

ENTRY POINTS

FROM MAP NUMBER	ENTER THIS MAP ENTRY POINT	PAGE NUMBER	STEP NUMBER
0020	A	1	001
2071	BC	1	049
2071	CC	1	087
2071	CT	2	021
2071	KT	5	025
2071	LB	6	034
2071	LK	1	073
2071	MT	1	083
2071	RC	1	088
2071	SG	12	086

EXIT POINTS

EXIT THIS MAP PAGE NUMBER	TO STEP NUMBER	MAP NUMBER	ENTRY POINT
2	008	1470	A
3	016	1470	A
7	039	2400	A
8	046	2400	A

001  
 (ENTRY POINT A)

- SEE THE CONSOLE MLD PAXXX FOR LOCATION AND WIRING WHEN INSTRUCTED TO REMOVE A CABLE.
- SEE THE PROCESSING UNIT THEORY DIAGRAMS, ROW AND COLUMN OPERATION FOR AN UNDERSTANDING OF THE CONSOLE.
- USE THE CHART WITH CONSOLE MLDs PAXXX.

4954 PROCESSING UNIT CABLE LOCATION

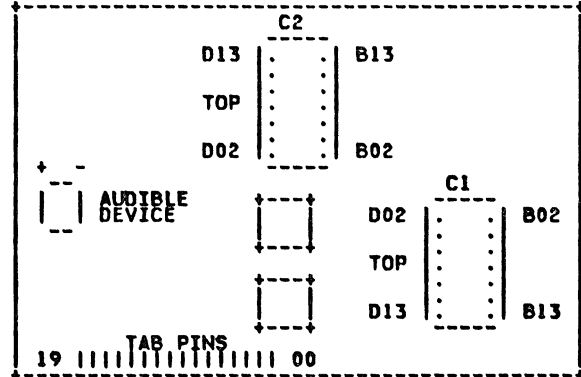
PROCESSING UNIT CARD CONNECTOR	CABLE	CONNECTOR ON THE CONSOLE
X	C1	C1
TO BASIC CONSOLE - C2 TO C6		

(X02) D02 | B02 (X22)

(X13) D13 | B13 (X33)

CONNECTOR END OF CABLE ( ) = TOP CARD PIN

PROGRAMMER CONSOLE CABLE AND PIN LOCATION.



'TOP' IS PIN ROW NEAR BOARD.

- POWER OFF THE PROCESSING UNIT.
- INSPECT THE CABLE CONNECTOR FOR CORRECT SEATING ON THE PROCESSING UNIT CARD END.

IS THE CABLE SEATED?

N

- 002
- RESEAT THE CABLE.
  - GO TO THE MAP AND STEP THAT SENT YOU HERE TO SEE IF THE FAILING PART OR LED IS REPAIRED.

IF NO REPAIR, RETURN TO THIS MAP.  
 GO TO STEP 001, ENTRY POINT A.

A  
1

4954 CONSOLE TEST MAP  
PAPER ONLY MAP  
PAGE 2 OF 13

MAP 1072-2

003  
THE CONSOLE MUST HAVE AT LEAST ONE LED 'ON',  
TO ENSURE POWER IS GOOD TO THE CONSOLE BOARD.  
SEE IF THERE IS POWER TO THE BASIC CONSOLE AS  
FOLLOWS:

- POWER ON THE PROCESSING UNIT.
- ENSURE AT LEAST ONE LED IS 'ON', ON THE BASIC CONSOLE.

IS AT LEAST ONE LED 'ON', ON THE BASIC CONSOLE?  
Y  
N

- 004
- ENSURE THE LOAD DEVICE IS NOT READY.
  - SEE THE LOAD LED.
  - PRESS AND RELEASE THE LOAD KEY.

IS THE LOAD LED 'ON'?

Y  
N

005  
SEE THE CONSOLE MLDS PAXXX FOR THE LOCATION OF THE VOLTAGE PINS. THE VOLTAGE PINS ARE CONNECTED TO A STANDARD VOLTAGE CONNECTOR.

- USE A RELAY PROBE WITH A TEST LEAD TO MAKE CONNECTIONS.
- SET THE C.E. MULTIMETER TO THE CORRECT D.C. VOLT.
- MEASURE THE VOLTAGE BETWEEN THE +5V PIN AND THE GROUND PIN ON THE BASIC CONSOLE.

IS +5V DC MEASURED AS NOTED ABOVE?

Y  
N

006  
THE PROBLEM IS IN THE POWER CABLE TO THE CONSOLE OR THE POWER SUPPLY. SEE THE POWER SUPPLY ALDS YXXXX AND CONSOLE MLDS PAXXX.

- POWER OFF THE PROCESSING UNIT.
- DO A POINT TO POINT RESISTANCE TEST OF THE POWER CABLE TO THE CONSOLE ON THE SYSTEM. ENSURE YOU TEST THE CORRECT POWER CABLE.

IS THE POWER CABLE TO THE CONSOLE GOOD?

Y  
N

- 007
- REPAIR OR EXCHANGE THE FAILING POWER CABLE.
  - VERIFY THE REPAIR.

008  
GO TO MAP 1470, ENTRY POINT A.

009  
THE VOLTAGE NETWORK ON THE BASIC CONSOLE IS OPEN.

- REPAIR OR EXCHANGE THE BASIC CONSOLE BOARD.

010  
THE POWER ON LED IS BAD.

- REPAIR OR EXCHANGE THE POWER ON LED.
- VERIFY THE REPAIR.

011  
THE CONSOLE MUST HAVE AT LEAST ONE LED 'ON',  
TO ENSURE POWER IS GOOD TO THE CONSOLE BOARD.  
SEE IF THERE IS POWER TO THE OTHER CONSOLE AS  
FOLLOWS:

- ENSURE AT LEAST ONE LED IS 'ON', ON THE CONSOLE.

DOES THE CONSOLE HAVE AT LEAST ONE (1) LED ON?  
Y  
N

3 3  
B C

20NOV81 PN6060924  
EC466795 PEC466794  
MAP 1072-2

012  
THE CONSOLE MLDS PAXXX FOR THE LOCATION OF THE VOLTAGE PINS. THE VOLTAGE PINS ARE CONNECTED TO A STANDARD VOLTAGE CONNECTOR.

- USE A RELAY PROBE WITH A TEST LEAD TO MAKE CONNECTIONS
- SET THE C.E. MULTIMETER TO THE CORRECT DC VOLTAGE
- MEASURE THE VOLTAGE BETWEEN THE +5V PIN AND THE GROUND PIN ON THE CONSOLE.

IS +5V DC MEASURED ON THE CONSOLE HOUSING?

N

013  
- SEE IF +5V IS MEASURED ON THE BASIC CONSOLE.

IS +5V MEASURED AS NOTED ABOVE?

N

014  
THE PROBLEM IS IN THE POWER CABLE TO THE CONSOLE OR THE POWER SUPPLY. SET THE POWER ALDS YXXXX AND CONSOLE MLDS PAXXX.

- POWER OFF THE PROCESSING UNIT.
- DO A POINT TO POINT RESISTANCE TEST OF THE POWER CABLE TO THE CONSOLE ON THE SYSTEM.

IF THE BASIC CONSOLE POWER CABLE IS SUSPECTED, ENSURE YOU TEST THE CORRECT POWER CABLE.

IS THE POWER CABLE TO THE CONSOLES GOOD?

N

015  
- REPAIR OR EXCHANGE THE FAILING POWER CABLE  
- VERIFY THE REPAIR.

016  
GO TO MAP 1470, ENTRY POINT A.

017  
THERE IS +5V TO THE BASIC CONSOLE, BUT NOT TO THE OTHER CONSOLE.

- POWER OFF THE PROCESSING UNIT.
- DO A POINT TO POINT RESISTANCE TEST OF THE VOLTAGE CABLE FROM THE BASIC TO THE OTHER CONSOLE.

IF THE BASIC CONSOLE CABLE IS SUSPECTED, ENSURE YOU TEST THE CORRECT POWER CABLE.

IS THE POWER CABLE GOOD?

N

018  
- REPAIR OR EXCHANGE THE FAILING CABLE.  
- VERIFY THE REPAIR.

019  
THE VOLTAGE NETWORK ON THE BASIC CONSOLE IS OPEN.

- REPAIR OR EXCHANGE THE BASIC CONSOLE BOARD.

020  
THE VOLTAGE NETWORK ON THE CONSOLE IS OPEN.

- REPAIR OR EXCHANGE THE CONSOLE BOARD.

021  
(ENTRY POINT CT)

- SEE IF YOU WANT TO TEST A PROGRAMMER OR C E CONSOLE.
- SEE IF YOU WANT TO TEST THE BASIC CONSOLE AS FOLLOWS:

- A BASIC CONSOLE KEY.
- A BASIC CONSOLE LED.
- A BASIC CONSOLE SWITCH.

DO YOU WANT TO TEST THE BASIC CONSOLE AS NOTED ABOVE?

N

5

022

- SEE THE NOTE --->

YOU WANT TO TEST A PROGRAMMER OR C E CONSOLE.

- SEE THE 'AUDIBLE DEVICE'.  
- SEE THE LEDS.

'AUDIBLE DEVICE' - THE UNIT ON THE CONSOLE  
THAT IS SOUNDED WHEN A KEY IS PRESSED.

DO YOU WANT TO VERIFY A LED OR THE AUDIBLE  
DEVICE?

N

023

- SEE THE CONSOLE KEYS.

DO YOU WANT TO VERIFY A CONSOLE KEY?

N

024

GO TO PAGE 5, STEP 025,  
ENTRY POINT KT.

5

025  
(ENTRY POINT KT)

- SEE THE TABLE --->
- POWER OFF THE PROCESSING UNIT.

FIND THE KEY TO BE TESTED IN THE TABLE. NOTE THE TAB PIN NUMBERS OF THE KEY TO BE TESTED. USE THE TAB PIN NUMBERS INDICATED IN THE TABLE ON THE TAB PIN CONNECTOR ON THE CONSOLE CARD.

CONSOLE KEY	ROW #	COLUMN	
		TAB PIN #	TAB PIN #
AKR	000	10	000
CHK	001	000	000
CLAR	002	000	000
CONSOLE INTERRUPT	003	000	000
DATA BUFFER	004	000	000
	005	000	000
	006	000	000
	007	000	000
	008	000	000
	009	000	000
	010	000	000
	011	000	000
	012	000	000
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TAB PINS 16, 17, 18 AND 19 NOT USED.  
 REFERENCE THE PROCESSING UNIT THEORY DIAGRAMS, 'ROW AND COLUMN OPERATION', FOR THE CONSOLE WIRING MATRIX.

- UNSEAT CABLE C1 AT THE CONSOLE UNIT CARD
- SET THE C.E. MULTIMETER TO 'X1 RESISTANCE'
- MEASURE THE RESISTANCE BETWEEN THE TAB PINS IN THE 'FROM' AND THE 'TO' COLUMN OF THE KEY TO BE TESTED.

THE C. E. MULTIMETER WILL INDICATE AN OPEN CIRCUIT.

- MEASURE FOR A SHORT WHEN THE KEY IS PRESSED.
- IF THERE IS MORE THAN ONE KEY SUSPECT, TEST IT NOW.

DOES THE KEY TEST O.K.?

026  
 THE PROBLEM IS IN THE SWITCH PANEL ASSEMBLY OR THE CONSOLE BOARD.

- REMOVE THE SCREWS
- SEPARATE THE PANEL AND BOARD.
- TEST THE SUSPECT SWITCH ON THE SWITCH PANEL ASSEMBLY.

DOES THE SWITCH TEST OUT CORRECT?

- 027
- REPAIR OR EXCHANGE THE SWITCH PANEL ASSEMBLY
- VERIFY THE REPAIR.

F H J  
4 5 5

028

- REPAIR OR EXCHANGE THE CONSOLE.
- VERIFY THE REPAIR.

029

GO TO PAGE 11, STEP 083, ENTRY POINT MT.

030

- DISCONNECT CABLE C1 AT THE PROCESSING UNIT CARD.
- POWER ON THE PROCESSING UNIT.
- SEE THE NOTE --->

WHEN POWER IS ON, SOME LEDS WILL GO 'ON'.

- GROUND THE FOLLOWING PINS.
- GROUND PIN B10 TO D08.
- REMOVE THE GROUND.
- GROUND PIN D10 TO D08.
- REMOVE THE GROUND.
- GROUND PIN B10 AND D10 TO D08.
- REMOVE THE GROUND.

THIS WILL ENSURE ALL LEDS AND THE AUDIBLE DEVICE ARE NOT ON. THE POWER ON LED WILL REMAIN ON.

ARE ALL LEDS OFF, AUDIBLE DEVICE SILENT AND 'POWER ON' LED ON?

Y  
N

031

THERE IS A LED ON OR THE AUDIBLE DEVICE IS SOUNDING.

- REMOVE CABLE C1 ON THE CONSOLE END.

ALL LEDS OFF, AUDIBLE DEVICE SILENT, AND 'POWER ON' LED ON?

Y  
N

032

THERE IS A LED ON OR THE AUDIBLE DEVICE IS SOUNDING. THE CONSOLE BOARD FAILED.

- EXCHANGE THE CONSOLE BOARD.
- VERIFY THE REPAIR.

033

THE CABLE FAILED.

- REPLACE THE CABLE.
- VERIFY THE REPAIR.

034

(ENTRY POINT LB)

- POWER OFF THE PROCESSING UNIT.

IS THE PROBLEM AUDIBLE DEVICE 'SOUNDING' OR SILENT?

Y  
N

WHEN POWER IS ON, SOME LEDS WILL GO 'ON'. THIS IS NORMAL AND CAN BE USED BY YOU IF ONE OF THE LEDS 'ON' IS THE SUSPECT LED. DO NOT POWER OFF UNLESS THIS MAP INSTRUCTS YOU TO.

77  
K Z

- 035
- POWER OFF THE PROCESSING UNIT.
  - SEE CABLE C1 ON THE PROCESSING UNIT END.
  - GROUND THE PIN(S) FOR THE SUSPECT LED PER THE CHART, AT THE PROCESSING UNIT CARD END OF THE CABLE.
  - POWER ON THE PROCESSING UNIT.
  - ENSURE THE SUSPECT LED IS ON.
  - REMOVE THE GROUND.
  - ENSURE THE SUSPECT LED IS OFF.

THE LED TO TEST ON THE CONSOLE IS:	GROUND TAB PINS		
	B10	D10	BXX
AUDIBLE DEVICE	X	X	
CHECK RESTART	X	X	
DATA BIT 00	X		
DATA BIT 01	X		
DATA BIT 02	X		
DATA BIT 03	X		
DATA BIT 04	X		
DATA BIT 05	X		
DATA BIT 06	X		
DATA BIT 07	X		
DATA BIT 08	X		
DATA BIT 09	X		
DATA BIT 10	X		
DATA BIT 11	X		
DATA BIT 12	X		
DATA BIT 13	X		
DATA BIT 14	X		
DATA BIT 15	X		
INSTRUCTION STEP	X	X	
LEVEL 0		X	
LEVEL 1		X	
LEVEL 2		X	
LEVEL 3		X	
LOAD		X	
LOCK	X	X	
POWER ON (NOT +) OR DOT SIDE OF RUN		X	
STOP ON ADDRESS	X	X	
STOP ON ERROR	X	X	
WAIT LED		X	

X = GROUND THIS PIN

DID THE LED TEST OUT O.K.?  
N

- 036  
THE PROBLEM IS THE LED OR THE CABLE.
- REMOVE CABLE C1 ON THE CONSOLE END.
  - GROUND THE PIN(S) FOR THE SUSPECT LED ON THE CONSOLE BOARD SLT CONNECTOR.
  - ENSURE THE SUSPECT LED IS ON.
  - REMOVE THE GROUND.
  - ENSURE THE SUSPECT LED IS OFF.

DID THE LED TEST OUT O.K.?  
N

- 037  
THE PROBLEM IS IN THE CONSOLE BOARD.
- REPAIR OR REPLACE THE BOARD.
  - VERIFY THE REPAIR.

038  
THE CABLE IS BAD.

- REPAIR OR REPLACE THE CABLE.
- VERIFY THE REPAIR.

039  
THE PROCESSING UNIT CARD IS SUSPECT.  
GO TO MAP 2400, ENTRY POINT A.

- 040
- SEE CABLE C1 ON THE PROCESSING UNIT END.
  - GROUND THE AUDIBLE DEVICE PINS B10, B12, AND D10 AT THE PROCESSING UNIT CARD END OF THE CABLE.

- ENSURE THE AUDIBLE DEVICE SOUNDS.
- REMOVE THE GROUND.
- ENSURE THE AUDIBLE DEVICE IS SILENT.

DID THE AUDIBLE DEVICE TEST CORRECT?  
N

- 041  
 - REMOVE CABLE C1 ON THE CONSOLE END.  
 - GROUND THE AUDIBLE DEVICE PINS B10, B12 AND D10 ON CONSOLE BOARD SLT CONNECTOR C1.  
 - ENSURE THE AUDIBLE DEVICE SOUNDS.  
 - REMOVE THE GROUND.  
 - ENSURE THE AUDIBLE DEVICE IS SILENT.

DID THE AUDIBLE DEVICE TEST CORRECT?

Y  
N

- 042  
 THE AUDIBLE DEVICE IS MARKED + AND -.  
 - GROUND THE MINUS SIDE OF THE AUDIBLE DEVICE.  
 - ENSURE THE AUDIBLE DEVICE SOUNDS.  
 - REMOVE THE GROUND.  
 - ENSURE THE AUDIBLE DEVICE IS SILENT.

DID THE AUDIBLE DEVICE TEST CORRECT?

Y  
N

- 043  
 THE AUDIBLE DEVICE IS BAD.  
 - REPAIR OR REPLACE THE AUDIBLE DEVICE.  
 - VERIFY THE REPAIR.

044  
 THE CONSOLE BOARD IS BAD.

- REPAIR OR REPLACE THE BOARD.  
 - VERIFY THE REPAIR.

045  
 THE CABLE IS BAD.

- REPAIR OR REPLACE THE CABLE.  
 - VERIFY THE REPAIR.

046  
 THE PROCESSING UNIT CARD IS SUSPECT.  
 GO TO MAP 2400, ENTRY POINT A.

047  
 VERIFY THE CUSTOMER PROGRAMMER CONSOLE IS INSTALLED AND CONNECTED TO THE SYSTEM.

IS THE PROGRAMMER CONSOLE INSTALLED AND CONNECTED?  
Y  
N

048  
 THE C.E. MAINTENANCE CONSOLE TOOL IS INSTALLED ON THE CUSTOMER SYSTEM. THE CABLE TESTED IS PART OF THE C.E. MAINTENANCE CONSOLE TOOL. IF THE TEST INDICATES A GOOD PART, THE CABLE USED BY THE BASIC CONSOLE IS NOT CONNECTED AND WILL HAVE TO BE TESTED WITH THE C.E. MULTIMETER.  
 GO TO STEP 049, ENTRY POINT BC.

049  
 (ENTRY POINT BC)

THIS IS THE BASIC CONSOLE TEST PROCEDURE. SEE THE CONSOLE Hlds PAXXX FOR LOCATION.

- SEE THE CHART --->  
 - POWER OFF THE PROCESSING UNIT.

SWITCHES AND LEDS ON THE BASIC CONSOLE	FROM PIN	TO PIN	C E MULTIMETER READING
IPL SOURCE	C6D08	C6D07	SHORT
MODE	C6D08	C6B02	SHORT
GROUND		C6D08	
LOAD KEY	C6D03	C6B05	SHORT
LOAD LED		C6D06	
PRIMARY SWITCH	C6D08	C6B09	OPEN
ALTERNATE SWITCH	C6D08	C6B09	SHORT
RUN LED		C6D04	
WAIT LED		C6D05	

DO YOU WANT TO TEST THE LOAD KEY?

Y  
N

- 050  
 - SEE IF YOU WANT TO TEST A LED.

DO YOU WANT TO TEST A LED?

Y  
N



051  
- SEE IF YOU WANT TO TEST A SWITCH.

DO YOU WANT TO TEST A SWITCH?

Y  
N

052  
GO TO PAGE 11, STEP 083, ENTRY POINT MT.

053  
NOTE - WHEN TESTING A SWITCH, TEST EACH POSITION OF THE SWITCH.

- SEE THE CHART --->
- UNSEAT THE CABLE FROM CONNECTOR C6 ON THE BASIC CONSOLE CARD.
- SET THE C.E. MULTIMETER TO XI RESISTANCE.

MEASURE THE RESISTANCE BETWEEN THE 'FROM' PIN AND THE 'TO' PIN ON THE BASIC CONSOLE CONNECTOR C6.

- OPERATE THE SWITCH.

THE RESISTANCE READING IS IN 'C. E. MULTIMETER READING' COLUMN.

- OPERATE THE SWITCH TO ANY OTHER POSITION.

THIS WILL CHANGE THE C. E. MULTIMETER READING AND VERIFY THE OPERATION OF THE SWITCH.

DID THE SWITCH OPERATE CORRECT?

Y  
N

054  
NOTE - WHEN TESTING A SWITCH, TEST EACH POSITION OF THE SWITCH. USE A TEST LEAD TO CONNECT DIRECTLY TO EACH SWITCH TERMINAL.

- TEST THE SUSPECT SWITCH ON THE BASIC CONSOLE.
- MEASURE THE RESISTANCE BETWEEN EACH SWITCH TERMINAL.
- OPERATE THE SWITCH.

THE RESISTANCE READING IS IN 'C. E. MULTIMETER READING' COLUMN.

- OPERATE THE SWITCH TO ANY OTHER POSITION.

THIS WILL CHANGE THE C. E. MULTIMETER READING AND VERIFY THE OPERATION OF THE SWITCH.

DID THE SWITCH OPERATE CORRECT?

Y  
N

055  
THE SWITCH IS BAD.

- REPAIR OR EXCHANGE THE SWITCH.
- IF NO REPAIR, EXCHANGE THE CONSOLE.

056  
THE PROBLEM IS IN THE BASIC CONSOLE BOARD.

- REPAIR OR EXCHANGE THE BASIC CONSOLE BOARD.
- VERIFY THE REPAIR.

057  
THE PROBLEM IS IN THE CABLE OR THE PROGRAMMER CONSOLE BOARD.

- DO A POINT TO POINT TEST OF THE CABLE.

DOES THE CABLE TEST CORRECT?

Y  
N

058  
- REPAIR OR EXCHANGE THE CABLE.

059  
- EXCHANGE THE CONSOLE BOARD.

DOES THE SWITCH TEST CORRECT?

Y  
N

060  
REPLACE THE PROCESSOR CARD.  
IF NO REPAIR:  
GO TO MAP 0070, ENTRY POINT A.

SWITCHES AND LEDS ON THE BASIC CONSOLE	FROM PIN	TO PIN	C. E. MULTIMETER READING
IPL SOURCE	C6D08	C6D07	SHORT
MODE	C6D08	C6B02	SHORT
GROUND		C6D08	
LOAD KEY	C6D03	C6B05	SHORT
LOAD LED		C6D06	
PRIMARY SWITCH	C6D08	C6B09	OPEN
ALTERNATE SWITCH	C6D08	C6B09	SHORT
RUN LED		C6D04	
WAIT LED		C6D05	

061  
- SEE IF THE PROBLEM IS REPAIRED.  
IS THE PROBLEM REPAIRED?  
Y N  
062  
REPLACE THE PROCESSOR CARD.  
IF NO REPAIR:  
GO TO MAP 0070, ENTRY POINT A.  
063  
- VERIFY THE REPAIR.  
064  
- SEE THE CHART --->  
- UNSEAT THE CABLE FROM CONNECTOR C6 ON THE  
BASIC CONSOLE CARD.  
- GROUND THE LED PIN ON THE BASIC CONSOLE  
CONNECTOR TO A D08 PIN ON THE PROCESSING  
UNIT BOARD OR TO FRAME GROUND.  
THE LED TESTED WILL GO ON.

SWITCHES AND LEDS ON THE BASIC CONSOLE	FROM PIN	TO PIN	C E MULTIMETER READING
IPL SOURCE	C6D08	C6D07	SHORT
MODE	C6D08	C6B02	SHORT
GROUND		C6D08	
LOAD KEY	C6D03	C6B05	SHORT
LOAD LED		C6D08	
PRIMARY SWITCH	C6D08	C6B09	OPEN
ALTERNATE SWITCH	C6D08	C6B09	SHORT
RUN LED		C6D04	
WAIT LED		C6D05	

DOES THE LED TEST GOOD?  
N  
065  
- EXCHANGE THE FAILING LED OR THE CONSOLE  
BOARD.  
066  
THE PROBLEM IS IN THE CABLE OR THE PROGRAMMER  
CONSOLE BOARD.  
- SET THE C.E. MULTIMETER TO THE X1  
RESISTANCE.  
- DO A POINT TO POINT TEST OF CABLE UNSEATED  
FROM C6.  
- MEASURE FOR AN OPEN OR SHORT IN THE CABLE,  
PIN TO PIN.

DOES THE CABLE TEST CORRECT?  
N  
067  
- REPAIR OR EXCHANGE THE CABLE.  
068  
- EXCHANGE THE CONSOLE BOARD.

DOES THE LED TEST CORRECT?  
Y N  
069  
REPLACE THE PROCESSOR CARD.  
IF NO REPAIR:  
GO TO MAP 0070, ENTRY POINT A.

070  
- SEE IF THE PROBLEM IS REPAIRED.  
IS THE PROBLEM REPAIRED?

Y N  
071  
REPLACE THE PROCESSOR CARD.  
IF NO REPAIR:  
GO TO MAP 0070, ENTRY POINT A.  
072  
- VERIFY THE REPAIR.

073  
(ENTRY POINT LK)

- UNSEAT THE CABLE ON CONNECTOR C6 ON THE BASIC CONSOLE CARD.
- SET THE C.E. MULTIMETER TO X1 RESISTANCE.
- CONNECT ONE METER LEAD TO C6B05.
- CONNECT THE OTHER METER LEAD TO C6D03.
- DO NOT PRESS THE LOAD KEY.
- TEST FOR AN OPEN BETWEEN C6B05 AND C6D03 ON THE BASIC CONSOLE CONNECTOR C6.
- PRESS AND HOLD THE LOAD KEY.
- TEST FOR A SHORT BETWEEN C6B05 AND C6D03.

DID THE LOAD KEY TEST CORRECT?

N

074  
THE PROBLEM IS IN THE LOAD KEY.

- REPAIR OR EXCHANGE THE LOAD KEY OR THE BASIC CONSOLE BOARD.
- VERIFY THE REPAIR.

075  
- SEE IF THE CABLE TO THE C6 CONNECTOR HAS BEEN TESTED.

HAS THE CABLE HAS BEEN TESTED?

N

076  
- SET THE C.E. MULTIMETER TO THE X1 RESISTANCE.  
- DO A POINT TO POINT TEST OF THE CABLE UNSEATED FROM C6.  
- TEST FOR AN OPEN OR SHORT IN THE CABLE, PIN TO PIN.

DOES THE CABLE TEST CORRECT?

N

077  
- REPAIR OR EXCHANGE THE CABLE.

078  
- EXCHANGE THE PROGRAMMER CONSOLE BOARD.

DOES THE LOAD KEY TEST CORRECT?

N

079  
REPLACE THE PROCESSOR CARD.  
IF NO REPAIR:  
GO TO MAP 0070, ENTRY POINT A.

080  
- SEE IF THE PROBLEM IS REPAIRED.

IS THE PROBLEM REPAIRED?

N

081  
REPLACE THE PROCESSOR CARD.  
IF NO REPAIR:  
GO TO MAP 0070, ENTRY POINT A.

082  
- VERIFY THE REPAIR.

083  
(ENTRY POINT MT)

THE MAP AND STEP THAT SENT YOU HERE MAY HAVE INSTRUCTED YOU TO TEST SOME OTHER PART OF A CONSOLE.  
IF MORE TESTING ON CONSOLE IS NEEDED BY THE MAP, SUCH AS A KEY, LED OR SWITCH ON THE PROGRAMMER CONSOLE, C.E. MAINTENANCE CONSOLE, OR BASIC CONSOLE, DO IT NOW.

IS MORE TESTING NEEDED BY THE MAP THAT SENT YOU HERE?

N

084  
IF YOU SUSPECT A PROBLEM IN THE CONSOLE, SUCH AS:  
THE CONSTANT SOUNDING OF THE 'AUDIBLE DEVICE', A CUSTOMER PROBLEM WITH THE CONSOLE OR A SHORT CIRCUIT IN THE CONSOLE, THE FOLLOWING IS A TEST FOR A SHORT CIRCUIT IN THE CONSOLE WIRING.

DO YOU WANT TO TEST THE ROW OR COLUMN WIRING FOR A SHORT CIRCUIT?  
N

- 085
- RETURN ANY CABLE OR COVER REMOVED IN THIS MAP TO ITS ORIGINAL CONDITION.
  - RETURN TO THE MAP AND STEP THAT SENT YOU HERE.

086  
(ENTRY POINT SG)

- SEE IF YOU WANT TO TEST THE ROW WIRING FOR A SHORT CIRCUIT.

DO YOU WANT TO TEST THE ROW WIRING FOR A SHORT CIRCUIT?  
N

087  
(ENTRY POINT CC)

- SEE IF YOU WANT TO TEST THE COLUMN WIRING FOR A SHORT CIRCUIT.

DO YOU WANT TO TEST THE COLUMN WIRING FOR A SHORT CIRCUIT?  
N

088  
(ENTRY POINT RC)

- SEE IF YOU WANT TO TEST THE ROW AND COLUMN WIRING FOR A SHORT CIRCUIT.

DO YOU WANT TO TEST THE ROW AND COLUMN WIRING FOR A SHORT CIRCUIT?  
N

- 089
- RETURN ANY CABLE OR COVER REMOVED IN THIS MAP TO ITS ORIGINAL CONDITION.
  - RETURN TO THE MAP AND STEP THAT SENT YOU HERE.

090  
- SEE THE TABLE --->

TABLE ONE (1) IS A LIST OF PINS FOR A ROW TO COLUMN TEST FOR A SHORT. USE THE PINS INDICATED IN THE TABLE FOR THE TEST.

- SET THE C.E. MULTIMETER TO X1 RESISTANCE.
- PUT THE PLUS TEST LEAD ON THE PIN INDICATED IN 'TEST LEAD ON' COLUMN. THIS IS THE ROW REFERENCE POINT FOR MEASURING FOR A SHORT CIRCUIT.
- PUT THE MINUS TEST LEAD ON THE PINS INDICATED BY 'TEST COLUMN' COLUMN.
- START AT THE TOP OF THE TABLE AND TEST THE ROW AND COLUMN INDICATED IN SEQUENCE, AS FOLLOWS:

ROW 00 IS PIN 08 OF THE TAB CONNECTOR ON THE BOARD.  
COLUMN 00 IS PIN 05 OF THE SAME CONNECTOR.  
THE C. E. MULTIMETER WILL INDICATE AN OPEN CIRCUIT.

- DO THIS FOR ALL 'TEST LEAD ON' TAB PINS.
- DO THIS FOR ALL 'TEST COLUMNS' TAB PINS.

DOES THE C.E. MULTIMETER INDICATE AN OPEN CIRCUIT FOR THE TEST?  
N

091  
- EXCHANGE THE CONSOLE BOARD.

- 092
- RETURN ANY CABLE OR COVER REMOVED IN THIS MAP TO ITS ORIGINAL CONDITION.
  - RETURN TO THE MAP AND STEP THAT SENT YOU HERE.

TABLE ONE (1) ROW TO COLUMN		
TO TEST ROW	TEST LEAD ON	TEST COLUMN
ROW 0	08	00 TO 11
ROW 1	09	00 TO 11
ROW 2	10	00 TO 11
ROW 3	11	00 TO 11

T V W  
I 2 2

093  
- SEE THE TABLE --->

TABLE TWO (2) IS A LIST OF PINS FOR A COLUMN TO COLUMN TEST FOR A SHORT. USE THE PINS INDICATED IN THE TABLE FOR THE TEST.

- SET THE C.E. MULTIMETER TO X1 RESISTANCE.
- PUT THE PLUS TEST LEAD ON THE PIN INDICATED IN 'TEST LEAD ON' COLUMN. THIS IS THE REFERENCE POINT FOR MEASURING FOR A SHORT CIRCUIT.
- PUT THE MINUS TEST LEAD ON THE PINS INDICATED BY 'TEST COLUMN' COLUMN.
- START AT THE TOP OF THE TABLE AND TEST THE COLUMN INDICATED IN SEQUENCE, AS FOLLOWS:

COLUMN 00 IS PIN 05 OF THE TAB CONNECTOR ON THE BOARD.  
COLUMN 01 IS PIN 15 OF THE SAME CONNECTOR. THE C. E. MULTIMETER WILL INDICATE AN OPEN CIRCUIT.

- DO THIS FOR ALL 'TEST LEAD ON' TAB PINS.
- DO THIS FOR ALL 'TEST COLUMNS' TAB PINS.

DOES THE C.E. MULTIMETER INDICATE AN OPEN CIRCUIT FOR THE TEST?

Y  
N

094  
- EXCHANGE THE CONSOLE BOARD.

095  
GO TO PAGE 12, STEP 088,  
ENTRY POINT RC.

096  
- SEE THE TABLE --->

TABLE THREE (3) IS A LIST OF PINS FOR A ROW TO ROW TEST FOR A SHORT. USE THE PINS IN THE TABLE FOR THE TEST.

- SET THE C.E. MULTIMETER TO X1 RESISTANCE.
- PUT THE PLUS TEST LEAD ON THE PIN INDICATED IN 'TEST LEAD ON' COLUMN. THIS IS THE REFERENCE POINT FOR MEASURING FOR A SHORT CIRCUIT.
- PUT THE MINUS TEST LEAD ON THE PINS INDICATED BY 'TEST ROWS' COLUMN.
- START AT THE TOP OF THE TABLE AND TEST THE ROW INDICATED IN SEQUENCE, AS FOLLOWS:

COLUMN 00 IS PIN 05 OF THE TAB CONNECTOR ON THE BOARD.  
ROW 0 IS PIN 08 OF THE SAME CONNECTOR. THE C. E. MULTIMETER WILL INDICATE AN OPEN CIRCUIT.

- DO THIS FOR ALL 'TEST LEAD ON' TAB PINS.
- DO THIS FOR ALL 'TEST ROWS' TAB PINS.

DOES THE C.E. MULTIMETER INDICATE AN OPEN CIRCUIT FOR THE TEST?

Y  
N

097  
- EXCHANGE THE CONSOLE BOARD.

098  
GO TO PAGE 12, STEP 087, ENTRY POINT CC.

099  
GO TO PAGE 3, STEP 021, ENTRY POINT CT.

REFERENCE COLUMN OR ROW	TEST LEAD ON	TEST COLUMN(S)
COLUMN 00	05	01 TO 11
COLUMN 01	15	02 TO 11
COLUMN 02	04	03 TO 11
COLUMN 03	03	04 TO 11
COLUMN 04	01	05 TO 11
COLUMN 05	00	06 TO 11
COLUMN 06	02	07 TO 11
COLUMN 07	14	08 TO 11
COLUMN 08	06	09 TO 11
COLUMN 09	07	10 TO 11
COLUMN 10	13	11 ONLY
COLUMN 11	12	

REFERENCE ROW	TEST LEAD ON	TEST ROW(S)
ROW 0	08	1 TO 3
ROW 1	09	2 TO 3
ROW 2	10	3 ONLY
ROW 3	11	