GENERATE IN CORE, TABLE INDICATING ORDER OF BAND EXECUTION
BANDS SEQUENCED CORRECTLY
Y
N
ACC: + 14631463 MULTIPLY + 20000000
A46
B
27 1016
DISPLAY BAND SEQUENCE TABLE IN SINGLE STEP MODE
27 1017
A46
LAST TEST RESULTS CORRECT
Y
N
ONLY ONE BIT WRONG
27 1545
ACC UNCHANGED
27 1540
ACC = + ZERO
27 1541
ACC = + 20000000
27 1546
ACC = + 03146314
27 1547
ACC = + 17777777
27 1550
ACC = + 00001463
27 1551
ACC = + 10000000
27 1552
ACC = + 06000000
27 1553
T
ACC = + 04631463
27 1554
ACC = + 17776000
27 1555
ACC = + 00000001
27 1556
ACC = + 17777775
27 1557
ACC = + 17777771
27 1560
ACC = + 00000011
27 1561
V
V
ACC = + 00000031
27 1562
ACC = + 17777731
27 1563
ACC = + 17777631
27 1564
ACC = + 00000231
27 1565
ACC = + 00000631
27 1566
W
MQ = 200XXXXX
Y
MQ = 377XXXXX
27 1542
MQ = 346XXXXX
27 1543
MQ = 000XXXXX
27 1544
27 3777



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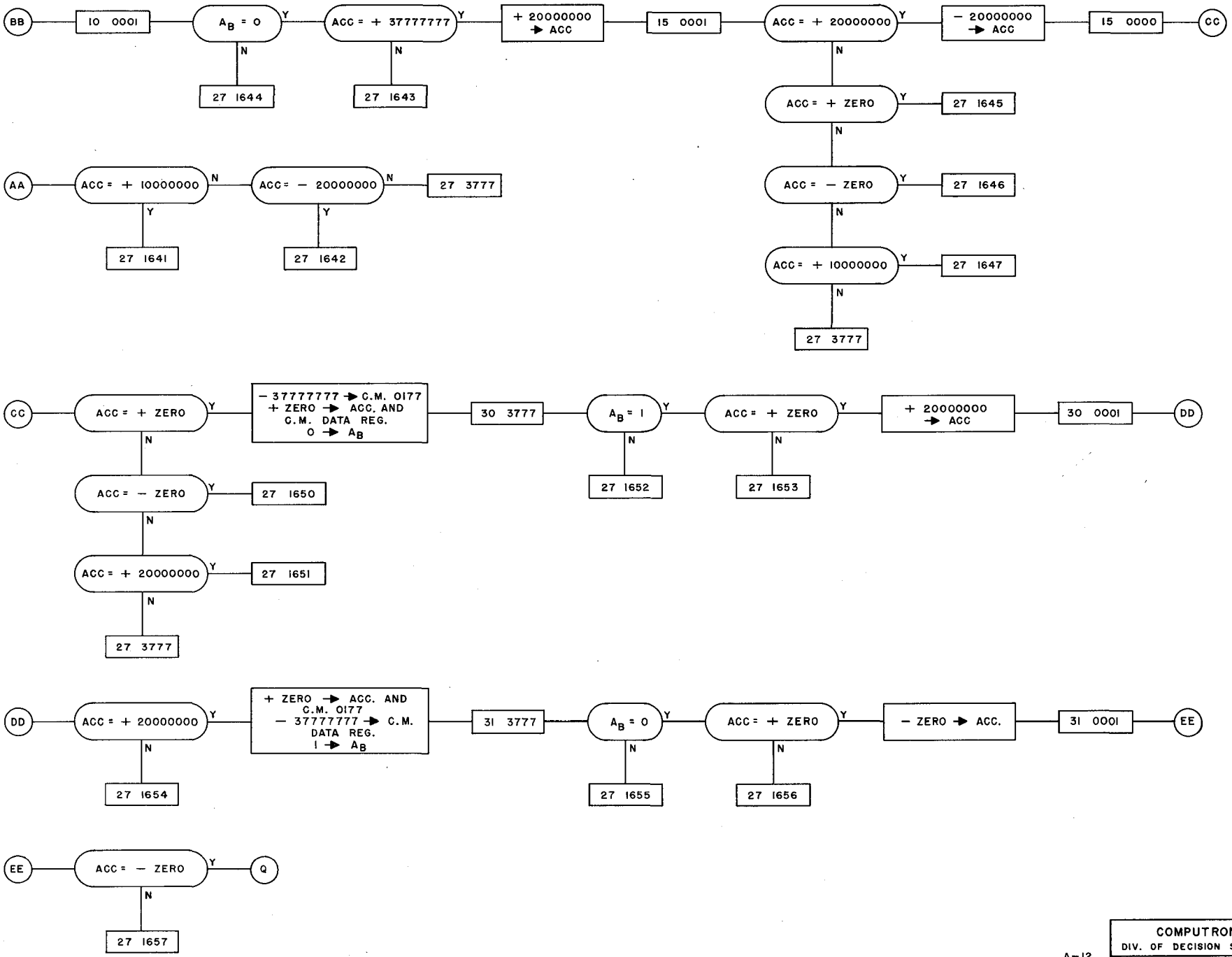
DIV. OF DECISION SYSTEMS, INC.
GP DIAGNOSTIC − MARK I



COMPUTRONICS
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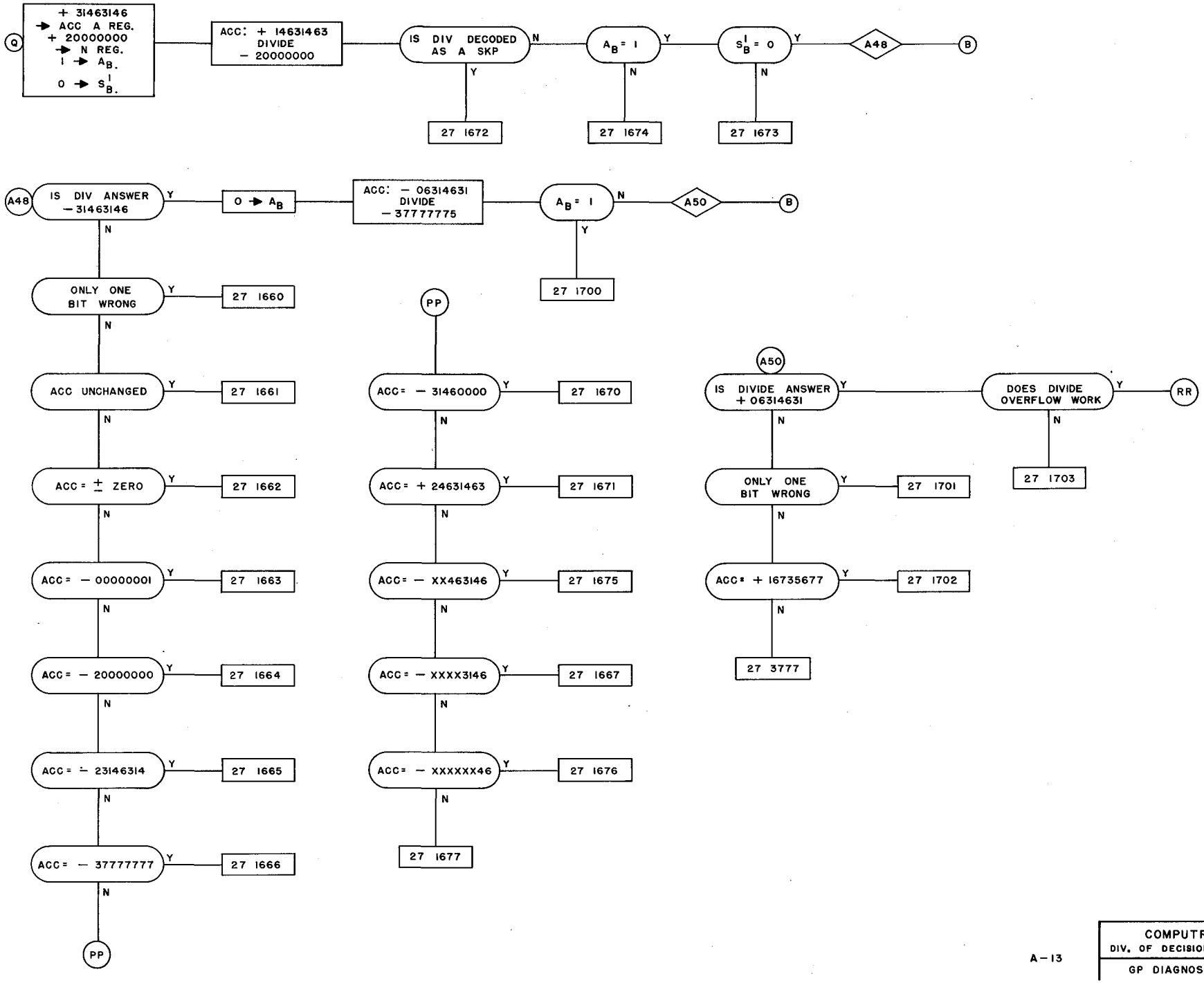
GP DIAGNOSTIC – MARK I



COMPUTRONICS
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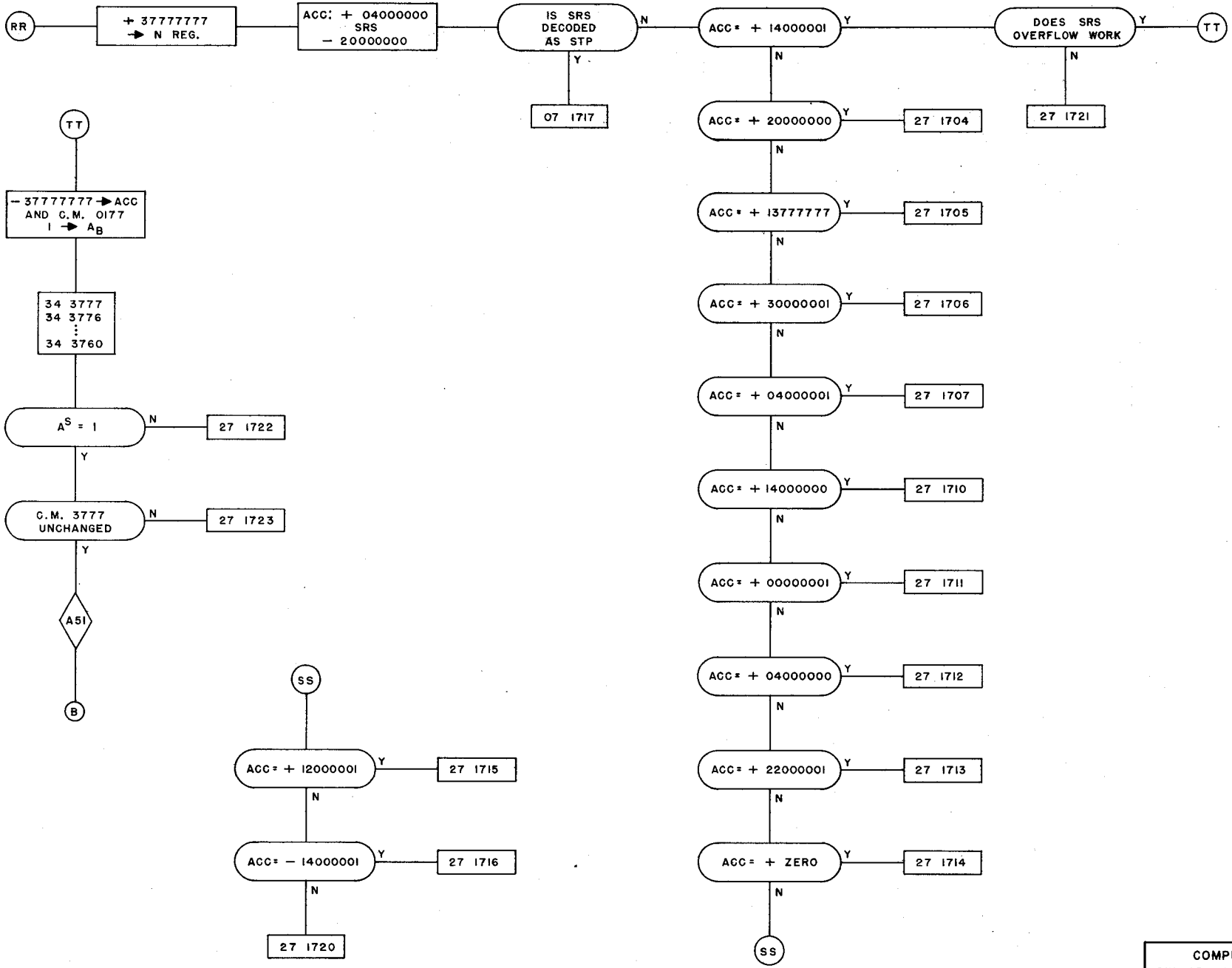
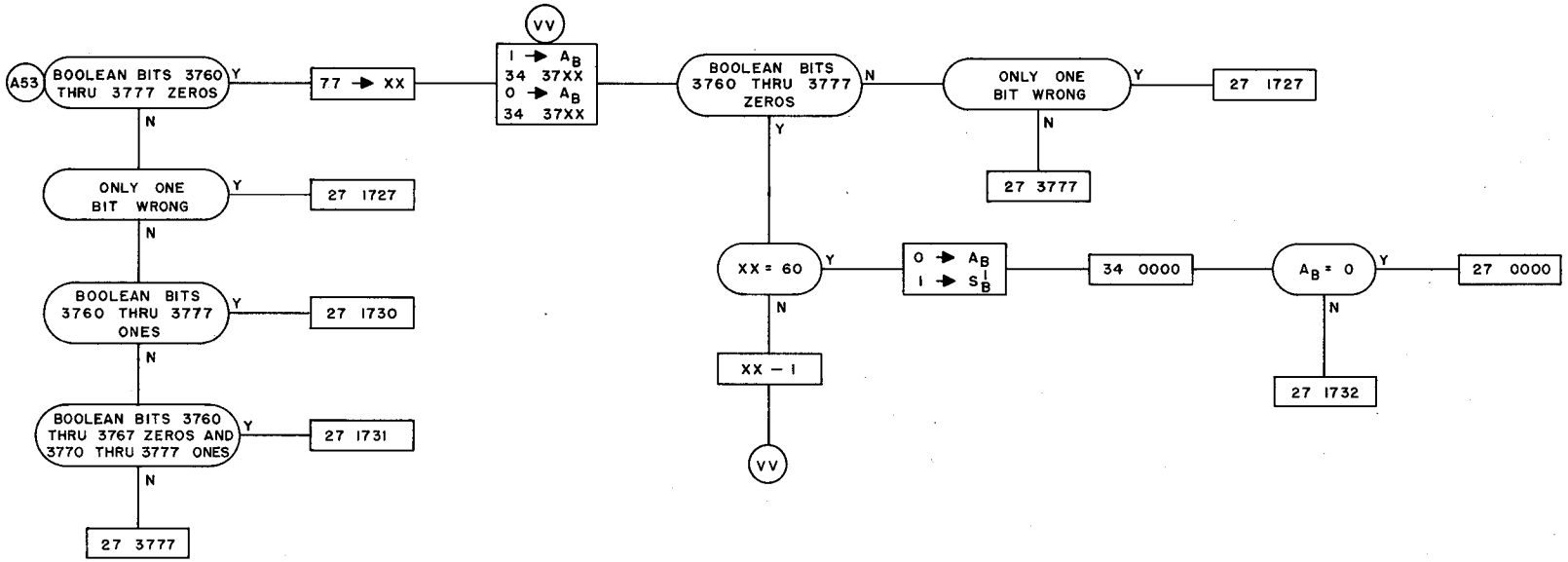
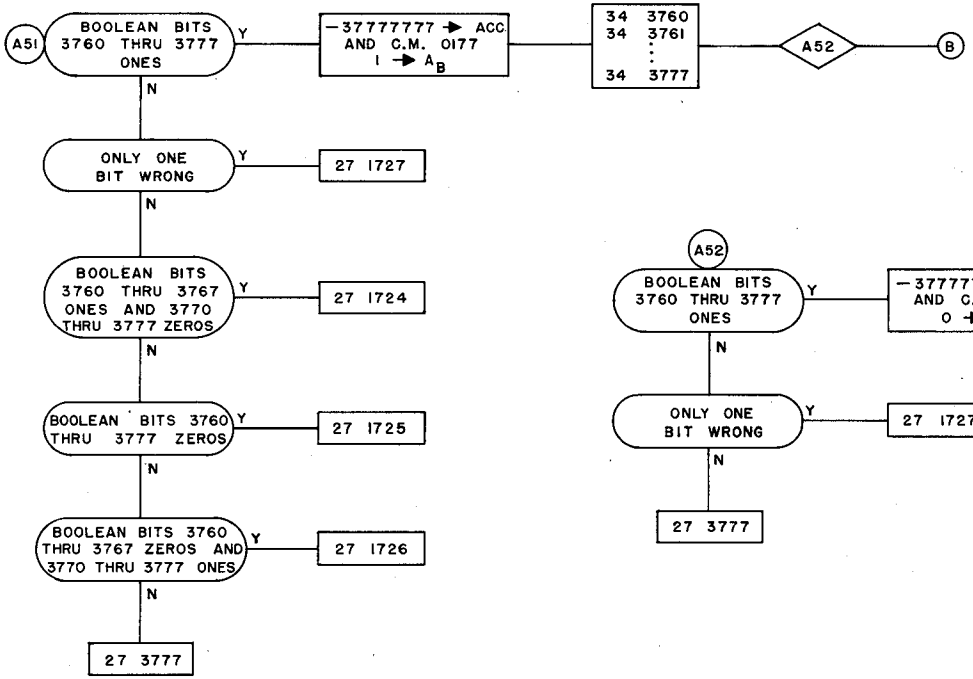
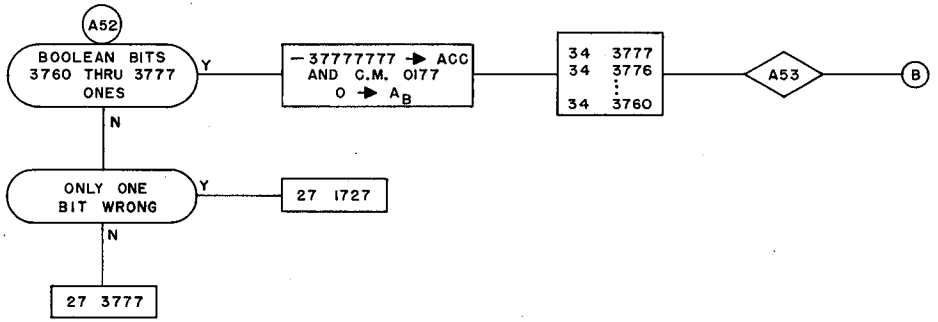
GP DIAGNOSTIC – MARK I


RR
+ 37777777 → N REG.
ACC: + 04000000 SRS − 20000000
IS SRS DECODED AS STP
N
Y
07 1717
ACC = + 14000001
Y
N
DOES SRS OVERFLOW WORK
Y
TT
N
27 1721
ACC = + 20000000
Y
27 1704
N
ACC = + 13777777
Y
27 1705
N
ACC = + 30000001
Y
27 1706
N
ACC = + 04000001
Y
27 1707
N
ACC = + 14000000
Y
27 1710
N
ACC = + 00000001
Y
27 1711
N
ACC = + 04000000
Y
27 1712
N
ACC = + 22000001
Y
27 1713
N
ACC = + ZERO
Y
27 1714
N
SS
TT
− 37777777 → ACC AND C.M. 0177 1 → AB
34 3777
34 3776
⋮
34 3760
AS = 1
N
27 1722
Y
C.M. 3777 UNCHANGED
N
27 1723
Y
A51
B
SS
ACC = + 12000001
Y
27 1715
N
ACC = − 14000001
Y
27 1716
N
27 1720


A53
BOOLEAN BITS 3760 THRU 3777 ZEROS
Y
77 → XX
N
ONLY ONE BIT WRONG
Y
27 1727
N
BOOLEAN BITS 3760 THRU 3777 ONES
Y
27 1730
N
BOOLEAN BITS 3760 THRU 3767 ZEROS AND 3770 THRU 3777 ONES
Y
27 1731
N
27 3777
VV
1 → A_B
34 37XX
0 → A_B
34 37XX
BOOLEAN BITS 3760 THRU 3777 ZEROS
N
ONLY ONE BIT WRONG
Y
27 1727
N
27 3777
Y
XX = 60
Y
0 → A_B
1 → S_B
34 0000
A_B = 0
Y
27 0000
N
27 1732
N
XX − 1
VV


A51
BOOLEAN BITS 3760 THRU 3777 ONES
Y
−37777777 → ACC
AND C.M. 0177
1 → A_B
34 3760
34 3761
34 3777
A52
B
N
ONLY ONE BIT WRONG
Y
27 1727
N
BOOLEAN BITS 3760 THRU 3767 ONES AND 3770 THRU 3777 ZEROS
Y
27 1724
N
BOOLEAN BITS 3760 THRU 3777 ZEROS
Y
27 1725
N
BOOLEAN BITS 3760 THRU 3767 ZEROS AND 3770 THRU 3777 ONES
Y
27 1726
N
27 3777


A52
BOOLEAN BITS 3760 THRU 3777 ONES
Y
−37777777 → ACC
AND C.M. 0177
0 → A_B
34 3777
34 3776
34 3760
A53
B
N
ONLY ONE BIT WRONG
Y
27 1727
N
27 3777

INSTRUCTION	LOCATION
+25 3777	00 0001
+27 2400	00 0002
+17 2400	00 0003
+33 2400	00 0004
+35 2400	00 0005
+36 2400	00 0006
+00 0000	00 0007
+00 0000	00 0010
+00 0000	00 0011
+00 0000	00 0012
+00 0000	00 0013
+00 0000	00 0014
+00 0000	00 0015
+00 0000	00 0016
+00 0000	00 0017
+00 0000	00 0020
+00 0000	00 0021
+00 0000	00 0022
+00 0000	00 0023
+00 0000	00 0024
+00 0000	00 0025
+00 0000	00 0026
+26 0002	00 0027
+32 0000	00 0030
+26 0011	00 0031
+33 3177	00 0032
+26 0001	00 0033
+27 1021	00 0034
+33 0000	00 0035
+26 0171	00 0036
+00 0000	00 0037
+25 3777	00 0040
+12 0000	00 0041
+32 0000	00 0042
+26 0000	00 0043
+26 0177	00 0044
+27 1001	00 0045
+27 1002	00 0046
+27 3777	00 0047
+27 1003	00 0050
+27 3777	00 0051
+27 3777	00 0052
+27 3777	00 0053
+27 1004	00 0054
+27 3777	00 0055
+27 3777	00 0056
+27 3777	00 0057
+27 3777	00 0060
+27 3777	00 0061
+27 3777	00 0062

INSTRUCTION	LOCATION
+27 3777	00 0063
+27 1005	00 0064
+27 3777	00 0065
+27 3777	00 0066
+27 3777	00 0067
+27 3777	00 0070
+27 3777	00 0071
+27 3777	00 0072
+27 3777	00 0073
+27 3777	00 0074
+27 3777	00 0075
+27 3777	00 0076
+27 3777	00 0077
+27 3777	00 0100
+27 3777	00 0101
+27 3777	00 0102
+27 3777	00 0103
+27 1006	00 0104
+27 3777	00 0105
+27 3777	00 0106
+27 3777	00 0107
+27 3777	00 0110
+27 3777	00 0111
+27 3777	00 0112
+27 3777	00 0113
+27 3777	00 0114
+27 3777	00 0115
+27 3777	00 0116
+27 3777	00 0117
+27 3777	00 0120
+27 3777	00 0121
+27 3777	00 0122
+26 0104	00 0123
+27 3777	00 0124
+27 3777	00 0125
+27 3777	00 0126
+27 3777	00 0127
+27 3777	00 0130
+27 3777	00 0131
+27 3777	00 0132
+27 3777	00 0133
+27 3777	00 0134
+27 3777	00 0135
+27 3777	00 0136
+27 3777	00 0137
+27 3777	00 0140
+27 3777	00 0141
+27 3777	00 0142
+27 3777	00 0143
+27 1007	00 0144

INSTRUCTION	LOCATION
+27 3777	00 0145
+27 3777	00 0146
+27 3777	00 0147
+27 3777	00 0150
+27 3777	00 0151
+27 3777	00 0152
+27 3777	00 0153
+27 3777	00 0154
+27 3777	00 0155
+27 3777	00 0156
+27 3777	00 0157
+27 3777	00 0160
+27 3777	00 0161
+27 3777	00 0162
+27 3777	00 0163
+27 3777	00 0164
+27 3777	00 0165
+27 3777	00 0166
+27 3777	00 0167
+27 3777	00 0170
+27 3777	00 0171
+27 3777	00 0172
+27 3777	00 0173
+27 3777	00 0174
+27 3777	00 0175
+27 3777	00 0176
+27 3777	00 0177
+27 3777	00 0200
+27 3777	00 0201
+27 3777	00 0202
+27 3777	00 0203
+27 3777	00 0204
+27 3777	00 0205
+27 3777	00 0206
+27 3777	00 0207
+27 3777	00 0210
+27 3777	00 0211
+27 3777	00 0212
+27 3777	00 0213
+27 3777	00 0214
+27 3777	00 0215
+27 3777	00 0216
+27 3777	00 0217
+27 3777	00 0220
+27 3777	00 0221
+27 3777	00 0222
+27 3777	00 0223
+27 3777	00 0224
+27 3777	00 0225
+27 3777	00 0226

INSTRUCTION	LOCATION
+27 3777	00 0227
+26 0152	00 0230
+27 3777	00 0231
+27 3777	00 0232
+27 3777	00 0233
+27 3777	00 0234
+27 1012	00 0235
+27 3777	00 0236
+27 3777	00 0237
+27 3777	00 0240
+27 3777	00 0241
+27 3777	00 0242
+27 1010	00 0243
+32 0000	00 0244
+26 0003	00 0245
+32 0000	00 0246
+26 0002	00 0247
+27 1100	00 0250
+27 1101	00 0251
+32 0000	00 0252
+30 0000	00 0253
+26 0012	00 0254
+32 0000	00 0255
+31 0000	00 0256
+26 0006	00 0257
+32 0000	00 0260
+33 0000	00 0261
+26 0026	00 0262
+30 0000	00 0263
+26 0005	00 0264
+27 1102	00 0265
+27 1103	00 0266
+31 0000	00 0267
+26 0004	00 0270
+27 1104	00 0271
+31 0000	00 0272
+26 0001	00 0273
+27 1104	00 0274
+32 0000	00 0275
+33 0000	00 0276
+26 0001	00 0277
+27 1105	00 0300
+33 0000	00 0301
+26 0005	00 0302
+33 0000	00 0303
+31 0000	00 0304
+26 0004	00 0305
+32 0000	00 0306
+26 0003	00 0307
+27 1106	00 0310

INSTRUCTION	LOCATION
+27 1107	00 0311
+27 1110	00 0312
+33 0000	00 0313
+26 0001	00 0314
+32 0000	00 0315
+33 0000	00 0316
+33 0000	00 0317
+33 0000	00 0320
+32 0000	00 0321
+33 0001	00 0322
+26 0004	00 0323
+33 0002	00 0324
+26 0001	00 0325
+27 1111	00 0326
+27 1112	00 0327
+33 0002	00 0330
+26 0004	00 0331
+33 0003	00 0332
+26 0001	00 0333
+27 1113	00 0334
+27 1114	00 0335
+33 0003	00 0336
+26 0001	00 0337
+27 1115	00 0340
+32 0000	00 0341
+33 0000	00 0342
+32 0000	00 0343
+33 0000	00 0344
+33 0000	00 0345
+33 0000	00 0346
+33 0001	00 0347
+26 0006	00 0350
+33 0002	00 0351
+26 0010	00 0352
+33 0003	00 0353
+26 0012	00 0354
+32 0000	00 0355
+26 0011	00 0356
+33 0002	00 0357
+26 0001	00 0360
+27 1116	00 0361
+27 1117	00 0362
+33 0003	00 0363
+26 0001	00 0364
+27 1120	00 0365
+27 1121	00 0366
+27 1122	00 0367
+33 0001	00 0370
+33 0001	00 0371
+26 0002	00 0372

INSTRUCTION	LOCATION
+32 0000	00 0373
+26 0002	00 0374
+27 1123	00 0375
+27 3777	00 0376
+32 0000	00 0377
+32 0000	00 0400
+26 0002	00 0401
+27 1014	00 0402
+26 0162	00 0403
+32 0000	00 0404
+16 0000	00 0405
+26 0025	00 0406
+16 0000	00 0407
+16 0000	00 0410
+26 0020	00 0411
+32 0000	00 0412
+16 0000	00 0413
+26 0016	00 0414
+13 0000	00 0415
+16 0000	00 0416
+26 0032	00 0417
+22 7777	00 0420
+11 0001	00 0421
+16 0000	00 0422
+26 0005	00 0423
+23 0177	00 0424
+33 3777	00 0425
+26 0001	00 0426
+27 1205	00 0427
+27 1201	00 0430
+27 1210	00 0431
+27 1207	00 0432
+27 1200	00 0433
+16 0000	00 0434
+26 0001	00 0435
+27 1207	00 0436
+13 0000	00 0437
+32 0000	00 0440
+16 0000	00 0441
+26 0020	00 0442
+32 0000	00 0443
+16 0000	00 0444
+26 0026	00 0445
+13 0000	00 0446
+16 0000	00 0447
+26 0010	00 0450
+27 1210	00 0451
+16 0000	00 0452
+26 0001	00 0453
+27 1207	00 0454

INSTRUCTION	LOCATION
+13 0000	00 0455
+16 0000	00 0456
+26 0002	00 0457
+32 0000	00 0460
+26 0013	00 0461
+27 1210	00 0462
+14 0000	00 0463
+16 0000	00 0464
+26 0001	00 0465
+27 1210	00 0466
+23 0177	00 0467
+33 3777	00 0470
+26 0001	00 0471
+27 1200	00 0472
+27 1206	00 0473
+27 1200	00 0474
+16 0000	00 0475
+26 0001	00 0476
+13 0000	00 0477
+14 0000	00 0500
+16 0000	00 0501
+26 0002	00 0502
+32 0000	00 0503
+26 0001	00 0504
+27 1211	00 0505
+13 0000	00 0506
+11 1001	00 0507
+16 0000	00 0510
+26 0002	00 0511
+32 0000	00 0512
+26 0001	00 0513
+27 1212	00 0514
+13 0000	00 0515
+11 1001	00 0516
+11 1001	00 0517
+11 1001	00 0520
+13 0000	00 0521
+11 1001	00 0522
+13 0000	00 0523
+11 1001	00 0524
+11 1001	00 0525
+11 1001	00 0526
+13 0000	00 0527
+11 1001	00 0530
+13 0000	00 0531
+11 1001	00 0532
+11 1001	00 0533
+11 1001	00 0534
+13 0000	00 0535
+11 1001	00 0536

INSTRUCTION	LOCATION
+13 0000	00 0537
+11 1001	00 0540
+11 1001	00 0541
+11 1001	00 0542
+13 0000	00 0543
+11 1001	00 0544
+13 0000	00 0545
+11 1001	00 0546
+11 1001	00 0547
+11 1001	00 0550
+13 0000	00 0551
+11 1001	00 0552
+13 0000	00 0553
+11 1001	00 0554
+11 1001	00 0555
+11 1001	00 0556
+13 0000	00 0557
+11 1001	00 0560
+13 0000	00 0561
+11 1001	00 0562
+26 0003	00 0563
+32 0000	00 0564
+26 0001	00 0565
+26 0114	00 0566
+23 0177	00 0567
+23 0147	00 0570
+11 0001	00 0571
+16 0000	00 0572
+26 0063	00 0573
+33 3776	00 0574
+26 0022	00 0575
+33 3775	00 0576
+26 0032	00 0577
+33 3774	00 0600
+26 0030	00 0601
+33 3773	00 0602
+26 0026	00 0603
+33 3772	00 0604
+26 0024	00 0605
+22 4000	00 0606
+23 0177	00 0607
+33 3776	00 0610
+26 0001	00 0611
+27 1216	00 0612
+11 0001	00 0613
+16 0000	00 0614
+26 0001	00 0615
+27 1217	00 0616
+27 1203	00 0617
+33 3775	00 0620

INSTRUCTION	LOCATION
+26 0002	00 0621
+32 0000	00 0622
+26 0006	00 0623
+33 3774	00 0624
+26 0004	00 0625
+33 3773	00 0626
+26 0002	00 0627
+33 3772	00 0630
+26 0024	00 0631
+22 6300	00 0632
+11 0001	00 0633
+16 0000	00 0634
+26 0001	00 0635
+27 1222	00 0636
+11 0001	00 0637
+16 0000	00 0640
+26 0001	00 0641
+27 1220	00 0642
+11 0001	00 0643
+16 0000	00 0644
+26 0006	00 0645
+11 0001	00 0646
+16 0000	00 0647
+26 0003	00 0650
+11 0001	00 0651
+16 0000	00 0652
+26 0001	00 0653
+27 1220	00 0654
+27 1215	00 0655
+27 1221	00 0656
+11 0001	00 0657
+16 0000	00 0660
+26 0001	00 0661
+27 1602	00 0662
+11 0001	00 0663
+16 0000	00 0664
+26 0013	00 0665
+11 0001	00 0666
+16 0000	00 0667
+26 0011	00 0670
+11 0001	00 0671
+16 0000	00 0672
+26 0001	00 0673
+27 1605	00 0674
+11 0001	00 0675
+16 0000	00 0676
+26 0004	00 0677
+27 1606	00 0700
+27 1603	00 0701
+27 1604	00 0702

INSTRUCTION	LOCATION
+26 0114	00 0703
+11 0001	00 0704
+16 0000	00 0705
+26 0013	00 0706
+11 0001	00 0707
+16 0000	00 0710
+26 0011	00 0711
+11 0001	00 0712
+16 0000	00 0713
+26 0001	00 0714
+27 1611	00 0715
+11 0001	00 0716
+16 0000	00 0717
+26 0003	00 0720
+27 1612	00 0721
+27 1607	00 0722
+27 1610	00 0723
+11 0001	00 0724
+16 0000	00 0725
+26 0013	00 0726
+11 0001	00 0727
+16 0000	00 0730
+26 0011	00 0731
+11 0001	00 0732
+16 0000	00 0733
+26 0001	00 0734
+27 1615	00 0735
+11 0001	00 0736
+16 0000	00 0737
+26 0003	00 0740
+27 1616	00 0741
+27 1613	00 0742
+27 1614	00 0743
+11 0001	00 0744
+16 0000	00 0745
+26 0013	00 0746
+11 0001	00 0747
+16 0000	00 0750
+26 0011	00 0751
+11 0001	00 0752
+16 0000	00 0753
+26 0001	00 0754
+27 1621	00 0755
+11 0001	00 0756
+16 0000	00 0757
+26 0003	00 0760
+27 1622	00 0761
+27 1617	00 0762
+27 1620	00 0763
+11 0001	00 0764

INSTRUCTION	LOCATION
+16 0000	00 0765
+26 0021	00 0766
+11 0001	00 0767
+16 0000	00 0770
+26 0017	00 0771
+11 0001	00 0772
+16 0000	00 0773
+26 0001	00 0774
+27 1625	00 0775
+32 0000	00 0776
+12 0000	00 0777
+32 0000	00 1000
+12 0000	00 1001
+26 0001	00 1002
+27 1014	00 1003
+11 0001	00 1004
+16 0000	00 1005
+26 0003	00 1006
+27 1626	00 1007
+27 1623	00 1010
+27 1624	00 1011
+11 0001	00 1012
+16 0000	00 1013
+26 0002	00 1014
+32 0000	00 1015
+26 0002	00 1016
+27 1627	00 1017
+26 0140	00 1020
+13 0000	00 1021
+11 1006	00 1022
+25 3777	00 1023
+11 0001	00 1024
+11 0001	00 1025
+11 0001	00 1026
+11 0001	00 1027
+11 0001	00 1030
+11 0001	00 1031
+16 0000	00 1032
+26 0001	00 1033
+27 1224	00 1034
+22 2524	00 1035
+13 0000	00 1036
+11 1005	00 1037
+11 1005	00 1040
+11 1002	00 1041
+22 2524	00 1042
+01 0000	00 1043
+22 0000	00 1044
+01 0000	00 1045
+16 0000	00 1046

INSTRUCTION	LOCATION
+26 0002	00 1047
+11 0001	00 1050
+16 0000	00 1051
+26 0003	00 1052
+11 0001	00 1053
+16 0000	00 1054
+32 0000	00 1055
+26 0002	00 1056
+11 0001	00 1057
+16 0000	00 1060
+26 0003	00 1061
+11 0001	00 1062
+16 0000	00 1063
+32 0000	00 1064
+26 0002	00 1065
+11 0001	00 1066
+16 0000	00 1067
+26 0003	00 1070
+11 0001	00 1071
+16 0000	00 1072
+32 0000	00 1073
+26 0002	00 1074
+11 0001	00 1075
+16 0000	00 1076
+26 0003	00 1077
+11 0001	00 1100
+16 0000	00 1101
+32 0000	00 1102
+26 0002	00 1103
+11 0001	00 1104
+16 0000	00 1105
+26 0003	00 1106
+11 0001	00 1107
+16 0000	00 1110
+32 0000	00 1111
+26 0002	00 1112
+11 0001	00 1113
+16 0000	00 1114
+26 0003	00 1115
+11 0001	00 1116
+16 0000	00 1117
+32 0000	00 1120
+26 0002	00 1121
+11 0001	00 1122
+16 0000	00 1123
+26 0003	00 1124
+11 0001	00 1125
+16 0000	00 1126
+32 0000	00 1127
+26 0002	00 1130

INSTRUCTION	LOCATION
+11 0001	00 1131
+16 0000	00 1132
+26 0003	00 1133
+11 0001	00 1134
+16 0000	00 1135
+32 0000	00 1136
+26 0002	00 1137
+11 0001	00 1140
+16 0000	00 1141
+26 0003	00 1142
+11 0001	00 1143
+16 0000	00 1144
+32 0000	00 1145
+26 0002	00 1146
+11 0001	00 1147
+16 0000	00 1150
+26 0003	00 1151
+11 0001	00 1152
+16 0000	00 1153
+32 0000	00 1154
+26 0002	00 1155
+11 0001	00 1156
+16 0000	00 1157
+26 0004	00 1160
+26 0145	00 1161
+11 0001	00 1162
+16 0000	00 1163
+32 0000	00 1164
+26 0002	00 1165
+11 0001	00 1166
+16 0000	00 1167
+26 0020	00 1170
+11 1005	00 1171
+11 1005	00 1172
+11 1005	00 1173
+11 1005	00 1174
+11 1005	00 1175
+01 0000	00 1176
+13 0000	00 1177
+11 1001	00 1200
+22 0000	00 1201
+11 1005	00 1202
+11 1005	00 1203
+11 1005	00 1204
+11 1005	00 1205
+11 1005	00 1206
+01 0000	00 1207
+16 0000	00 1210
+26 0003	00 1211
+11 0001	00 1212

INSTRUCTION	LOCATION
+16 0000	00 1213
+32 0000	00 1214
+26 0002	00 1215
+11 0001	00 1216
+16 0000	00 1217
+26 0003	00 1220
+11 0001	00 1221
+16 0000	00 1222
+32 0000	00 1223
+26 0002	00 1224
+11 0001	00 1225
+16 0000	00 1226
+26 0003	00 1227
+11 0001	00 1230
+16 0000	00 1231
+32 0000	00 1232
+26 0002	00 1233
+11 0001	00 1234
+16 0000	00 1235
+26 0003	00 1236
+11 0001	00 1237
+16 0000	00 1240
+32 0000	00 1241
+26 0002	00 1242
+11 0001	00 1243
+16 0000	00 1244
+26 0003	00 1245
+11 0001	00 1246
+16 0000	00 1247
+32 0000	00 1250
+26 0002	00 1251
+11 0001	00 1252
+16 0000	00 1253
+26 0003	00 1254
+11 0001	00 1255
+16 0000	00 1256
+32 0000	00 1257
+26 0002	00 1260
+11 0001	00 1261
+16 0000	00 1262
+26 0003	00 1263
+11 0001	00 1264
+16 0000	00 1265
+32 0000	00 1266
+26 0002	00 1267
+11 0001	00 1270
+16 0000	00 1271
+26 0003	00 1272
+11 0001	00 1273
+16 0000	00 1274

INSTRUCTION	LOCATION
+32 0000	00 1275
+26 0002	00 1276
+11 0001	00 1277
+16 0000	00 1300
+26 0003	00 1301
+11 0001	00 1302
+16 0000	00 1303
+32 0000	00 1304
+26 0002	00 1305
+11 0001	00 1306
+16 0000	00 1307
+26 0003	00 1310
+11 0001	00 1311
+16 0000	00 1312
+32 0000	00 1313
+26 0002	00 1314
+11 0001	00 1315
+16 0000	00 1316
+26 0003	00 1317
+11 0001	00 1320
+16 0000	00 1321
+32 0000	00 1322
+26 0002	00 1323
+11 0001	00 1324
+16 0000	00 1325
+26 0004	00 1326
+26 0133	00 1327
+11 0001	00 1330
+16 0000	00 1331
+32 0000	00 1332
+26 0020	00 1333
+11 1005	00 1334
+11 1005	00 1335
+11 1005	00 1336
+11 1005	00 1337
+11 1005	00 1340
+01 0000	00 1341
+13 0000	00 1342
+22 0000	00 1343
+11 1005	00 1344
+11 1005	00 1345
+11 1005	00 1346
+11 1005	00 1347
+11 1005	00 1350
+01 0000	00 1351
+16 0000	00 1352
+32 0000	00 1353
+26 0003	00 1354
+11 0001	00 1355
+16 0000	00 1356

INSTRUCTION	LOCATION
+32 0000	00 1357
+26 0002	00 1360
+11 0001	00 1361
+16 0000	00 1362
+26 0003	00 1363
+11 0001	00 1364
+16 0000	00 1365
+32 0000	00 1366
+26 0002	00 1367
+11 0001	00 1370
+16 0000	00 1371
+26 0003	00 1372
+11 0001	00 1373
+16 0000	00 1374
+32 0000	00 1375
+26 0002	00 1376
+11 0001	00 1377
+16 0000	00 1400
+26 0003	00 1401
+11 0001	00 1402
+16 0000	00 1403
+32 0000	00 1404
+26 0002	00 1405
+11 0001	00 1406
+16 0000	00 1407
+26 0003	00 1410
+11 0001	00 1411
+16 0000	00 1412
+32 0000	00 1413
+26 0002	00 1414
+11 0001	00 1415
+16 0000	00 1416
+26 0003	00 1417
+11 0001	00 1420
+16 0000	00 1421
+32 0000	00 1422
+26 0002	00 1423
+11 0001	00 1424
+16 0000	00 1425
+26 0003	00 1426
+11 0001	00 1427
+16 0000	00 1430
+32 0000	00 1431
+26 0002	00 1432
+11 0001	00 1433
+16 0000	00 1434
+26 0003	00 1435
+11 0001	00 1436
+16 0000	00 1437
+32 0000	00 1440

INSTRUCTION	LOCATION
+26 0002	00 1441
+11 0001	00 1442
+16 0000	00 1443
+26 0003	00 1444
+11 0001	00 1445
+16 0000	00 1446
+32 0000	00 1447
+26 0002	00 1450
+11 0001	00 1451
+16 0000	00 1452
+26 0003	00 1453
+11 0001	00 1454
+16 0000	00 1455
+32 0000	00 1456
+26 0002	00 1457
+11 0001	00 1460
+16 0000	00 1461
+26 0004	00 1462
+26 0127	00 1463
+11 0001	00 1464
+16 0000	00 1465
+32 0000	00 1466
+26 0002	00 1467
+11 0001	00 1470
+16 0000	00 1471
+26 0003	00 1472
+11 0001	00 1473
+16 0000	00 1474
+32 0000	00 1475
+26 0020	00 1476
+11 1005	00 1477
+11 1005	00 1500
+11 1005	00 1501
+11 1005	00 1502
+11 1005	00 1503
+01 0000	00 1504
+11 0001	00 1505
+22 0000	00 1506
+11 1005	00 1507
+11 1005	00 1510
+11 1005	00 1511
+11 1005	00 1512
+11 1005	00 1513
+01 0000	00 1514
+16 0000	00 1515
+32 0000	00 1516
+26 0002	00 1517
+11 0001	00 1520
+16 0000	00 1521
+26 0003	00 1522

INSTRUCTION	LOCATION
+11 0001	00 1523
+16 0000	00 1524
+32 0000	00 1525
+26 0002	00 1526
+11 0001	00 1527
+16 0000	00 1530
+26 0003	00 1531
+11 0001	00 1532
+16 0000	00 1533
+32 0000	00 1534
+26 0002	00 1535
+11 0001	00 1536
+16 0000	00 1537
+26 0003	00 1540
+11 0001	00 1541
+16 0000	00 1542
+32 0000	00 1543
+26 0002	00 1544
+11 0001	00 1545
+16 0000	00 1546
+26 0003	00 1547
+11 0001	00 1550
+16 0000	00 1551
+32 0000	00 1552
+26 0002	00 1553
+11 0001	00 1554
+16 0000	00 1555
+26 0003	00 1556
+11 0001	00 1557
+16 0000	00 1560
+32 0000	00 1561
+26 0002	00 1562
+11 0001	00 1563
+16 0000	00 1564
+26 0003	00 1565
+11 0001	00 1566
+16 0000	00 1567
+32 0000	00 1570
+26 0002	00 1571
+11 0001	00 1572
+16 0000	00 1573
+26 0003	00 1574
+11 0001	00 1575
+16 0000	00 1576
+32 0000	00 1577
+26 0002	00 1600
+11 0001	00 1601
+16 0000	00 1602
+26 0003	00 1603
+11 0001	00 1604

INSTRUCTION	LOCATION
+16 0000	00 1605
+32 0000	00 1606
+26 0002	00 1607
+11 0001	00 1610
+16 0000	00 1611
+26 0004	00 1612
+26 0142	00 1613
+11 0001	00 1614
+16 0000	00 1615
+32 0000	00 1616
+26 0002	00 1617
+11 0001	00 1620
+16 0000	00 1621
+26 0003	00 1622
+11 0001	00 1623
+16 0000	00 1624
+32 0000	00 1625
+26 0002	00 1626
+11 0001	00 1627
+16 0000	00 1630
+26 0003	00 1631
+11 0001	00 1632
+16 0000	00 1633
+32 0000	00 1634
+26 0002	00 1635
+11 0001	00 1636
+16 0000	00 1637
+26 0162	00 1640
+11 1005	00 1641
+11 1005	00 1642
+11 1005	00 1643
+11 1005	00 1644
+11 1005	00 1645
+01 0000	00 1646
+23 3777	00 1647
+11 1001	00 1650
+23 3777	00 1651
+11 1005	00 1652
+11 1005	00 1653
+11 1005	00 1654
+11 1005	00 1655
+11 1005	00 1656
+01 3777	00 1657
+16 0000	00 1660
+32 0000	00 1661
+26 0001	00 1662
+27 1300	00 1663
+11 0001	00 1664
+16 0000	00 1665
+26 0001	00 1666

INSTRUCTION	LOCATION
+27 1301	00 1667
+11 0001	00 1670
+16 0000	00 1671
+32 0000	00 1672
+26 0001	00 1673
+27 1302	00 1674
+11 0001	00 1675
+16 0000	00 1676
+26 0001	00 1677
+27 1303	00 1700
+11 0001	00 1701
+16 0000	00 1702
+32 0000	00 1703
+26 0001	00 1704
+27 1304	00 1705
+11 0001	00 1706
+16 0000	00 1707
+26 0001	00 1710
+27 1305	00 1711
+11 0001	00 1712
+16 0000	00 1713
+32 0000	00 1714
+26 0001	00 1715
+27 1306	00 1716
+11 0001	00 1717
+16 0000	00 1720
+26 0001	00 1721
+27 1307	00 1722
+11 0001	00 1723
+16 0000	00 1724
+32 0000	00 1725
+26 0001	00 1726
+27 1310	00 1727
+11 0001	00 1730
+16 0000	00 1731
+26 0001	00 1732
+27 1311	00 1733
+11 0001	00 1734
+16 0000	00 1735
+32 0000	00 1736
+26 0001	00 1737
+27 1312	00 1740
+11 0001	00 1741
+16 0000	00 1742
+26 0001	00 1743
+27 1313	00 1744
+11 0001	00 1745
+16 0000	00 1746
+32 0000	00 1747
+26 0001	00 1750

INSTRUCTION	LOCATION
+27 1314	00 1751
+11 0001	00 1752
+16 0000	00 1753
+26 0002	00 1754
+27 1315	00 1755
+26 0177	00 1756
+32 0000	00 1757

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+32 0000	00 2001
+26 0001	00 2002
+27 1014	00 2003
+32 0000	00 2004
+26 0004	00 2005
+25 3777	00 2006
+12 0000	00 2007
+32 0000	00 2010
+26 0005	00 2011
+27 1014	00 2012
+27 3777	00 2013
+27 3777	00 2014
+27 3777	00 2015
+27 3777	00 2016
+32 0000	00 2017
+32 0000	00 2020
+26 0002	00 2021
+27 1014	00 2022
+26 0053	00 2023
+11 0001	00 2024
+16 0000	00 2025
+32 0000	00 2026
+26 0001	00 2027
+27 1316	00 2030
+11 0001	00 2031
+16 0000	00 2032
+26 0001	00 2033
+27 1317	00 2034
+11 0001	00 2035
+16 0000	00 2036
+32 0000	00 2037
+26 0001	00 2040
+27 1320	00 2041
+11 0001	00 2042
+16 0000	00 2043
+26 0001	00 2044
+27 1321	00 2045

INSTRUCTION	LOCATION
+11 0001	00 2046
+16 0000	00 2047
+32 0000	00 2050
+26 0001	00 2051
+27 1322	00 2052
+11 0001	00 2053
+16 0000	00 2054
+26 0001	00 2055
+27 1323	00 2056
+11 0001	00 2057
+16 0000	00 2060
+32 0000	00 2061
+26 0001	00 2062
+27 1324	00 2063
+11 0001	00 2064
+16 0000	00 2065
+26 0001	00 2066
+27 1325	00 2067
+11 0001	00 2070
+16 0000	00 2071
+32 0000	00 2072
+26 0001	00 2073
+27 1326	00 2074
+11 0001	00 2075
+26 0001	00 2076
+26 0136	00 2077
+32 0000	00 2100
+32 0000	00 2101
+26 0001	00 2102
+27 1014	00 2103
+16 0000	00 2104
+26 0001	00 2105
+27 1327	00 2106
+11 1005	00 2107
+11 1005	00 2110
+11 1005	00 2111
+11 1005	00 2112
+11 1005	00 2113
+01 0000	00 2114
+23 3777	00 2115
+11 1005	00 2116
+11 1005	00 2117
+11 1005	00 2120
+11 1005	00 2121
+11 1005	00 2122
+01 3777	00 2123
+16 0000	00 2124
+26 0001	00 2125
+27 1330	00 2126
+11 0001	00 2127

INSTRUCTION	LOCATION
+16 0000	00 2130
+32 0000	00 2131
+26 0001	00 2132
+27 1331	00 2133
+11 0001	00 2134
+16 0000	00 2135
+26 0001	00 2136
+27 1332	00 2137
+11 0001	00 2140
+16 0000	00 2141
+32 0000	00 2142
+26 0001	00 2143
+27 1333	00 2144
+11 0001	00 2145
+16 0000	00 2146
+26 0001	00 2147
+27 1334	00 2150
+11 0001	00 2151
+16 0000	00 2152
+32 0000	00 2153
+26 0002	00 2154
+27 1335	00 2155
+26 0146	00 2156
+11 0001	00 2157
+16 0000	00 2160
+26 0001	00 2161
+27 1336	00 2162
+11 0001	00 2163
+16 0000	00 2164
+32 0000	00 2165
+26 0001	00 2166
+27 1337	00 2167
+11 0001	00 2170
+16 0000	00 2171
+26 0001	00 2172
+27 1340	00 2173
+32 0000	00 2174
+12 0000	00 2175
+25 3777	00 2176
+12 0000	00 2177
+32 0000	00 2200
+26 0001	00 2201
+27 1014	00 2202
+11 0001	00 2203
+16 0000	00 2204
+32 0000	00 2205
+26 0001	00 2206
+27 1341	00 2207
+11 0001	00 2210
+16 0000	00 2211

INSTRUCTION	LOCATION
+26 0001	00 2212
+27 1342	00 2213
+11 0001	00 2214
+16 0000	00 2215
+32 0000	00 2216
+26 0001	00 2217
+27 1343	00 2220
+11 0001	00 2221
+16 0000	00 2222
+26 0001	00 2223
+27 1344	00 2224
+11 0001	00 2225
+16 0000	00 2226
+32 0000	00 2227
+26 0001	00 2230
+27 1345	00 2231
+11 0001	00 2232
+16 0000	00 2233
+26 0002	00 2234
+27 1346	00 2235
+26 0067	00 2236
+11 0001	00 2237
+16 0000	00 2240
+32 0000	00 2241
+26 0001	00 2242
+27 1347	00 2243
+11 0001	00 2244
+16 0000	00 2245
+26 0001	00 2246
+27 1350	00 2247
+11 0001	00 2250
+16 0000	00 2251
+32 0000	00 2252
+26 0001	00 2253
+27 1351	00 2254
+11 0001	00 2255
+16 0000	00 2256
+26 0001	00 2257
+27 1352	00 2260
+11 0001	00 2261
+16 0000	00 2262
+32 0000	00 2263
+26 0001	00 2264
+27 1353	00 2265
+11 0001	00 2266
+16 0000	00 2267
+26 0001	00 2270
+27 1354	00 2271
+11 0001	00 2272
+16 0000	00 2273

INSTRUCTION	LOCATION
+32 0000	00 2274
+26 0001	00 2275
+27 1355	00 2276
+11 0001	00 2277
+16 0000	00 2300
+26 0001	00 2301
+27 1356	00 2302
+11 0001	00 2303
+16 0000	00 2304
+32 0000	00 2305
+26 0001	00 2306
+27 1357	00 2307
+13 0000	00 2310
+23 3777	00 2311
+13 0000	00 2312
+23 3776	00 2313
+11 1005	00 2314
+11 1005	00 2315
+11 1005	00 2316
+11 1005	00 2317
+11 1005	00 2320
+01 3777	00 2321
+16 0000	00 2322
+26 0003	00 2323
+27 1360	00 2324
+26 0146	00 2325
+26 0144	00 2326
+11 1005	00 2327
+11 1005	00 2330
+11 1005	00 2331
+11 1005	00 2332
+11 1005	00 2333
+23 3775	00 2334
+01 3777	00 2335
+16 0000	00 2336
+26 0001	00 2337
+27 1361	00 2340
+11 1005	00 2341
+11 1005	00 2342
+11 1005	00 2343
+11 1005	00 2344
+11 1005	00 2345
+23 3773	00 2346
+01 3777	00 2347
+16 0000	00 2350
+26 0001	00 2351
+27 1362	00 2352
+11 1005	00 2353
+11 1005	00 2354
+11 1005	00 2355

INSTRUCTION	LOCATION
+11 1005	00 2356
+11 1005	00 2357
+23 3767	00 2360
+01 3777	00 2361
+16 0000	00 2362
+26 0001	00 2363
+27 1363	00 2364
+11 1005	00 2365
+11 1005	00 2366
+11 1005	00 2367
+11 1005	00 2370
+11 1005	00 2371
+23 3757	00 2372
+01 3777	00 2373
+16 0000	00 2374
+26 0001	00 2375
+27 1364	00 2376
+11 1005	00 2377
+11 1005	00 2400
+11 1005	00 2401
+11 1005	00 2402
+11 1005	00 2403
+23 3737	00 2404
+01 3777	00 2405
+16 0000	00 2406
+26 0001	00 2407
+27 1365	00 2410
+11 1005	00 2411
+11 1005	00 2412
+11 1005	00 2413
+11 1005	00 2414
+11 1005	00 2415
+23 3677	00 2416
+01 3777	00 2417
+16 0000	00 2420
+26 0001	00 2421
+27 1366	00 2422
+11 1005	00 2423
+11 1005	00 2424
+11 1005	00 2425
+11 1005	00 2426
+11 1005	00 2427
+23 3577	00 2430
+01 3777	00 2431
+16 0000	00 2432
+26 0001	00 2433
+27 1367	00 2434
+11 1005	00 2435
+11 1005	00 2436
+11 1005	00 2437

INSTRUCTION	LOCATION
+11 1005	00 2440
+11 1005	00 2441
+23 3377	00 2442
+01 3777	00 2443
+16 0000	00 2444
+26 0001	00 2445
+27 1370	00 2446
+11 1005	00 2447
+11 1005	00 2450
+11 1005	00 2451
+11 1005	00 2452
+11 1005	00 2453
+23 2777	00 2454
+01 3777	00 2455
+16 0000	00 2456
+26 0001	00 2457
+27 1371	00 2460
+11 1005	00 2461
+11 1005	00 2462
+11 1005	00 2463
+11 1005	00 2464
+11 1005	00 2465
+23 1777	00 2466
+01 3777	00 2467
+16 0000	00 2470
+26 0003	00 2471
+27 1372	00 2472
+26 0060	00 2473
+26 0056	00 2474
+11 1005	00 2475
+11 1005	00 2476
+11 1005	00 2477
+11 1005	00 2500
+23 0177	00 2501
+33 3777	00 2502
+32 0000	00 2503
+26 0001	00 2504
+27 1373	00 2505
+11 1001	00 2506
+13 0000	00 2507
+11 1001	00 2510
+13 0000	00 2511
+11 1001	00 2512
+13 0000	00 2513
+11 1001	00 2514
+13 0000	00 2515
+11 1001	00 2516
+13 0000	00 2517
+11 1001	00 2520
+13 0000	00 2521

INSTRUCTION	LOCATION
+11 1001	00 2522
+13 0000	00 2523
+11 1001	00 2524
+13 0000	00 2525
+11 1001	00 2526
+13 0000	00 2527
+11 1001	00 2530
+13 0000	00 2531
+11 1001	00 2532
+13 0000	00 2533
+11 1001	00 2534
+13 0000	00 2535
+11 1001	00 2536
+13 0000	00 2537
+11 1001	00 2540
+13 0000	00 2541
+11 1001	00 2542
+13 0000	00 2543
+11 1001	00 2544
+13 0000	00 2545
+23 0177	00 2546
+32 0000	00 2547
+33 3777	00 2550
+26 0003	00 2551
+27 1374	00 2552
+26 0166	00 2553
+26 0166	00 2554
+11 1005	00 2555
+11 1005	00 2556
+11 1005	00 2557
+11 1005	00 2560
+11 1005	00 2561
+01 0177	00 2562
+13 0000	00 2563
+23 0177	00 2564
+33 3777	00 2565
+32 0000	00 2566
+26 0001	00 2567
+27 1230	00 2570
+11 1001	00 2571
+13 0000	00 2572
+23 0177	00 2573
+33 3776	00 2574
+32 0000	00 2575
+26 0001	00 2576
+27 1231	00 2577
+11 1001	00 2600
+13 0000	00 2601
+23 0177	00 2602
+33 3775	00 2603

INSTRUCTION	LOCATION
+32 0000	00 2604
+26 0001	00 2605
+27 1232	00 2606
+11 1001	00 2607
+13 0000	00 2610
+23 0177	00 2611
+33 3774	00 2612
+32 0000	00 2613
+26 0001	00 2614
+27 1233	00 2615
+11 1001	00 2616
+13 0000	00 2617
+23 0177	00 2620
+33 3773	00 2621
+32 0000	00 2622
+26 0001	00 2623
+27 1234	00 2624
+11 1001	00 2625
+13 0000	00 2626
+23 0177	00 2627
+33 3772	00 2630
+32 0000	00 2631
+26 0001	00 2632
+27 1235	00 2633
+11 1001	00 2634
+13 0000	00 2635
+23 0177	00 2636
+33 3771	00 2637
+32 0000	00 2640
+26 0001	00 2641
+27 1236	00 2642
+11 1001	00 2643
+13 0000	00 2644
+23 0177	00 2645
+33 3770	00 2646
+32 0000	00 2647
+26 0001	00 2650
+27 1237	00 2651
+11 1001	00 2652
+13 0000	00 2653
+23 0177	00 2654
+33 3767	00 2655
+32 0000	00 2656
+26 0001	00 2657
+27 1240	00 2660
+11 1001	00 2661
+13 0000	00 2662
+23 0177	00 2663
+33 3766	00 2664
+32 0000	00 2665

INSTRUCTION	LOCATION
+26 0001	00 2666
+27 1241	00 2667
+11 1001	00 2670
+13 0000	00 2671
+23 0177	00 2672
+33 3765	00 2673
+32 0000	00 2674
+26 0001	00 2675
+27 1242	00 2676
+11 1001	00 2677
+13 0000	00 2700
+23 0177	00 2701
+33 3764	00 2702
+32 0000	00 2703
+26 0001	00 2704
+27 1243	00 2705
+11 1001	00 2706
+13 0000	00 2707
+23 0177	00 2710
+33 3763	00 2711
+32 0000	00 2712
+26 0001	00 2713
+27 1244	00 2714
+11 1001	00 2715
+13 0000	00 2716
+23 0177	00 2717
+33 3762	00 2720
+32 0000	00 2721
+26 0001	00 2722
+27 1245	00 2723
+11 1001	00 2724
+13 0000	00 2725
+23 0177	00 2726
+33 3761	00 2727
+32 0000	00 2730
+26 0001	00 2731
+27 1246	00 2732
+11 1001	00 2733
+13 0000	00 2734
+23 0177	00 2735
+33 3760	00 2736
+32 0000	00 2737
+26 0003	00 2740
+27 1247	00 2741
+26 0126	00 2742
+26 0126	00 2743
+11 1005	00 2744
+11 1005	00 2745
+11 1005	00 2746
+11 1005	00 2747

INSTRUCTION	LOCATION
+11 1005	00 2750
+13 0000	00 2751
+23 0177	00 2752
+33 3777	00 2753
+26 0001	00 2754
+27 1250	00 2755
+11 1001	00 2756
+23 0177	00 2757
+33 3776	00 2760
+26 0001	00 2761
+27 1251	00 2762
+11 1001	00 2763
+23 0177	00 2764
+33 3775	00 2765
+26 0001	00 2766
+27 1252	00 2767
+11 1001	00 2770
+23 0177	00 2771
+33 3774	00 2772
+26 0001	00 2773
+27 1253	00 2774
+11 1001	00 2775
+23 0177	00 2776
+33 3773	00 2777
+26 0001	00 3000
+27 1254	00 3001
+11 1001	00 3002
+23 0177	00 3003
+33 3772	00 3004
+26 0001	00 3005
+27 1255	00 3006
+11 1001	00 3007
+23 0177	00 3010
+33 3771	00 3011
+26 0001	00 3012
+27 1256	00 3013
+11 1001	00 3014
+23 0177	00 3015
+33 3770	00 3016
+26 0001	00 3017
+27 1257	00 3020
+11 1001	00 3021
+23 0177	00 3022
+33 3767	00 3023
+26 0001	00 3024
+27 1260	00 3025
+11 1001	00 3026
+23 0177	00 3027
+33 3766	00 3030
+26 0001	00 3031

INSTRUCTION	LOCATION
+27 1261	00 3032
+11 1001	00 3033
+23 0177	00 3034
+33 3765	00 3035
+26 0001	00 3036
+27 1262	00 3037
+11 1001	00 3040
+23 0177	00 3041
+33 3764	00 3042
+26 0001	00 3043
+27 1263	00 3044
+11 1001	00 3045
+23 0177	00 3046
+33 3763	00 3047
+26 0001	00 3050
+27 1264	00 3051
+11 1001	00 3052
+23 0177	00 3053
+33 3762	00 3054
+26 0001	00 3055
+27 1265	00 3056
+11 1001	00 3057
+23 0177	00 3060
+33 3761	00 3061
+26 0001	00 3062
+27 1266	00 3063
+11 1001	00 3064
+23 0177	00 3065
+33 3760	00 3066
+26 0002	00 3067
+27 1267	00 3070
+26 0052	00 3071
+11 1001	00 3072
+13 0000	00 3073
+11 1001	00 3074
+13 0000	00 3075
+11 1001	00 3076
+13 0000	00 3077
+11 1001	00 3100
+13 0000	00 3101
+11 1001	00 3102
+13 0000	00 3103
+11 1001	00 3104
+13 0000	00 3105
+11 1001	00 3106
+13 0000	00 3107
+11 1001	00 3110
+13 0000	00 3111
+11 1001	00 3112
+13 0000	00 3113

INSTRUCTION	LOCATION
+11 1001	00 3114
+13 0000	00 3115
+11 1001	00 3116
+13 0000	00 3117
+11 1001	00 3120
+23 0167	00 3121
+13 0000	00 3122
+23 0166	00 3123
+23 0165	00 3124
+23 0164	00 3125
+23 0163	00 3126
+23 0162	00 3127
+23 0161	00 3130
+23 0160	00 3131
+23 0157	00 3132
+23 0156	00 3133
+23 0155	00 3134
+23 0154	00 3135
+23 0153	00 3136
+23 0152	00 3137
+23 0151	00 3140
+23 0150	00 3141
+11 1001	00 3142
+23 0173	00 3143
+33 3577	00 3144
+26 0054	00 3145
+32 0000	00 3146
+22 0002	00 3147
+26 0001	00 3150
+27 1401	00 3151
+11 1005	00 3152
+11 1005	00 3153
+11 1005	00 3154
+11 1005	00 3155
+11 1005	00 3156
+23 0174	00 3157
+22 7776	00 3160
+23 0177	00 3161
+11 0005	00 3162
+11 0005	00 3163
+11 0002	00 3164
+23 0176	00 3165
+11 1001	00 3166
+13 0000	00 3167
+11 1001	00 3170
+13 0000	00 3171
+11 1001	00 3172
+13 0000	00 3173
+11 1001	00 3174
+13 0000	00 3175

INSTRUCTION	LOCATION
+11 1001	00 3176
+13 0000	00 3177
+11 1001	00 3200
+13 0000	00 3201
+11 1001	00 3202
+13 0000	00 3203
+11 1001	00 3204
+13 0000	00 3205
+11 1001	00 3206
+13 0000	00 3207
+11 1001	00 3210
+13 0000	00 3211
+11 1001	00 3212
+13 0000	00 3213
+11 1001	00 3214
+23 0175	00 3215
+11 1001	00 3216
+13 0000	00 3217
+23 0173	00 3220
+23 0167	00 3221
+33 3677	00 3222
+26 0001	00 3223
+33 3576	00 3224
+26 0054	00 3225
+33 3657	00 3226
+26 0053	00 3227
+23 0175	00 3230
+22 7776	00 3231
+13 0000	00 3232
+11 1001	00 3233
+13 0000	00 3234
+11 1001	00 3235
+13 0000	00 3236
+11 1001	00 3237
+13 0000	00 3240
+11 1001	00 3241
+13 0000	00 3242
+11 1001	00 3243
+13 0000	00 3244
+11 1001	00 3245
+13 0000	00 3246
+11 1001	00 3247
+13 0000	00 3250
+11 1001	00 3251
+13 0000	00 3252
+11 1001	00 3253
+13 0000	00 3254
+11 1001	00 3255
+13 0000	00 3256
+11 1001	00 3257

INSTRUCTION	LOCATION
+13 0000	00 3260
+11 1001	00 3261
+13 0000	00 3262
+23 0173	00 3263
+22 0000	00 3264
+23 0177	00 3265
+11 0005	00 3266
+11 0005	00 3267
+11 0002	00 3270
+23 0176	00 3271
+11 1005	00 3272
+11 1005	00 3273
+11 1002	00 3274
+23 0174	00 3275
+22 5776	00 3276
+13 0000	00 3277
+23 0167	00 3300
+16 0000	00 3301
+26 0004	00 3302
+33 3637	00 3303
+26 0001	00 3304
+27 1402	00 3305
+27 1403	00 3306
+33 3677	00 3307
+26 0001	00 3310
+33 3575	00 3311
+26 0056	00 3312
+33 3637	00 3313
+26 0004	00 3314
+33 3657	00 3315
+26 0003	00 3316
+32 0000	00 3317
+26 0002	00 3320
+27 1404	00 3321
+27 1405	00 3322
+22 5252	00 3323
+11 1001	00 3324
+13 0000	00 3325
+11 1002	00 3326
+13 0000	00 3327
+11 1002	00 3330
+13 0000	00 3331
+11 1002	00 3332
+13 0000	00 3333
+11 1002	00 3334
+13 0000	00 3335
+11 1002	00 3336
+22 2526	00 3337
+13 0000	00 3340
+11 1002	00 3341

INSTRUCTION	LOCATION
+13 0000	00 3342
+11 1002	00 3343
+13 0000	00 3344
+11 1002	00 3345
+13 0000	00 3346
+11 1002	00 3347
+13 0000	00 3350
+11 1002	00 3351
+13 0000	00 3352
+11 1002	00 3353
+01 0000	00 3354
+23 0177	00 3355
+11 0005	00 3356
+11 0005	00 3357
+11 0002	00 3360
+23 0176	00 3361
+22 5252	00 3362
+23 0175	00 3363
+23 0174	00 3364
+22 6776	00 3365
+13 0000	00 3366
+23 0167	00 3367
+23 0173	00 3370
+33 3677	00 3371
+26 0001	00 3372
+33 3574	00 3373
+26 0026	00 3374
+33 3657	00 3375
+26 0002	00 3376
+32 0000	00 3377
+26 0023	00 3400
+33 3637	00 3401
+26 0001	00 3402
+27 1406	00 3403
+33 3617	00 3404
+26 0001	00 3405
+27 1407	00 3406
+22 2526	00 3407
+13 0000	00 3410
+23 0174	00 3411
+22 2524	00 3412
+23 0175	00 3413
+22 7776	00 3414
+13 0000	00 3415
+23 0167	00 3416
+23 0173	00 3417
+22 6776	00 3420
+13 0000	00 3421
+23 0166	00 3422
+26 0047	00 3423

INSTRUCTION	LOCATION
+22 5252	00 3424
+11 1001	00 3425
+13 0000	00 3426
+11 1002	00 3427
+13 0000	00 3430
+11 1002	00 3431
+13 0000	00 3432
+11 1002	00 3433
+13 0000	00 3434
+11 1002	00 3435
+13 0000	00 3436
+11 1002	00 3437
+13 0000	00 3440
+22 5252	00 3441
+11 1001	00 3442
+13 0000	00 3443
+11 1002	00 3444
+13 0000	00 3445
+11 1002	00 3446
+13 0000	00 3447
+11 1002	00 3450
+13 0000	00 3451
+11 1002	00 3452
+13 0000	00 3453
+11 1001	00 3454
+01 0000	00 3455
+23 0177	00 3456
+11 0005	00 3457
+11 0005	00 3460
+11 0002	00 3461
+23 0176	00 3462
+22 2524	00 3463
+23 0175	00 3464
+13 0000	00 3465
+23 0174	00 3466
+23 0173	00 3467
+22 7376	00 3470
+13 0000	00 3471
+23 0167	00 3472
+33 3677	00 3473
+26 0001	00 3474
+33 3554	00 3475
+26 0013	00 3476
+33 3657	00 3477
+26 0001	00 3500
+27 1410	00 3501
+22 7776	00 3502
+23 0175	00 3503
+13 0000	00 3504
+23 0174	00 3505

INSTRUCTION	LOCATION
+23 0173	00 3506
+22 7376	00 3507
+13 0000	00 3510
+23 0166	00 3511
+33 3677	00 3512
+26 0001	00 3513
+33 3553	00 3514
+26 0013	00 3515
+33 3657	00 3516
+26 0001	00 3517
+27 1411	00 3520
+22 5252	00 3521
+23 0175	00 3522
+11 0001	00 3523
+23 0174	00 3524
+23 0173	00 3525
+22 7576	00 3526
+13 0000	00 3527
+23 0166	00 3530
+33 3677	00 3531
+26 0001	00 3532
+33 3552	00 3533
+26 0015	00 3534
+33 3657	00 3535
+26 0001	00 3536
+27 1412	00 3537
+22 5250	00 3540
+13 0000	00 3541
+23 0175	00 3542
+22 7776	00 3543
+13 0000	00 3544
+23 0174	00 3545
+23 0173	00 3546
+22 7676	00 3547
+13 0000	00 3550
+23 0166	00 3551
+33 3677	00 3552
+26 0001	00 3553
+33 3551	00 3554
+26 0013	00 3555
+33 3657	00 3556
+26 0001	00 3557
+27 1413	00 3560
+22 2526	00 3561
+23 0175	00 3562
+22 5252	00 3563
+23 0174	00 3564
+22 7736	00 3565
+13 0000	00 3566
+23 0166	00 3567

INSTRUCTION	LOCATION
+23 0173	00 3570
+33 3677	00 3571
+26 0001	00 3572
+33 3550	00 3573
+26 0014	00 3574
+33 3657	00 3575
+26 0001	00 3576
+27 1414	00 3577
+22 5250	00 3600
+23 0175	00 3601
+22 2526	00 3602
+13 0000	00 3603
+23 0174	00 3604
+23 0173	00 3605
+22 7756	00 3606
+13 0000	00 3607
+23 0166	00 3610
+33 3677	00 3611
+26 0001	00 3612
+33 3547	00 3613
+26 0013	00 3614
+33 3657	00 3615
+26 0001	00 3616
+27 1415	00 3617
+22 0002	00 3620
+23 0174	00 3621
+11 1001	00 3622
+23 0175	00 3623
+22 7766	00 3624
+13 0000	00 3625
+23 0166	00 3626
+23 0173	00 3627
+33 3677	00 3630
+26 0001	00 3631
+33 3546	00 3632
+26 0016	00 3633
+33 3657	00 3634
+26 0001	00 3635
+27 1416	00 3636
+22 2524	00 3637
+13 0000	00 3640
+23 0174	00 3641
+23 0175	00 3642
+23 0173	00 3643
+22 7776	00 3644
+13 0000	00 3645
+23 0166	00 3646
+22 7772	00 3647
+13 0000	00 3650
+23 0165	00 3651

INSTRUCTION	LOCATION
+33 3677	00 3652
+26 0001	00 3653
+33 3525	00 3654
+26 0013	00 3655
+33 3657	00 3656
+26 0001	00 3657
+27 1433	00 3660
+22 2524	00 3661
+23 0175	00 3662
+22 5252	00 3663
+23 0174	00 3664
+22 7776	00 3665
+11 0001	00 3666
+23 0165	00 3667
+23 0173	00 3670
+33 3677	00 3671
+26 0001	00 3672
+33 3524	00 3673
+26 0015	00 3674
+33 3657	00 3675
+26 0001	00 3676
+27 1434	00 3677
+22 5252	00 3700
+23 0175	00 3701
+22 2526	00 3702
+13 0000	00 3703
+23 0174	00 3704
+23 0173	00 3705
+22 7776	00 3706
+23 0164	00 3707
+13 0000	00 3710
+23 0165	00 3711
+33 3677	00 3712
+26 0001	00 3713
+33 3517	00 3714
+26 0013	00 3715
+33 3657	00 3716
+26 0001	00 3717
+27 1435	00 3720
+22 2452	00 3721
+23 0175	00 3722
+22 5252	00 3723
+23 0174	00 3724
+22 3776	00 3725
+13 0000	00 3726
+23 0164	00 3727
+23 0173	00 3730
+33 3677	00 3731
+26 0001	00 3732
+33 3516	00 3733

INSTRUCTION	LOCATION
+26 0011	00 3734
+33 3657	00 3735
+26 0001	00 3736
+27 1436	00 3737
+22 5324	00 3740
+23 0175	00 3741
+22 5776	00 3742
+13 0000	00 3743
+23 0164	00 3744
+23 0173	00 3745
+33 3677	00 3746
+26 0001	00 3747
+33 3515	00 3750
+26 0047	00 3751
+33 3657	00 3752
+26 0034	00 3753
+27 1437	00 3754

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+27 1021	00 4001
+12 0000	00 4002
+12 0000	00 4003
+12 0000	00 4004
+12 0000	00 4005
+12 0000	00 4006
+12 0000	00 4007
+22 5252	00 4010
+23 0175	00 4011
+22 2452	00 4012
+13 0000	00 4013
+23 0174	00 4014
+23 0173	00 4015
+22 6776	00 4016
+13 0000	00 4017
+23 0164	00 4020
+33 3677	00 4021
+26 0001	00 4022
+33 3514	00 4023
+26 0011	00 4024
+33 3657	00 4025
+26 0001	00 4026
+27 1440	00 4027
+22 5326	00 4030
+23 0174	00 4031
+22 7376	00 4032
+13 0000	00 4033

INSTRUCTION	LOCATION
+23 0164	00 4034
+23 0173	00 4035
+33 3677	00 4036
+26 0001	00 4037
+33 3513	00 4040
+26 0004	00 4041
+33 3657	00 4042
+26 0001	00 4043
+27 1441	00 4044
+27 3777	00 4045
+33 3677	00 4046
+26 0001	00 4047
+33 3573	00 4050
+26 0025	00 4051
+33 3657	00 4052
+32 0000	00 4053
+26 0023	00 4054
+33 3617	00 4055
+26 0004	00 4056
+33 3637	00 4057
+26 0001	00 4060
+27 1417	00 4061
+27 1420	00 4062
+22 0002	00 4063
+23 0174	00 4064
+11 1001	00 4065
+13 0000	00 4066
+23 0175	00 4067
+23 0173	00 4070
+22 7776	00 4071
+13 0000	00 4072
+23 0167	00 4073
+22 7772	00 4074
+13 0000	00 4075
+23 0166	00 4076
+26 0032	00 4077
+22 2524	00 4100
+13 0000	00 4101
+11 1002	00 4102
+13 0000	00 4103
+11 1002	00 4104
+13 0000	00 4105
+11 1002	00 4106
+13 0000	00 4107
+11 1002	00 4110
+13 0000	00 4111
+11 1002	00 4112
+13 0000	00 4113
+23 0174	00 4114
+11 1002	00 4115

INSTRUCTION	LOCATION
+23 0175	00 4116
+22 0000	00 4117
+01 0000	00 4120
+23 0177	00 4121
+11 0005	00 4122
+11 0005	00 4123
+11 0002	00 4124
+23 0176	00 4125
+22 7576	00 4126
+13 0000	00 4127
+23 0167	00 4130
+23 0173	00 4131
+33 3677	00 4132
+26 0001	00 4133
+33 3545	00 4134
+26 0011	00 4135
+33 3657	00 4136
+26 0001	00 4137
+27 1421	00 4140
+22 5254	00 4141
+23 0174	00 4142
+22 7774	00 4143
+13 0000	00 4144
+23 0166	00 4145
+23 0173	00 4146
+33 3677	00 4147
+26 0001	00 4150
+33 3544	00 4151
+26 0015	00 4152
+33 3657	00 4153
+26 0001	00 4154
+27 1422	00 4155
+22 2524	00 4156
+23 0175	00 4157
+22 7776	00 4160
+13 0000	00 4161
+23 0174	00 4162
+23 0173	00 4163
+23 0166	00 4164
+22 5776	00 4165
+13 0000	00 4166
+23 0165	00 4167
+33 3677	00 4170
+26 0001	00 4171
+33 3535	00 4172
+26 0014	00 4173
+33 3657	00 4174
+26 0001	00 4175
+27 1423	00 4176
+22 0052	00 4177

INSTRUCTION	LOCATION
+13 0000	00 4200
+23 0175	00 4201
+23 0173	00 4202
+22 5254	00 4203
+23 0174	00 4204
+22 6776	00 4205
+13 0000	00 4206
+23 0165	00 4207
+33 3677	00 4210
+26 0001	00 4211
+33 3534	00 4212
+26 0014	00 4213
+33 3657	00 4214
+26 0001	00 4215
+27 1424	00 4216
+22 2576	00 4217
+23 0175	00 4220
+22 2524	00 4221
+13 0000	00 4222
+23 0174	00 4223
+23 0173	00 4224
+22 7376	00 4225
+13 0000	00 4226
+23 0165	00 4227
+33 3677	00 4230
+26 0001	00 4231
+33 3533	00 4232
+26 0014	00 4233
+33 3657	00 4234
+26 0001	00 4235
+27 1425	00 4236
+22 2524	00 4237
+23 0175	00 4240
+22 7724	00 4241
+13 0000	00 4242
+23 0174	00 4243
+23 0173	00 4244
+22 7576	00 4245
+13 0000	00 4246
+23 0165	00 4247
+33 3677	00 4250
+26 0001	00 4251
+33 3532	00 4252
+26 0012	00 4253
+33 3657	00 4254
+26 0001	00 4255
+27 1426	00 4256
+22 2576	00 4257
+13 0000	00 4260
+23 0174	00 4261

INSTRUCTION	LOCATION
+23 0173	00 4262
+22 7676	00 4263
+13 0000	00 4264
+23 0165	00 4265
+33 3677	00 4266
+26 0001	00 4267
+33 3531	00 4270
+26 0013	00 4271
+33 3657	00 4272
+26 0001	00 4273
+27 1427	00 4274
+22 7776	00 4275
+23 0175	00 4276
+11 0001	00 4277
+23 0174	00 4300
+23 0173	00 4301
+22 7736	00 4302
+13 0000	00 4303
+23 0165	00 4304
+33 3677	00 4305
+26 0001	00 4306
+33 3530	00 4307
+26 0012	00 4310
+33 3657	00 4311
+26 0001	00 4312
+27 1430	00 4313
+22 7776	00 4314
+13 0000	00 4315
+23 0174	00 4316
+23 0173	00 4317
+22 7756	00 4320
+13 0000	00 4321
+23 0165	00 4322
+33 3677	00 4323
+26 0001	00 4324
+33 3527	00 4325
+26 0013	00 4326
+33 3657	00 4327
+26 0001	00 4330
+27 1431	00 4331
+22 5252	00 4332
+23 0174	00 4333
+13 0000	00 4334
+23 0175	00 4335
+23 0173	00 4336
+22 7766	00 4337
+13 0000	00 4340
+23 0165	00 4341
+33 3677	00 4342
+26 0001	00 4343

INSTRUCTION	LOCATION
+33 3526	00 4344
+26 0004	00 4345
+33 3657	00 4346
+26 0001	00 4347
+27 1432	00 4350
+27 3777	00 4351
+33 3677	00 4352
+26 0001	00 4353
+33 3572	00 4354
+26 0045	00 4355
+33 3657	00 4356
+32 0000	00 4357
+26 0007	00 4360
+33 3617	00 4361
+26 0004	00 4362
+33 3637	00 4363
+26 0001	00 4364
+27 1442	00 4365
+27 1443	00 4366
+27 3777	00 4367
+22 5252	00 4370
+11 1001	00 4371
+13 0000	00 4372
+11 1002	00 4373
+13 0000	00 4374
+11 1002	00 4375
+13 0000	00 4376
+11 1002	00 4377
+13 0000	00 4400
+11 1002	00 4401
+13 0000	00 4402
+11 1002	00 4403
+13 0000	00 4404
+11 1001	00 4405
+23 0175	00 4406
+23 0174	00 4407
+22 0000	00 4410
+01 0000	00 4411
+23 0177	00 4412
+11 0005	00 4413
+11 0005	00 4414
+11 0002	00 4415
+23 0176	00 4416
+22 7676	00 4417
+13 0000	00 4420
+23 0167	00 4421
+23 0173	00 4422
+33 3677	00 4423
+26 0001	00 4424
+33 3571	00 4425

INSTRUCTION	LOCATION
+26 0022	00 4426
+33 3657	00 4427
+32 0000	00 4430
+26 0027	00 4431
+33 3637	00 4432
+26 0001	00 4433
+27 1444	00 4434
+33 3617	00 4435
+26 0001	00 4436
+27 1445	00 4437
+22 7776	00 4440
+23 0175	00 4441
+13 0000	00 4442
+23 0174	00 4443
+23 0173	00 4444
+23 0167	00 4445
+22 7576	00 4446
+13 0000	00 4447
+23 0164	00 4450
+33 3677	00 4451
+26 0001	00 4452
+33 3512	00 4453
+26 0071	00 4454
+33 3657	00 4455
+26 0001	00 4456
+27 1446	00 4457
+27 3777	00 4460
+22 2525	00 4461
+13 0000	00 4462
+23 0174	00 4463
+23 0173	00 4464
+11 1002	00 4465
+23 0175	00 4466
+13 0000	00 4467
+11 1002	00 4470
+13 0000	00 4471
+11 1002	00 4472
+13 0000	00 4473
+11 1002	00 4474
+13 0000	00 4475
+11 1002	00 4476
+13 0000	00 4477
+11 1002	00 4500
+13 0000	00 4501
+11 1001	00 4502
+13 0000	00 4503
+22 7776	00 4504
+13 0000	00 4505
+11 1001	00 4506
+13 0000	00 4507

INSTRUCTION	LOCATION
+11 1001	00 4510
+13 0000	00 4511
+11 1001	00 4512
+13 0000	00 4513
+11 1001	00 4514
+13 0000	00 4515
+11 1001	00 4516
+13 0000	00 4517
+11 1001	00 4520
+13 0000	00 4521
+11 1001	00 4522
+13 0000	00 4523
+11 1001	00 4524
+13 0000	00 4525
+11 1001	00 4526
+13 0000	00 4527
+11 1001	00 4530
+13 0000	00 4531
+11 1001	00 4532
+13 0000	00 4533
+11 1001	00 4534
+01 0000	00 4535
+23 0177	00 4536
+11 0005	00 4537
+11 0005	00 4540
+11 0002	00 4541
+23 0176	00 4542
+22 7736	00 4543
+13 0000	00 4544
+23 0167	00 4545
+33 3677	00 4546
+26 0001	00 4547
+33 3570	00 4550
+26 0076	00 4551
+33 3657	00 4552
+32 0000	00 4553
+26 0007	00 4554
+33 3637	00 4555
+26 0001	00 4556
+27 1447	00 4557
+33 3617	00 4560
+26 0001	00 4561
+27 1450	00 4562
+27 3777	00 4563
+22 2524	00 4564
+13 0000	00 4565
+11 1002	00 4566
+13 0000	00 4567
+11 1002	00 4570
+13 0000	00 4571

INSTRUCTION	LOCATION
+11 1002	00 4572
+13 0000	00 4573
+11 1002	00 4574
+13 0000	00 4575
+11 1002	00 4576
+13 0000	00 4577
+11 1002	00 4600
+13 0000	00 4601
+22 7776	00 4602
+13 0000	00 4603
+11 1001	00 4604
+13 0000	00 4605
+11 1001	00 4606
+13 0000	00 4607
+11 1001	00 4610
+13 0000	00 4611
+11 1001	00 4612
+13 0000	00 4613
+11 1001	00 4614
+13 0000	00 4615
+11 1001	00 4616
+13 0000	00 4617
+11 1001	00 4620
+13 0000	00 4621
+11 1001	00 4622
+13 0000	00 4623
+11 1001	00 4624
+13 0000	00 4625
+11 1001	00 4626
+13 0000	00 4627
+11 1001	00 4630
+13 0000	00 4631
+11 1001	00 4632
+01 0000	00 4633
+23 0177	00 4634
+11 0005	00 4635
+11 0005	00 4636
+11 0002	00 4637
+23 0176	00 4640
+22 5252	00 4641
+23 0175	00 4642
+23 0174	00 4643
+22 7756	00 4644
+13 0000	00 4645
+23 0167	00 4646
+23 0173	00 4647
+33 3677	00 4650
+26 0001	00 4651
+33 3567	00 4652
+26 0045	00 4653

INSTRUCTION	LOCATION
+33 3657	00 4654
+32 0000	00 4655
+26 0007	00 4656
+33 3637	00 4657
+26 0001	00 4660
+27 1451	00 4661
+33 3617	00 4662
+26 0001	00 4663
+27 1452	00 4664
+27 3777	00 4665
+22 5252	00 4666
+23 0174	00 4667
+11 1001	00 4670
+13 0000	00 4671
+11 1002	00 4672
+13 0000	00 4673
+11 1002	00 4674
+13 0000	00 4675
+11 1002	00 4676
+13 0000	00 4677
+11 1002	00 4700
+13 0000	00 4701
+11 1002	00 4702
+13 0000	00 4703
+11 1001	00 4704
+13 0000	00 4705
+23 0175	00 4706
+23 0173	00 4707
+01 0000	00 4710
+23 0177	00 4711
+11 0005	00 4712
+11 0005	00 4713
+11 0002	00 4714
+23 0176	00 4715
+22 7766	00 4716
+13 0000	00 4717
+23 0167	00 4720
+33 3677	00 4721
+26 0001	00 4722
+33 3566	00 4723
+26 0044	00 4724
+33 3657	00 4725
+32 0000	00 4726
+26 0007	00 4727
+33 3637	00 4730
+26 0001	00 4731
+27 1453	00 4732
+33 3617	00 4733
+26 0001	00 4734
+27 1454	00 4735

INSTRUCTION	LOCATION
+27 3777	00 4736
+13 0000	00 4737
+22 2524	00 4740
+23 0175	00 4741
+13 0000	00 4742
+23 0174	00 4743
+23 0173	00 4744
+11 1002	00 4745
+13 0000	00 4746
+11 1002	00 4747
+13 0000	00 4750
+11 1002	00 4751
+13 0000	00 4752
+11 1002	00 4753
+13 0000	00 4754
+11 1002	00 4755
+13 0000	00 4756
+11 1002	00 4757
+01 0000	00 4760
+23 0177	00 4761
+11 0005	00 4762
+11 0005	00 4763
+11 0002	00 4764
+23 0176	00 4765
+22 7772	00 4766
+13 0000	00 4767
+23 0167	00 4770
+33 3677	00 4771
+26 0001	00 4772
+33 3565	00 4773
+26 0041	00 4774
+33 3657	00 4775
+32 0000	00 4776
+26 0007	00 4777
+33 3637	00 5000
+26 0001	00 5001
+27 1455	00 5002
+33 3617	00 5003
+26 0001	00 5004
+27 1456	00 5005
+27 3777	00 5006
+22 2524	00 5007
+13 0000	00 5010
+11 1002	00 5011
+13 0000	00 5012
+11 1002	00 5013
+13 0000	00 5014
+11 1002	00 5015
+13 0000	00 5016
+11 1002	00 5017

INSTRUCTION	LOCATION
+13 0000	00 5020
+11 1002	00 5021
+13 0000	00 5022
+11 1002	00 5023
+01 0000	00 5024
+23 0177	00 5025
+11 0005	00 5026
+11 0005	00 5027
+11 0002	00 5030
+23 0176	00 5031
+22 7776	00 5032
+11 0001	00 5033
+23 0167	00 5034
+23 0173	00 5035
+33 3677	00 5036
+26 0001	00 5037
+33 3564	00 5040
+26 0075	00 5041
+33 3657	00 5042
+32 0000	00 5043
+26 0007	00 5044
+33 3637	00 5045
+26 0001	00 5046
+27 1457	00 5047
+33 3617	00 5050
+26 0001	00 5051
+27 1460	00 5052
+27 3777	00 5053
+22 7776	00 5054
+13 0000	00 5055
+11 1001	00 5056
+13 0000	00 5057
+11 1001	00 5060
+13 0000	00 5061
+11 1001	00 5062
+13 0000	00 5063
+11 1001	00 5064
+13 0000	00 5065
+11 1001	00 5066
+13 0000	00 5067
+11 1001	00 5070
+13 0000	00 5071
+11 1001	00 5072
+13 0000	00 5073
+11 1001	00 5074
+13 0000	00 5075
+11 1001	00 5076
+13 0000	00 5077
+11 1001	00 5100
+13 0000	00 5101

INSTRUCTION	LOCATION
+11 1001	00 5102
+13 0000	00 5103
+11 1001	00 5104
+23 0166	00 5105
+13 0000	00 5106
+23 0167	00 5107
+23 0173	00 5110
+22 5252	00 5111
+11 1001	00 5112
+13 0000	00 5113
+23 0175	00 5114
+23 0174	00 5115
+11 1002	00 5116
+13 0000	00 5117
+11 1002	00 5120
+13 0000	00 5121
+11 1002	00 5122
+13 0000	00 5123
+11 1002	00 5124
+13 0000	00 5125
+11 1002	00 5126
+13 0000	00 5127
+11 1001	00 5130
+01 0000	00 5131
+23 0177	00 5132
+11 0005	00 5133
+11 0005	00 5134
+11 0002	00 5135
+23 0176	00 5136
+33 3677	00 5137
+26 0001	00 5140
+33 3557	00 5141
+26 0031	00 5142
+33 3657	00 5143
+26 0030	00 5144
+22 0002	00 5145
+11 1005	00 5146
+11 1005	00 5147
+11 1002	00 5150
+22 0002	00 5151
+11 1005	00 5152
+11 1005	00 5153
+11 1002	00 5154
+01 0000	00 5155
+23 0177	00 5156
+11 0005	00 5157
+11 0005	00 5160
+11 0002	00 5161
+23 0176	00 5162
+22 0000	00 5163

INSTRUCTION	LOCATION
+23 0175	00 5164
+22 0004	00 5165
+23 0174	00 5166
+22 3776	00 5167
+13 0000	00 5170
+23 0173	00 5171
+23 0166	00 5172
+32 0000	00 5173
+26 0020	00 5174
+33 3637	00 5175
+26 0001	00 5176
+27 1461	00 5177
+33 3617	00 5200
+26 0001	00 5201
+27 1462	00 5202
+22 5252	00 5203
+23 0175	00 5204
+23 0174	00 5205
+22 7776	00 5206
+13 0000	00 5207
+23 0166	00 5210
+23 0173	00 5211
+22 7676	00 5212
+13 0000	00 5213
+23 0164	00 5214
+33 3677	00 5215
+26 0001	00 5216
+33 3511	00 5217
+26 0011	00 5220
+33 3657	00 5221
+26 0001	00 5222
+27 1465	00 5223
+33 3637	00 5224
+26 0002	00 5225
+16 0000	00 5226
+26 0001	00 5227
+27 1467	00 5230
+27 1466	00 5231
+33 3677	00 5232
+26 0001	00 5233
+33 3556	00 5234
+26 0051	00 5235
+33 3657	00 5236
+32 0000	00 5237
+26 0001	00 5240
+27 1463	00 5241
+22 7776	00 5242
+13 0000	00 5243
+11 1001	00 5244
+13 0000	00 5245

INSTRUCTION	LOCATION
+11 1001	00 5246
+13 0000	00 5247
+11 1001	00 5250
+13 0000	00 5251
+11 1001	00 5252
+13 0000	00 5253
+11 1001	00 5254
+13 0000	00 5255
+11 1001	00 5256
+13 0000	00 5257
+11 1001	00 5260
+13 0000	00 5261
+11 1001	00 5262
+13 0000	00 5263
+11 1001	00 5264
+13 0000	00 5265
+11 1001	00 5266
+13 0000	00 5267
+11 1002	00 5270
+13 0000	00 5271
+22 4000	00 5272
+01 0000	00 5273
+23 0177	00 5274
+11 0005	00 5275
+11 0005	00 5276
+11 0002	00 5277
+23 0176	00 5300
+22 0002	00 5301
+23 0174	00 5302
+22 5776	00 5303
+13 0000	00 5304
+23 0166	00 5305
+23 0173	00 5306
+33 3677	00 5307
+26 0001	00 5310
+33 3555	00 5311
+26 0026	00 5312
+33 3657	00 5313
+32 0000	00 5314
+26 0001	00 5315
+27 1464	00 5316
+22 4000	00 5317
+12 0000	00 5320
+22 4000	00 5321
+01 0000	00 5322
+23 0177	00 5323
+11 0004	00 5324
+11 0004	00 5325
+11 0004	00 5326
+23 0176	00 5327

INSTRUCTION	LOCATION
+22 7776	00 5330
+23 0175	00 5331
+13 0000	00 5332
+23 0174	00 5333
+23 0173	00 5334
+23 0166	00 5335
+22 7736	00 5336
+13 0000	00 5337
+23 0164	00 5340
+33 3677	00 5341
+26 0001	00 5342
+33 3510	00 5343
+26 0116	00 5344
+33 3657	00 5345
+32 0000	00 5346
+26 0004	00 5347
+33 3637	00 5350
+26 0001	00 5351
+27 1470	00 5352
+27 1471	00 5353
+22 7776	00 5354
+13 0000	00 5355
+11 1004	00 5356
+11 1004	00 5357
+11 1004	00 5360
+23 3777	00 5361
+22 7776	00 5362
+01 0000	00 5363
+13 0000	00 5364
+23 3776	00 5365
+22 0000	00 5366
+22 0000	00 5367
+01 3777	00 5370
+20 3776	00 5371
+23 3775	00 5372
+11 1005	00 5373
+11 1005	00 5374
+11 1005	00 5375
+11 1005	00 5376
+11 1005	00 5377
+01 0000	00 5400
+23 3774	00 5401
+22 0000	00 5402
+23 3773	00 5403
+01 3776	00 5404
+13 0000	00 5405
+01 3775	00 5406
+13 0000	00 5407
+16 0000	00 5410
+32 0000	00 5411

INSTRUCTION	LOCATION
+26 0047	00 5412
+22 0000	00 5413
+01 3775	00 5414
+13 0000	00 5415
+16 0000	00 5416
+26 0002	00 5417
+32 0000	00 5420
+26 0004	00 5421
+01 3773	00 5422
+16 0000	00 5423
+26 0001	00 5424
+27 1472	00 5425
+22 0000	00 5426
+01 3775	00 5427
+01 3776	00 5430
+01 3773	00 5431
+16 0000	00 5432
+26 0001	00 5433
+27 1473	00 5434
+22 0000	00 5435
+01 3777	00 5436
+13 0000	00 5437
+01 3775	00 5440
+16 0000	00 5441
+26 0005	00 5442
+13 0000	00 5443
+01 3773	00 5444
+16 0000	00 5445
+26 0001	00 5446
+27 1474	00 5447
+22 7776	00 5450
+01 3775	00 5451
+16 0000	00 5452
+26 0001	00 5453
+27 1477	00 5454
+01 3773	00 5455
+16 0000	00 5456
+26 0001	00 5457
+27 1475	00 5460
+27 1477	00 5461
+32 0000	00 5462
+26 0025	00 5463
+01 3774	00 5464
+13 0000	00 5465
+01 3777	00 5466
+16 0000	00 5467
+26 0006	00 5470
+13 0000	00 5471
+01 3773	00 5472
+16 0000	00 5473

INSTRUCTION	LOCATION
+26 0002	00 5474
+32 0000	00 5475
+26 0001	00 5476
+27 1476	00 5477
+32 0000	00 5500
+26 0062	00 5501
+20 3777	00 5502
+21 3776	00 5503
+23 3000	00 5504
+11 1005	00 5505
+11 1005	00 5506
+11 1005	00 5507
+11 1005	00 5510
+11 1005	00 5511
+01 0000	00 5512
+23 3001	00 5513
+20 3776	00 5514
+13 0000	00 5515
+01 3000	00 5516
+16 0000	00 5517
+26 0002	00 5520
+32 0000	00 5521
+26 0002	00 5522
+01 3773	00 5523
+16 0000	00 5524
+26 0002	00 5525
+32 0000	00 5526
+26 0047	00 5527
+20 3000	00 5530
+16 0000	00 5531
+26 0003	00 5532
+13 0000	00 5533
+01 3773	00 5534
+16 0000	00 5535
+26 0001	00 5536
+27 1500	00 5537
+20 3776	00 5540
+01 3000	00 5541
+16 0000	00 5542
+26 0001	00 5543
+27 1501	00 5544
+22 0000	00 5545
+13 0000	00 5546
+23 3775	00 5547
+20 3777	00 5550
+13 0000	00 5551
+01 3000	00 5552
+16 0000	00 5553
+26 0004	00 5554
+01 3775	00 5555

INSTRUCTION	LOCATION
+16 0000	00 5556
+26 0002	00 5557
+32 0000	00 5560
+26 0001	00 5561
+27 1502	00 5562
+32 0000	00 5563
+26 0033	00 5564
+22 7776	00 5565
+01 3000	00 5566
+16 0000	00 5567
+26 0001	00 5570
+27 1505	00 5571
+01 3773	00 5572
+16 0000	00 5573
+26 0001	00 5574
+27 1503	00 5575
+27 1505	00 5576
+13 0000	00 5577
+23 3775	00 5600
+20 3777	00 5601
+13 0000	00 5602
+01 3001	00 5603
+16 0000	00 5604
+26 0003	00 5605
+01 3775	00 5606
+16 0000	00 5607
+26 0001	00 5610
+27 1504	00 5611
+21 3776	00 5612
+16 0000	00 5613
+32 0000	00 5614
+26 0001	00 5615
+27 1506	00 5616
+32 0000	00 5617
+26 0126	00 5620
+22 2000	00 5621
+23 3774	00 5622
+20 3777	00 5623
+22 2400	00 5624
+02 3774	00 5625
+23 3000	00 5626
+22 0400	00 5627
+13 0000	00 5630
+01 3000	00 5631
+16 0000	00 5632
+26 0003	00 5633
+01 3775	00 5634
+16 0000	00 5635
+26 0160	00 5636
+22 4400	00 5637

INSTRUCTION	LOCATION
+13 0000	00 5640
+01 3000	00 5641
+16 0000	00 5642
+26 0003	00 5643
+01 3775	00 5644
+16 0000	00 5645
+32 0000	00 5646
+26 0001	00 5647
+27 1507	00 5650
+22 4400	00 5651
+01 3776	00 5652
+23 3772	00 5653
+13 0000	00 5654
+01 3000	00 5655
+11 0001	00 5656
+11 1001	00 5657
+01 3775	00 5660
+16 0000	00 5661
+32 0000	00 5662
+26 0001	00 5663
+27 1510	00 5664
+20 3776	00 5665
+01 3000	00 5666
+11 0001	00 5667
+11 1001	00 5670
+01 3775	00 5671
+16 0000	00 5672
+32 0000	00 5673
+26 0001	00 5674
+27 1511	00 5675
+22 2400	00 5676
+13 0000	00 5677
+01 3000	00 5700
+16 0000	00 5701
+32 0000	00 5702
+26 0001	00 5703
+27 1512	00 5704
+22 2400	00 5705
+01 3000	00 5706
+11 0001	00 5707
+11 1001	00 5710
+13 0000	00 5711
+01 3773	00 5712
+16 0000	00 5713
+26 0001	00 5714
+27 1513	00 5715
+20 3777	00 5716
+13 0000	00 5717
+01 3000	00 5720
+11 0001	00 5721

INSTRUCTION	LOCATION
+11 1001	00 5722
+13 0000	00 5723
+01 3773	00 5724
+16 0000	00 5725
+26 0001	00 5726
+27 1514	00 5727
+22 0002	00 5730
+11 1004	00 5731
+11 1004	00 5732
+11 1004	00 5733
+22 2376	00 5734
+01 0000	00 5735
+13 0000	00 5736
+01 3000	00 5737
+11 0001	00 5740
+11 1001	00 5741
+01 3775	00 5742
+16 0000	00 5743
+26 0001	00 5744
+27 1516	00 5745
+27 1515	00 5746
+26 0150	00 5747

BLOCK END CODE THE REST OF THIS QUAD. IS BLANK

+27 1021	00 6001
+00 0000	00 6002
+00 0000	00 6003
+00 0000	00 6004
+00 0000	00 6005
+00 0000	00 6006
+00 0000	00 6007
+00 0000	00 6010
+00 0000	00 6011
+00 0000	00 6012
+00 0000	00 6013
+00 0000	00 6014
+00 0000	00 6015
+00 0000	00 6016
+26 0172	00 6017
+00 0000	00 6020
+00 0000	00 6021
+00 0000	00 6022
+00 0000	00 6023
+00 0000	00 6024
+00 0000	00 6025
+00 0000	00 6026

INSTRUCTION	LOCATION
+00 0000	00 6027
+00 0000	00 6030
+00 0000	00 6031
+00 0000	00 6032
+00 0000	00 6033
+00 0000	00 6034
+00 0000	00 6035
+00 0000	00 6036
+00 0000	00 6037
+00 0000	00 6040
+00 0000	00 6041
+00 0000	00 6042
+00 0000	00 6043
+00 0000	00 6044
+00 0000	00 6045
+00 0000	00 6046
+00 0000	00 6047
+00 0000	00 6050
+00 0000	00 6051
+00 0000	00 6052
+00 0000	00 6053
+00 0000	00 6054
+00 0000	00 6055
+00 0000	00 6056
+00 0000	00 6057
+00 0000	00 6060
+00 0000	00 6061
+00 0000	00 6062
+00 0000	00 6063
+00 0000	00 6064
+00 0000	00 6065
+00 0000	00 6066
+00 0000	00 6067
+00 0000	00 6070
+00 0000	00 6071
+00 0000	00 6072
+00 0000	00 6073
+00 0000	00 6074
+00 0000	00 6075
+00 0000	00 6076
+00 0000	00 6077
+00 0000	00 6100
+00 0000	00 6101
+00 0000	00 6102
+00 0000	00 6103
+00 0000	00 6104
+00 0000	00 6105
+00 0000	00 6106
+00 0000	00 6107
+00 0000	00 6110

INSTRUCTION	LOCATION
+00 0000	00 6111
+00 0000	00 6112
+00 0000	00 6113
+00 0000	00 6114
+00 0000	00 6115
+00 0000	00 6116
+00 0000	00 6117
+26 0142	00 6120
+00 0000	00 6121
+00 0000	00 6122
+00 0000	00 6123
+00 0000	00 6124
+00 0000	00 6125
+00 0000	00 6126
+00 0000	00 6127
+00 0000	00 6130
+00 0000	00 6131
+00 0000	00 6132
+00 0000	00 6133
+00 0000	00 6134
+00 0000	00 6135
+00 0000	00 6136
+00 0000	00 6137
+00 0000	00 6140
+00 0000	00 6141
+00 0000	00 6142
+00 0000	00 6143
+00 0000	00 6144
+00 0000	00 6145
+00 0000	00 6146
+00 0000	00 6147
+00 0000	00 6150
+00 0000	00 6151
+00 0000	00 6152
+00 0000	00 6153
+00 0000	00 6154
+00 0000	00 6155
+00 0000	00 6156
+00 0000	00 6157
+00 0000	00 6160
+00 0000	00 6161
+00 0000	00 6162
+00 0000	00 6163
+00 0000	00 6164
+00 0000	00 6165
+00 0000	00 6166
+00 0000	00 6167
+00 0000	00 6170
+00 0000	00 6171
+00 0000	00 6172

INSTRUCTION	LOCATION
+00 0000	00 6173
+00 0000	00 6174
+00 0000	00 6175
+00 0000	00 6176
+00 0000	00 6177
+00 0000	00 6200
+00 0000	00 6201
+00 0000	00 6202
+00 0000	00 6203
+00 0000	00 6204
+00 0000	00 6205
+00 0000	00 6206
+00 0000	00 6207
+00 0000	00 6210
+00 0000	00 6211
+22 2000	00 6212
+13 0000	00 6213
+22 2400	00 6214
+13 0000	00 6215
+02 0000	00 6216
+23 3000	00 6217
+22 0400	00 6220
+01 3000	00 6221
+11 0001	00 6222
+11 1001	00 6223
+01 3775	00 6224
+16 0000	00 6225
+26 0035	00 6226
+22 4400	00 6227
+01 3000	00 6230
+11 0001	00 6231
+11 1001	00 6232
+01 3775	00 6233
+16 0000	00 6234
+32 0000	00 6235
+26 0001	00 6236
+27 1517	00 6237
+20 3772	00 6240
+01 3000	00 6241
+11 0001	00 6242
+11 1001	00 6243
+13 0000	00 6244
+01 3773	00 6245
+16 0000	00 6246
+26 0001	00 6247
+27 1520	00 6250
+20 3776	00 6251
+13 0000	00 6252
+01 3000	00 6253
+11 0001	00 6254

INSTRUCTION	LOCATION
+11 1001	00 6255
+01 3775	00 6256
+16 0000	00 6257
+26 0001	00 6260
+27 1516	00 6261
+27 1521	00 6262
+26 0022	00 6263
+22 0000	00 6264
+02 3776	00 6265
+16 0000	00 6266
+26 0006	00 6267
+01 3776	00 6270
+01 3773	00 6271
+16 0000	00 6272
+32 0000	00 6273
+26 0012	00 6274
+27 1516	00 6275
+11 0001	00 6276
+11 1001	00 6277
+01 3776	00 6300
+01 3773	00 6301
+16 0000	00 6302
+26 0001	00 6303
+27 1522	00 6304
+27 1516	00 6305
+26 0016	00 6306
+20 3775	00 6307
+02 3773	00 6310
+16 0000	00 6311
+26 0005	00 6312
+01 3775	00 6313
+16 0000	00 6314
+26 0001	00 6315
+27 1516	00 6316
+27 1523	00 6317
+01 3773	00 6320
+16 0000	00 6321
+32 0000	00 6322
+26 0002	00 6323
+27 1516	00 6324
+26 0056	00 6325
+22 7000	00 6326
+23 3002	00 6327
+23 3003	00 6330
+22 7776	00 6331
+24 3002	00 6332
+26 0002	00 6333
+12 0000	00 6334
+27 1524	00 6335
+16 0000	00 6336

INSTRUCTION	LOCATION
+32 0000	00 6337
+26 0001	00 6340
+27 1525	00 6341
+23 3000	00 6342
+22 7776	00 6343
+02 3003	00 6344
+11 0001	00 6345
+11 1001	00 6346
+01 3775	00 6347
+16 0000	00 6350
+26 0022	00 6351
+20 3003	00 6352
+16 0000	00 6353
+26 0005	00 6354
+01 3775	00 6355
+16 0000	00 6356
+32 0000	00 6357
+26 0002	00 6360
+27 1526	00 6361
+27 1530	00 6362
+22 7776	00 6363
+02 3002	00 6364
+11 0001	00 6365
+11 1001	00 6366
+01 3775	00 6367
+16 0000	00 6370
+26 0001	00 6371
+27 1530	00 6372
+27 1527	00 6373
+22 7776	00 6374
+02 3000	00 6375
+11 0001	00 6376
+11 1001	00 6377
+01 3775	00 6400
+16 0000	00 6401
+26 0002	00 6402
+27 1531	00 6403
+26 0051	00 6404
+33 3577	00 6405
+32 0000	00 6406
+16 0000	00 6407
+31 0000	00 6410
+26 0002	00 6411
+32 0000	00 6412
+26 0001	00 6413
+27 1532	00 6414
+22 2000	00 6415
+23 3001	00 6416
+14 3001	00 6417
+23 3000	00 6420

INSTRUCTION	LOCATION
+26 0001	00 6421
+27 1533	00 6422
+12 0000	00 6423
+22 2000	00 6424
+02 3000	00 6425
+11 0001	00 6426
+11 1001	00 6427
+01 3775	00 6430
+16 0000	00 6431
+26 0011	00 6432
+22 4000	00 6433
+02 3000	00 6434
+11 0001	00 6435
+11 1001	00 6436
+01 3775	00 6437
+16 0000	00 6440
+26 0001	00 6441
+27 1537	00 6442
+27 1534	00 6443
+20 3776	00 6444
+23 0177	00 6445
+32 0000	00 6446
+14 3700	00 6447
+32 0000	00 6450
+26 0001	00 6451
+27 1536	00 6452
+33 3700	00 6453
+26 0002	00 6454
+27 1535	00 6455
+26 0004	00 6456
+20 3776	00 6457
+23 0164	00 6460
+13 0000	00 6461
+23 0165	00 6462
+11 1001	00 6463
+13 0000	00 6464
+23 0147	00 6465
+33 3677	00 6466
+26 0001	00 6467
+33 3537	00 6470
+26 0065	00 6471
+22 3776	00 6472
+13 0000	00 6473
+23 0165	00 6474
+22 0000	00 6475
+23 1730	00 6476
+23 1731	00 6477
+23 1732	00 6500
+23 1733	00 6501
+23 1734	00 6502

INSTRUCTION	LOCATION
+23 1735	00 6503
+23 1736	00 6504
+23 1737	00 6505
+23 1740	00 6506
+23 1741	00 6507
+23 1742	00 6510
+23 1743	00 6511
+23 1750	00 6512
+23 1751	00 6513
+23 1752	00 6514
+23 1753	00 6515
+23 1754	00 6516
+23 1755	00 6517
+23 1756	00 6520
+23 1757	00 6521
+23 1760	00 6522
+23 1761	00 6523
+23 1762	00 6524
+23 1763	00 6525
+23 1764	00 6526
+23 1765	00 6527
+23 1766	00 6530
+23 1767	00 6531
+23 1770	00 6532
+23 1771	00 6533
+23 1772	00 6534
+23 1773	00 6535
+23 1774	00 6536
+23 1775	00 6537
+23 1777	00 6540
+22 0060	00 6541
+11 1005	00 6542
+11 1005	00 6543
+11 1002	00 6544
+23 1776	00 6545
+22 0002	00 6546
+11 1005	00 6547
+11 1005	00 6550
+11 1002	00 6551
+23 1747	00 6552
+22 0020	00 6553
+23 1746	00 6554
+22 0002	00 6555
+23 1744	00 6556
+33 3677	00 6557
+26 0001	00 6560
+33 3536	00 6561
+26 0102	00 6562
+20 1776	00 6563
+02 1777	00 6564

INSTRUCTION	LOCATION
+16 0000	00 6565
+26 0011	00 6566
+20 1750	00 6567
+11 0001	00 6570
+16 0000	00 6571
+26 0003	00 6572
+01 1747	00 6573
+32 0000	00 6574
+26 0012	00 6575
+02 1747	00 6576
+26 0010	00 6577
+20 1751	00 6600
+11 0001	00 6601
+16 0000	00 6602
+26 0003	00 6603
+01 1746	00 6604
+32 0000	00 6605
+26 0001	00 6606
+02 1746	00 6607
+33 0000	00 6610
+24 1750	00 6611
+20 1730	00 6612
+01 1744	00 6613
+23 1730	00 6614
+21 1752	00 6615
+11 0001	00 6616
+24 1752	00 6617
+21 1754	00 6620
+11 0001	00 6621
+24 1754	00 6622
+21 1756	00 6623
+11 0001	00 6624
+24 1756	00 6625
+21 1760	00 6626
+11 0001	00 6627
+24 1760	00 6630
+21 1762	00 6631
+11 0001	00 6632
+24 1762	00 6633
+21 1764	00 6634
+11 0001	00 6635
+24 1764	00 6636
+21 1766	00 6637
+11 0001	00 6640
+24 1766	00 6641
+21 1770	00 6642
+11 0001	00 6643
+24 1770	00 6644
+21 1772	00 6645
+11 0001	00 6646

INSTRUCTION	LOCATION
+24 1772	00 6647
+21 1774	00 6650
+11 0001	00 6651
+24 1774	00 6652
+22 0100	00 6653
+11 1005	00 6654
+11 1005	00 6655
+11 1002	00 6656
+02 1777	00 6657
+16 0000	00 6660
+26 0005	00 6661
+20 1777	00 6662
+01 1747	00 6663
+23 1777	00 6664
+11 1001	00 6665
+16 0000	00 6666
+26 0154	00 6667
+23 0172	00 6670
+23 0171	00 6671
+23 0170	00 6672
+23 0173	00 6673
+33 3744	00 6674
+26 0004	00 6675
+33 3704	00 6676
+26 0004	00 6677
+32 0000	00 6700
+26 0001	00 6701
+33 3704	00 6702
+26 0002	00 6703
+13 0000	00 6704
+23 0172	00 6705
+11 1001	00 6706
+33 3745	00 6707
+26 0004	00 6710
+33 3705	00 6711
+26 0004	00 6712
+32 0000	00 6713
+26 0001	00 6714
+33 3705	00 6715
+26 0005	00 6716
+13 0000	00 6717
+33 3657	00 6720
+26 0003	00 6721
+23 0172	00 6722
+32 0000	00 6723
+26 0001	00 6724
+23 0171	00 6725
+11 1001	00 6726
+33 3746	00 6727
+26 0004	00 6730

INSTRUCTION	LOCATION
+33 3706	00 6731
+26 0004	00 6732
+32 0000	00 6733
+26 0001	00 6734
+33 3706	00 6735
+26 0012	00 6736
+13 0000	00 6737
+33 3657	00 6740
+32 0000	00 6741
+26 0005	00 6742
+33 3637	00 6743
+32 0000	00 6744
+26 0001	00 6745
+23 0170	00 6746
+23 0171	00 6747
+23 0172	00 6750
+11 1001	00 6751
+33 3747	00 6752
+26 0004	00 6753
+33 3707	00 6754
+26 0004	00 6755
+32 0000	00 6756
+26 0001	00 6757
+33 3707	00 6760
+26 0012	00 6761
+13 0000	00 6762
+33 3657	00 6763
+32 0000	00 6764
+26 0005	00 6765
+33 3637	00 6766
+32 0000	00 6767
+26 0001	00 6770
+23 0170	00 6771
+23 0171	00 6772
+23 0172	00 6773
+11 1001	00 6774
+33 3750	00 6775
+26 0004	00 6776
+33 3710	00 6777
+26 0004	00 7000
+32 0000	00 7001
+26 0001	00 7002
+33 3710	00 7003
+26 0012	00 7004
+13 0000	00 7005
+33 3657	00 7006
+32 0000	00 7007
+26 0005	00 7010
+33 3637	00 7011
+32 0000	00 7012

INSTRUCTION	LOCATION
+26 0001	00 7013
+23 0170	00 7014
+23 0171	00 7015
+23 0172	00 7016
+11 1001	00 7017
+33 3751	00 7020
+26 0004	00 7021
+33 3711	00 7022
+26 0004	00 7023
+32 0000	00 7024
+26 0001	00 7025
+33 3711	00 7026
+26 0012	00 7027
+13 0000	00 7030
+33 3657	00 7031
+32 0000	00 7032
+26 0005	00 7033
+33 3637	00 7034
+32 0000	00 7035
+26 0001	00 7036
+23 0170	00 7037
+23 0171	00 7040
+23 0172	00 7041
+11 1001	00 7042
+16 0000	00 7043
+26 0163	00 7044
+33 3752	00 7045
+26 0004	00 7046
+33 3712	00 7047
+26 0004	00 7050
+32 0000	00 7051
+26 0001	00 7052
+33 3712	00 7053
+26 0012	00 7054
+13 0000	00 7055
+33 3657	00 7056
+32 0000	00 7057
+26 0005	00 7060
+33 3637	00 7061
+32 0000	00 7062
+26 0001	00 7063
+23 0170	00 7064
+23 0171	00 7065
+23 0172	00 7066
+11 1001	00 7067
+33 3753	00 7070
+26 0004	00 7071
+33 3713	00 7072
+26 0004	00 7073
+32 0000	00 7074

INSTRUCTION	LOCATION
+26 0001	00 7075
+33 3713	00 7076
+26 0012	00 7077
+13 0000	00 7100
+33 3657	00 7101
+32 0000	00 7102
+26 0005	00 7103
+33 3637	00 7104
+32 0000	00 7105
+26 0001	00 7106
+23 0170	00 7107
+23 0171	00 7110
+23 0172	00 7111
+11 1001	00 7112
+33 3754	00 7113
+26 0004	00 7114
+33 3714	00 7115
+26 0004	00 7116
+32 0000	00 7117
+26 0001	00 7120
+33 3714	00 7121
+26 0012	00 7122
+13 0000	00 7123
+33 3657	00 7124
+32 0000	00 7125
+26 0005	00 7126
+33 3637	00 7127
+32 0000	00 7130
+26 0001	00 7131
+23 0170	00 7132
+23 0171	00 7133
+23 0172	00 7134
+11 1001	00 7135
+33 3755	00 7136
+26 0004	00 7137
+33 3715	00 7140
+26 0004	00 7141
+32 0000	00 7142
+26 0001	00 7143
+33 3715	00 7144
+26 0012	00 7145
+13 0000	00 7146
+33 3657	00 7147
+32 0000	00 7150
+26 0005	00 7151
+33 3637	00 7152
+32 0000	00 7153
+26 0001	00 7154
+23 0170	00 7155
+23 0171	00 7156

INSTRUCTION	LOCATION
+23 0172	00 7157
+11 1001	00 7160
+33 3756	00 7161
+26 0004	00 7162
+33 3716	00 7163
+26 0004	00 7164
+32 0000	00 7165
+26 0001	00 7166
+33 3716	00 7167
+26 0012	00 7170
+13 0000	00 7171
+33 3657	00 7172
+32 0000	00 7173
+26 0005	00 7174
+33 3637	00 7175
+32 0000	00 7176
+26 0001	00 7177
+23 0170	00 7200
+23 0171	00 7201
+23 0172	00 7202
+11 1001	00 7203
+33 3757	00 7204
+26 0004	00 7205
+33 3717	00 7206
+26 0004	00 7207
+32 0000	00 7210
+26 0001	00 7211
+33 3717	00 7212
+26 0012	00 7213
+13 0000	00 7214
+33 3657	00 7215
+32 0000	00 7216
+26 0005	00 7217
+33 3637	00 7220
+32 0000	00 7221
+26 0001	00 7222
+23 0170	00 7223
+23 0171	00 7224
+23 0172	00 7225
+11 1001	00 7226
+16 0000	00 7227
+26 0163	00 7230
+33 3764	00 7231
+26 0004	00 7232
+33 3724	00 7233
+26 0004	00 7234
+32 0000	00 7235
+26 0001	00 7236
+33 3724	00 7237
+26 0012	00 7240

INSTRUCTION	LOCATION
+13 0000	00 7241
+33 3657	00 7242
+32 0000	00 7243
+26 0005	00 7244
+33 3637	00 7245
+32 0000	00 7246
+26 0001	00 7247
+23 0170	00 7250
+23 0171	00 7251
+23 0172	00 7252
+11 1001	00 7253
+33 3765	00 7254
+26 0004	00 7255
+33 3725	00 7256
+26 0004	00 7257
+32 0000	00 7260
+26 0001	00 7261
+33 3725	00 7262
+26 0012	00 7263
+13 0000	00 7264
+33 3657	00 7265
+32 0000	00 7266
+26 0005	00 7267
+33 3637	00 7270
+32 0000	00 7271
+26 0001	00 7272
+23 0170	00 7273
+23 0171	00 7274
+23 0172	00 7275
+11 1001	00 7276
+33 3766	00 7277
+26 0004	00 7300
+33 3726	00 7301
+26 0004	00 7302
+32 0000	00 7303
+26 0001	00 7304
+33 3726	00 7305
+26 0012	00 7306
+13 0000	00 7307
+33 3657	00 7310
+32 0000	00 7311
+26 0005	00 7312
+33 3637	00 7313
+32 0000	00 7314
+26 0001	00 7315
+23 0170	00 7316
+23 0171	00 7317
+23 0172	00 7320
+11 1001	00 7321
+33 3767	00 7322

INSTRUCTION	LOCATION
+26 0004	00 7323
+33 3727	00 7324
+26 0004	00 7325
+32 0000	00 7326
+26 0001	00 7327
+33 3727	00 7330
+26 0012	00 7331
+13 0000	00 7332
+33 3657	00 7333
+32 0000	00 7334
+26 0005	00 7335
+33 3637	00 7336
+32 0000	00 7337
+26 0001	00 7340
+23 0170	00 7341
+23 0171	00 7342
+23 0172	00 7343
+11 1001	00 7344
+33 3770	00 7345
+26 0004	00 7346
+33 3730	00 7347
+26 0004	00 7350
+32 0000	00 7351
+26 0001	00 7352
+33 3730	00 7353
+26 0012	00 7354
+13 0000	00 7355
+33 3657	00 7356
+32 0000	00 7357
+26 0005	00 7360
+33 3637	00 7361
+32 0000	00 7362
+26 0001	00 7363
+23 0170	00 7364
+23 0171	00 7365
+23 0172	00 7366
+11 1001	00 7367
+33 3771	00 7370
+26 0004	00 7371
+33 3731	00 7372
+26 0004	00 7373
+32 0000	00 7374
+26 0001	00 7375
+33 3731	00 7376
+26 0012	00 7377
+13 0000	00 7400
+33 3657	00 7401
+32 0000	00 7402
+26 0005	00 7403
+33 3637	00 7404

INSTRUCTION	LOCATION
+32 0000	00 7405
+26 0001	00 7406
+23 0170	00 7407
+23 0171	00 7410
+23 0172	00 7411
+11 1001	00 7412
+16 0000	00 7413
+26 0165	00 7414
+33 3772	00 7415
+26 0004	00 7416
+33 3732	00 7417
+26 0004	00 7420
+32 0000	00 7421
+26 0001	00 7422
+33 3732	00 7423
+26 0012	00 7424
+13 0000	00 7425
+33 3657	00 7426
+32 0000	00 7427
+26 0005	00 7430
+33 3637	00 7431
+32 0000	00 7432
+26 0001	00 7433
+23 0170	00 7434
+23 0171	00 7435
+23 0172	00 7436
+11 1001	00 7437
+33 3773	00 7440
+26 0004	00 7441
+33 3733	00 7442
+26 0004	00 7443
+32 0000	00 7444
+26 0001	00 7445
+33 3733	00 7446
+26 0012	00 7447
+13 0000	00 7450
+33 3657	00 7451
+32 0000	00 7452
+26 0005	00 7453
+33 3637	00 7454
+32 0000	00 7455
+26 0001	00 7456
+23 0170	00 7457
+23 0171	00 7460
+23 0172	00 7461
+11 1001	00 7462
+33 3774	00 7463
+26 0004	00 7464
+33 3734	00 7465
+26 0004	00 7466

INSTRUCTION	LOCATION
+32 0000	00 7467
+26 0001	00 7470
+33 3734	00 7471
+26 0012	00 7472
+13 0000	00 7473
+33 3657	00 7474
+32 0000	00 7475
+26 0005	00 7476
+33 3637	00 7477
+32 0000	00 7500
+26 0001	00 7501
+23 0170	00 7502
+23 0171	00 7503
+23 0172	00 7504
+11 1001	00 7505
+33 3775	00 7506
+26 0004	00 7507
+33 3735	00 7510
+26 0004	00 7511
+32 0000	00 7512
+26 0001	00 7513
+33 3735	00 7514
+26 0012	00 7515
+13 0000	00 7516
+33 3657	00 7517
+32 0000	00 7520
+26 0005	00 7521
+33 3637	00 7522
+32 0000	00 7523
+26 0001	00 7524
+23 0170	00 7525
+23 0171	00 7526
+23 0172	00 7527
+11 1001	00 7530
+33 3776	00 7531
+26 0004	00 7532
+33 3736	00 7533
+26 0004	00 7534
+32 0000	00 7535
+26 0001	00 7536
+33 3736	00 7537
+26 0012	00 7540
+13 0000	00 7541
+33 3657	00 7542
+32 0000	00 7543
+26 0005	00 7544
+33 3637	00 7545
+32 0000	00 7546
+26 0001	00 7547
+23 0170	00 7550

INSTRUCTION	LOCATION
+23 0171	00 7551
+23 0172	00 7552
+11 1001	00 7553
+33 3777	00 7554
+26 0004	00 7555
+33 3737	00 7556
+26 0004	00 7557
+32 0000	00 7560
+26 0001	00 7561
+33 3737	00 7562
+26 0012	00 7563
+13 0000	00 7564
+33 3657	00 7565
+32 0000	00 7566
+26 0005	00 7567
+33 3637	00 7570
+32 0000	00 7571
+26 0001	00 7572
+23 0170	00 7573
+23 0171	00 7574
+23 0172	00 7575
+33 3536	00 7576
+26 0170	00 7577
+32 0000	00 7600
+26 0177	00 7601
+22 0042	00 7602
+02 1730	00 7603
+14 0000	00 7604
+02 1743	00 7605
+16 0000	00 7606
+26 0002	00 7607
+32 0000	00 7610
+26 0116	00 7611
+22 0010	00 7612
+02 1731	00 7613
+14 0000	00 7614
+02 1743	00 7615
+16 0000	00 7616
+26 0002	00 7617
+32 0000	00 7620
+26 0106	00 7621
+22 0010	00 7622
+02 1732	00 7623
+14 0000	00 7624
+02 1743	00 7625
+16 0000	00 7626
+26 0002	00 7627
+32 0000	00 7630
+26 0076	00 7631
+22 0002	00 7632

INSTRUCTION	LOCATION
+02 1733	00 7633
+14 0000	00 7634
+02 1743	00 7635
+16 0000	00 7636
+26 0002	00 7637
+32 0000	00 7640
+26 0066	00 7641
+22 0002	00 7642
+02 1734	00 7643
+14 0000	00 7644
+02 1743	00 7645
+16 0000	00 7646
+26 0002	00 7647
+32 0000	00 7650
+26 0056	00 7651
+22 0002	00 7652
+02 1735	00 7653
+14 0000	00 7654
+02 1743	00 7655
+16 0000	00 7656
+26 0002	00 7657
+32 0000	00 7660
+26 0046	00 7661
+22 0002	00 7662
+02 1736	00 7663
+14 0000	00 7664
+02 1743	00 7665
+16 0000	00 7666
+26 0002	00 7667
+32 0000	00 7670
+26 0036	00 7671
+22 0002	00 7672
+02 1737	00 7673
+14 0000	00 7674
+02 1743	00 7675
+16 0000	00 7676
+26 0002	00 7677
+32 0000	00 7700
+26 0026	00 7701
+22 0002	00 7702
+02 1740	00 7703
+14 0000	00 7704
+02 1743	00 7705
+16 0000	00 7706
+26 0002	00 7707
+32 0000	00 7710
+26 0016	00 7711
+22 0002	00 7712
+02 1741	00 7713
+14 0000	00 7714

INSTRUCTION	LOCATION
+02 1743	00 7715
+16 0000	00 7716
+26 0002	00 7717
+32 0000	00 7720
+26 0006	00 7721
+22 0002	00 7722
+02 1742	00 7723
+14 0000	00 7724
+02 1743	00 7725
+16 0000	00 7726
+26 0032	00 7727
+27 1016	00 7730
+20 1751	00 7731
+20 1750	00 7732
+20 1753	00 7733
+20 1752	00 7734
+20 1755	00 7735
+20 1754	00 7736
+20 1757	00 7737
+20 1756	00 7740
+20 1761	00 7741
+20 1760	00 7742
+20 1763	00 7743
+20 1762	00 7744
+20 1765	00 7745
+20 1764	00 7746
+20 1767	00 7747
+20 1766	00 7750
+20 1771	00 7751
+20 1770	00 7752
+20 1773	00 7753
+20 1772	00 7754
+20 1775	00 7755
+20 1774	00 7756
+27 1017	00 7757
+32 0000	00 7760
+26 0012	00 7761
+22 7776	00 7762
+13 0000	00 7763
+23 0165	00 7764
+22 7756	00 7765
+13 0000	00 7766
+23 0164	00 7767
+33 3477	00 7770
+26 0131	00 7771
+12 0000	00 7772
+27 0000	00 7773
+26 0001	00 7774
+32 0000	00 7775
+32 0000	00 7776

INSTRUCTION	LOCATION
= BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+10 0000	01 0001
+25 3777	01 0002
+25 3777	01 0003
+25 3777	01 0004
+25 3777	01 0005
+25 3777	01 0006
+25 3777	01 0007
+26 0002	01 0010
+32 0000	01 0011
+26 0112	01 0012
+33 3536	01 0013
+26 0111	01 0014
+20 1776	01 0015
+02 1777	01 0016
+16 0000	01 0017
+26 0011	01 0020
+20 1752	01 0021
+11 0001	01 0022
+16 0000	01 0023
+26 0003	01 0024
+01 1747	01 0025
+32 0000	01 0026
+26 0012	01 0027
+02 1747	01 0030
+26 0010	01 0031
+20 1753	01 0032
+11 0001	01 0033
+16 0000	01 0034
+26 0003	01 0035
+01 1746	01 0036
+32 0000	01 0037
+26 0001	01 0040
+02 1746	01 0041
+33 0000	01 0042
+24 1752	01 0043
+20 1731	01 0044
+01 1744	01 0045
+23 1731	01 0046
+21 1750	01 0047
+11 0001	01 0050
+24 1750	01 0051
+21 1754	01 0052
+11 0001	01 0053
+24 1754	01 0054

INSTRUCTION	LOCATION
+21 1756	01 0055
+11 0001	01 0056
+24 1756	01 0057
+21 1760	01 0060
+11 0001	01 0061
+24 1760	01 0062
+21 1762	01 0063
+11 0001	01 0064
+24 1762	01 0065
+21 1764	01 0066
+11 0001	01 0067
+24 1764	01 0070
+21 1766	01 0071
+11 0001	01 0072
+24 1766	01 0073
+21 1770	01 0074
+11 0001	01 0075
+24 1770	01 0076
+21 1772	01 0077
+11 0001	01 0100
+24 1772	01 0101
+21 1774	01 0102
+11 0001	01 0103
+24 1774	01 0104
+22 0100	01 0105
+11 1005	01 0106
+11 1005	01 0107
+11 1002	01 0110
+02 1777	01 0111
+16 0000	01 0112
+26 0006	01 0113
+20 1777	01 0114
+01 1747	01 0115
+23 1777	01 0116
+26 0006	01 0117
+32 0000	01 0120
+26 0004	01 0121
+27 3777	01 0122
+26 0002	01 0123
+27 1033	01 0124
+32 0000	01 0125
+12 0000	01 0126
+25 3777	01 0127
+12 0000	01 0130
+25 3777	01 0131
+12 0000	01 0132
+25 3777	01 0133
+26 0002	01 0134
+32 0000	01 0135
+26 0150	01 0136

INSTRUCTION	LOCATION
+33 3677	01 0137
+26 0001	01 0140
+33 3507	01 0141
+26 0051	01 0142
+22 3146	01 0143
+23 3771	01 0144
+11 1005	01 0145
+11 1005	01 0146
+11 1002	01 0147
+01 3771	01 0150
+23 3771	01 0151
+20 3776	01 0152
+03 0000	01 0153
+12 0000	01 0154
+25 3777	01 0155
+12 0000	01 0156
+25 3777	01 0157
+22 4000	01 0160
+20 3771	01 0161
+03 0000	01 0162
+12 0000	01 0163
+25 3777	01 0164
+12 0000	01 0165
+25 3777	01 0166
+23 3000	01 0167
+11 0005	01 0170
+11 0005	01 0171
+11 0005	01 0172
+11 0005	01 0173
+11 0003	01 0174
+23 3001	01 0175
+22 1462	01 0176
+23 0175	01 0177
+13 0000	01 0200
+23 0174	01 0201
+20 3000	01 0202
+23 0177	01 0203
+11 0004	01 0204
+11 0004	01 0205
+11 0004	01 0206
+23 0176	01 0207
+22 7766	01 0210
+13 0000	01 0211
+23 0164	01 0212
+23 0173	01 0213
+33 3677	01 0214
+26 0001	01 0215
+33 3506	01 0216
+26 0015	01 0217
+33 3657	01 0220

INSTRUCTION	LOCATION
+26 0066	01 0221
+22 4000	01 0222
+01 3001	01 0223
+14 0000	01 0224
+01 3775	01 0225
+16 0000	01 0226
+32 0000	01 0227
+26 0005	01 0230
+22 7772	01 0231
+13 0000	01 0232
+23 0164	01 0233
+32 0000	01 0234
+26 0050	01 0235
+20 3001	01 0236
+11 1005	01 0237
+11 1005	01 0240
+11 1003	01 0241
+22 7776	01 0242
+11 1004	01 0243
+11 1004	01 0244
+11 1004	01 0245
+02 0000	01 0246
+14 0000	01 0247
+01 3775	01 0250
+16 0000	01 0251
+32 0000	01 0252
+26 0001	01 0253
+27 1542	01 0254
+22 7462	01 0255
+11 1004	01 0256
+11 1004	01 0257
+11 1004	01 0260
+20 3001	01 0261
+11 1004	01 0262
+11 1004	01 0263
+11 1005	01 0264
+02 0000	01 0265
+14 0000	01 0266
+01 3775	01 0267
+16 0000	01 0270
+32 0000	01 0271
+26 0001	01 0272
+27 1543	01 0273
+20 3001	01 0274
+13 0000	01 0275
+11 1005	01 0276
+11 1005	01 0277
+11 1003	01 0300
+01 3775	01 0301
+16 0000	01 0302

INSTRUCTION	LOCATION
+26 0001	01 0303
+27 3777	01 0304
+27 1544	01 0305
+26 0113	01 0306
+26 0113	01 0307
+33 3637	01 0310
+26 0001	01 0311
+27 1545	01 0312
+20 3000	01 0313
+02 3771	01 0314
+14 0000	01 0315
+01 3775	01 0316
+16 0000	01 0317
+32 0000	01 0320
+26 0001	01 0321
+27 1540	01 0322
+20 3000	01 0323
+16 0000	01 0324
+32 0000	01 0325
+26 0001	01 0326
+27 3777	01 0327
+01 3775	01 0330
+16 0000	01 0331
+32 0000	01 0332
+26 0001	01 0333
+27 1541	01 0334
+22 4000	01 0335
+02 3000	01 0336
+14 0000	01 0337
+01 3775	01 0340
+16 0000	01 0341
+32 0000	01 0342
+26 0001	01 0343
+27 1546	01 0344
+20 3771	01 0345
+11 1002	01 0346
+02 3000	01 0347
+14 0000	01 0350
+13 0000	01 0351
+01 3773	01 0352
+16 0000	01 0353
+26 0001	01 0354
+27 1547	01 0355
+20 3776	01 0356
+11 1002	01 0357
+02 3000	01 0360
+14 0000	01 0361
+13 0000	01 0362
+01 3773	01 0363
+16 0000	01 0364

INSTRUCTION	LOCATION
+26 0001	01 0365
+27 1550	01 0366
+22 3146	01 0367
+11 1005	01 0370
+11 1005	01 0371
+11 1002	01 0372
+02 3000	01 0373
+14 0000	01 0374
+13 0000	01 0375
+01 3773	01 0376
+16 0000	01 0377
+26 0001	01 0400
+27 1551	01 0401
+22 2000	01 0402
+02 3000	01 0403
+14 0000	01 0404
+13 0000	01 0405
+01 3773	01 0406
+16 0000	01 0407
+26 0001	01 0410
+27 1552	01 0411
+22 1400	01 0412
+02 3000	01 0413
+14 0000	01 0414
+13 0000	01 0415
+01 3773	01 0416
+16 0000	01 0417
+26 0003	01 0420
+27 1553	01 0421
+26 0074	01 0422
+26 0074	01 0423
+20 3771	01 0424
+11 0003	01 0425
+11 1003	01 0426
+02 3000	01 0427
+14 0000	01 0430
+13 0000	01 0431
+01 3773	01 0432
+16 0000	01 0433
+26 0001	01 0434
+27 1554	01 0435
+22 7776	01 0436
+13 0000	01 0437
+11 1002	01 0440
+02 3000	01 0441
+14 0000	01 0442
+13 0000	01 0443
+01 3773	01 0444
+16 0000	01 0445
+26 0001	01 0446

INSTRUCTION	LOCATION
+27 1555	01 0447
+22 0002	01 0450
+11 1004	01 0451
+11 1004	01 0452
+11 1004	01 0453
+02 3000	01 0454
+14 0000	01 0455
+13 0000	01 0456
+01 3773	01 0457
+16 0000	01 0460
+26 0001	01 0461
+27 1556	01 0462
+22 7772	01 0463
+13 0000	01 0464
+11 1004	01 0465
+11 1004	01 0466
+11 1004	01 0467
+22 3776	01 0470
+01 0000	01 0471
+02 3000	01 0472
+14 0000	01 0473
+13 0000	01 0474
+01 3773	01 0475
+16 0000	01 0476
+26 0001	01 0477
+27 1557	01 0500
+22 7762	01 0501
+13 0000	01 0502
+11 1004	01 0503
+11 1004	01 0504
+11 1004	01 0505
+22 3776	01 0506
+01 0000	01 0507
+02 3000	01 0510
+14 0000	01 0511
+13 0000	01 0512
+01 3773	01 0513
+16 0000	01 0514
+26 0003	01 0515
+27 1560	01 0516
+26 0111	01 0517
+26 0111	01 0520
+22 0022	01 0521
+11 1004	01 0522
+11 1004	01 0523
+11 1004	01 0524
+02 3000	01 0525
+14 0000	01 0526
+13 0000	01 0527
+01 3773	01 0530

INSTRUCTION	LOCATION
+16 0000	01 0531
+26 0001	01 0532
+27 1561	01 0533
+22 0062	01 0534
+11 1004	01 0535
+11 1004	01 0536
+11 1004	01 0537
+02 3000	01 0540
+14 0000	01 0541
+13 0000	01 0542
+01 3773	01 0543
+16 0000	01 0544
+26 0001	01 0545
+27 1562	01 0546
+22 7662	01 0547
+13 0000	01 0550
+11 1004	01 0551
+11 1004	01 0552
+11 1004	01 0553
+22 3776	01 0554
+01 0000	01 0555
+02 3000	01 0556
+14 0000	01 0557
+13 0000	01 0560
+01 3773	01 0561
+16 0000	01 0562
+26 0001	01 0563
+27 1563	01 0564
+22 7462	01 0565
+13 0000	01 0566
+11 1004	01 0567
+11 1004	01 0570
+11 1004	01 0571
+22 3776	01 0572
+01 0000	01 0573
+02 3000	01 0574
+14 0000	01 0575
+13 0000	01 0576
+01 3773	01 0577
+16 0000	01 0600
+26 0001	01 0601
+27 1564	01 0602
+22 0462	01 0603
+11 1004	01 0604
+11 1004	01 0605
+11 1004	01 0606
+02 3000	01 0607
+14 0000	01 0610
+13 0000	01 0611
+01 3773	01 0612

INSTRUCTION	LOCATION
+16 0000	01 0613
+26 0001	01 0614
+27 1565	01 0615
+22 1462	01 0616
+11 1004	01 0617
+11 1004	01 0620
+11 1004	01 0621
+02 3000	01 0622
+14 0000	01 0623
+13 0000	01 0624
+01 3773	01 0625
+16 0000	01 0626
+26 0003	01 0627
+27 1566	01 0630
+26 0141	01 0631
+26 0144	01 0632
+22 5462	01 0633
+13 0000	01 0634
+11 1004	01 0635
+11 1004	01 0636
+11 1004	01 0637
+22 3776	01 0640
+01 0000	01 0641
+02 3000	01 0642
+14 0000	01 0643
+13 0000	01 0644
+01 3773	01 0645
+16 0000	01 0646
+26 0001	01 0647
+27 1567	01 0650
+22 1462	01 0651
+13 0000	01 0652
+11 1004	01 0653
+11 1004	01 0654
+11 1004	01 0655
+22 3776	01 0656
+01 0000	01 0657
+02 3000	01 0660
+14 0000	01 0661
+13 0000	01 0662
+01 3773	01 0663
+16 0000	01 0664
+26 0001	01 0665
+27 1570	01 0666
+22 1462	01 0667
+13 0000	01 0670
+11 1004	01 0671
+11 1004	01 0672
+11 1004	01 0673
+23 3770	01 0674

INSTRUCTION	LOCATION
+02 3000	01 0675
+14 0000	01 0676
+13 0000	01 0677
+01 3773	01 0700
+16 0000	01 0701
+26 0001	01 0702
+27 1571	01 0703
+22 0002	01 0704
+01 3770	01 0705
+02 3000	01 0706
+14 0000	01 0707
+13 0000	01 0710
+01 3773	01 0711
+16 0000	01 0712
+26 0001	01 0713
+27 1572	01 0714
+22 3772	01 0715
+01 3770	01 0716
+02 3000	01 0717
+14 0000	01 0720
+13 0000	01 0721
+01 3773	01 0722
+16 0000	01 0723
+26 0001	01 0724
+27 1573	01 0725
+22 3762	01 0726
+01 3770	01 0727
+02 3000	01 0730
+14 0000	01 0731
+13 0000	01 0732
+01 3773	01 0733
+16 0000	01 0734
+26 0001	01 0735
+27 1574	01 0736
+22 0022	01 0737
+01 3770	01 0740
+02 3000	01 0741
+14 0000	01 0742
+13 0000	01 0743
+01 3773	01 0744
+16 0000	01 0745
+26 0001	01 0746
+27 1575	01 0747
+22 0062	01 0750
+01 3770	01 0751
+02 3000	01 0752
+14 0000	01 0753
+13 0000	01 0754
+01 3773	01 0755
+16 0000	01 0756

INSTRUCTION	LOCATION
+26 0001	01 0757
+27 1576	01 0760
+22 3662	01 0761
+01 3770	01 0762
+02 3000	01 0763
+14 0000	01 0764
+13 0000	01 0765
+01 3773	01 0766
+16 0000	01 0767
+26 0001	01 0770
+27 1577	01 0771
+27 3777	01 0772
+33 3677	01 0773
+26 0001	01 0774
+33 3505	01 0775
+26 0052	01 0776
+26 0111	01 0777
+22 6000	01 1000
+13 0000	01 1001
+22 6000	01 1002
+03 0000	01 1003
+12 0000	01 1004
+25 3777	01 1005
+12 0000	01 1006
+25 3777	01 1007
+23 3000	01 1010
+11 0005	01 1011
+23 3001	01 1012
+22 4400	01 1013
+01 3000	01 1014
+14 0000	01 1015
+01 3775	01 1016
+16 0000	01 1017
+26 0010	01 1020
+22 4400	01 1021
+02 3000	01 1022
+14 0000	01 1023
+01 3775	01 1024
+16 0000	01 1025
+26 0001	01 1026
+27 3777	01 1027
+27 1630	01 1030
+20 3001	01 1031
+11 0005	01 1032
+11 0005	01 1033
+11 0005	01 1034
+11 0004	01 1035
+16 0000	01 1036
+26 0002	01 1037
+32 0000	01 1040

INSTRUCTION	LOCATION
+26 0001	01 1041
+27 1631	01 1042
+22 4000	01 1043
+13 0000	01 1044
+22 4000	01 1045
+13 0000	01 1046
+04 0000	01 1047
+32 0000	01 1050
+26 0036	01 1051
+12 0000	01 1052
+25 3777	01 1053
+23 3000	01 1054
+22 2000	01 1055
+01 3000	01 1056
+14 0000	01 1057
+01 3775	01 1060
+16 0000	01 1061
+26 0017	01 1062
+22 4000	01 1063
+02 3000	01 1064
+14 0000	01 1065
+01 3775	01 1066
+16 0000	01 1067
+26 0010	01 1070
+22 2000	01 1071
+02 3000	01 1072
+14 0000	01 1073
+01 3775	01 1074
+16 0000	01 1075
+26 0001	01 1076
+27 3777	01 1077
+27 1633	01 1100
+27 1632	01 1101
+20 3776	01 1102
+23 3000	01 1103
+22 4000	01 1104
+13 0000	01 1105
+05 0000	01 1106
+32 0000	01 1107
+26 0053	01 1110
+26 0137	01 1111
+12 0000	01 1112
+25 3777	01 1113
+23 3000	01 1114
+11 0005	01 1115
+11 0005	01 1116
+11 0005	01 1117
+11 0005	01 1120
+11 0003	01 1121
+23 3001	01 1122

INSTRUCTION	LOCATION
+20 3000	01 1123
+02 3774	01 1124
+14 0000	01 1125
+01 3775	01 1126
+16 0000	01 1127
+26 0027	01 1130
+20 3000	01 1131
+14 0000	01 1132
+01 3775	01 1133
+16 0000	01 1134
+26 0021	01 1135
+20 3776	01 1136
+11 0002	01 1137
+11 1002	01 1140
+02 3000	01 1141
+14 0000	01 1142
+01 3775	01 1143
+16 0000	01 1144
+26 0010	01 1145
+22 2000	01 1146
+01 3000	01 1147
+14 0000	01 1150
+01 3775	01 1151
+16 0000	01 1152
+26 0001	01 1153
+27 3777	01 1154
+27 1637	01 1155
+27 1635	01 1156
+27 1634	01 1157
+20 3001	01 1160
+01 3775	01 1161
+16 0000	01 1162
+26 0002	01 1163
+26 0024	01 1164
+27 1636	01 1165
+22 6000	01 1166
+11 0001	01 1167
+01 3773	01 1170
+10 1001	01 1171
+23 3000	01 1172
+22 2000	01 1173
+01 3000	01 1174
+14 0000	01 1175
+01 3775	01 1176
+16 0000	01 1177
+26 0031	01 1200
+22 6000	01 1201
+01 3000	01 1202
+14 0000	01 1203
+13 0000	01 1204

INSTRUCTION	LOCATION
+01 3773	01 1205
+16 0000	01 1206
+26 0002	01 1207
+27 1640	01 1210
+26 0036	01 1211
+22 2000	01 1212
+02 3000	01 1213
+14 0000	01 1214
+13 0000	01 1215
+01 3773	01 1216
+16 0000	01 1217
+26 0001	01 1220
+27 1641	01 1221
+22 4000	01 1222
+01 3000	01 1223
+14 0000	01 1224
+01 3775	01 1225
+16 0000	01 1226
+26 0001	01 1227
+27 3777	01 1230
+27 1642	01 1231
+22 4000	01 1232
+16 0000	01 1233
+16 0000	01 1234
+10 0001	01 1235
+26 0002	01 1236
+32 0000	01 1237
+26 0001	01 1240
+27 1644	01 1241
+01 3776	01 1242
+14 0000	01 1243
+01 3775	01 1244
+16 0000	01 1245
+26 0003	01 1246
+27 1643	01 1247
+26 0072	01 1250
+26 0072	01 1251
+22 4000	01 1252
+15 0001	01 1253
+12 0000	01 1254
+25 3777	01 1255
+12 0000	01 1256
+25 3777	01 1257
+23 3000	01 1260
+22 4000	01 1261
+02 3000	01 1262
+14 0000	01 1263
+01 3775	01 1264
+16 0000	01 1265
+26 0024	01 1266

INSTRUCTION	LOCATION
+20 3000	01 1267
+16 0000	01 1270
+26 0005	01 1271
+01 3775	01 1272
+16 0000	01 1273
+32 0000	01 1274
+26 0005	01 1275
+27 1645	01 1276
+01 3773	01 1277
+16 0000	01 1300
+26 0001	01 1301
+27 1646	01 1302
+22 2000	01 1303
+02 3000	01 1304
+14 0000	01 1305
+01 3775	01 1306
+16 0000	01 1307
+26 0001	01 1310
+27 3777	01 1311
+27 1647	01 1312
+22 4000	01 1313
+13 0000	01 1314
+15 0000	01 1315
+23 3000	01 1316
+16 0000	01 1317
+26 0014	01 1320
+01 3775	01 1321
+16 0000	01 1322
+26 0021	01 1323
+22 4000	01 1324
+02 3000	01 1325
+14 0000	01 1326
+13 0000	01 1327
+01 3773	01 1330
+16 0000	01 1331
+26 0001	01 1332
+27 1651	01 1333
+27 3777	01 1334
+20 3000	01 1335
+01 3773	01 1336
+16 0000	01 1337
+26 0001	01 1340
+27 1650	01 1341
+27 3777	01 1342
+26 0150	01 1343
+26 0153	01 1344
+20 3776	01 1345
+23 0177	01 1346
+22 0000	01 1347
+23 3000	01 1350

INSTRUCTION	LOCATION
+32 0000	01 1351
+30 3777	01 1352
+26 0001	01 1353
+27 1652	01 1354
+16 0000	01 1355
+32 0000	01 1356
+26 0001	01 1357
+27 1653	01 1360
+01 3775	01 1361
+16 0000	01 1362
+26 0001	01 1363
+27 1653	01 1364
+22 4000	01 1365
+30 0001	01 1366
+23 3000	01 1367
+22 4000	01 1370
+02 3000	01 1371
+14 0000	01 1372
+01 3775	01 1373
+16 0000	01 1374
+26 0001	01 1375
+27 1654	01 1376
+22 0000	01 1377
+23 0177	01 1400
+20 3776	01 1401
+22 0000	01 1402
+31 3777	01 1403
+32 0000	01 1404
+26 0001	01 1405
+27 1655	01 1406
+16 0000	01 1407
+26 0003	01 1410
+01 3775	01 1411
+16 0000	01 1412
+26 0001	01 1413
+27 1656	01 1414
+31 0001	01 1415
+16 0000	01 1416
+26 0001	01 1417
+27 1657	01 1420
+01 3773	01 1421
+16 0000	01 1422
+26 0002	01 1423
+32 0000	01 1424
+26 0001	01 1425
+27 1657	01 1426
+22 4000	01 1427
+12 0000	01 1430
+22 0000	01 1431
+01 0000	01 1432

INSTRUCTION	LOCATION
+13 0000	01 1433
+23 3017	01 1434
+22 3146	01 1435
+11 1001	01 1436
+13 0000	01 1437
+11 1001	01 1440
+13 0000	01 1441
+11 1003	01 1442
+13 0000	01 1443
+11 1001	01 1444
+13 0000	01 1445
+11 1003	01 1446
+13 0000	01 1447
+11 1001	01 1450
+13 0000	01 1451
+11 1002	01 1452
+16 0000	01 1453
+33 3577	01 1454
+06 3017	01 1455
+12 0000	01 1456
+25 3777	01 1457
+12 0000	01 1460
+25 3777	01 1461
+12 0000	01 1462
+25 3777	01 1463
+12 0000	01 1464
+25 3777	01 1465
+26 0001	01 1466
+27 1674	01 1467
+33 0000	01 1470
+26 0002	01 1471
+32 0000	01 1472
+26 0002	01 1473
+27 1673	01 1474
+27 1672	01 1475
+23 3000	01 1476
+23 0177	01 1477
+11 0004	01 1500
+11 0004	01 1501
+11 0004	01 1502
+23 0176	01 1503
+22 6314	01 1504
+23 0174	01 1505
+13 0000	01 1506
+23 0175	01 1507
+23 0173	01 1510
+22 7774	01 1511
+13 0000	01 1512
+23 0164	01 1513
+33 3677	01 1514

INSTRUCTION	LOCATION
+26 0001	01 1515
+33 3504	01 1516
+26 0073	01 1517
+26 0073	01 1520
+33 3657	01 1521
+26 0002	01 1522
+32 0000	01 1523
+26 0070	01 1524
+33 3637	01 1525
+26 0001	01 1526
+27 1660	01 1527
+20 3000	01 1530
+02 3771	01 1531
+14 0000	01 1532
+01 3775	01 1533
+16 0000	01 1534
+32 0000	01 1535
+26 0001	01 1536
+27 1661	01 1537
+20 3000	01 1540
+14 0000	01 1541
+13 0000	01 1542
+01 3773	01 1543
+16 0000	01 1544
+26 0001	01 1545
+27 1662	01 1546
+22 0002	01 1547
+11 1004	01 1550
+11 1004	01 1551
+11 1004	01 1552
+01 3000	01 1553
+14 0000	01 1554
+13 0000	01 1555
+01 3773	01 1556
+16 0000	01 1557
+26 0001	01 1560
+27 1663	01 1561
+22 4000	01 1562
+01 3000	01 1563
+14 0000	01 1564
+13 0000	01 1565
+01 3773	01 1566
+16 0000	01 1567
+26 0001	01 1570
+27 1664	01 1571
+20 3771	01 1572
+11 0002	01 1573
+02 3000	01 1574
+14 0000	01 1575
+13 0000	01 1576

INSTRUCTION	LOCATION
+01 3773	01 1577
+16 0000	01 1600
+26 0001	01 1601
+27 1665	01 1602
+20 3776	01 1603
+02 3000	01 1604
+14 0000	01 1605
+13 0000	01 1606
+01 3773	01 1607
+16 0000	01 1610
+26 0004	01 1611
+27 1666	01 1612
+26 0100	01 1613
+26 0100	01 1614
+26 0163	01 1615
+22 6314	01 1616
+01 3000	01 1617
+14 0000	01 1620
+13 0000	01 1621
+01 3773	01 1622
+16 0000	01 1623
+26 0001	01 1624
+27 1670	01 1625
+20 3771	01 1626
+01 3774	01 1627
+02 3000	01 1630
+14 0000	01 1631
+13 0000	01 1632
+01 3773	01 1633
+16 0000	01 1634
+26 0001	01 1635
+27 1671	01 1636
+20 3000	01 1637
+16 0000	01 1640
+26 0001	01 1641
+27 1677	01 1642
+11 0003	01 1643
+11 0003	01 1644
+22 3146	01 1645
+11 1001	01 1646
+13 0000	01 1647
+11 1001	01 1650
+13 0000	01 1651
+11 1003	01 1652
+01 0000	01 1653
+14 0000	01 1654
+13 0000	01 1655
+01 3773	01 1656
+16 0000	01 1657
+26 0001	01 1660

INSTRUCTION	LOCATION
+27 1675	01 1661
+20 3000	01 1662
+11 0004	01 1663
+11 0004	01 1664
+11 0004	01 1665
+22 6314	01 1666
+02 0000	01 1667
+14 0000	01 1670
+13 0000	01 1671
+01 3773	01 1672
+16 0000	01 1673
+26 0001	01 1674
+27 1667	01 1675
+20 3000	01 1676
+11 0005	01 1677
+11 0005	01 1700
+11 0005	01 1701
+11 0003	01 1702
+22 1400	01 1703
+01 0000	01 1704
+14 0000	01 1705
+13 0000	01 1706
+01 3773	01 1707
+16 0000	01 1710
+26 0001	01 1711
+27 1676	01 1712
+27 1677	01 1713
+26 0126	01 1714
+26 0131	01 1715

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+32 0000	01 2001
+22 7772	01 2002
+13 0000	01 2003
+11 1004	01 2004
+11 1004	01 2005
+11 1004	01 2006
+22 7776	01 2007
+01 0000	01 2010
+13 0000	01 2011
+20 3771	01 2012
+11 1001	01 2013
+13 0000	01 2014
+06 0000	01 2015
+26 0002	01 2016
+32 0000	01 2017

INSTRUCTION	LOCATION
+26 0001	01 2020
+27 1700	01 2021
+23 3000	01 2022
+23 0177	01 2023
+11 0004	01 2024
+11 0004	01 2025
+11 0004	01 2026
+23 0176	01 2027
+22 1462	01 2030
+23 0175	01 2031
+13 0000	01 2032
+23 0174	01 2033
+23 0173	01 2034
+22 7776	01 2035
+13 0000	01 2036
+23 0164	01 2037
+22 3776	01 2040
+13 0000	01 2041
+23 0163	01 2042
+33 3677	01 2043
+26 0001	01 2044
+33 3476	01 2045
+26 0046	01 2046
+26 0046	01 2047
+33 3657	01 2050
+32 0000	01 2051
+26 0022	01 2052
+33 3637	01 2053
+26 0001	01 2054
+27 1701	01 2055
+22 3576	01 2056
+13 0000	01 2057
+11 1004	01 2060
+11 1004	01 2061
+11 1004	01 2062
+22 3566	01 2063
+01 0000	01 2064
+02 3000	01 2065
+14 0000	01 2066
+13 0000	01 2067
+01 3773	01 2070
+16 0000	01 2071
+26 0001	01 2072
+27 1702	01 2073
+27 3777	01 2074
+22 4000	01 2075
+06 3773	01 2076
+23 3000	01 2077
+12 0000	01 2100
+25 3777	01 2101

INSTRUCTION	LOCATION
+12 0000	01 2102
+20 3000	01 2103
+01 3776	01 2104
+14 0000	01 2105
+13 0000	01 2106
+01 3773	01 2107
+16 0000	01 2110
+26 0002	01 2111
+32 0000	01 2112
+26 0003	01 2113
+27 1703	01 2114
+26 0114	01 2115
+26 0114	01 2116
+22 4000	01 2117
+13 0000	01 2120
+23 1717	01 2121
+20 3776	01 2122
+13 0000	01 2123
+23 3000	01 2124
+20 3000	01 2125
+22 4000	01 2126
+11 1002	01 2127
+07 1717	01 2130
+12 0000	01 2131
+25 3777	01 2132
+12 0000	01 2133
+25 3777	01 2134
+12 0000	01 2135
+25 3777	01 2136
+12 0000	01 2137
+25 3777	01 2140
+23 3000	01 2141
+22 0002	01 2142
+11 1004	01 2143
+11 1004	01 2144
+11 1004	01 2145
+23 3767	01 2146
+22 3000	01 2147
+01 0000	01 2150
+02 3000	01 2151
+14 0000	01 2152
+01 3775	01 2153
+16 0000	01 2154
+26 0056	01 2155
+22 4000	01 2156
+02 3000	01 2157
+14 0000	01 2160
+13 0000	01 2161
+01 3773	01 2162
+16 0000	01 2163

INSTRUCTION	LOCATION
+26 0001	01 2164
+27 1704	01 2165
+22 5000	01 2166
+13 0000	01 2167
+02 3776	01 2170
+02 3000	01 2171
+14 0000	01 2172
+13 0000	01 2173
+01 3773	01 2174
+16 0000	01 2175
+26 0001	01 2176
+27 1705	01 2177
+22 6000	01 2200
+01 3767	01 2201
+02 3000	01 2202
+14 0000	01 2203
+13 0000	01 2204
+01 3773	01 2205
+16 0000	01 2206
+26 0001	01 2207
+27 1706	01 2210
+22 1000	01 2211
+01 3767	01 2212
+02 3000	01 2213
+14 0000	01 2214
+13 0000	01 2215
+01 3773	01 2216
+16 0000	01 2217
+26 0001	01 2220
+27 1707	01 2221
+22 3000	01 2222
+02 3000	01 2223
+14 0000	01 2224
+13 0000	01 2225
+01 3773	01 2226
+16 0000	01 2227
+26 0004	01 2230
+27 1710	01 2231
+26 0065	01 2232
+26 0065	01 2233
+26 0065	01 2234
+20 3000	01 2235
+02 3767	01 2236
+14 0000	01 2237
+13 0000	01 2240
+01 3773	01 2241
+16 0000	01 2242
+26 0001	01 2243
+27 1711	01 2244
+22 1000	01 2245

INSTRUCTION	LOCATION
+02 3000	01 2246
+14 0000	01 2247
+13 0000	01 2250
+01 3773	01 2251
+16 0000	01 2252
+26 0001	01 2253
+27 1712	01 2254
+22 4400	01 2255
+01 3767	01 2256
+02 3000	01 2257
+14 0000	01 2260
+13 0000	01 2261
+01 3773	01 2262
+16 0000	01 2263
+26 0001	01 2264
+27 1713	01 2265
+20 3000	01 2266
+16 0000	01 2267
+26 0016	01 2270
+01 3775	01 2271
+16 0000	01 2272
+32 0000	01 2273
+26 0001	01 2274
+27 1714	01 2275
+22 2400	01 2276
+01 3767	01 2277
+02 3000	01 2300
+14 0000	01 2301
+01 3775	01 2302
+16 0000	01 2303
+26 0001	01 2304
+27 1720	01 2305
+27 1715	01 2306
+22 3000	01 2307
+01 3767	01 2310
+01 3000	01 2311
+14 0000	01 2312
+01 3775	01 2313
+16 0000	01 2314
+26 0001	01 2315
+27 1720	01 2316
+27 1716	01 2317
+26 0100	01 2320
+26 0103	01 2321
+22 0000	01 2322
+07 3773	01 2323
+23 3000	01 2324
+12 0000	01 2325
+25 3777	01 2326
+12 0000	01 2327

INSTRUCTION	LOCATION
+20 3000	01 2330
+01 3776	01 2331
+14 0000	01 2332
+01 3775	01 2333
+16 0000	01 2334
+26 0001	01 2335
+27 1721	01 2336
+20 3776	01 2337
+23 0177	01 2340
+34 3777	01 2341
+34 3776	01 2342
+34 3775	01 2343
+34 3774	01 2344
+34 3773	01 2345
+34 3772	01 2346
+34 3771	01 2347
+34 3770	01 2350
+34 3767	01 2351
+34 3766	01 2352
+34 3765	01 2353
+34 3764	01 2354
+34 3763	01 2355
+34 3762	01 2356
+34 3761	01 2357
+34 3760	01 2360
+16 0000	01 2361
+26 0001	01 2362
+27 1722	01 2363
+22 7776	01 2364
+13 0000	01 2365
+11 1004	01 2366
+11 1004	01 2367
+11 1004	01 2370
+02 3777	01 2371
+14 0000	01 2372
+01 3775	01 2373
+16 0000	01 2374
+26 0001	01 2375
+27 1723	01 2376
+20 0177	01 2377
+11 1004	01 2400
+11 1004	01 2401
+11 0005	01 2402
+11 0005	01 2403
+11 0005	01 2404
+11 0005	01 2405
+23 0176	01 2406
+22 7776	01 2407
+13 0000	01 2410
+23 0175	01 2411

INSTRUCTION	LOCATION
+23 0173	01 2412
+22 7400	01 2413
+11 0001	01 2414
+23 0174	01 2415
+22 5776	01 2416
+13 0000	01 2417
+23 0163	01 2420
+33 3677	01 2421
+26 0001	01 2422
+33 3475	01 2423
+26 0045	01 2424
+26 0045	01 2425
+33 3657	01 2426
+32 0000	01 2427
+26 0043	01 2430
+33 3637	01 2431
+26 0001	01 2432
+27 1727	01 2433
+20 0177	01 2434
+11 1004	01 2435
+11 1004	01 2436
+23 3000	01 2437
+22 0776	01 2440
+11 1004	01 2441
+11 1004	01 2442
+11 1004	01 2443
+02 3000	01 2444
+14 0000	01 2445
+13 0000	01 2446
+01 3773	01 2447
+16 0000	01 2450
+26 0001	01 2451
+27 1724	01 2452
+20 3000	01 2453
+13 0000	01 2454
+01 3773	01 2455
+16 0000	01 2456
+26 0001	01 2457
+27 1725	01 2460
+22 0776	01 2461
+11 1004	01 2462
+02 3000	01 2463
+14 0000	01 2464
+01 3775	01 2465
+16 0000	01 2466
+26 0001	01 2467
+27 3777	01 2470
+27 1726	01 2471
+26 0035	01 2472
+26 0040	01 2473

INSTRUCTION	LOCATION
+34 3760	01 2474
+34 3761	01 2475
+34 3762	01 2476
+34 3763	01 2477
+34 3764	01 2500
+34 3765	01 2501
+34 3766	01 2502
+34 3767	01 2503
+34 3770	01 2504
+34 3771	01 2505
+34 3772	01 2506
+34 3773	01 2507
+34 3774	01 2510
+34 3775	01 2511
+34 3776	01 2512
+34 3777	01 2513
+20 0177	01 2514
+11 1004	01 2515
+11 1004	01 2516
+11 0005	01 2517
+11 0005	01 2520
+11 0005	01 2521
+11 0005	01 2522
+23 0176	01 2523
+22 6776	01 2524
+13 0000	01 2525
+23 0163	01 2526
+23 0173	01 2527
+33 3677	01 2530
+26 0001	01 2531
+33 3474	01 2532
+26 0050	01 2533
+26 0053	01 2534
+33 3657	01 2535
+32 0000	01 2536
+26 0004	01 2537
+33 3637	01 2540
+26 0001	01 2541
+27 1727	01 2542
+27 3777	01 2543
+32 0000	01 2544
+34 3777	01 2545
+34 3776	01 2546
+34 3775	01 2547
+34 3774	01 2550
+34 3773	01 2551
+34 3772	01 2552
+34 3771	01 2553
+34 3770	01 2554
+34 3767	01 2555

INSTRUCTION	LOCATION
+34 3766	01 2556
+34 3765	01 2557
+34 3764	01 2560
+34 3763	01 2561
+34 3762	01 2562
+34 3761	01 2563
+34 3760	01 2564
+20 0177	01 2565
+11 1004	01 2566
+11 1004	01 2567
+11 0005	01 2570
+11 0005	01 2571
+11 0005	01 2572
+11 0005	01 2573
+23 0176	01 2574
+22 0000	01 2575
+23 0175	01 2576
+23 0174	01 2577
+22 7376	01 2600
+13 0000	01 2601
+23 0163	01 2602
+23 0173	01 2603
+33 3677	01 2604
+26 0001	01 2605
+33 3473	01 2606
+26 0042	01 2607
+26 0042	01 2610
+33 3657	01 2611
+32 0000	01 2612
+26 0040	01 2613
+33 3637	01 2614
+26 0001	01 2615
+27 1727	01 2616
+20 0177	01 2617
+11 1004	01 2620
+11 1004	01 2621
+23 3000	01 2622
+22 7776	01 2623
+11 1004	01 2624
+11 1004	01 2625
+11 1003	01 2626
+22 0076	01 2627
+01 0000	01 2630
+11 1001	01 2631
+02 3000	01 2632
+14 0000	01 2633
+13 0000	01 2634
+01 3773	01 2635
+16 0000	01 2636
+26 0001	01 2637

INSTRUCTION	LOCATION
+27 1730	01 2640
+22 0776	01 2641
+11 1004	01 2642
+02 3000	01 2643
+14 0000	01 2644
+01 3775	01 2645
+16 0000	01 2646
+26 0001	01 2647
+27 3777	01 2650
+27 1731	01 2651
+26 0135	01 2652
+26 0135	01 2653
+22 0000	01 2654
+23 0177	01 2655
+34 3777	01 2656
+32 0000	01 2657
+34 3777	01 2660
+20 0177	01 2661
+16 0000	01 2662
+26 0004	01 2663
+01 3775	01 2664
+16 0000	01 2665
+26 0002	01 2666
+32 0000	01 2667
+26 0005	01 2670
+34 3776	01 2671
+32 0000	01 2672
+34 3776	01 2673
+20 0177	01 2674
+16 0000	01 2675
+26 0004	01 2676
+01 3775	01 2677
+16 0000	01 2700
+26 0002	01 2701
+32 0000	01 2702
+26 0005	01 2703
+34 3775	01 2704
+32 0000	01 2705
+34 3775	01 2706
+20 0177	01 2707
+16 0000	01 2710
+26 0004	01 2711
+01 3775	01 2712
+16 0000	01 2713
+26 0002	01 2714
+32 0000	01 2715
+26 0005	01 2716
+34 3774	01 2717
+32 0000	01 2720
+34 3774	01 2721

INSTRUCTION	LOCATION
+20 0177	01 2722
+16 0000	01 2723
+26 0004	01 2724
+01 3775	01 2725
+16 0000	01 2726
+26 0002	01 2727
+32 0000	01 2730
+26 0005	01 2731
+34 3773	01 2732
+32 0000	01 2733
+34 3773	01 2734
+20 0177	01 2735
+16 0000	01 2736
+26 0004	01 2737
+01 3775	01 2740
+16 0000	01 2741
+26 0002	01 2742
+32 0000	01 2743
+26 0005	01 2744
+34 3772	01 2745
+32 0000	01 2746
+34 3772	01 2747
+20 0177	01 2750
+16 0000	01 2751
+26 0004	01 2752
+01 3775	01 2753
+16 0000	01 2754
+26 0002	01 2755
+32 0000	01 2756
+26 0005	01 2757
+34 3771	01 2760
+32 0000	01 2761
+34 3771	01 2762
+20 0177	01 2763
+16 0000	01 2764
+26 0004	01 2765
+01 3775	01 2766
+16 0000	01 2767
+26 0002	01 2770
+32 0000	01 2771
+26 0005	01 2772
+34 3770	01 2773
+32 0000	01 2774
+34 3770	01 2775
+20 0177	01 2776
+16 0000	01 2777
+26 0004	01 3000
+01 3775	01 3001
+16 0000	01 3002
+26 0002	01 3003

INSTRUCTION	LOCATION
+32 0000	01 3004
+26 0007	01 3005
+34 3767	01 3006
+32 0000	01 3007
+26 0136	01 3010
+26 0141	01 3011
+34 3767	01 3012
+20 0177	01 3013
+16 0000	01 3014
+26 0004	01 3015
+01 3775	01 3016
+16 0000	01 3017
+26 0002	01 3020
+32 0000	01 3021
+26 0005	01 3022
+34 3766	01 3023
+32 0000	01 3024
+34 3766	01 3025
+20 0177	01 3026
+16 0000	01 3027
+26 0004	01 3030
+01 3775	01 3031
+16 0000	01 3032
+26 0002	01 3033
+32 0000	01 3034
+26 0005	01 3035
+34 3765	01 3036
+32 0000	01 3037
+34 3765	01 3040
+20 0177	01 3041
+16 0000	01 3042
+26 0004	01 3043
+01 3775	01 3044
+16 0000	01 3045
+26 0002	01 3046
+32 0000	01 3047
+26 0005	01 3050
+34 3764	01 3051
+32 0000	01 3052
+34 3764	01 3053
+20 0177	01 3054
+16 0000	01 3055
+26 0004	01 3056
+01 3775	01 3057
+16 0000	01 3060
+26 0002	01 3061
+32 0000	01 3062
+26 0005	01 3063
+34 3763	01 3064
+32 0000	01 3065

INSTRUCTION	LOCATION
+34 3763	01 3066
+20 0177	01 3067
+16 0000	01 3070
+26 0004	01 3071
+01 3775	01 3072
+16 0000	01 3073
+26 0002	01 3074
+32 0000	01 3075
+26 0005	01 3076
+34 3762	01 3077
+32 0000	01 3100
+34 3762	01 3101
+20 0177	01 3102
+16 0000	01 3103
+26 0004	01 3104
+01 3775	01 3105
+16 0000	01 3106
+26 0002	01 3107
+32 0000	01 3110
+26 0005	01 3111
+34 3761	01 3112
+32 0000	01 3113
+34 3761	01 3114
+20 0177	01 3115
+16 0000	01 3116
+26 0004	01 3117
+01 3775	01 3120
+16 0000	01 3121
+26 0002	01 3122
+32 0000	01 3123
+26 0005	01 3124
+34 3760	01 3125
+32 0000	01 3126
+34 3760	01 3127
+20 0177	01 3130
+16 0000	01 3131
+26 0003	01 3132
+01 3775	01 3133
+16 0000	01 3134
+26 0022	01 3135
+20 0177	01 3136
+11 0004	01 3137
+11 0004	01 3140
+11 0004	01 3141
+23 0176	01 3142
+22 7576	01 3143
+13 0000	01 3144
+23 0163	01 3145
+23 0173	01 3146
+33 3677	01 3147

INSTRUCTION	LOCATION
+26 0001	01 3150
+33 3472	01 3151
+26 0017	01 3152
+26 0015	01 3153
+33 3637	01 3154
+26 0001	01 3155
+27 1727	01 3156
+27 3777	01 3157
+16 0000	01 3160
+32 0000	01 3161
+34 0000	01 3162
+32 0000	01 3163
+26 0001	01 3164
+27 1732	01 3165
+22 7776	01 3166
+23 0163	01 3167
+32 0000	01 3170
+32 0000	01 3171
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	01 4001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	01 6001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+04 0000	02 0001
+25 3777	02 0002
+25 3777	02 0003
+25 3777	02 0004
+25 3777	02 0005
+25 3777	02 0006
+25 3777	02 0007
+26 0002	02 0010
+32 0000	02 0011
+26 0112	02 0012
+33 3536	02 0013
+26 0111	02 0014

INSTRUCTION	LOCATION
+20 1776	02 0015
+02 1777	02 0016
+16 0000	02 0017
+26 0011	02 0020
+20 1754	02 0021
+11 0001	02 0022
+16 0000	02 0023
+26 0003	02 0024
+01 1747	02 0025
+32 0000	02 0026
+26 0012	02 0027
+02 1747	02 0030
+26 0010	02 0031
+20 1755	02 0032
+11 0001	02 0033
+16 0000	02 0034
+26 0003	02 0035
+01 1746	02 0036
+32 0000	02 0037
+26 0001	02 0040
+02 1746	02 0041
+33 0000	02 0042
+24 1754	02 0043
+20 1732	02 0044
+01 1744	02 0045
+23 1731	02 0046
+21 1750	02 0047
+11 0001	02 0050
+24 1750	02 0051
+21 1752	02 0052
+11 0001	02 0053
+24 1752	02 0054
+21 1756	02 0055
+11 0001	02 0056
+24 1756	02 0057
+21 1760	02 0060
+11 0001	02 0061
+24 1760	02 0062
+21 1762	02 0063
+11 0001	02 0064
+24 1762	02 0065
+21 1764	02 0066
+11 0001	02 0067
+24 1764	02 0070
+21 1766	02 0071
+11 0001	02 0072
+24 1766	02 0073
+21 1770	02 0074
+11 0001	02 0075
+24 1770	02 0076

INSTRUCTION	LOCATION
+21 1772	02 0077
+11 0001	02 0100
+24 1772	02 0101
+21 1774	02 0102
+11 0001	02 0103
+24 1774	02 0104
+22 0100	02 0105
+11 1005	02 0106
+11 1005	02 0107
+11 1002	02 0110
+02 1777	02 0111
+16 0000	02 0112
+26 0006	02 0113
+20 1777	02 0114
+01 1747	02 0115
+23 1777	02 0116
+26 0006	02 0117
+32 0000	02 0120
+26 0004	02 0121
+27 3777	02 0122
+26 0002	02 0123
+27 1034	02 0124
+32 0000	02 0125

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000 — 02 2001

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000 — 02 4001

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000 — 02 6001

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

INSTRUCTION	LOCATION
+02 0000	03 0001
+25 3777	03 0002
+25 3777	03 0003
+25 3777	03 0004
+25 3777	03 0005
+25 3777	03 0006
+25 3777	03 0007
+26 0002	03 0010
+32 0000	03 0011
+26 0112	03 0012
+33 3536	03 0013
+26 0111	03 0014
+20 1776	03 0015
+02 1777	03 0016
+16 0000	03 0017
+26 0011	03 0020
+20 1756	03 0021
+11 0001	03 0022
+16 0000	03 0023
+26 0003	03 0024
+01 1747	03 0025
+32 0000	03 0026
+26 0012	03 0027
+02 1747	03 0030
+26 0010	03 0031
+20 1757	03 0032
+11 0001	03 0033
+16 0000	03 0034
+26 0003	03 0035
+01 1746	03 0036
+32 0000	03 0037
+26 0001	03 0040
+02 1746	03 0041
+33 0000	03 0042
+24 1756	03 0043
+20 1733	03 0044
+01 1744	03 0045
+23 1733	03 0046
+21 1750	03 0047
+11 0001	03 0050
+24 1750	03 0051
+21 1752	03 0052
+11 0001	03 0053
+24 1752	03 0054
+21 1754	03 0055
+11 0001	03 0056
+24 1754	03 0057
+21 1760	03 0060
+11 0001	03 0061
+24 1760	03 0062

INSTRUCTION	LOCATION
+21 1762	03 0063
+11 0001	03 0064
+24 1762	03 0065
+21 1764	03 0066
+11 0001	03 0067
+24 1764	03 0070
+21 1766	03 0071
+11 0001	03 0072
+24 1766	03 0073
+21 1770	03 0074
+11 0001	03 0075
+24 1770	03 0076
+21 1772	03 0077
+11 0001	03 0100
+24 1772	03 0101
+21 1774	03 0102
+11 0001	03 0103
+24 1774	03 0104
+22 0100	03 0105
+11 1005	03 0106
+11 1005	03 0107
+11 1002	03 0110
+02 1777	03 0111
+16 0000	03 0112
+26 0006	03 0113
+20 1777	03 0114
+01 1747	03 0115
+23 1777	03 0116
+26 0006	03 0117
+32 0000	03 0120
+26 0004	03 0121
+27 3777	03 0122
+26 0002	03 0123
+27 1035	03 0124
+32 0000	03 0125

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000	03 2001

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000	03 4001

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

INSTRUCTION	LOCATION
+12 0000	03 6001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+01 0000	04 0001
+25 3777	04 0002
+25 3777	04 0003
+25 3777	04 0004
+25 3777	04 0005
+25 3777	04 0006
+25 3777	04 0007
+26 0002	04 0010
+32 0000	04 0011
+26 0112	04 0012
+33 3536	04 0013
+26 0111	04 0014
+20 1776	04 0015
+02 1777	04 0016
+16 0000	04 0017
+26 0011	04 0020
+20 1760	04 0021
+11 0001	04 0022
+16 0000	04 0023
+26 0003	04 0024
+01 1747	04 0025
+32 0000	04 0026
+26 0012	04 0027
+02 1747	04 0030
+26 0010	04 0031
+20 1761	04 0032
+11 0001	04 0033
+16 0000	04 0034
+26 0003	04 0035
+01 1746	04 0036
+32 0000	04 0037
+26 0001	04 0040
+02 1746	04 0041
+33 0000	04 0042
+24 1760	04 0043
+20 1734	04 0044
+01 1744	04 0045
+23 1734	04 0046
+21 1750	04 0047

INSTRUCTION	LOCATION
+11 0001	04 0050
+24 1750	04 0051
+21 1752	04 0052
+11 0001	04 0053
+24 1752	04 0054
+21 1754	04 0055
+11 0001	04 0056
+24 1754	04 0057
+21 1756	04 0060
+11 0001	04 0061
+24 1756	04 0062
+21 1762	04 0063
+11 0001	04 0064
+24 1762	04 0065
+21 1764	04 0066
+11 0001	04 0067
+24 1764	04 0070
+21 1766	04 0071
+11 0001	04 0072
+24 1766	04 0073
+21 1770	04 0074
+11 0001	04 0075
+24 1770	04 0076
+21 1772	04 0077
+11 0001	04 0100
+24 1772	04 0101
+21 1774	04 0102
+11 0001	04 0103
+24 1774	04 0104
+22 0100	04 0105
+11 1005	04 0106
+11 1005	04 0107
+11 1002	04 0110
+02 1777	04 0111
+16 0000	04 0112
+26 0006	04 0113
+20 1777	04 0114
+01 1747	04 0115
+23 1777	04 0116
+26 0006	04 0117
+32 0000	04 0120
+26 0004	04 0121
+27 3777	04 0122
+26 0002	04 0123
+27 1036	04 0124
+32 0000	04 0125

BLOCK END CODE THE REST OF THIS QUAD. IS BLANK

INSTRUCTION	LOCATION
+12 0000	04 2001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	04 4001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	04 6001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+20 0000	05 0001
+25 3777	05 0002
+25 3777	05 0003
+25 3777	05 0004
+25 3777	05 0005
+25 3777	05 0006
+25 3777	05 0007
+26 0002	05 0010
+32 0000	05 0011
+26 0112	05 0012
+33 3536	05 0013
+26 0111	05 0014
+20 1776	05 0015
+02 1777	05 0016
+16 0000	05 0017
+26 0011	05 0020
+20 1762	05 0021
+11 0001	05 0022
+16 0000	05 0023
+26 0003	05 0024
+01 1747	05 0025
+32 0000	05 0026
+26 0012	05 0027
+02 1747	05 0030
+26 0010	05 0031
+20 1763	05 0032
+11 0001	05 0033
+16 0000	05 0034
+26 0003	05 0035

INSTRUCTION	LOCATION
+01 1746	05 0036
+32 0000	05 0037
+26 0001	05 0040
+02 1746	05 0041
+33 0000	05 0042
+24 1762	05 0043
+20 1735	05 0044
+01 1744	05 0045
+23 1735	05 0046
+21 1750	05 0047
+11 0001	05 0050
+24 1750	05 0051
+21 1752	05 0052
+11 0001	05 0053
+24 1752	05 0054
+21 1754	05 0055
+11 0001	05 0056
+24 1754	05 0057
+21 1756	05 0060
+11 0001	05 0061
+24 1756	05 0062
+21 1760	05 0063
+11 0001	05 0064
+24 1760	05 0065
+21 1764	05 0066
+11 0001	05 0067
+24 1764	05 0070
+21 1766	05 0071
+11 0001	05 0072
+24 1766	05 0073
+21 1770	05 0074
+11 0001	05 0075
+24 1770	05 0076
+21 1772	05 0077
+11 0001	05 0100
+24 1722	05 0101
+21 1774	05 0102
+11 0001	05 0103
+24 1774	05 0104
+22 0100	05 0105
+11 1005	05 0106
+11 1005	05 0107
+11 1002	05 0110
+02 1777	05 0111
+16 0000	05 0112
+26 0006	05 0113
+20 1777	05 0114
+01 1747	05 0115
+23 1777	05 0116
+26 0006	05 0117

INSTRUCTION	LOCATION
+32 0000	05 0120
+26 0004	05 0121
+27 3777	05 0122
+26 0002	05 0123
+27 1032	05 0124
+32 0000	05 0125
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	05 2001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	05 4001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	05 6001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	06 0001
+00 0000	06 0002
+00 0000	06 0003
+00 0000	06 0004
+00 0000	06 0005
+00 0000	06 0006
+00 0000	06 0007
+26 0002	06 0010
+32 0000	06 0011
+26 0111	06 0012
+33 3536	06 0013
+26 0110	06 0014
+20 1776	06 0015
+02 1777	06 0016
+16 0000	06 0017
+26 0011	06 0020
+20 1764	06 0021

INSTRUCTION	LOCATION
+11 0001	06 0022
+16 0000	06 0023
+26 0003	06 0024
+01 1747	06 0025
+32 0000	06 0026
+26 0012	06 0027
+02 1747	06 0030
+26 0010	06 0031
+20 1765	06 0032
+11 0001	06 0033
+16 0000	06 0034
+26 0003	06 0035
+01 1746	06 0036
+32 0000	06 0037
+26 0001	06 0040
+02 1746	06 0041
+33 0000	06 0042
+24 1764	06 0043
+20 1736	06 0044
+01 1744	06 0045
+23 1736	06 0046
+21 1750	06 0047
+11 0001	06 0050
+24 1750	06 0051
+21 1752	06 0052
+11 0001	06 0053
+24 1752	06 0054
+21 1754	06 0055
+11 0001	06 0056
+24 1754	06 0057
+21 1756	06 0060
+11 0001	06 0061
+24 1756	06 0062
+21 1760	06 0063
+11 0001	06 0064
+24 1760	06 0065
+21 1762	06 0066
+11 0001	06 0067
+24 1762	06 0070
+21 1766	06 0071
+11 0001	06 0072
+24 1766	06 0073
+21 1770	06 0074
+11 0001	06 0075
+24 1770	06 0076
+21 1772	06 0077
+11 0001	06 0100
+24 1772	06 0101
+21 1774	06 0102
+11 0001	06 0103

INSTRUCTION	LOCATION
+24 1774	06 0104
+22 0100	06 0105
+11 1005	06 0106
+11 1005	06 0107
+11 1002	06 0110
+02 1777	06 0111
+16 0000	06 0112
+26 0006	06 0113
+20 1777	06 0114
+01 1747	06 0115
+23 1777	06 0116
+26 0005	06 0117
+32 0000	06 0120
+26 0003	06 0121
+27 3777	06 0122
+32 0000	06 0123
+32 0000	06 0124

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000	06 2001

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000	06 4001

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000	06 6001

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000	07 0001
+00 0000	07 0002
+00 0000	07 0003
+00 0000	07 0004
+00 0000	07 0005
+00 0000	07 0006

INSTRUCTION	LOCATION
+00 0000	07 0007
+26 0002	07 0010
+32 0000	07 0011
+26 0111	07 0012
+33 3536	07 0013
+26 0110	07 0014
+20 1776	07 0015
+02 1777	07 0016
+16 0000	07 0017
+26 0011	07 0020
+20 1766	07 0021
+11 0001	07 0022
+16 0000	07 0023
+26 0003	07 0024
+01 1747	07 0025
+32 0000	07 0026
+26 0012	07 0027
+02 1747	07 0030
+26 0010	07 0031
+20 1767	07 0032
+11 0001	07 0033
+16 0000	07 0034
+26 0003	07 0035
+01 1746	07 0036
+32 0000	07 0037
+26 0001	07 0040
+02 1746	07 0041
+33 0000	07 0042
+24 1766	07 0043
+20 1737	07 0044
+01 1744	07 0045
+23 1737	07 0046
+21 1750	07 0047
+11 0001	07 0050
+24 1750	07 0051
+21 1752	07 0052
+11 0001	07 0053
+24 1752	07 0054
+21 1754	07 0055
+11 0001	07 0056
+24 1754	07 0057
+21 1756	07 0060
+11 0001	07 0061
+24 1756	07 0062
+21 1760	07 0063
+11 0001	07 0064
+24 1760	07 0065
+21 1762	07 0066
+11 0001	07 0067
+24 1762	07 0070

INSTRUCTION	LOCATION
+21 1764	07 0071
+11 0001	07 0072
+24 1764	07 0073
+21 1770	07 0074
+11 0001	07 0075
+24 1770	07 0076
+21 1772	07 0077
+11 0001	07 0100
+24 1772	07 0101
+21 1774	07 0102
+11 0001	07 0103
+24 1774	07 0104
+22 0100	07 0105
+11 1005	07 0106
+11 1005	07 0107
+11 1002	07 0110
+02 1777	07 0111
+16 0000	07 0112
+26 0006	07 0113
+20 1777	07 0114
+01 1747	07 0115
+23 1777	07 0116
+26 0005	07 0117
+32 0000	07 0120
+26 0003	07 0121
+27 3777	07 0122
+32 0000	07 0123
+32 0000	07 0124
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	07 2001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	07 4001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	07 6001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	

INSTRUCTION	LOCATION
+12 0000	10 0001
+00 0000	10 0002
+00 0000	10 0003
+00 0000	10 0004
+00 0000	10 0005
+00 0000	10 0006
+00 0000	10 0007
+26 0002	10 0010
+32 0000	10 0011
+26 0111	10 0012
+33 3536	10 0013
+26 0110	10 0014
+20 1776	10 0015
+02 1777	10 0016
+16 0000	10 0017
+26 0011	10 0020
+20 1770	10 0021
+11 0001	10 0022
+16 0000	10 0023
+26 0003	10 0024
+01 1747	10 0025
+32 0000	10 0026
+26 0012	10 0027
+02 1747	10 0030
+26 0010	10 0031
+20 1771	10 0032
+11 0001	10 0033
+16 0000	10 0034
+26 0003	10 0035
+01 1746	10 0036
+32 0000	10 0037
+26 0001	10 0040
+02 1746	10 0041
+33 0000	10 0042
+24 1770	10 0043
+20 1740	10 0044
+01 1744	10 0045
+23 1740	10 0046
+21 1750	10 0047
+11 0001	10 0050
+24 1750	10 0051
+21 1752	10 0052
+11 0001	10 0053
+24 1752	10 0054
+21 1754	10 0055
+11 0001	10 0056

INSTRUCTION	LOCATION
+24 1754	10 0057
+21 1756	10 0060
+11 0001	10 0061
+24 1756	10 0062
+21 1760	10 0063
+11 0001	10 0064
+24 1760	10 0065
+21 1762	10 0066
+11 0001	10 0067
+24 1762	10 0070
+21 1764	10 0071
+11 0001	10 0072
+24 1764	10 0073
+21 1766	10 0074
+11 0001	10 0075
+24 1766	10 0076
+21 1772	10 0077
+11 0001	10 0100
+24 1772	10 0101
+21 1774	10 0102
+11 0001	10 0103
+24 1774	10 0104
+22 0100	10 0105
+11 1005	10 0106
+11 1005	10 0107
+11 1002	10 0110
+02 1777	10 0111
+16 0000	10 0112
+26 0006	10 0113
+20 1777	10 0114
+01 1747	10 0115
+23 1777	10 0116
+26 0005	10 0117
+32 0000	10 0120
+26 0003	10 0121
+27 3777	10 0122
+32 0000	10 0123
+32 0000	10 0124

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000	10 2001

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

INSTRUCTION	LOCATION
+12 0000	10 4001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	10 6001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	11 0001
+00 0000	11 0002
+00 0000	11 0003
+00 0000	11 0004
+00 0000	11 0005
+00 0000	11 0006
+00 0000	11 0007
+26 0002	11 0010
+32 0000	11 0011
+26 0111	11 0012
+33 3536	11 0013
+26 0110	11 0014
+20 1776	11 0015
+02 1777	11 0016
+16 0000	11 0017
+26 0011	11 0020
+20 1772	11 0021
+11 0001	11 0022
+16 0000	11 0023
+26 0003	11 0024
+01 1747	11 0025
+32 0000	11 0026
+26 0012	11 0027
+02 1747	11 0030
+26 0010	11 0031
+20 1773	11 0032
+11 0001	11 0033
+16 0000	11 0034
+26 0003	11 0035
+01 1746	11 0036
+32 0000	11 0037
+26 0001	11 0040
+02 1746	11 0041
+33 0000	11 0042
+24 1772	11 0043
+20 1741	11 0044

INSTRUCTION	LOCATION
+01 1744	11 0045
+23 1741	11 0046
+21 1750	11 0047
+11 0001	11 0050
+24 1750	11 0051
+21 1752	11 0052
+11 0001	11 0053
+24 1752	11 0054
+21 1754	11 0055
+11 0001	11 0056
+24 1754	11 0057
+21 1756	11 0060
+11 0001	11 0061
+24 1756	11 0062
+21 1760	11 0063
+11 0001	11 0064
+24 1760	11 0065
+21 1762	11 0066
+11 0001	11 0067
+24 1762	11 0070
+21 1764	11 0071
+11 0001	11 0072
+24 1764	11 0073
+21 1766	11 0074
+11 0001	11 0075
+24 1766	11 0076
+21 1770	11 0077
+11 0001	11 0100
+24 1770	11 0101
+21 1774	11 0102
+11 0001	11 0103
+24 1774	11 0104
+22 0100	11 0105
+11 1005	11 0106
+11 1005	11 0107
+11 1002	11 0110
+02 1777	11 0111
+16 0000	11 0112
+26 0006	11 0113
+20 1777	11 0114
+01 1747	11 0115
+23 1777	11 0116
+26 0005	11 0117
+32 0000	11 0120
+26 0003	11 0121
+27 3777	11 0122
+32 0000	11 0123
+32 0000	11 0124

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

INSTRUCTION	LOCATION
+12 0000	11 2001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	11 4001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	11 6001
- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK	
+12 0000	12 0001
+00 0000	12 0002
+00 0000	12 0003
+00 0000	12 0004
+00 0000	12 0005
+00 0000	12 0006
+00 0000	12 0007
+26 0002	12 0010
+32 0000	12 0011
+26 0111	12 0012
+33 3536	12 0013
+26 0110	12 0014
+20 1776	12 0015
+02 1777	12 0016
+16 0000	12 0017
+26 0011	12 0020
+20 1774	12 0021
+11 0001	12 0022
+16 0000	12 0023
+26 0003	12 0024
+01 1747	12 0025
+32 0000	12 0026
+26 0012	12 0027
+02 1747	12 0030
+26 0010	12 0031
+20 1775	12 0032
+11 0001	12 0033

INSTRUCTION	LOCATION
+16 0000	12 0034
+26 0003	12 0035
+01 1746	12 0036
+32 0000	12 0037
+26 0001	12 0040
+02 1746	12 0041
+33 0000	12 0042
+24 1774	12 0043
+20 1742	12 0044
+01 1744	12 0045
+23 1742	12 0046
+21 1750	12 0047
+11 0001	12 0050
+24 1750	12 0051
+21 1752	12 0052
+11 0001	12 0053
+24 1752	12 0054
+21 1754	12 0055
+11 0001	12 0056
+24 1754	12 0057
+21 1756	12 0060
+11 0001	12 0061
+24 1756	12 0062
+21 1760	12 0063
+11 0001	12 0064
+24 1760	12 0065
+21 1762	12 0066
+11 0001	12 0067
+24 1762	12 0070
+21 1764	12 0071
+11 0001	12 0072
+24 1764	12 0073
+21 1766	12 0074
+11 0001	12 0075
+24 1766	12 0076
+21 1770	12 0077
+11 0001	12 0100
+24 1770	12 0101
+21 1772	12 0102
+11 0001	12 0103
+24 1772	12 0104
+22 0100	12 0105
+11 1005	12 0106
+11 1005	12 0107
+11 1002	12 0110
+02 1777	12 0111
+16 0000	12 0112
+26 0006	12 0113
+20 1777	12 0114
+01 1747	12 0115

INSTRUCTION	LOCATION
+23 1777	12 0116
+26 0005	12 0117
+32 0000	12 0120
+26 0003	12 0121
+27 3777	12 0122
+32 0000	12 0123
+32 0000	12 0124

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000	12 2001

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000	12 4001

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK

+12 0000	12 6001

- BLOCK END CODE-THE REST OF THIS QUAD. IS BLANK