

**8CU29A
I/O INTERPRET TEST**

April 15, 1961

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I/O INTERPRET TEST

I. PURPOSE OF TEST

To check the operation of circuitry associated with the I/O Interpret Switch when this switch is ON.

II. METHOD OF TEST

It is assumed that the 7080 CPU and channel operation are in good working order in all areas other than the one tested in this program. The test consists of 16 Routines each of which is independent and tests only one feature.

A. Special Features

1. The test should be run separately in each of the following two modes:
 - a. 705 III Mode
 - b. 705 II Mode
2. As the NON STOP switch is ON in this test, Halt instructions will be executed only when the Interrupt Program Trigger is ON. Thus in all Error Routines each Halt instruction is preceded by EEM and TIP. The TIP instruction can only be given when the machine is in 7080 Mode. The LIP 3700 instruction, which immediately follows the Halt, takes the machine to the next IC location which contains the instruction LEM to take the machine out of 7080 Mode.
3. There are 4 sub-routines in this program. Sub-routines 1 and 2 merely set up IW 250 and 200, respectively. Sub-routine 3 has the function of resetting all the check triggers, taking the machine out of 7080 Mode, typing out IC locations from which all error interrupts come and stepping IC plus 5 as determined by the NOP-TR switches in the Interrupt Program. Sub-routine 4 serves the sole purpose of checking that the write instruction is completed and a channel interrupt occurs in Routine 5.

B. Order of Running the Test

1. To completely test the I/O Interpret feature a separate Z typeout must be obtained in each of the following two modes:

- a. 705 III
- b. 705 II

2. Always run the test in 705 III Mode first.

III. AREA OF MACHINE REQUIRED

1. Units

- a. 7080 CPU
- b. 7621 TCU
- c. Tape Drive Unit with address 2001

2. Memory Locations

- a. 00000 - 03044 8CU29
- b. 18200 - 18800 Load Program

IV. LODING PROCEDURE

1. Card

Use standard load program 8LD01 with cards in the following order:

8LD01 2 cards
8CU29 48 cards
8TR02 1 card
Blanks 3 cards

2. Tape

Use a tape generated by 8TR06. Refer to the 8TR06 write-up for complete details on generating and using this tape.

V.

PROGRAM CONTROL

1. Check Switches - All in Automatic

2. Alteration Switches

911 ON - Bypass Typeouts
912 ON - Repeat Routine
913 ON - Stop on Error
914 ON - Repeat the Test in One of the Two Modes
914 OFF - Read in next program (When in 705 II Mode)
915 - Not used
916 ON - Do the Test in 705 II Mode
OFF - Do the Test in 705 III Mode

3. Other Switches

NON STOP	-	ON
I/O Interpret	-	ON
705 I/II	-	ON if in 705 II Mode
	-	OFF if in 705 III Mode

4. Manual Control

- a. 705 III Mode
916 OFF
705 I/II OFF
- b. 705 II Mode
916 ON
705 I/II ON
40K Switch Optional

VI. NORMAL STOPS

1. Halt 0000. This stop occurs on initial program entry in the first pass only. Proceed per typeout.
2. Halt 6666. This stop occurs when the test is run in 705 III Mode with 914 OFF. Turn 914 and 916 ON. Reset and Start.
3. Halt 9999. This stop occurs on leaving program with 916 ON and 914 OFF. Proceed per typeout.

VII. ERROR STOPS

1. Halt 00XX indicates failure of a routine, where "XX" stands for the number of the Routine that failed.

Example: Halt 0012 means Routine 12 failed. To continue, hit Start.
2. Halt 1111 indicates that NON STOP is not ON.

VIII. TYPEOUTS

1. Normal Typeouts
 - a. "Z" - This will be typed out after every 100 passes in each mode.
 - b. "NON STOP & I/O INTERPRET SW ON. CHK SW ALL ON AUTO". - This will be typed out on initial pass only.

- c. "**PUT 705 I/II & 916 SW ON**" - This will be typed out only the first time the test is run in 705 III Mode with 914 OFF.
- d. "**TURN 705 I/II, NON STOP & I/O INTERPRET SW OFF**". This will be typed out on leaving the program, i. e., when running in 705 II Mode with 914 off.

In each case follow the typeout instructions and Start.

2. Error Typeouts

- a. "**00XX**" - This indicates failure of a Routine, where "XX" stands for the number of the Routine that failed.

Example: "0010" means Routine 10 failed.

- b. "**IC - XXXX**" - This indicates a bad interrupt where "XXXX" stands for the location from which the interrupt came.

Example: IC-1014 means a bad interrupt coming from 1014.

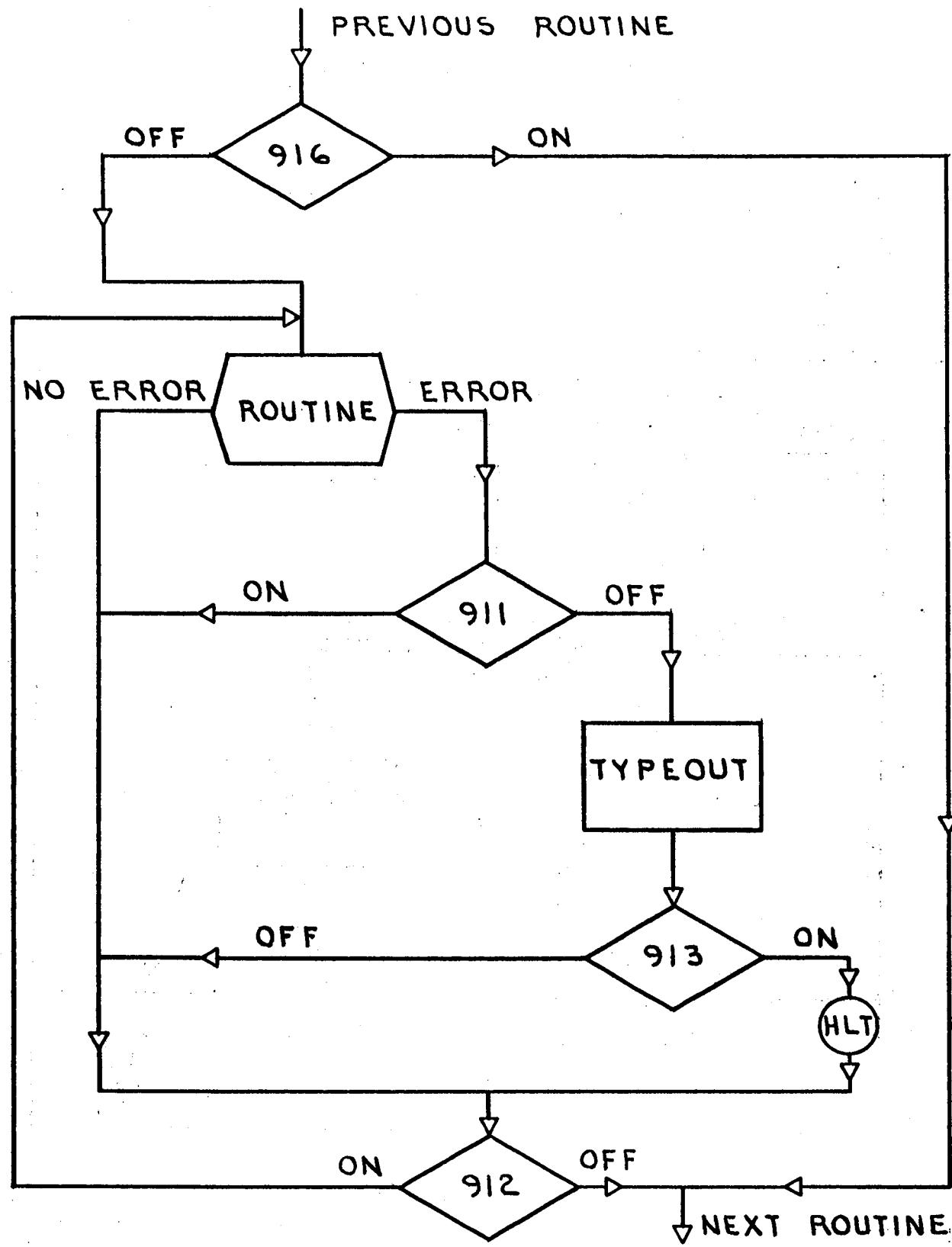
- c. "**FIELDS UNEQUAL**" - This occurs in Routine 5 only and indicates that the write and read fields in that Routine did not compare equal.

- d. "**NON STOP NOT ON**". This means that the operator did not put NON STOP ON, or that TRA07 Instruction failed.

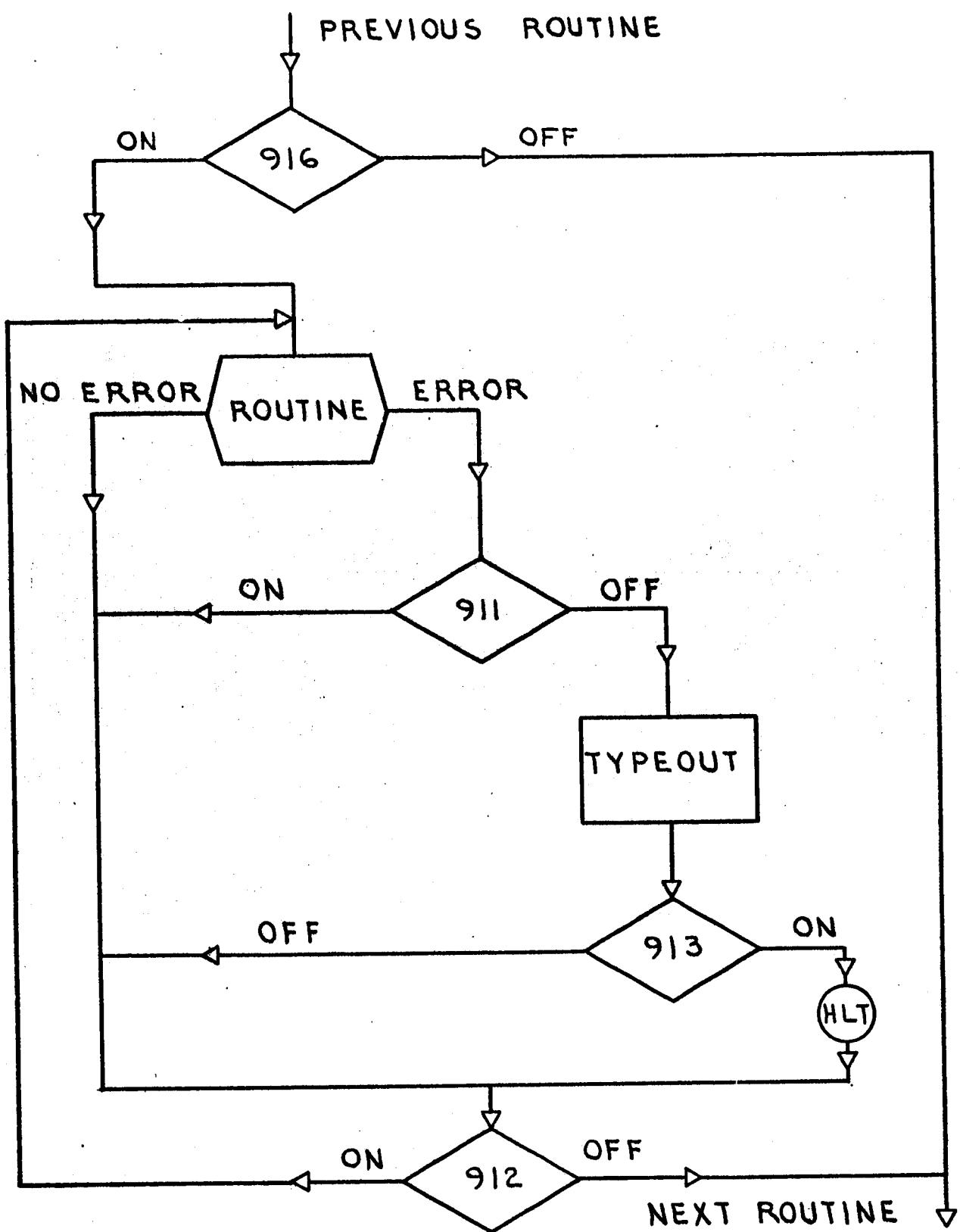
IX.

COMMENTS

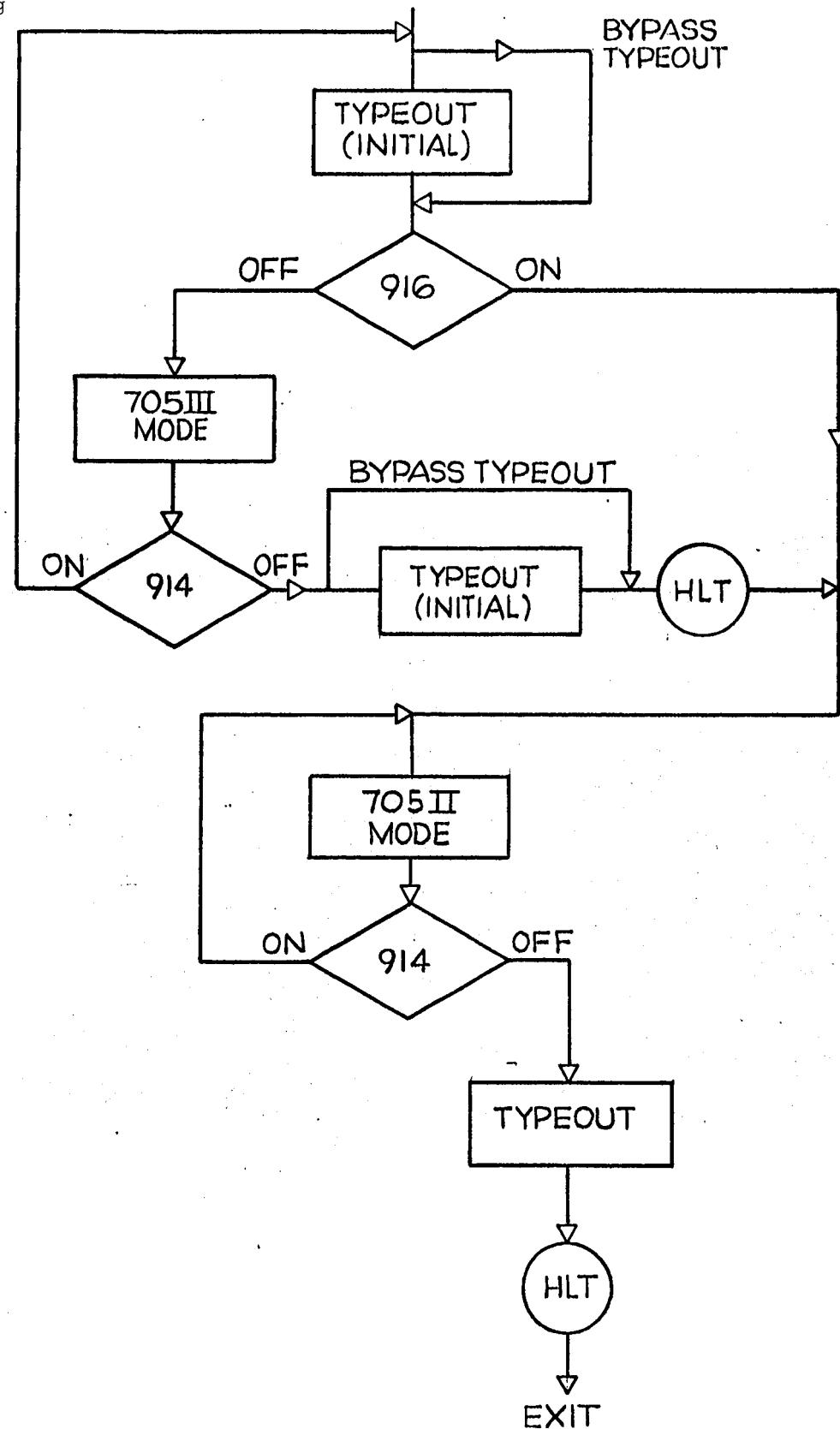
It is not possible to leave the program when in 705 III Mode. The only way an exit could be made would be by doing the test in 705 II Mode. As already pointed out, in order to completely check the I/O Interpret feature, it is essential that the test be run in 705 III Mode first.



USES OF ALTERATION SWITCHES IN
705 III MODE



USES OF ALTERATION SWITCHES IN
705 II MODE



GENERAL LAYOUT OF PROGRAM

8CU29A APRIL/15/1961
LOAD PROGRAM WITH ALL
CHK SW ON PROGRAM &
NON STOP & I/O INTERPRET SW
OFF & AWAIT FOLLOWING TYPEOUT
*NON STOP & I/O INTERPRET SW
ON CHK SW ALL ON AUTO * FOLLOW
THE INSTRUCTIONS & HIT START.
THE TEST WILL RUN IN 705 III
MODE. TO PERFORM IN 705 II
MODE, PUT 916 & 705 I/II
SW ON, RESET & START.
ON LEAVING 705 II MODE
TURN 705 I/II & 916 OFF.
NOTE THE ABOVE TYPE OUT OCCURS
ONLY ON INITIAL LODING

██
□ 00004 NOP A 0089 ----- A02 SWITCH TO BYPASS TYPEOUT
□ 00009 SGN T 12 0000 0&00 □
□ 00014 SEL 2 0500 □
□ 00019 WR R 0030 □
□ 00024 HLT J 0000 □
□ 00029 TR 1 0089 ----- A02
██

2 044 00073
2 006 00081
2 001 00082

CONSTANTS & WORK AREA
NON STOP & I/O INTERPRET SW ON • CHK SW ALL
ON AUTO.
□

ROUTINE 1
TEST FOR NO INTERRUPT ON
CTL 14 IN 705 II OR III MODE

A01.....
 I 00089 EEM 3 14 0000 0&-0 □
 I 00094 TRA I 07 0124 0/B4---
 I 00099 TIP , 14 0104 0A-4---
 I 00104 SEL 2 0500
 I 00109 WR R 0260 □
 I 00114 HLT J 1111 □
 I 00119 LIP , 15 3700 3G&0 □
 I
 I

INTERROGATE NON STOP

I 00124 SEL 2 2001
 I 00129 TIP , 14 2744 2GM4--- T19
 I 00134 LIM , 07 0000 0 &0 □
 I 00139 EIM , 06 0000 0 -0 □
 I 00144 SGN F 12 2865 2H65 □
 I 00149 LEM 3 15 0000 0&&0 □
 I 00154 EEM 3 14 0000 0&-0 □
 I 00159 TR 1 0169 ---
 I 00164 TR 1 0184 ---
 I 00169 ADM 6 12 2865 2H65 . . I
 I 00174 LEM 3 15 0000 0&&0 □
 I 00179 TR 1 0244 ---
 I

DESELECT 500
SET UP WORD 250
RESET INTERRUPT CALLS

SET SWITCH FOR BAD INTERRUPT
INCORRECT INTERRUPT

RESET SWITCH

I 00184 SEL 2 0911
 I 00189 TRS O 0244 ---
 I 00194 SEL 2 0500 □
 I 00199 WR R 0255 □
 I 00204 SEL 2 0913 □
 I 00209 TRS O 0219 ---
 I 00214 TR 1 0244 ---
 I 00219 EEM 3 14 0000 0&-0 . . I
 I 00224 TIP , 14 0229 0BK9---
 I 00229 HLT J 0001
 I 00234 LIP , 15 3700 3G&0 □
 I 00239 LEM 3 15 0000 0&&0 □
 I 00244 SEL 2 0912
 I 00249 TRS O 0089 □
 I 00254 TR 1 0284 --- B03
 I

ERROR ROUTINE

2 004 00258
 2 001 00259
 2 015 00274
 2 001 00275

CONSTANTS & WORK AREA

0001
 □
 NON STOP NOT ON
 □

ROUTINE 2
TEST FOR INTERRUPT ON
OP CHK IN 705 III MODE ONLY

BYPASS IF IN 705 II MODE

DESELECT 916

MAKE ADDRESS OF NOP REDUNDANT
SET SWITCH FOR GOOD INTERRUPT
TURN ON 900 & INTERRUPT

CLEAR REDUNDANCY

RESET SWITCH

ERROR ROUTINE

CONSTANTS & WORK AREA

2 004 00413
2 001 00414

0002
□

```

B02.....I 00284 SEL 2    0916   □
I 00289 TRS O    0409---□-----I
I 00294 EEM 3 14  0000 0&-0  □ I
I 00299 SEL 2    2001   □
I 00304 LEM 3 15  0000 0&&0  □ I
I 00309 SB % 08  0319 OL19  □ I
I 00314 SGN T 12  2825 2H25  □ I
I 00319 NOP A    0000   □
I 00324 TRS O 10  0339 OLL9---I
I 00329 SB % 08  0319 OL19  □ I
I 00334 TRS O 11  0404 OM&4---I
I 00339 ADM 6 12  2825 2H25  □ I
I 00344 SB % 08  0319 OL19  □ I
I 00349 TRS O 11  0354 OLE4---I
I 00354 TRA I 01  0404 04 4---I
I 00359 SEL 2    0500   □ I
I 00364 WR R    0410   □ I
I 00369 TRA I 03  0379 03G9---I
I 00374 TR I    0404---I
I 00379 EEM 3 14  0000 0&-0  □ I
I 00384 TIP , 14  0389 OCQ9---I
I 00389 HLT J    0002---I
I 00394 LIP , 15  3700 3G&0  □ I
I 00399 LEM 3 15  0000 0&&0  □ I
--- 00404 TRA I 02  0284 02Q4---I
--- 00409 TR I    0419---C04

```

ROUTINE 3
TEST FOR NO INTERRUPT
WHEN OP CHK IS NOT
FORCED • 705 II OR III MODE

```

C03.....•00419 EEM 3 14 0000 0&0
I □ 00424 SEL 2 2001 □
I □ 00429 SPC , 0000 □
I □ 00434 LEM 3 15 0000 0&0
I □ 00439 RAD H 0544 □
I □ 00444 SET B 0004 □
I □ 00449 ADD G 0549 □
I □ 00454 SUB P 0554 □
I □ 00459 CMP 4 0559 □
I □ 00464 TRE L 0529 ----
I □ 00469 SEL 2 0911 □
I □ 00474 TRS 0 0529 ----
I □ 00479 SEL 2 0500 □
I □ 00484 WR R 0560 □
I □ 00489 SEL 2 0913 □
I □ 00494 TRS 0 0504 ----
I □ 00499 TR 1 0529 ----
I □ 00504 EEM 3 14 0000 0&0
I □ 00509 TIP , 14 0514 0EJ4
I □ 00514 HLT J 0003
I □ 00519 LIP , 15 3700 3G&0
I □ 00524 LEM 3 15 0000 0&0
I □ 00529 SEL 2 0912 ----
+ 00534 TRS 0 0419 □
□ 00539 TR 1 0569 ---- D05

```

DESELECT 500 OR 916

RESET ADD 200

ADD 800
SUBTRACT 300
COMPARE 500

ERROR ROUTINE

2 005 00544	AA20&
2 005 00549	AA80&
2 005 00554	AA30&
2 005 00559	A0700
2 004 00563	0003
2 001 00564	□

CONSTANTS & WORK AREA

ROUTINE 4
TEST FOR NO INTERRUPT ON
TRS 10-15 IN 705 III MODE .

BYPASS IF IN 705 II MODE

DESELECT 916
SET SWITCH FOR BAD INTERRUPT
INCORRECT INTERRUPT

INCORRECT INTERRUPT

INCORRECT INTERRUPT

INCORRECT INTERRUPT

INCORRECT INTERRUPT

INCORRECT INTERRUPT

RESET SWITCH

ERROR ROUTINE

```

004..... 00569 SEL 2 0916
  00574 TRS O 0744-----I
  00579 SEL 2 2001
  00584 SGN T 12 2865 2H65
  00589 TRS O 10 0594 0NR4-----I
  00594 TR 1 0604-----I
  00599 TR 1 0689-----I
  00604 TRS O 11 0609 00&9-----I
  00609 TR 1 0619-----I
  00614 TR 1 0689-----I
  00619 TRS O 12 0624 0F24-----I
  00624 TR 1 0634-----I
  00629 TR 1 0689-----I
  00634 TRS O 13 0639 0FT9-----I
  00639 TR 1 0649-----I
  00644 TR 1 0689-----I
  00649 TRS O 14 0654 0FN4-----I
  00654 TR 1 0664-----I
  00659 TR 1 0689-----I
  00664 TRS O 15 0669 0FF9-----I
  00669 TR 1 0679-----I
  00674 TR 1 0689-----I
  00679 ADM 6 12 2865 2H65-----I
  00684 TR 1 0739-----I
  00689 TRA I 01 0739 07T9-----I
  00694 SEL 2 0500
  00699 WR R 0745
  00704 TRA I 03 0714 07A4-----I
  00709 TR 1 0739-----I
  00714 EEM 3 14 0000 0&-0-----I
  00719 TIP , 14 0724 0GK4-----I
  00724 HLT J 0004-----I
  00729 LIP , 15 3700 3G&0
  00734 LEM 3 15 0000 0&&0
  00739 TRA I 02 0569 0509-----I
  00744 TR 1 0754-----E06
  
```

2 004 00748
2 001 00749

0004
I

CONSTANTS & WORK AREA

ROUTINE 5
TEST FOR NO INTERRUPT 250
ON WR IN 7080 MODE

```

E05..... 00754 SGN T 12 2865 2H65 □
I □ 00759 ADM 6 12 2865 2H65 □
I □ 00764 ADM 6 12 0795 OG95 □
I □ 00769 EEM 3 14 0000 0E-0 □
I □ 00774 TIP , 14 2779 2GP9-----U19
I □ 00779 SEL 2 2001
I □ 00784 SGN T 12 2865 2H65 □
I □ 00789 WR R 0890 □
I □ 00794 TRS O 03 0799 07I9-----U19
I □ 00799 NOP A 0809 *****I
I □ 00804 TR 1 0819 -----I
I □ 00809 ADM 6 12 2865 2H65 .II
I □ 00814 TR 1 0879 -----I
I
I
I □ 00819 SEL 2 0911 *****I
I □ 00824 TRS O 0879 -----I
I □ 00829 SEL 2 0500 □
I □ 00834 WR R 0900 □
I □ 00839 SEL 2 0913 □
I □ 00844 TRS O 0854 -----I
I □ 00849 TR 1 0879 -----I
I □ 00854 EEM 3 14 0000 0E-0 .II
I □ 00859 TIP , 14 0864 0HO4-----I
I □ 00864 HLT J 0005 *****I
I □ 00869 LIP , 15 3700 3G&0 □
I □ 00874 LEM 3 15 0000 0E60 □
I □ 00879 SEL 2 0912 *****I
I
I □ 00884 TRS O 0754 □
I □ 00889 TR 1 0909 -----F07
I
I

```

RESET SWITCH 200

SET UP IW 200

SET SWITCH FOR BAD INTERRUPT
INCORRECT INTERRUPT 250

SWITCH 200

RESET SWITCH

ERROR ROUTINE

CONSTANTS & WORK AREA

2 009 00898
 2 001 00899
 2 004 00903
 2 001 00904

123456789
 □
 0005
 □

ROUTINE 6
TEST FOR NO INTERRUPT
ON TRS WITH 900-905 SELECTED

```
F06.....I 00909 EEM 3 14 0000 0&-0 I
I 00914 CHR 3 13 0000 0& 0 I
I 00919 LEM 3 15 0000 0&&0 I
I 00924 SGN T 12 2865 2H65 I
I 00929 SEL 2 0900 I
I 00934 TRS O 0939-----I
I 00939 TR 1 0949-----I
I 00944 TR 1 1059-----I
I 00949 SEL 2 0901-----I
I 00954 TRS O 0959-----I
I 00959 TR 1 0969-----I
I 00964 TR 1 1059-----I
I 00969 SEL 2 0902-----I
I 00974 TRS O 0979-----I
I 00979 TR 1 0989-----I
I 00984 TR 1 1059-----I
I 00989 SEL 2 0903-----I
I 00994 TRS O 0999-----I
I 00999 TR 1 1009-----I
I 01004 TR 1 1059-----I
I 01009 SEL 2 0904-----I
I 01014 TRS O 1019-----I
I 01019 TR 1 1029-----I
I 01024 TR 1 1059-----I
I 01029 SEL 2 0905-----I
I 01034 TRS O 1039-----I
I 01039 TR 1 1049-----I
I 01044 TR 1 1059-----I
I 01049 ADM 6 12 2865 2H65-----I
I 01054 TR 1 1119-----I
I
I 01059 SEL 2 0911-----I
I 01064 TRS O 1119-----I
I 01069 SEL 2 0500-----I
I 01074 WR R 1135-----I
I 01079 SEL 2 0913-----I
I 01084 TRS O 1094-----I
I 01089 TR 1 1119-----I
I 01094 EEM 3 14 0000 0&-0-----I
I 01099 TIP , 14 1104 1A-4-----I
I 01104 HLT J 0006-----I
I 01109 LIP , 15 3700 3G&0-----I
I 01114 LEM 3 15 0000 0&&0-----I
I 01119 SEL 2 0912-----I
I 01124 TRS O 0909-----I
I 01129 TR 1 1144-----G08
```

IN 705 II OR III MODE

SET SWITCH FOR BAD INTERRUPT

INCORRECT INTERRUPT

INCORRECT INTERRUPT

INCORRECT INTERRUPT

INCORRECT INTERRUPT

INCORRECT INTERRUPT

INCORRECT INTERRUPT

RESET SWITCH

ERROR ROUTINE

2 005 01134	00000
2 004 01138	0006
2 001 01139	I

CONSTANTS & WORK AREA

ROUTINE 7
TEST FOR INTERRUPT ON
TRS 00, 01, 02, 03 IN
705 III MODE ONLY

G07..... 01144 SEL 2 0916 □
 01149 TRS 0 1779 ----- M13
 01154 SEL 2 2001 □
 01159 SGN T 12 2825 2H25 □
 01164 TRS 0 1169 -----
 01169 TR 1 1224-----
 01174 SGN T 12 2825 2H25 □
 01179 TRS 0 01 1184 11Y4-----
 01184 TR 1 1224-----
 01189 SGN T 12 2825 2H25 □
 01194 TRS 0 02 1199 11R9-----
 01199 TR 1 1224-----
 01204 SGN T 12 2825 2H25 □
 01209 TRS 0 03 1214 12A4-----
 01214 TR 1 1224-----
 01219 TR 1 1279 -----
 01224 ADM 6 12 2825 2H25 .□...
 I
 01229 TRA I 01 1279 12X9-----
 01234 SEL 2 0500 □
 01239 WR R 1285 □
 01244 TRA I 03 1254 12E4-----
 01249 TR 1 1279 -----
 01254 EEM 3 14 0000 0&-0.□..
 01259 TIP , 14 1264 1B04-----
 01264 HLT J 0007 .□...
 01269 LIP , 15 3700 3G&0 □
 01274 LEM 3 15 0000 0&&0 □
 01279 TRA I 02 1144 11M4 .□...
 01284 TR 1 1294 ----- H09

2 004 01288
2 001 01289

0007
□

CONSTANTS & WORK AREA

BYPASS TO ROUTINE 12 IF IN
705 II MODE
DESELECT 916
SET SWITCH FOR GOOD INTERRUPT
CORRECT INTERRUPT

CORRECT INTERRUPT

CORRECT INTERRUPT

CORRECT INTERRUPT

RESET SWITCH

ERROR ROUTINE

ROUTINE 8
TEST FOR INTERRUPT ON
WR IN 705 III MODE ONLY

```

H08..... 01294 SEL 2 2001
I 01299 SGN T 12 2825 2H25
I 01304 WR R 1385
I 01309 TR 1 1319
I 01314 TR 1 1374
I 01319 ADM 6 12 2825 2H25
I
I
I 01324 TRA I 01 1374 13X4
I 01329 SEL 2 0500
I 01334 WR R 1380
I 01339 TRA I 03 1349 13D9
I 01344 TR 1 1374
I 01349 EEM 3 14 0000 0&0
I 01354 TIP , 14 1359 1CN9
I 01359 HLT J 0008
I 01364 LIP , 15 3700 3G&0
I 01369 LEM 3 15 0000 0&0
I -01374 TRA I 02 1294 12R4
I 01379 TR 1 1399 J10

```

SET SWITCH FOR GOOD INTERRUPT
CORRECT INTERRUPT

RESET SWITCH

ERROR ROUTINE

CONSTANTS & WORK AREA

2 004 01383	0008
2 001 01384	
2 009 01393	ABCDEFGHI
2 001 01394	

ROUTINE 9

TEST FOR INTERRUPT ON
RD IN 705 III MODE ONLY

J09..... 01399 EEM 3 14 0000 0&-0 □
 I □ 01404 SEL 2 2001 □
 I □ 01409 LIM , 07 0000 0 &0 □
 I □ 01414 WR R 0890 □
 I □ 01419 TRS O 03 1424 14B4 -■-■
 I □ 01424 LIM , 07 0000 0 &0 .■. I
 I □ 01429 EIM , 06 0000 0 -0 □
 I □ 01434 LEM 3 15 0000 0&&0 □
 I □ 01439 SGN T 12 2825 2H25 □
 I □ 01444 RD Y 1525 □
 I □ 01449 TR 1 1459 -■-■
 I □ 01454 TR 1 1514 -■-■
 I □ 01459 ADM 6 12 2825 2H25 .■. I
 I □ 01464 TRA I 01 1514 15/4 -■-■
 I □ 01469 SEL 2 0500 □
 I □ 01474 WR R 1520 □
 I □ 01479 TRA I 03 1489 14H9 -■-■
 I □ 01484 TR 1 1514 -■-■
 I □ 01489 EEM 3 14 0000 0&-0 .■. I
 I □ 01494 TIP , 14 1499 1DR9 -■-■
 I □ 01499 HLT J 0009 .■. ■. ■. I
 I □ 01504 LIP , 15 3700 3G&0 □
 I □ 01509 LEM 3 15 0000 0&&0 □
 I □ 01514 TRA I 02 1399 13R9 .■. ■.
 I □ 01519 TR 1 1539 -■-■ K11

SET SWITCH FOR GOOD INTERRUPT
CORRECT INTERRUPT

RESET SWITCH

ERROR ROUTINE

CONSTANTS & WORK AREA

 2 004 01523
 2 001 01524
 2 009 01533
0009
□

ROUTINE 10
TEST FOR INTERRUPT ON
WRE IN 705 III MODE ONLY

```

K10.....I 01539 SEL 2 2001   □
I 01544 SGN T 12 2825 2H25 □
I 01549 WRE Z 1645   □
I 01554 TR 1 1584-----I
I 01559 EEM 3 14 0000 0&0 □ I
I 01564 TRS 0 09 1579 1NX9---I
I 01569 LEM 3 15 0000 0&0 □ II
I 01574 TR 1 1639-----I
I 01579 LEM 3 15 0000 0&0 .II
I 01584 ADM 6 12 2825 2H25 .II
I
I 01589 TRA I 01 1639 16T9---X
I 01594 SEL 2 0500   □
I 01599 WR R 1650   □
I 01604 TRA I 03 1614 16A4---I
I 01609 TR 1 1639-----I
I 01614 EEM 3 14 0000 0&0 .I
I 01619 TIP , 14 1624 1FK4---I
I 01624 HLT J 0010----.I
I 01629 LIP , 15 3700 3G&0 □
I 01634 LEM 3 15 0000 0&0 □
I 01639 TRA I 02 1539 15L9 .I
I 01644 TR 1 1659-----L12

```

SET SWITCH FOR GOOD INTERRUPT
CORRECT INTERRUPT

TEST ART

RESET SWITCH

ERROR ROUTINE

2 004 01648	□
2 001 01649	□
2 004 01653	0010
2 001 01654	□

CONSTANTS & WORK AREA

ROUTINE 11
TEST FOR INTERRUPT ON
RWW IN 705 III MODE ONLY

```
L11..... 01659 SEL 2 2001
I 01664 SGN T 12 2825 2H25
I 01669 RWW S 1765
I 01674 TR 1 1704
I 01679 EEM 3 14 0000 0E-0
I 01684 TRS O 09 1699 1029
I 01689 LEM 3 15 0000 0E&0
I 01694 TR 1 1759
I 01699 LEM 3 15 0000 0E&0
I 01704 ADM 6 12 2825 2H25
I 01709 TRA I 01 1759 17V9
I 01714 SEL 2 0500
I 01719 WR R 1770
I 01724 TRA I 03 1734 17C4
I 01729 TR 1 1759
I 01734 EEM 3 14 0000 0E-0
I 01739 TIP , 14 1744 1GM4
I 01744 HLT J 0011
I 01749 LIP , 15 3700 3G&0
I 01754 LEM 3 15 0000 0E&0
I 01759 TRA I 02 1659 16N9
I 01764 TR 1 1779 M13
```

SET SWITCH FOR GOOD INTERRUPT
CORRECT INTERRUPT

RESET SWITCH

ERROR ROUTINE

CONSTANTS & WORK AREA

2 004 01768	
2 001 01769	
2 004 01773	0011
2 001 01774	

ROUTINE 12
TEST FOR INTERRUPT ON
CTL 13 IN 705 II OR III MODE

M08
M12.....

01779	SEL	2	2001	
01784	SGN	T	12	2825 2H25
01789	CHR	3	13	0000 0&0
01794	TR	1	1804	
01799	TR	1	1869	
01804	ADM	6	12	2825 2H25
01809	SEL	2	0911	
01814	TRS	O	1869	
01819	SEL	2	0500	
01824	WR	R	1880	
01829	SEL	2	0913	
01834	TRS	O	1844	
01839	TR	1	1869	
01844	EEM	3	14	0000 06-0
01849	TIP	,	14	1854 1HN4
01854	HLT	J		0012
01859	LIP	♦	15	3700 3660
01864	LEM	3	15	0000 0&&0
01869	SEL	2	0912	•••••
01874	TRS	O	1779	
01879	TR	1	1889	N14

SET SWITCH FOR GOOD INTERRUPT
CORRECT INTERRUPT

RESET SWITCH

ERROR ROUTINE

2 004 01883
2 001 018840012
□

CONSTANTS & WORK AREA

ROUTINE 13

705 I/II SW & 916 ON
TEST FOR NO INTERRUPT ON
TRS 00 IN 7080 MODE

BYPASS ROUTINES 13-16 IF
IN 705 III MODE

SET SWITCH FOR BAD INTERRUPT
INCORRECT INTERRUPT

RESET SWITCH

ERROR ROUTINE

N13.....	01889	SEL 2	0916	□
I	01894	TRS O	1904	-----
I	01899	TR 1	2404	-----
I	01904	EEM 3 14	0000 06-0	••I
I	01909	SEL 2	2001	□
I	01914	SGN T 12	2865 2H65	□
I	01919	TRS O	1924	-----
I	01924	TR 1	1934	-----
I	01929	TR 1	1949	-----
I	01934	ADM 6	2865	•••••I
I	01939	LEM 3 15	0000 06&60	□ I
I	01944	TR 1	2009	-----
I	01949	SEL 2	0911	•••••I
I	01954	TRS O	2009	-----
I	01959	SEL 2	0500	□
I	01964	WR R	2020	□
I	01969	SEL 2	0913	□
I	01974	TRS O	1984	-----
I	01979	TR 1	2009	-----
I	01984	EEM 3 14	0000 06-0	••I
I	01989	TIP , 14	1994 1IR4	-----
I	01994	HLT J	0013	•••••I
I	01999	LIP , 15	3700 3G&0	□
I	02004	LEM 3 15	0000 06&60	□
I	02009	SEL 2	0912	•••••I
I	02014	TRS O	1889	□
I	02019	TR 1	2029	-----

CONSTANTS & WORK AREA

2 004 02023
2 001 02024

0013
□

ROUTINE 14
705 I/II SW & 916 ON
TEST FOR NO INTERRUPT ON
TRS 02 WITH 900 SELECTED
IN 705 II MODE ONLY

```
P14.....• 02029 SEL 2 0900 □
I □ 02034 SGN T 12 2865 2H65 □
I □ 02039 TRS O 02 2044 20M4-■-■
I □ 02044 TR 1 2054-■-■■■■■
I □ 02049 TR 1 2064-■-■■■■■
I □ 02054 ADM 6 12 2865 2H65 .■.■
I □ 02059 TR 1 2124-■-■■■■■
I □ 02064 SEL 2 0911.....■.■
I □ 02069 TRS O 2124-■-■■■■■
I □ 02074 SEL 2 0500 □
I □ 02079 WR R 2135 □
I □ 02084 SEL 2 0913 □
I □ 02089 TRS O 2099-■-■■■■■
I □ 02094 TR 1 2124-■-■■■■■
I □ 02099 EEM 3 14 0000 06-0 ■.■
I □ 02104 TIP , 14 2109 2A-9-■-■
I □ 02109 HLT J 0014.....■.■
I □ 02114 LIP , 15 3700 3G&0 □
I □ 02119 LEM 3 15 0000 06&0 □
I □ 02124 SEL 2 0912.....■.■.■.■
+--- 02129 TRS O 2029 □
□ 02134 TR 1 2144-■-■■■■■ Q16
```

SET SWITCH FOR BAD INTERRUPT
INCORRECT INTERRUPT

RESET SWITCH

ERROR ROUTINE

2 004 02138 0014
2 001 02139 □

CONSTANTS & WORK AREA

ROUTINE 15

705 I/II SW & 916 ON
TEST FOR INTERRUPT ON
TRS 01 & RD IN 705 II MODE

```

Q15..... 02144 SEL 2 2001
I 02149 SGN T 12 2825 2H25
I 02154 TRS O 01 2159 21V9
I 02159 TR 1 2184
I 02164 SGN T 12 2825 2H25
I 02169 RD Y 10000 000
I 02174 TR 1 2184
I 02179 TR 1 2249
I 02184 ADM 6 12 2825 2H25
I
I
I 02189 SEL 2 0911
I 02194 TRS O 2249
I 02199 SEL 2 0500
I 02204 WR R 2263
I 02209 SEL 2 0913
I 02214 TRS O 2224
I 02219 TR 1 2249
I 02224 EEM 3 14 0000 0E-0
I 02229 TIP , 14 2234 2BL4
I 02234 HLT J 0015
I 02239 LIP , 15 3700 3G&0
I 02244 LEM 3 15 0000 0E&0
I 02249 SEL 2 0912
I 02254 TRS O 2144
I 02259 TR 1 2269
R17

```

SET SWITCH FOR GOOD INTERRUPT
CORRECT INTERRUPT

RESET SWITCH

ERROR ROUTINE

CONSTANTS & WORK AREA

2 004 02263
2 001 02264

0015
I

ROUTINE 16
705 I/II SW & 916 ON
TEST FOR INTERRUPT ON
TRS 14 & WR IN 705 II MODE

R16.....• 02269 SEL 2 2001 □
 I □ 02274 SGN T 12 2825 2H25 □
 I □ 02279 TRS O 14 2284 2BQ4---
 I □ 02284 TR 1 2309-----
 I □ 02289 SGN T 12 2825 2H25 □
 I □ 02294 WR R 2390 □ I
 I □ 02299 TR 1 2309-----
 I □ 02304 TR I 2374-----
 I □ 02309 ADM 6 12 2825 2H25 •• I
 I □ 02314 SEL 2 0911 □
 I □ 02319 TRS O 2374-----
 I □ 02324 SEL 2 0500 □
 I □ 02329 WR R 2385 □
 I □ 02334 SEL 2 0913 □
 I □ 02339 TRS O 2349-----
 I □ 02344 TR 1 2374-----
 I □ 02349 EEM 3 14 0000 06-0• I
 I □ 02354 TIP , 14 2359 2CN9---
 I □ 02359 HLT J 0016-----
 I □ 02364 LIP , 15 3700 3G&0 □
 I □ 02369 LEM 3 15 0000 06&0 □
 I □ 02374 SEL 2 0912-----
 I □ 02379 TRS O 2269 □
 I □ 02384 TR 1 2404-----

SET SWITCH FOR GOOD INTERRUPT
CORRECT INTERRUPT

RESET SWITCH

ERROR ROUTINE

CONSTANTS & WORK AREA

2 004 02388	0016
2 001 02389	□
2 009 02398	123456789
2 001 02399	□

S14				
S17.....	02404	SEL	2	0916
	02409	TRS	0	2529-----
	02414	SET	B	0004
	02419	LOD	8	2634
	02424	ADD	G	2639
	02429	UNL	7	2634
	02434	CMP	4	2644
	02439	TRE	L	2449-----
	02444	TR	I	0004
	02449	LOD	8	2649.....
	02454	UNL	7	2634
	02459	SEL	2	0500
	02464	WR	R	2650
	02469	SEL	2	0914
	02474	TRS	O	0004
	02479	NOP	A	2499-----
	02484	SGN	T	2475 2D75
	02489	SEL	2	0500
	02494	WR	R	2655
	02499	EEM	3	0000 0&-0
	02504	TIP	,	2509 2E-9
	02509	HLT	J	6666.....
	02514	LIP	,	3700 3G&O
	02519	LEM	3	0000 0&&O
	02524	TR	I	0004
	02529	SET	B	0004.....
	02534	LOD	8	2739
	02539	ADD	G	2639
	02544	UNL	7	2739
	02549	CMP	4	2644
	02554	TRE	L	2564-----
	02559	TR	I	0004
	02564	LOD	8	2649.....
	02569	UNL	7	2739
	02574	SEL	2	0500
	02579	WR	R	2650
	02584	SEL	2	0914
	02589	TRS	O	0004
	02594	SEL	2	0500
	02599	WR	R	2685
	02604	EEM	3	0000 0&-0
	02609	TIP	,	2614 2FJ4
	02614	HLT	J	9999.....
	02619	LIP	,	3700 3G&O
	02624	LEM	3	0000 0&&O
	02629	TR	I	18219 Y219

SWITCH TO BYPASS TYPEOUT

CONSTANTS & WORK AREA

2	005	02634	00000
2	005	02639	000AA
2	005	02644	00100
2	005	02649	00000
2	001	02650	Z
2	001	02651	□
2	003	02654	
2	025	02679	PUT 70
2	005	02684	□
2	041	02725	TURN
2	007	02732	SW OFF
2	002	02734	□
2	005	02739	00000

SUBROUTINE 1
SET UP IW 250 WITH LOCATION
AND STATUS FOR TRANSFER TO
SUBROUTINE 3

T02.....
02744 SPC , 2500
02749 SET B 0008
02754 LOD 8 2774
02759 SET B 0032
02764 LIP , 15 0009 0&&9

I

2 006 02770 I -----
3 02774 2814 2814

CONSTANTS & WORK AREA

SUBROUTINE 2
SET UP IW 200 WITH LOCATION
AND STATUS FOR TRANSFER TO
SUBROUTINE 4

U06.....
02779 SPC , 2000
02784 SET B 0008
02789 LOD 8 2809
02794 SET B 0032
02799 LIP , 15 0009 0&&9

I

2 006 02805 I -----
3 02809 2944 2944

CONSTANTS & WORK AREA

SUBROUTINE 3
ON ALL INTERRUPTS RESET ALL
CHK TRIGGERS & LEAVE 7080 MODE
ON ALL BAD INTERRUPTS TYPEOUT
THE IC LOCATION FROM WHICH THE
INTERRUPT CAME. ON THE BAD
INTERRUPTS TESTED BY THE
PROGRAM & ALSO ON ALL GOOD
INTERRUPTS STEP IC PLUS 5

02814	EEM	3	14	0000	06-0
02819	SPC	,		3700	
02824	SET	B		0004	
02829	NOP	A		2879	- - -
02834	SUB	P		2924	
02839	UNL	7		2931	
02844	SEL	2		0911	
02849	TRS	O		2864	- - -
02854	SEL	2		0500	
02859	WR	R		2925	
02864	ADD	G		2924	• • • •
02869	NOP	A		2879	- - -
02874	TR	1		2884	- - -
02879	ADD	G		2924	• • • •
02884	SPC	,		3704	• • • •
02889	LFC	,	02	2919	29J9
02894	SPC	,		0000	
02899	ADM	6	12	2825	2H25
02904	ADM	6	12	2865	2H65
02909	SPC	,		2000	
02914	LIP	,	15	0009	06&9

SWITCH FOR GOOD INTERRUPTS

TYPEOUT IC LOCATION

SWITCH FOR BAD INTERRUPTS

STEP IC PLUS 5

RESET SWITCH

CONSTANTS & WORK AREA

2	005	02919	
2	005	02924	000AE
2	009	02933	IC-
2	001	02934	
2	005	02939	□

SUBROUTINE 4
IN ROUTINE 5 ON INTERRUPT
200 INTERRUPT TO THIS
ROUTINE TO SET SWITCH
200 TO TRANSFER & ALSO
TO COMPARE RD-WR FIELDS

02944	SEL	2	2001	
02949	BSP	3	0004	
02954	RD	Y	3020	
02959	TRS	O 03	2964	29F4- I - T
02964	SPC	,	0000 • • • • •
02969	SET	B	0010	
02974	LOD	8	3029	
02979	CMP	4	0899	
02984	TRE	L	3009	- • - • • •
02989	SEL	2	0911	
02994	TRS	O 02	3009	- • - • • • •
02999	SEL	R	0500	
03004	WR	R	3030	
03009	CHR	3	13	0000 0& 0 • • •
03014	SGN	T	12	0795 OG95
03019	LIP	,	15	0009 0&9

SET SWITCH TO TRANSFER

CONSTANTS & WORK AREA

2 010 03029
2 014 03043
2 001 03044 FIELDS UNEQUAL

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