

DMP-11
DMV-11

DMP/V-11 FUNC TEST 1
CZDMTFO

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.TITLE CZDMTFO DMP/V-11 FCTNL TST #1
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IDENTIFICATION

PRODUCT CODE: AC-E237F-MC
PRODUCT NAME: CZDMTFO DMP/V-11 FUNCTIONAL TEST 1
PRODUCT DATE: NOVEMBER 1984
MAINTAINER: MERRIMACK DISTRIBUTED SYSTEMS
SOFTWARE ENGINEERING

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HISTORY

REV	DATE	REASON	
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A	18-AUG-80	INITIAL RELEASE DMP ONLY	
B	14-JAN-81	DMP11 BUGS FIXED	
C	1-APR-81	DMV11 SUPPORT ADDED	
D	15-FEB-82	DMP11 BUGS FIXED (11/24 RELATED)	
E	1-SEP-83	DMP11 ETCH AND MICROCODE CHANGE (TEST 16 FAILED)	**JPB
		DMP11 CABLE LOOP AND M3254.5 TURN AROUND MODE FAILED.	***JPB
		DMP11 MODEM LOCAL LOOP FAILED TEST 16.	****JPB
F	8-NOV-84	TIMING VALUE IN "WAIT50" ROUTINE WAS TOO SHORT. VALUE (AT LOCATION 4250) WAS 200 DECIMAL, 310 BINARY. CHANGED THE VALUE TO 4000 DECIMAL, 7640 BINARY. REQUIRED BECAUSE THE J-11 IS A FAST PROCESSOR.	

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1.0 INTRODUCTION

THE DMP AND DMV OPTIONS ARE COMMUNICATION OPTIONS THAT IMPLEMENT THE DDCMP PROTOCOL IN A MULTIDROP ENVIRONMENT. THE DMP IS USED WITH UNIBUS SYSTEMS WHILE THE DMV IS A Q BUS OPTION. THE PURPOSE OF THIS FUNCTIONAL TEST IS TO VERIFY AND EXERCISE THE MICROCODE USED IN THIS OPTION. THIS IS DONE BY PERFORMING THE FOLLOWING TESTS.

CSR ADDRESSING TESTS, ROM VERIFICATION BY CRC TESTS, RUNNING MICRO DIAGNOSTICS, RUNNING INTERFACE DIAGS. (DMP ONLY), CHECKS FOR RDO AND RDI, CHECKS FOR VARIOUS PROCEDURE ERRORS, MODE DEFINITION CHECKS, TEST FOR ALL CONTROL IN COMMANDS AND TESTS FOR ALL CONTROL AND INFORMATION OUT COMMANDS, TRANSMIT, AND RECEIVE MESSAGE TESTS OF VARIOUS LENGTHS, TO AND FROM VARIOUS BUFFERS.

THE FUNCTIONAL DIAGNOSTIC TEST WILL PROVIDE EXTENSIVE TROUBLESHOOTING CAPABILITIES, SUCH AS TIGHT SCOPE LOOPS, SWITCH OPTIONS, AND ABILITY TO "LOCK" ONTO INTERMITTENT ERRORS. IN ADDITION TESTS WILL BE DESIGNED AND STRUCTURED TO ACHIEVE MAXIMUM FAULT RESOLUTION AND FACILITATE REPLACEMENT OF THE SMALLEST FIELD REPLACEABLE UNIT.

THIS PROGRAM WILL BE IMPLEMENTED USING THE DIAGNOSTIC SUPERVISOR AND A STRUCTURED PROGRAMMING APPROACH. BECAUSE THE DESIGN WILL CONFORM TO THE SUPERVISOR (STANDALONE VERSION) THE PROGRAM WILL BE COMPATIBLE WITH ACT, APT, XXDP., AND SLIDE.

THROUGH DIALOGUE WITH OPERATOR, THE PROGRAM WILL ALLOW MODIFICATION OF DEVICE PARAMETERS, SUCH AS UNIBUS ADDRESS, VECTOR ADDRESSES AND DEVICE PRIORITY. IN ADDITION, THE OPERATOR CAN SPECIFY PARTICULAR TESTS TO BE RUN AND A VARIETY OF LOOPING, RUNNING, AND REPORTING MODES

DEVICE ERRORS WILL BE REPORTED AS THEY OCCUR. THE REPORT WILL INCLUDE A TEST NUMBER AND DESCRIPTION OF THE ERROR, GOOD AND BAD TEST DATA, AND APPLICABLE DEVICE REGISTER CONTENTS.

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2.0 HARDWARE REQUIREMENTS

THE FOLLOWING HARDWARE IS REQUIRED TO RUN THE DMP/DMV-11
FUNCTIONAL TESTS:

FOR DMP:
PDP-11/04,05,10,20,30,34,35,40,45,50,60, OR 70
DMP-11

FOR DMV:
LSI-11/03,23,238
DMV-11

FOR BOTH:
16K MEMORY
CONSOLE TERMINAL

3.0 PRELIMINARY PROGRAM REQUIREMENTS

FOR DMP:
THE M8207 STATIC DIAGNOSTICS AND THE M8203 STATIC
DIAGNOSTICS SHOULD BE RUN BEFORE RUNNING THIS FUNCTIONAL
DIAG.

FOR DMV:
THE M8053/64 MICROCONTROL AND LINE UNIT STATIC LOGIC TESTS
(5 PROGRAMS) SHOULD BE RUN BEFORE RUNNING THIS FUNCTIONAL DIAG.

4.0 GENERAL PROGRAM CONSIDERATIONS

4.1 DIAGNOSTIC SUPERVISOR

THIS PROGRAM IS COMPATIBLE WITH THE STANDALONE DIAGNOSTIC
SUPERVISOR, AND MUST BE LOADED TO BE CO-RESIDENT WITH THE
SUPERVISOR, OR BE PREVIOUSLY COMBINED WITH THE SUPERVISOR
AND LOADED AS A SINGLE FILE. IN EITHER CASE, THE COMBINED
PROGRAM WILL NOT EXCEED 16K OF MEMORY.

4.2 EXECUTION TIME

THE TOTAL TIME REQUIRED TO RUN THE DMP-11 FUNCTIONAL TESTS
IS ABOUT 120 SECONDS PER PASS (DMP-11) OR ??? SECONDS (DMV-11)
FOR EACH UNIT.

4.3 XXDP.

THIS PROGRAM MAY BE LOADED UNDER XXDP., AND MAY BE RUN IN
DUMP MODE OR CHAIN MODE.

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4.4 ACT/SLIDE

THIS PROGRAM MAY BE LOADED UNDER ACT OR SLIDE AND MAY BE RUN IN DUMP MODE OR CHAIN MODE.

4.5 APT

THIS PROGRAM MAY BE LOADED BY THE APT SYSTEM (INCLUDING APT-RD) AND RUN IN PROGRAM MODE OR SCRIPT MODE.

4.6 MEMORY MANAGEMENT

IT IS USED IN TX AND RX TESTS.

4.7 MEMORY PARITY OPTION

IF PARITY MEMORY IS INSTALLED, MEMORY PARITY TRAPS ARE DISABLED BY THE PROGRAM.

4.8 ERROR LOGGING

THE NUMBER OF ERRORS WHICH HAVE OCCURRED ON EACH DEVICE UNDER TEST SINCE THE LAST START OR RESTART COMMAND IS KEPT IN AN ERROR LOG. THIS LOG MAY BE PRINTED BY USING THE "PRINT" COMMAND (SEE SECTION 6.3.8).

5.0 PROGRAM LOAD MEDIA

THIS PROGRAM CAN BE LOADED FROM PAPER TAPE USING THE ABSOLUTE LOADER OR FROM ACT, SLIDE, OR APT SYSTEMS, OR FROM ANY MEDIA SUPPORTED BY XXDP+. WHEN USING THE PAPER TAPE ABSOLUTE LOADER, THE PROGRAM SHOULD BE LOADED FIRST, FOLLOWED BY THE DIAGNOSTIC SUPERVISOR. WHEN USING XXDP+, THE DIAGNOSTIC SUPERVISOR SHOULD BE LOADED FIRST, FOLLOWED BY THE DIAGNOSTIC PROGRAM.

6.0 OPERATING INSTRUCTIONS

6.1 LOADING AND STARTING PROCEDURES

6.1.1 LOADING PROCEDURES

THIS PROGRAM MAY BE LOADED FROM PAPER TAPE USING THE ABSOLUTE LOADER. IT MAY ALSO BE LOADED FROM ANY XXDP+ LOAD MEDIA. WHEN LOADED UNDER XXDP+ THE DIAGNOSTIC SUPERVISOR WILL BE LOADED AUTOMATICALLY.

6.1.2 STARTING PROCEDURES

THE PROGRAM STARTS AT LOCATION 200. USE STANDARD DEC PROCEDURES TO START THE PROGRAM.

6.1.3 STEPS FOR QUICK AND SIMPLE EXECUTION

THE DIAGNOSTIC CAN BE EXECUTED STANDALONE WITHOUT READING THE REMAINDER OF THIS DOCUMENT, AS FOLLOWS:

- A) LOAD AND START THE DIAGNOSTIC USING THE RUN COMMAND
- B) RECEIVE DIAGNOSTIC SUPERVISOR IDENTIFICATION PROMPT (DR)
- C) ENTER STA<CR>
- D) ANSWER HARDWARE AND SOFTWARE QUESTIONS
- E) GET END OF PASS MESSAGES OR ERROR MESSAGES
- F) TO END EXECUTION, ENTER CONTROL/C

6.2 INITIAL DIALOGUE

AFTER THE PROGRAM AND THE SUPERVISOR ARE LOADED THE PROGRAM IS STARTED. THE FOLLOWING IDENTIFICATION IS TYPED:

DRS LOADED
DIAG. RUN-TIME SERVICES
CZDMT-F-0
DMP/V-11 FUNCTIONAL DIAG.
UNIT IS DMP-11 OR DMV-11
DR>

THE OPERATOR THEN PROCEEDS BY TYPING ONE OR MORE OF THE COMMANDS DESCRIBED IN THE FOLLOWING SECTION 6.3. (FOR MORE INFORMATION, REFER TO THE DIAGNOSTIC SUPERVISOR FUNCTIONAL SPECIFICATION).

6.3 PROGRAM OPTIONS

6.3.1 START COMMAND

```
*****
STA(RT)/TESTS:<TEST-LIST>/PASS:<PASS-CNT>/FLAGS:
<FLAG-LIST>/EOP:<INCR>
*****
```

6.3.1.1 TESTS SWITCH (/TESTS:<TEST-LIST>)

<TEST-LIST> IS A SEQUENCE OF DECIMAL NUMBERS (1:2 ETC.) OR RANGES OF DECIMAL NUMBERS (1-5:8-10 ETC.) THAT SPECIFY THE TESTS TO BE EXECUTED. THE NUMBERS ARE SEPARATED BY COLONS.

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THE NUMBERS RANGE FROM 1 TO THE LARGEST TEST NUMBER IN THE DIAGNOSTIC. THEY MAY BE SPECIFIED IN ANY ORDER. TESTS WILL BE EXECUTED IN NUMERICAL ORDER REGARDLESS OF THE ORDER OF SPECIFICATION. THE DEFAULT IS TO EXECUTE ALL TESTS. ON THIS AND ALL SWITCHES, THE ANGLE BRACKETS <> ARE PUNCTUATION USED IN THE DEFINITION ONLY, AND ARE NOT TO BE TYPED BY THE OPERATOR. SEE EXAMPLE AT END OF 6.3.1.5.

6.3.1.2 PASS SWITCH (/PASS:<PASS-CNT>)

<PASS-CNT> IS A DECIMAL NUMBER INDICATING THE DESIRED NUMBER OF PASSES. A PASS IS DEFINED AS THE EXECUTION OF THE FULL DIAGNOSTIC (ALL SELECTED TESTS) AGAINST ALL UNITS SUBMITTED. THE DEFAULT IS NON-ENDING EXECUTION. IN THIS CASE EXIT FROM THE PROGRAM IS ACCOMPLISHED EITHER BY TYPING A CONTROL/C OR BY OCCURRENCE OF AN ERROR WITH THE HALT ON ERROR FLAG BEING SET. THE EXIT IS A RETURN TO COMMAND MODE. SEE EXAMPLE AT END OF 6.3.1.5.

6.3.1.3 FLAGS SWITCH (/FLAGS:<FLAG-LIST>)

<FLAG-LIST> IS A SEQUENCE OF ELEMENTS OF THE FORM <FLAG>, <FLAG=1>, OR <FLAG=0>, SEPARATED BY COLONS, WHERE <FLAG> HAS ONE OF THE FOLLOWING VALUES:

HOE	HALT ON ERROR, CAUSING COMMAND MODE TO BE ENTERED WHEN AN ERROR IS ENCOUNTERED
LOE	LOOP ON ERROR, CAUSING THE DIAGNOSTIC TO LOOP CONTINUOUSLY WITHIN THE SMALLEST DEFINED BLOCK OF CODING (SEGMENT, SUBTEST, OR TEST) CONTAINING THE ERROR
IER	INHIBIT ERROR REPORTING
IBE	INHIBIT BASIC ERROR REPORTS
IXE	INHIBIT EXTENDED ERROR REPORTS
PRI	DIRECT ALL MESSAGES TO A LINE PRINTER
PNT	PRINT NUMBER OF TEST BEING EXECUTED
BOE	BELL ON ERROR
UAM	RUN IN UNATTENDED MODE, BYPASSING MANUAL INTERVENTION TESTS
ISR	INHIBIT STATISTICAL REPORTS
IDU	INHIBIT DROPPING OF UNITS BY DIAGNOSTIC
LOT	LOOP ON TEST

THE FLAGS NAMED OR EQUATED TO 1 ARE SET, THOSE EQUATED TO 0 ARE CLEARED. A FLAG NOT SPECIFIED IS CLEARED. IF THE FLAGS SWITCH IS NOT GIVEN ALL FLAGS ARE CLEARED. SEE EXAMPLE AT END OF 6.3.1.5.

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6.3.1.4 END OF PASS SWITCH (/EOP:<INCR>)

<INCR> IS A DECIMAL NUMBER INDICATING HOW OFTEN (IN TERMS OF PASSES) IT IS DESIRED THAT THE END OF PASS MESSAGE BE PRINTED. THE DEFAULT IS AT THE END OF EVERY PASS. SEE EXAMPLE AT END OF 6.3.1.5.

6.3.1.5 EFFECT OF START COMMAND

THE EFFECT OF THE START COMMAND IS TO INITIATE THE HARDWARE PARAMETER DIALOGUE, THE SOFTWARE PARAMETER DIALOGUE, AND THEN THE DIAGNOSTIC TESTS THEMSELVES.

THE HARDWARE PARAMETER DIALOGUE COMMENCES WITH THE QUESTION "# UNITS?" TO WHICH THE OPERATOR REPLIES WITH A DECIMAL NUMBER N FROM 1 TO 16. THE TERM "UNIT" REFERS TO THE DEVICE TO WHICH THIS SERIES OF DIAGNOSTICS IS DEDICATED. FOLLOWING THIS ARE THE QUESTIONS WHEREBY THE P-TABLES THEMSELVES WILL BE BUILT. EACH P-TABLE IS A CORE-RESIDENT TABLE CONTAINING ALL THE HARDWARE INFORMATION FOR ONE UNIT. THE OPERATOR MUST SUPPLY N (NUMBER OF UNITS) VALUES FOR EACH QUESTION. HE MAY DO THIS BY GIVING ONE ANSWER TO EACH QUESTION (IN WHICH CASE THE SERIES OF QUESTIONS WILL BE POSED N TIMES) OR BY GIVING N VALUES, SEPARATED BY COMMAS, TO EACH QUESTION (SERIES WILL BE POSED ONCE). EACH QUESTION IS FOLLOWED BY THE RESPONSE RADIX (D FOR DECIMAL, B FOR BINARY, O FOR OCTAL, L FOR YES/NO) IN PARENTHESES AND THE DEFAULT VALUE AFTER THE PARENTHESES.

FOLLOWING THE HARDWARE QUESTIONS ARE THE SOFTWARE QUESTIONS TO BUILD THE SOFTWARE TABLES, WHICH DEFINE THE MODE (QUICK VERIFY ETC.) THAT THE DIAGNOSTIC WILL EXECUTE IN.

WHEN THE QUESTION "# UNITS?" IS ANSWERED, MEMORY STORAGE IS ALLOCATED FOR THE P-TABLES, AND IF THERE IS NOT ENOUGH TO ACCOMMODATE THEM THE MESSAGE "TOO MANY UNITS" IS ISSUED. IN THIS CASE THE DIAGNOSTIC MUST BE EXECUTED MORE THAN ONCE TO TEST ALL UNITS.

EXAMPLE:

STA/TESTS:1:2-4:6:8-10/PASS:3/FLAGS:IER:HOE=1:UAM:LOE

THIS COMMAND WILL CAUSE THREE PASSES TO BE MADE, EACH PASS CONSISTING OF TESTS 1,2,3,4,6,8,9, AND 10 EXECUTED AGAINST ALL UNITS. THERE IS NO DIFFERENCE BETWEEN SAYING <FLAG> AND SAYING <FLAG=1>. THE NOTATION <FLAG=0> IS MEANINGFUL ONLY ON A COMMAND OTHER THAN START TO CLEAR A FLAG THAT WAS PREVIOUSLY SET. NOTE THAT ON ALL COMMANDS ONLY THE FIRST THREE LETTERS ARE SCANNED.

6.3.2 RESTART COMMAND

RES(TART)/TESTS:<TEST-LIST>/PASS:<PASS-CNT>/FLAGS:
<FLAG-LIST>/UNITS:<UNIT-LIST>

6.3.2.1 TESTS, PASS, AND FLAGS SWITCHES

<TEST-LIST>, <PASS-CNT>, AND <FLAG-LIST> ARE AS IN THE START COMMAND.

6.3.2.2 UNITS SWITCH (/UNITS:<UNIT-LIST>)

<UNIT-LIST> IS A SEQUENCE OF DECIMAL NUMBERS (0,1 ETC.) OR RANGES OF DECIMAL NUMBERS (0-5, 8-10 ETC.) THAT SPECIFY THE UNITS TO BE TESTED. THE NUMBERS ARE SEPARATED BY COLONS. THE NUMBERS MAY RANGE FROM 0 THRU N-1 (N IS THE NUMBER OF UNITS SPECIFIED IN THE PREVIOUS START COMMAND). THE NUMBER INDICATES THE POSITION OF THE P-TABLE AS THE DATA WAS ENTERED DURING THE HARDWARE DIALOGUE. THE UNITS WHICH ARE SELECTED MUST NOT HAVE BEEN DROPPED BY THE DROP COMMAND. SEE THE DISCUSSION OF ADD AND DROP COMMANDS BELOW. DEFAULT IS TO TEST ALL UNITS WHICH HAVE NOT BEEN DROPPED BY A DROP COMMAND.

6.3.2.3 EFFECT OF RESTART COMMAND

THE RESTART COMMAND DIFFERS FROM THE START COMMAND IN THAT THE P-TABLES FROM THE PREVIOUS START COMMAND (THERE MUST HAVE BEEN ONE) ARE USED, INSTEAD OF NEW ONES BEING BUILT. THE UNITS SWITCH GIVES THE ABILITY TO SELECT A SUBSET OF THESE. THE SOFTWARE DIALOGUE MAY OPTIONALLY BE REEXECUTED (OPERATOR WILL BE ASKED). THE COMMAND CAN BE USED AFTER COMMAND MODE HAS BEEN REENTERED IN ANY OF THE THREE NORMAL WAYS: A) THE REQUESTED NUMBER OF PASSES HAVE BEEN MADE B) AN ERROR WAS ENCOUNTERED WITH THE HALT ON ERROR FLAG SET C) A CONTROL/C WAS ENTERED BY THE OPERATOR.

6.3.3 CONTINUE COMMAND

CON(TINUE)/PASS:<PASS-CNT>/FLAGS:<FLAG-LIST>

6.3.3.1 PASS SWITCH (/PASS:<PASS-CNT>)

<PASS-CNT> IS SAME AS IN START COMMAND, BUT THE DEFAULT IS THE UNSATISFIED PASS-CNT FROM THE PREVIOUS START OR RESTART. IF NONE REMAINS, THE DEFAULT IS NON-ENDING EXECUTION.

6.3.3.2 FLAG SWITCH (/FLAGS:<FLAG-LIST>)

<FLAG-LIST> IS SAME AS IN START COMMAND, BUT UNSPECIFIED FLAGS RETAIN THEIR CURRENT VALUE.

6.3.3.3 EFFECT OF CONTINUE COMMAND

CONTINUE MUST FOLLOW A START OR RESTART, AND COMMAND MODE MUST HAVE BEEN ENTERED DUE TO A HALT ON ERROR OR A CONTROL/C. THE EFFECT OF THE COMMAND IS TO GO TO THE BEGINNING OF THE TEST THAT WAS BEING EXECUTED WHEN THE HALT OR CONTROL/C TOOK PLACE. SOFTWARE DIALOGUE MAY OPTIONALLY BE REEXECUTED. HARDWARE PARAMETERS MAY NOT BE CHANGED.

6.3.4 PROCEED COMMAND

PRO(CEED)/FLAGS:<FLAG-LIST>

6.3.4.1 FLAGS SWITCH (/FLAGS:<FLAG-LIST>)

<FLAG-LIST> IS AS IN THE START COMMAND, BUT UNSPECIFIED FLAGS RETAIN THEIR CURRENT VALUE.

6.3.4.2 EFFECT OF PROCEED COMMAND

PROCEED MUST FOLLOW A START, RESTART, OR CONTINUE. COMMAND MODE MUST HAVE BEEN ENTERED VIA A HALT ON ERROR. THE EFFECT OF THE COMMAND IS TO BEGIN EXECUTION AT THE LOCATION FOLLOWING THE ERROR CALL. NEITHER HARDWARE NOR SOFTWARE PARAMETERS MAY BE ALTERED.

6.3.5 ADD COMMAND

ADD/UNITS:<UNIT-LIST>

6.3.5.1 UNITS SWITCH (/UNITS:<UNIT-LIST>

<UNIT-LIST> IS AS IN THE RESTART COMMAND.

6.3.5.2 EFFECT OF ADD COMMAND

THE UNITS SPECIFIED ARE ADDED TO THE TEST SEQUENCE. EACH UNIT MUST HAVE A P-TABLE IN MEMORY DUE TO AN EARLIER HARDWARE DIALOGUE. THIS COMMAND MUST BE FOLLOWED BY A RESTART OR CONTINUE. THE UNITS SWITCH MUST BE SPECIFIED. THE ADD COMMAND IS MEANINGFUL ONLY FOR UNITS THAT WERE PREVIOUSLY DROPPED.

6.3.6 DROP COMMAND

DRO(P)/UNITS:<UNIT-LIST>

6.3.6.1 UNITS SWITCH (/UNITS:<UNIT-LIST>)

<UNIT-LIST> IS AS IN THE RESTART COMMAND.

6.3.6.2 EFFECT OF DROP COMMAND

THE UNITS SPECIFIED WILL BE DROPPED FROM TESTING. THE UNITS WILL BE RESELECTED ONLY BY THE EXECUTION OF AN ADD OR START COMMAND. THE UNITS SWITCH MUST BE ENTERED. THIS COMMAND MUST BE FOLLOWED BY A RESTART OR A CONTINUE COMMAND.

6.3.7 PRINT COMMAND

PRI(NT)

6.3.7.1 EFFECT OF PRINT COMMAND

THE TOTAL NUMBER OF ERRORS FOR EACH UNIT SINCE THE LAST START OR RESTART COMMAND ARE PRINTED. THE ISR (INHIBIT STATISTICAL REPORTING) FLAG IS CLEARED.

6.3.8 DISPLAY COMMAND

DIS(PLAY)/UNITS:<UNIT-LIST>

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6.3.8.1 UNITS SWITCH (/UNITS:<UNIT-LIST>)

<UNIT-LIST> IS AS IN THE RESTART COMMAND.

6.3.8.2 EFFECT OF DISPLAY COMMAND

THE HARDWARE P-TABLES FOR ALL UNITS UNDER TEST ARE PRINTED OUT IN THE FORMAT IN WHICH THEY WERE ENTERED. ANY UNITS THAT WERE DROPPED BY THE OPERATOR "DROP" COMMAND ARE SO DESIGNATED.

6.3.9 FLAGS COMMAND

 FLA(GS)

6.3.9.1 EFFECT OF FLAGS COMMAND

THE CURRENT SETTINGS OF ALL FLAGS ARE PRINTED.

6.3.10 ZFLAGS COMMAND

 ZFL(AGS)

6.3.10.1 EFFECT OF ZFLAGS COMMAND

ALL FLAGS ARE CLEARED.

6.3.11 CONTROL CHARACTERS

A CONTROL C (C) ENTERED DURING THE EXECUTION OF A DIAGNOSTIC CAUSES A RETURN TO COMMAND MODE.

A CONTROL Z (Z) ENTERED DURING ONE OF THE THREE OPERATOR DIALOGUES- INITIAL DIALOGUE (SEE 6.2), HARDWARE DIALOGUE (SEE 6.3.1.5), OR SOFTWARE DIALOGUE (SEE 6.3.1.5) CAUSES THE DEFAULTS TO BE TAKEN FOR THE REMAINDER OF THAT DIALOGUE.

A CONTROL O (O) ENTERED DURING THE EXECUTION OF A DIAGNOSTIC CAUSES ALL TELETYPE OUTPUT TO BE SUPPRESSED FOR THE REMAINDER OF THE DIAGNOSTIC OR UNTIL ANOTHER O IS TYPED, WHICH RESTORES NORMAL TELETYPE OUTPUT.

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6.3.12 HARDWARE PARAMETERS

THE FOLLOWING QUESTIONS WILL BE ASKED ON A START COMMAND. THE VALUE LOCATED TO THE LEFT OF THE QUESTION MARK IS THE DEFAULT VALUE THAT WILL BE TAKEN ON A CARRIAGE RETURN RESPONSE.

SELECT OPTION TYPE (0=8207'DMP',1=8053'DMV',2=8064'DMV): (0) 0 ?
 DEVICE CSR ADDRESS : (0) 160170 ?
 DEVICE VECTOR ADDRESS : (0) 300 ?
 DEVICE PRIORITY LEVEL : (0) 5 ?
 TURNAROUND TYPE -(0=M3254M3255,1=CABLE,2=MOD LOC,3=MOD REM,4=NONE) (0) 0 ?
 PLEASE SELECT BAUD RATE; TYPE '0' FOR 2.4K; '1' FOR 4.8K; '2' FOR 9.6K; '3' FOR 19.2K; '4' FOR 56K; '5' FOR 250K; OR '6' FOR 500K BAUDS (0) 4 ?
 SELECT INTERFACE TYPE (1=INTEGRAL,2=EIA,3=V.35,4=422): (0) 2 ?

6.3.13 SOFTWARE PARAMETERS

NO SOFTWARE PARAMETER QUESTIONS ARE ASKED BY THE DMP/V-11 FUNCTIONAL TEST

6.3.14 EXTENDED DISCUSSION OF P-TABLE DIALOGUE

THE FULL CAPABILITY OF THE HARDWARE DIALOGUE IS REVEALED BY THE FOLLOWING DISCUSSION OF WHAT HAPPENS INTERNALLY

AS SOON AS THE QUESTION "# UNITS?" IS ANSWERED (WITH THE NUMBER N, SAY) SPACE IN CORE IS ALLOCATED FOR N P-TABLES. ALL OF THE P-TABLES ARE OF THE SAME FORMAT, AND THERE IS A ONE-TO ONE CORRESPONDENCE BETWEEN THE HARDWARE PARAMETER QUESTIONS AND THE SLOTS IN THE P-TABLE FORMAT.

ON THE FIRST TRIP THRU THE QUESTIONS, ALL OF THE SLOTS IN ALL OF THE P-TABLES ARE FILLED. IF THE OPERATOR TYPES IN LESS THAN N EXPLICIT VALUES IN RESPONSE TO A PARTICULAR QUESTION, THESE VALUES ARE PLACED IN THE P-TABLES (ONE VALUE GOING INTO THE PROPER SLOT OF EACH P-TABLE BEGINNING WITH THE FIRST P-TABLE) UNTIL THE STRING OF VALUES IS EXHAUSTED. THE LAST VALUE IN THE STRING BECOMES THE NEW DEFAULT AND IS USED TO FILL THAT SLOT IN THE REMAINING P-TABLES.

ON SUBSEQUENT TRIPS THRU THE QUESTIONS, THE SAME PROCESS IS CARRIED OUT, EXCEPT THAT THE EARLIEST P-TABLE NOT TO HAVE RECEIVED AN EXPLICIT VALUE IN ANY OF ITS SLOTS NOW ASSUMES THE ROLE THAT TABLE NUMBER ONE PLAYED IN THE FIRST TRIP.

THE SERIES OF QUESTIONS IS REISSUED UNTIL AT LEAST ONE QUESTION HAS RECEIVED N EXPLICIT VALUES FROM THE OPERATOR.

IN GIVING A STRING OF VALUES, COMMAS WITHOUT INTERVENING VALUES MAY BE USED TO INDICATE A REPETITION OF THE LAST NAMED VALUE.

A STRING OF VALUES MAY BE GIVEN AS A RANGE (6-10 FOR EXAMPLE). IF THE VALUES REPRESENT PURE NUMERICAL DATA, THIS SAMPLE RANGE TRANSLATES TO THE STRING 6,7,8,9,10 (AN INCREMENT OF 1). IF THE VALUES ARE ADDRESSES, THE SAMPLE RANGE TRANSLATES TO THE STRING 6,8,10 (AN INCREMENT OF 2).

NOW LET US SEE HOW WE COULD USE THESE CAPABILITIES TO CONSTRUCT A SET OF P-TABLES. ASSUME THAT WE HAVE 16 UNITS, AND THAT THERE ARE THREE HARDWARE PARAMETERS FOR EACH (THREE SLOTS IN THE P-TABLE, THREE HARDWARE QUESTIONS IN THE DIALOGUE). LET THE DESIRED VALUE FOR THE FIRST PARAMETER BE THE NUMBER 75 FOR ALL 16 TABLES. LET THE DESIRED VALUE FOR THE SECOND PARAMETER BE EQUAL TO THE UNIT NUMBER (0,1,2,....,15) EXCEPT FOR UNIT 12, WHICH SHOULD RECEIVE THE VALUE 11. LET THE DESIRED VALUE FOR THE THIRD PARAMETER BE THE NUMBER 76 FOR THE FIRST 7 UNITS AND THE NUMBER 77 FOR THE LAST 9 UNITS.

THE FOLLOWING DIALOGUE WOULD ACCOMPLISH THIS GOAL:

0 UNITS (0) ? 16

UNIT 1
<QUESTION 1> ? 75
<QUESTION 2> ? 0-6
<QUESTION 3> ? 76

UNIT 21
<QUESTION 1> ?
<QUESTION 2> ? 7-11,13-15
<QUESTION 3> ? 77

THE FIRST TIME THE SERIES IS ASKED, SLOT ONE RECEIVES A 75 IN ALL 16 TABLES. SLOT TWO RECEIVES THE VALUES 0,1,2,....,6 IN TABLES 0 THRU 6 AND A CONSTANT 6 IN TABLES 7 THRU 15. SLOT THREE RECEIVES A CONSTANT 76 IN ALL 16 TABLES.

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THE SECOND TIME THRU THE SERIES, TABLES 16 THRU THE END ARE GOING TO BE AFFECTED (NOTE THAT THIS PIECE OF INFORMATION IS PRINTED OUT FOR THE THE OPERATOR IN THE FORM "UNIT XX" AT THE BEGINNING OF EACH SERIES). QUESTION 1 IS RESPONDED TO BY A <CR>, SO SLOT ONE STAYS AT CONSTANT 75 IN TABLES 7 THRU 15, SINCE NO NEW EXPLICIT VALUES ARE TYPED IN. SLOT TWO GETS THE VALUES 7,8,9,10,11 IN TABLES 7 THRU 11, AND GETS A 11 IN SLOT 12, AND GETS THE VALUES 13,14,15 IN TABLES 13 THRU 15. SLOT THREE GETS THE VALUE 77 IN TABLES 7 THRU 15.

THE DIALOGUE IS TERMINATED WHEN THE SOFTWARE RECOGNIZES THAT 16 EXPLICIT VALUES HAVE BEEN GIVEN FOR AT LEAST ONE QUESTION (NAMELY QUESTION 2).

TEST DESCRIPTIONS

7.0

7.1 ADDRESS TEST (TEST-1)

VERIFIES THAT ALL ADDRESSES IN THE MCPU RESPOND.
THIS TEST IS USED TO VERIFY THAT THE OPTION
IS AT THE ADDRESS THE USER THINKS IT IS ON.

7.2 ROM VERIFICATION TESTS (TESTS 2-9) (2-7 DMP ONLY.....8 9 DMV ONLY)

THIS SERIES OF TESTS VERIFIES THAT ALL ROMS
ARE IN PLACE AND THAT THE THE CONTENTS ARE
CORRECT BY DOING A CRC CALCULATION ON THE
ROM CONTENTS. THE TEST ALSO PRINTS THE REV AND
ROM NUMBER OF THE ROM ON THE FIRST PASS OF THE
TEST.

7.3 INITIALIZATION TEST (TEST 10)

THIS TEST DOES A MASTER CLEAR TO THE DEVICE
AND WAITS FOR THE MICRO-DIAGNOSTICS TO COMPLETE
IF MICRO DIAGS FAIL TO COMPLETE THEN A TIME
OUT ERROR WILL BE REPORTED.

7.4 INTERFACE DIAGNOSTICS (TEST 11) (DMP ONLY)

THIS TEST RUNS ADDITIONAL MICRODIAGNOSTIC CODE IN THE
DMP THAT CHECKS OUT THE INTERRUPT LOGIC AND THE
NPR LOGIC.

7.5 RDI REMAINS SET TEST (TEST 12)

THIS TEST SETS RDI, WAITS FOR RDI TO SET, ISSUES
A "NO REQUEST" CONTROL IN AND LOOKS FOR RDI TO
REMAIN SET.

7.6 TEST FOR RDO SETTING (TEST 13)

THIS TEST DOES A CONTROL IN COMMAND OF "READ MODEM"
AND EXPECTS RDO TO SET WITH AN INFORMATION OUT CODE
OF RETURN MODEM STATUS.

7.7 CHECK FOR PROCEDURE ERROR 100 (TEST 14)

THIS TEST ISSUES A MASTER CLEAR WAITS FOR RUN TO
SET THEN ISSUES A CONTROL IN COMMAND AND EXPECTS
A PROCEDURE ERROR OF 100 "NON MODE DEFINITION COMMAND
AFTER A MASTER CLEAR". UNLESS MODE HAS BEEN DEFINED
IN THE SWITCHES THEN LOOK FOR INFORMATION OUT.

7.8 CHECK FOR PROCEDURE ERROR 104 (TEST 15)

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THIS TEST ISSUES A MASTER CLEAR , MODE DEFINITION, FOLLOWED BY A MODE DEF. COMMAND DEFINING A DIFFERENT TYPE OF MODE. THE TEST LOOKS FOR A PROCEDURE ERROR OF 104 "ILLEGAL MODE CHANGE".

7.9 TEST MODE CHANGE OF DUPLEX PORTION OF MODE (TEST 16)

THIS TEST ISSUES A MASTER CLEAR,MODE DEFINITION SEQUENCE(CONTROL STATION/FULL DUPLEX). THE TEST THEN ISSUES A MODE DEF. COMMAND TO CHANGE TO HALF DUPLEX. THEN THE TESTS WAITS AND MAKES SURE NO PROCEDURE ERROR OCCURS.

7.10 TEST FOR MAX TRIBS TO BE ESTABLISHED. (TEST 17)

THIS TEST ESTABLISHES MAX TRIBS THEN ATTEMPTS TO ESTABLISH MAX+1 TRIBS AND CHECKS FOR A PROCEDURE ERROR 114, "ATTEMPT TO ESTABLISH MORE THEN MAXIMUM NUMBER OF TRIBS". THE TEST THEN TRIES TO ESTABLISH A TRIB THAT HAS ALREADY BEEN ESTABLISHED AND CHECKS FOR A PROCEDURE ERROR OF 116 "ATTEMPT TO ESTABLISH ALREADY ESTABLISHED TRIB".

NOTE: MAX TRIBS FOR DMP = 32
 MAX TRIBS FOR DMV = 12

7.11 READ/WRITE TRIBUTARY STATUS SLOTS TEST (TEST 18)

THIS TEST WRITES EACH TSS SLOT WITH VARIOUS DATA PATTERNS THEN READS THAT SLOT TO BE SURE THAT THE CORRECT OUTPUT COMMAND AND DATA IS RETURNED. THE SLOTS THAT ARE WRITTEN ARE TRIB STATUS SLOTS 30 THRU 37. THE DATA PATTERNS USED ARE:0,125252,052525,0,-1,377,177400,562:OCTAL.

7.12 TESTS FOR PROCEDURE ERROR 132 (TEST 19-20)

THESE TESTS CHECK THAT A PROCEDURE ERROR OF 132 "ATTEMPT TO WRITE INTO A RESERVED AREA OF THE TRIBUTARY STATUS SLOTS" IS PRODUCED WHEN A WRITE TSS COMMAND IS ISSUED FOR ADDRESS 4. A READ/CLEAR TSS COMMAND IS ISSUED FOR ADDRESS 6.

7.13 TEST FOR READ/CLEAR COMMAND (TEST 21)

THIS TEST ISSUES A READ CLEAR COMMAND TO TRIBUTARY STATUS SLOT 7 AND MAKES SURE THAT NO ERRORS OCCUR.

7.14 TESTS FOR GLOBAL STATUS SLOTS (TEST 22)

THIS TEST READS ALL THE GLOBAL STATUS SLOTS THEN WRITES ALL THE GLOBAL SLOTS USING THE ADDRESSES AS DATA THEN READS THEM BACK AND MAKES SURE THE DATA IS CORRECT. THIS TEST ALSO CHECKS FOR THE LIMITS ON THE WRITE TSS COMMAND BY MAKING SURE A

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PROCEDURE ERROR OCCURS WHEN THE LIMITS ARE EXCEEDED. THIS TEST ALSO CHECKS THE READ/CLEAR COMMAND TO A GLOBAL STATUS SLOT.

7.15 HALT TRIB COMMAND TESTS (TEST 23)

THIS TEST CHECKS THE HALT TRIB COMMAND BY DOING THE FOLLOWING: MASTER CLEAR; MODE DEF; ESTABLISH TRIB; ISTRT TRIB; QUE UP REC BUFFER; ISSUE HALT TRIB COMMAND; CHECK FOR OUTPUT OF REC BUFFER UNUSED; CHECK FOR SECOND OUTPUT OF BUFFER RETURNED COMPLETE. THE TEST THEN ISSUES A SECOND HALT TRIB COMMAND AND CHECKS THAT AFTER A DELAY NO CONTROL OUT OCCURS

7.16 KILL TRIB COMMAND TESTS (TEST 24)

THIS TEST CHECKS THE KILL TRIB COMMAND BY DOING THE FOLLOWING: MASTER CLEAR; MODE DEF.; ESTABLISH TRIB; READ TSS SLOT 1 AND COMPARE FOR GOOD ADDRESS; PUT TRIB IN MAINT STATE; ISSUE KILL TRIB; CHECK FOR PROCEDURE ERROR 112 "KILL TO UNHALTED TRIB"; HALT TRIB; KILL TRIB; READ TSS SLOT 1 AND CHECK FOR PROCEDURE ERROR 106 "NON GLOBAL CONTROL IN COMMAND TO UNESTABLISHED TRIB".

7.17 CHECK FOR PROCEDURE ERROR 102 (TEST 25)

THIS TEST ISSUES ILLEGAL TYPE CODES OF 7 6 5 AND 3 AND CHECKS THAT EACH ONE PRODUCES A PROCEDURE ERROR 102 "ILLEGAL TYPE CODE USED IN AN INPUT COMMAND".

7.18 CHECK FOR PROCEDURE ERROR OF 110 (TEST 26)

THIS TEST ISSUES A MASTER CLEAR; MODE DEF; FOLLOWED BY AN ISTRT TO TRIB ADDRESS OF ZERO. IT THEN CHECKS FOR A PROCEDURE ERROR OF 110 "ATTEMPT TO PERFORM A NON-GLOBAL COMMAND FOR TRIBUTARY ADDRESS OF 0".

7.19 CHECK FOR PROCEDURE ERROR OF 120 (TEST 27)

THIS TEST ISSUES A CONTROL IN WITH A REQUEST KEY OF 7 AND ALSO A CONTROL IN WITH A REQUEST KEY OF 17 THEN IT CHECKS THAT BOTH CASES GIVE PROCEDURE ERROR 120 "ILLEGAL REQUEST KEY ON CONTROL IN."

7.20 CHECK FOR PROCEDURE ERROR OF 134 (TEST 28)

THIS TEST ISSUES A MASTER CLEAR, MODE DEF, AND ESTABLISH TRIB SEQUENCE, FOLLOWED BY AN ATTEMPT TO USE A RESERVED BIT IN BSEL 7 THEN CHECKS THAT THIS PRODUCES A PROCEDURE ERROR OF 134 "ATTEMPT TO USE RESERVED BIT IN BSEL 7 ON CONTROL IN "

7.21 LATCH/UNLATCH POLL CHECK (TEST 29)

THIS TEST CHECKS THE LATCH AND UNLATCH POLL COMMANDS BY DOING THE FOLLOWING SEQUENCE OF COMMANDS:

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MASTER CLEAR; MODE DEF; ESTABLISH TRIB; LATCH POLL
TO DEAD STATE; READ TSS SLOT 2 AND CHECK THAT DEAD
BIT IS ON; UNLATCH POLL; READ TSS SLOT 2; CHECK THAT ACTIVE
BIT IS ON.

7.22 SHORT MESSAGE SENDING TEST (TEST 30)

THIS TEST SENDS A 4 BYTE MESSAGE FROM AN EVEN TRANSMIT
BUFFER TO AN EVEN REC BUFFER IN DDCMP FORMAT CONFIGURED
AS A MULTIPOINT CONTROL STATION FULL DUPLEX. THE TEST
CHECKS THAT REC BUFFERS ARE RETURNED AND DATA IS CORRECT
AND THAT THE NEXT OUTPUT IS TRANSMIT BUFFER RETURNED.
THIS TEST IS ALWAYS DONE IN TTL LOOPBACK MODE.

7.23 CHECK FOR PROCEDURE ERROR 122 (TEST 31)

THIS TEST CHECKS FOR A PROCEDURE ERROR OF 122 BY
PERFORMING THE FOLLOWING: MASTER CLEAR ; MODE DEF;
ESTABLISH BUFFER; CHECK FOR ERROR 122 "ATTEMPT
TO ASSIGN A BUFFER FOR AN UNESTABLISHED TRIB".

7.24 CHECK FOR PROCEDURE ERROR 124 (TEST 32)

THIS TEST CHECKS FOR A PROCEDURE ERROR OF 124 BY
PERFORMING THE FOLLOWING: MASTER CLEAR; MODE DEF;
ESTABLISH TRIB; ESTABLISH BUFFER; CHECK FOR ERROR
124 "ATTEMPT TO ASSIGN A BUFFER FOR A HALTED TRIB".

7.25 CHECK FOR PROCEDURE ERROR 126 (TEST 33)

THIS TEST CHECKS FOR A PROCEDURE ERROR OF 126 BY
PERFORMING THE FOLLOWING: MASTER CLEAR; MODE DEF
ESTABLISH TRIB ; PUT TRIB IN MAINT STATE; ESTABLISH
BUFFER WITH 0 BYTE COUNT; LOOK FOR ERROR 126
"ATTEMPT TO ASSIGN A BUFFER WITH A BYTE COUNT OF 0".

7.26 CHECK FOR PROCEDURE ERROR 130 (TEST 34)

THIS TEST CHECKS FOR A PROCEDURE ERROR OF 130 BY
PERFORMING THE FOLLOWING: MASTER CLEAR; MODE DEF;
ESTABLISH TX BUFFER TO TRIB; CHECK FOR ERROR
130 "ATTEMPT TO ASSIGN A TRANSMIT BUFFER FOR TRIB
0".

7.27 TRANSMIT/RECEIVE 256 BYTES, PTP, DDCMP (TEST 35)

THIS TEST WILL TRANSMIT A BUFFER OF 256 BYTES, STARTING
ON AN EVEN BYTE BOUNDARY TO A REC BUFFER STARTING ON AN
EVEN BYTE BOUNDARY. THE MODE DEFINED IS POINT TO POINT
FULL DUPLEX, DDCMP PROTOCOL. IF THERE IS EXTERNAL LOOP
BACK THEN THE TEST WILL BE DONE OVER THAT LOOPBACK; ELSE
THE LOOPBACK WILL BE SET TO INTERNAL (TTL).

7.28 DMV Q22 MODE TX/RX 256 BYTES, DDCMP (TEST 36) * DMV ONLY *

THIS TEST WILL TRANSMIT A BUFFER OF 256 BYTES, STARTING

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ON AN EVEN BYTE BOUNDARY TO A REC BUFFER STARTING ON AN EVEN BOUNDARY. THE MODE DEFINED IS Q22 FORMAT, POINT TO POINT FULL DUPLEX, DDCMP PROTOCOL. IF THERE IS EXTERNAL LOOPBACK THEN THE TEST WILL USE IT, OTHERWISE THE LOOPBACK WILL BE SET TO INTERNAL(TTL).

7.29 TRANSMIT/RECEIVE 255 BYTES, MTP, DDCMP (TEST 37)

THIS TEST WILL TRANSMIT A BUFFER OF 255 BYTES STARTING ON AN EVEN BYTE ADDRESS TO A REC BUFFER STARTING ON AN ODD BYTE ADDRESS. THE MODE IS FULL DUPLEX CONTROL STATION MULTIPOINT, DDCMP PROTOCOL. THE DATA IS COMPARED FOR CORRECTNESS. THE TEST IS DONE WITH INTERNAL LOOPBACK.

7.30 READ/WRITE MODEM REGISTER TESTS (TEST 38) (DMP ONLY)

THIS TEST WRITES THE MODEM REGS OVER THE VARIOUS INTERFACES WITH A PATTERN OF 100. THE MODEM REGS ARE THEN READ AND COMPARED FOR CORRECTNESS.

 * N O T E ----- THIS TEST ONLY RUNS IF LOOPBACK CONNECTORS

 ARE ATTACHED

7.31 TEST OF MEM EXTENSION BITS. (TESTS 39-41)

THESE THREE TESTS CHECK THE ABILITY OF THE DEVICE TO DO TRANSFERS TO UPPER MEMORY (IF IT EXISTS). THE TRANSFERS ARE DONE BY TRANSMITTING AND RECEIVING A MESSAGE. (TTL LOOPBACK ONLY). THE THREE TESTS ARE DONE FOR BIT 16, BIT 17 AND BITS 16 AND 17 (DMV SET FOR Q18 MODE).

 * N O T E ----- THIS TEST USES MEMORY ONLY IF IT EXISTS

7.32 TEST FOR TX/RX 257 BYTES (TEST 42)

THIS TEST TRANSMITS A MESSAGE OF 257 BYTES FROM A TRANSMIT BUFFER STARTING WITH AN ODD BYTE BOUNDARY TO A RECEIVE BUFFER STARTING ON AN ODD BYTE BOUNDARY IN DDCMP MODE, POINT TO POINT. IF THERE IS EXTERNAL LOOPBACK THEN THE TEST WILL BE DONE OVER THAT LOOPBACK, ELSE THE LOOPBACK WILL BE SET TO INTERNAL(TTL).

7.33 TEST FOR TX/RX 1 BYTE (TEST 43)

THIS TEST TX'S AND REC'S A 1 BYTE MESSAGE FROM AN ODD TX BUFFER TO AN EVEN RX BUFFER IN MAINT MODE, MULTIPOINT CONTROL STATION.

7.34 POLLING STATE TESTS (TEST 44)

THIS TEST CHECKS THE DEGRADING OF THE POLLING STATES FROM ACTIVE TO INACTIVE TO POTENTIALLY DEAD TO DEAD THE SEQUENCE THAT IS EXECUTED IS AS FOLLOWS:

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MASTER CLEAR, MODE DEF(FULL DUP CONTROL STATION),
SET POLL DELAY(GSS ADD 37), ESTABLISH TRIB, SET SELECTION
TIMER(TSS ADD 36), SET NUMBER OF NO DATA MESSAGES TO
INACTIVE TO 10 AND THE NUMBER OF TIME OUTS TO POTENTIALLY
DEAD TO 4, ISTRY TRIB, WAIT FOR RUN STATE, READ TSS (ADD 2),
CHECK FOR INACTIVE BIT, LOOP UNTIL INACTIVE OR TIME OUT, READ
THE SELECTION TIMER(TSS 11), COMPARE IT TO 10, CHANGE MODE
TO HALF DUPLEX, WAIT FOR TSS SLOT 2 TO INDICATE POT. DEAD,
READ SELECTION TIMER(TSS 16), COMPARE IT TO 4, WAIT FOR
CONTROL OUT INDICATING DEAD TRIB, READ SELECTION TIMER(TSS 16)
COMPARE IT TO 10.

8.0 ERROR INFORMATION

8.1 ERROR REPORTING

ERRORS ARE REPORTED BY THE PROGRAM AS THEY OCCUR (IF NOT INHIBITED). THE REPORT CONFORMS TO THE DIAGNOSTIC SUPERVISOR ERROR REPORT FORMAT, AND CONSISTS OF A DESCRIPTION OF THE ERROR, THE TEST NUMBER, SUBTEST NUMBER, PC OF THE ERROR CALL, DEVICE ADDRESS, AND BASIC AND EXTENDED ERROR INFORMATION.

THE FOLLOWING EXAMPLES PROVIDE TYPICAL ERROR REPORTS:

CZDMT DVC FTL ERR 00024 ON UNIT 00 TST 004 SUB 000 PC: 016170
ERROR IN ROM E04 READ = 177777 ; CALCULATED = 017327

FOR ALL OTHER ERRORS, THE REPORT MAY BE MORE EXTENSIVE AND REQUIRE ADDITIONAL DATA TO BE REPORTED.

E

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```

1100
1101      002000      ;      .-2000
1102
1103
1104
1105      000200      DRUN== 200
1106
1107
1108
1109
1110
1111
1112      000001      #LSTIN= 1
1113      000001      #LSTTAG= 1
1114      000000      SVCINS= 0      ; LIST INSTRUCTIONS, SHIFTED RIGHT
1115      000000      SVCTST= 0      ; LIST TEST TAGS, SHIFTED RIGHT
1116      000000      SVCSUB= 0      ; LIST SUBTEST TAGS, SHIFTED RIGHT
1117      000000      SVCGBL= 0      ; LIST GLOBAL TAGS, SHIFTED RIGHT
1118      000000      SVCTAG= 0      ; LIST OTHER TAGS, SHIFTED RIGHT
1119
1120      ;      CHANGE THE VALUES OF THE SVC... SYMBOLS TO BE ZERO IF YOU WISH
1121      ;      TO ALIGN THE MACRO CALLS AND THEIR EXPANSIONS. CHANGE THE
1122      ;      SYMBOLS TO BE MINUS-ONE TO NOT LIST THE EXPANSIONS. YOU MAY
1123      ;      CHANGE THE SYMBOLS AT ANY POINT IN YOUR PROGRAM.
1124
1125

```


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PROGRAM HEADER

```

1126      .SBTTL PROGRAM HEADER
1127      ;**
1128      ; THE PROGRAM HEADER IS THE INTERFACE BETWEEN
1129      ; THE DIAGNOSTIC PROGRAM AND THE SUPERVISOR.
1130      ;--
1131
1132
1133
1134 002000      L$NAME::          ;DIAGNOSTIC NAME
1135 002000      103          .ASCII /C/
1136 002001      132          .ASCII /Z/
1137 002002      104          .ASCII /D/
1138 002003      115          .ASCII /M/
1139 002004      124          .ASCII /T/
1140 002005      000          .BYTE 0
1141 002006      000          .BYTE 0
1142 002007      000          .BYTE 0
1143 002010      L$REV::          ;REVISION LEVEL
1144 002010      106          .ASCII /F/
1145 002011      L$DEPO::          ;0
1146 002011      060          .ASCII /O/
1147 002012      L$UNIT::          ;NUMBER OF UNITS
1148 002012      000000        .WORD 0
1149 002014      L$TIML::          ;LONGEST TEST TIME
1150 002014      003410        .WORD 1800.
1151 002016      L$HPCP::          ;PTR. TO H.W. QUES.
1152 002016      032622        .WORD L$HARD
1153 002020      L$SPCP::          ;PTR. TO S.W. QUES.
1154 002020      000000        .WORD 0
1155 002022      L$HPTP::          ;PTR. TO DEF. H.W. PTABLE
1156 002022      002264        .WORD L$HW
1157 002024      L$SPTP::          ;PTR. TO S.W. PTABLE
1158 002024      000000        .WORD 0
1159 002026      L$LADP::          ;DIAG. END ADDRESS
1160 002026      037740        .WORD L$LAST
1161 002030      L$STA::          ;RESERVED FOR APT STATS
1162 002030      000000        .WORD 0
1163 002032      L$CO::          .WORD 0
1164 002032      000000        .WORD 0
1165 002034      L$DTYP::          ;DIAGNOSTIC TYPE
1166 002034      000000        .WORD 0
1167 002036      L$APT::          ;APT EXPANSION
1168 002036      000000        .WORD 0
1169 002040      L$DTP::          ;PTR. TO DISPATCH TABLE
1170 002040      002132        .WORD L$DISPATCH
1171 002042      L$PRIO::          ;DIAGNOSTIC RUN PRIORITY
1172 002042      000340        .WORD PRIO7
1173 002044      L$ENVI::          ;FLAGS DESCRIBE HOW IT WAS SETUP
1174 002044      000000        .WORD 0
1175 002046      L$EXP1::          ;EXPANSION WORD
1176 002046      000000        .WORD 0
1177 002050      L$MREV::          ;SVC REV AND EDIT #
1178 002050      003          .BYTE C$REVISION
1179 002051      003          .BYTE C$EDIT
1180 002052      L$EF::          ;DIAG. EVENT FLAGS
1181 002052      000000        .WORD 0

```

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1182	002054	000000		.WORD	0	
1183	002056		L\$SPC::	.WORD	0	
1184	002056	000000		.WORD	0	
1185	002060		L\$DEVP::	.WORD	L\$DVTYP	; POINTER TO DEVICE TYPE LIST
1186	002060	002564		.WORD	0	
1187	002062		L\$REPP::	.WORD	0	;PTR. TO REPORT CODE
1188	002062	000000		.WORD	0	
1189	002064		L\$EXP4::	.WORD	0	
1190	002064	000000		.WORD	0	
1191	002066		L\$EXP5::	.WORD	0	
1192	002066	000000		.WORD	0	
1193	002070		L\$AUT::	.WORD	L\$AU	;PTR. TO ADD UNIT CODE
1194	002070	C14544		.WORD	0	
1195	002072		L\$DUT::	.WORD	L\$DU	;PTR. TO DROP UNIT CODE
1196	002072	014540		.WORD	0	
1197	002074		L\$LUN::	.WORD	0	;LUN FOR EXERCISERS TO FILL
1198	002074	000000		.WORD	0	
1199	002076		L\$DESP::	.WORD	L\$DESC	;POINTER TO DIAG. DESCRIPTION
1200	002076	002606		.WORD	0	
1201	002100		L\$LOAD::	EMT	E\$LOAD	;GENERATE SPECIAL AUTOLOAD EMT
1202	002100	104035		.WORD	0	
1203	002102		L\$ETP::	.WORD	0	;POINTER TO ERR_TBL
1204	002102	000000		.WORD	0	
1205	002104		L\$ICP::	.WORD	L\$INIT	;PTR. TO INIT CODE
1206	002104	014036		.WORD	0	
1207	002106		L\$CCP::	.WORD	L\$CLEAN	;PTR. TO CLEAN-UP CODE
1208	002106	014534		.WORD	0	
1209	002110		L\$ACP::	.WORD	L\$AUTO	;PTR. TO AUTO CODE
1210	002110	014472		.WORD	0	
1211	002112		L\$PRT::	.WORD	L\$PROT	;PTR. TO PROTECT TABLE
1212	002112	002122		.WORD	0	
1213	002114		L\$TEST::	.WORD	0	;TEST NUMBER
1214	002114	000000		.WORD	0	
1215	002116		L\$DLY::	.WORD	0	;DELAY COUNT
1216	002116	000000		.WORD	0	
1217	002120		L\$HIME::	.WORD	0	;PTR. TO HIGH MEM
1218	002120	000000		.WORD	0	
1219						
1220	002122		L\$PROT::	.WORD	-1	
1221	002122	177777		.WORD	-1	
1222	002124	177777		.WORD	-1	
1223	002126	177777		.WORD	-1	
1224						

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DISPATCH TABLE

1225
1226
1227
1228
1229
1230 002130 000054
1231 002132
1232 002132 014546
1233 002134 014726
1234 002136 015260
1235 002140 015612
1236 002142 016144
1237 002144 016476
1238 002146 017030
1239 002150 017362
1240 002152 017522
1241 002154 017662
1242 002156 020046
1243 002160 021200
1244 002162 021312
1245 002164 021522
1246 002166 021766
1247 002170 022176
1248 002172 022454
1249 002174 022706
1250 002176 023172
1251 002200 023300
1252 002202 023406
1253 002204 023522
1254 002206 024250
1255 002210 024676
1256 002212 025324
1257 002214 025440
1258 002216 025524
1259 002220 025752
1260 002222 026200
1261 002224 026526
1262 002226 026622
1263 002230 026742
1264 002232 027110
1265 002234 027276
1266 002236 027414
1267 002240 027536
1268 002242 027700
1269 002244 027774
1270 002246 030422
1271 002250 030664
1272 002252 031126
1273 002254 031370
1274 002256 031506
1275 002260 031604
1276
1277
1278
1279
1280

```
.SBTTL DISPATCH TABLE
://////
:/ THE DISPATCH TABLE CONTAINS THE STARTING ADDRESS OF EACH TEST.
:/ IT IS USED BY THE SUPERVISOR TO DISPATCH TO EACH TEST.
://////
      .WORD 44
L$DISPATCH::
      .WORD T1
      .WORD T2
      .WORD T3
      .WORD T4
      .WORD T5
      .WORD T6
      .WORD T7
      .WORD T8
      .WORD T9
      .WORD T10
      .WORD T11
      .WORD T12
      .WORD T13
      .WORD T14
      .WORD T15
      .WORD T16
      .WORD T17
      .WORD T18
      .WORD T19
      .WORD T20
      .WORD T21
      .WORD T22
      .WORD T23
      .WORD T24
      .WORD T25
      .WORD T26
      .WORD T27
      .WORD T28
      .WORD T29
      .WORD T30
      .WORD T31
      .WORD T32
      .WORD T33
      .WORD T34
      .WORD T35
      .WORD T36
      .WORD T37
      .WORD T38
      .WORD T39
      .WORD T40
      .WORD T41
      .WORD T42
      .WORD T43
      .WORD T44
```


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SOFTWARE P-TABLE

1318
1319
1320
1321
1322
1323
1324
1325
1326
1327
1328
1329
1330
1331
1332
1333
1334
1335
1336

002314 000000
002316
002316

002316

.SBTTL SOFTWARE P-TABLE

;/;;;
;/ THE SOFTWARE P-TABLE CONTAINS THE VALUES OF THE PROGRAM
;/ PARAMETERS THAT CAN BE CHANGED BY THE OPERATOR.
;/;;;

.WORD L10002-L#SW/2
L#SW::
SFPTBL::

L10002:

```

1337
1338
1339          .SBTTL  GLOBAL EQUATES SECTION
1340
1341
1342          ; ////////////////////////////////////////////////////////////////////
1343          ;//      THE GLOBAL EQUATES SECTION CONTAINS PROGRAM EQUATES THAT
1344          ;//      ARE USED IN MORE THAN ONE TEST.
1345          ; ////////////////////////////////////////////////////////////////////
1346
1347          ;
1348          ; BIT DIFINITIONS
1349          ;
1350          100000 BIT15== 100000
1351          040000 BIT14== 40000
1352          020000 BIT13== 20000
1353          010000 BIT12== 10000
1354          004000 BIT11== 4000
1355          002000 BIT10== 2000
1356          001000 BIT09== 1000
1357          000400 BIT08== 400
1358          000200 BIT07== 200
1359          000100 BIT06== 100
1360          000040 BIT05== 40
1361          000020 BIT04== 20
1362          000010 BIT03== 10
1363          000004 BIT02== 4
1364          000002 BIT01== 2
1365          000001 BIT00== 1
1366          ;
1367          001000 BIT9== BIT09
1368          000400 BIT8== BIT08
1369          000200 BIT7== BIT07
1370          000100 BIT6== BIT06
1371          000040 BIT5== BIT05
1372          000020 BIT4== BIT04
1373          000010 BIT3== BIT03
1374          000004 BIT2== BIT02
1375          000002 BIT1== BIT01
1376          000001 BIT0== BIT00
1377          ;
1378          ; EVENT FLAG DEFINITIONS
1379          ; EF32:EF17 RESERVED FOR SUPERVISOR TO PROGRAM COMMUNICATION
1380          ;
1381          000040 EF.START== 32. ; START COMMAND WAS ISSUED
1382          000037 EF.RESTART== 31. ; RESTART COMMAND WAS ISSUED
1383          000036 EF.CONTINUE== 30. ; CONTINUE COMMAND WAS ISSUED
1384          000035 EF.NEW== 29. ; A NEW PASS HAS BEEN STARTED
1385          000034 EF.PWR== 28. ; A POWER-FAIL/POWER-UP OCCURRED
1386          ;
1387          ;
1388          ; PRIORITY LEVEL DEFINITIONS
1389          ;
1390          000340 PRI07== 340
1391          000300 PRI06== 300
1392          000240 PRI05== 240

```

CZDMTFO DMP/V-11 FCTNL TST #1
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GLOBAL EQUATES SECTION

1393	000200	PRI04== 200
1394	000140	PRI03== 140
1395	000100	PRI02== 100
1396	000040	PRI01== 40
1397	000000	PRI00== 0
1398		;
1399		; OPERATOR FLAG BITS
1400		;
1401	000004	EVL== 4
1402	000010	LOT== 10
1403	000020	ADR== 20
1404	000040	IDU== 40
1405	000100	ISR== 100
1406	000200	UAM== 200
1407	000400	BOE== 400
1408	001000	PNT== 1000
1409	002000	PRI== 2000
1410	004000	IXE== 4000
1411	010000	IBE== 10000
1412	020000	IER== 20000
1413	040000	LOE== 40000
1414	100000	MOE== 100000

```

;*****
;* PROGRAM EVENT FLAG DEFINITIONS
;*****

```

```

;*****
;* MAINTENANCE REGISTER - BSEL1
;*****

```

1424	000200	RUN = BIT7
1425	000100	MCLR = BIT6
1426	000020	STEPLU = BIT4
1427	000010	LULOOP = BIT3
1428	000004	ROMO = BIT2
1429	000002	ROMI = BIT1
1430	000001	STEPMP = BIT0

```

;*****
; OTHER BIT DEFINITIONS
;*****

```

1435	000010	Q22BIT =BIT3
1436	000200	RQI =200
1437	000020	RDI =020
1438	000200	RDO =200
1439		
1440		

```

1441      .SBTTL  GLOBAL DATA SECTION
1442
1443      ;////////////////////////////////////////////////////
1444      ;//      THE GLOBAL DATA SECTION CONTAINS DATA THAT ARE USED
1445      ;//      IN MORE THAN ONE TEST.
1446      ;////////////////////////////////////////////////////
1447
1448      ;*****
1449      ;* MISCELLANEOUS STORAGE
1450      ;*****
1451 002316 000000 SAVE4:  .WORD  0          ;SAVE LOC 4 HERE (ERROR TRAP VECTOR)
1452 002320 000000 SAVE6:  .WORD  0
1453 002322 000000 PSTACK: .WORD  0
1454 002324 000000 SUBRPC: .WORD  0
1455 002326 000000 ERROR1: .WORD  0
1456 002330 000000 FRSTIM: .WORD  0
1457 002332 000000 LOGDEV: .WORD  0
1458 002334 000000 IFLAG:  .WORD  0
1459 002336 000000 $GDDAT: .WORD  0          ;GOOD AND BAD DATA STORAGE
1460 002340 000000 $BDDAT: .WORD  0
1461 002342 000000 COUNT:  .WORD  0
1462 002344 000000 REG:    .WORD  0
1463 002346 000000 STARES: .WORD  0          ;INDICATES PASSES
1464 002350 000000 DEVMAP: .WORD  0
1465 002352 000000 DEVPTR: .WORD  0
1466 002354 000000 FRSPAS: .WORD  0
1467 002356 000000 MODINT: .WORD  0          ;MODEM INTERFACE SELECTION
1468 002360 000000 TRIBN:  .WORD  0          ;POINTS TO CURRENT TRIP NUMBER.
1469 002362 000040 TRIBMX: .WORD 32.         ;MAXIMUM NUMBER OF TRIBS
1470 002364 000000 TRIBH:  .WORD  0          ;VALUE OF HIGHEST TRIB USED
1471
1472 002366 000000 ROMN:   .WORD  0          ;CURRENT ROM AND USED FOR TEST #
1473 002370 000000 ROMN1:  .WORD  0          ;CURRENT ROM NUMBER
1474 002372 000000 WORDT:  .WORD  0          ;CURRENT ROM CONTENTS.
1475 002374 177777 CWORD:  .WORD -1         ;CURRENT CRC CAL.
1476 002376 000000 MODQ22: .WORD  0          ;DMV Q22 FORMAT FLAG (Q22 MODE)
1477 002400 000000 EXLOOP: .WORD  0          ;DMV EXTERNAL LOOP FLAG
1478 002402 000000 ERRWRD: .WORD  0          ;ERROR OCCURRED.
1479 002404 000000 CADDR:  .WORD  0          ;CURRENT ROM ADDR.
1480 002406 000000 ERRADD: .WORD  0          ;PC OF ERROR
1481 002410 000000 PERR:   .WORD  0          ;PROCEDURE ERROR CHECKED
1482 002412 000000 TSSADD: .WORD  0          ;WORD FOR TSS ADD
1483 002414 003406 TYLST:  .WORD 3406
1484 002416 002403      .WORD 2403
1485 002420
1486 002420 000000 TXADD:  .WORD  0          ;TX BUFF ADDRESS
1487 002422 000000 RXADD:  .WORD  0          ;RX BUFF ADDRESS
1488 002424 000000 RXCC:   .WORD  0          ;RX CHAR COUNT
1489 002426 000000 TXCC:   .WORD  0          ;TX CHAR COUNT
1490 002430 000000 CODEW:  .WORD  0          ;LOCATION FOR ERROR CODES
1491 002432 000000 GENWRD: .WORD  0          ;USED FOR MAINT STATE AND EX MEM
1492 002434 000000 CRCCAL: .WORD  0          ;TEMP FOR CRC
1493 002436 000000 ROMADD: .WORD  0          ;ROM ADDRESS
1494
1495      ;***** CURRENT DEVICE PARAMETERS *****
1496 002440 BSELO:

```


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GLOBAL DATA SECTION

1497	002440		SELO:			
1498	002440	160170	MPCSR:	.WORD	160170	; POINTER TO M8200,4,7 CSR'S
1499	002442	160171	BSEL1:	.WORD	160171	; POINTER TO BSEL1
1500	002444		SEL2:			
1501	002444	160172	BSEL2:	.WORD	160172	
1502	002446	160173	BSEL3:	.WORD	160173	
1503	002450		BSEL4:			
1504	002450	160174	SEL4:	.WORD	160174	; POINTER TO SEL4
1505	002452	160175	BSEL5:	.WORD	160175	
1506	002454		BSEL6:			
1507	002454	160176	SEL6:	.WORD	160176	
1508	002456	160177	BSEL7:	.WORD	160177	
1509	002460		BSEL10:			
1510	002460	160200	SEL10:	.WORD	160200	; POINTER TO SEL10 (REQ'D FOR DMV Q22 MODE)
1511	002462		KMRVEC:			
1512	002462	000300	MPIVEC:	.WORD	300	; M8200,4,7 INPUT INTERRUPT VECTOR
1513	002464		KMTVEC:			
1514	002464	000304	MPOVEC:	.WORD	304	; M8200,4,7 OUTPUT INTERRUPT VECTOR
1515	002466	000000	SPEEDM:	.WORD	0	; SPEED OF LINE UNIT
1516	002470		KMRLVL:			
1517	002470		KMTLVL:			
1518	002470	000240	MPRIOR:	.WORD	240	; M8200,4,7 DEVICE PRIORITY
1519	002472	000000	OPTYP:	.WORD	0	; OPTION TYPE
1520	002474	000000	IFTYP:	.WORD	0	; INTERFACE TYPE
1521	002476	000000	TSTCON:	.WORD	0	; TEST CONNECTOR INDICATOR
1522	002500	000000	RETADR:	.WORD	0	; SUBR ERROR RETURN ADDRESS
1523	002502	000000	REDBYT:	.WORD	0	; LO BYTE CONTAINS BYTE READ FROM LU REG
1524	002504	000000	WRIBYT:	.WORD	0	; LO BYTE CONTAINS BYTE TO LOAD INTO LU REG
1525	002506	000000	AXNUM:	.WORD	0	; NUMBER (0-7) OF EXTENDED REG BYTE BEING TESTED
1526	002510	000000	DISILO:	.WORD	0	; CONTAINS CURRENT STATE OF DISSI IN BITS

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GLOBAL DATA SECTION

```

1527
1528 002512 000
1529 002513 000
1530 002514 000
1531 002515 000
1532 002516 000
1533 002517 000
1534 002520 000
1535 002521 000
1536
1537
1538 002522 000000
1539 002524 000000
1540 002526 000000
1541 002530 000000
1542 002532 000000
1543 002534 000000
1544 002536 000000
1545 002540 000000
1546
1547
1548 002542 000000
1549 002544 000000
1550 002546 000000
1551 002550 000000
1552 002552 000000
1553 002554 000000
1554 002556 000000
1555 002560 000000
1556 002562 000000
1557

```

```

;***** STORAGE FOR DATA READ IN ADDRESS TESTS *****
REDDAT: .BYTE 0
        .BYTE 0
        .BYTE 0
        .BYTE 0
        .BYTE 0
        .BYTE 0
        .BYTE 0
        .BYTE 0
        .BYTE 0

;***** GENERAL PURPOSE SCRATCH STORAGE *****
REG0:   .WORD 0
REG1:   .WORD 0
REG2:   .WORD 0
REG3:   .WORD 0
REG4:   .WORD 0
REG5:   .WORD 0
REG6:   .WORD 0
REG7:   .WORD 0

;***** SCRATCH STORAGE FOR MESSAGE REPORTING *****
$TMP0:  .WORD 0
TMP0:   .WORD 0
TMP1:   .WORD 0
TMP2:   .WORD 0
TMP3:   .WORD 0
TMP4:   .WORD 0
TMP5:   .WORD 0
TMP6:   .WORD 0
TMP7:   .WORD 0

```

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GLOBAL DATA SECTION

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002564				
002564	046504	026520	030461	
002572	047440	020122	046504	
002600	026526	030461	000	
	002606			
002606				
002606	046504	020120	051117	
002614	042040	053115	030455	
002622	020061	052506	041516	
002630	044524	047117	046101	
002636	042040	040511	027107	
002644	000			
	002646			

.SBTTL GLOBAL TEXT SECTION

```

;*****
;# THE GLOBAL TEXT SECTION CONTAINS FORMAT STATEMENTS,
;# MESSAGES, AND ASCII INFORMATION THAT ARE USED IN
;# MORE THAN ONE TEST.
;*****

```

```

;*****
; * NAMES OF DEVICES SUPPORTED BY PROGRAM
;*****

```

```

L#DVTYP::
      .ASCIZ /DMP-11 OR DMV-11/

```

.EVEN

```

L#DESC::
      .ASCIZ /DMP OR DMV-11 FUNCTIONAL DIAG./

```

.EVEN

```

;
; FORMAT STATEMENTS USED IN PRINT CALLS
;

```


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GLOBAL SUBROUTINES

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```

:*****
: FUNCTIONAL DESCRIPTION: WRDI - WAIT FOR READY IN
: THIS ROUTINE FIRST SAVES THE CALLING ADDRESS
: IN ERRADD, UNLESS ENTERED AT WRDI1.
: THEN CHECK FOR TIME OUT IF TIME OUT REPORT
: ERROR AND EXIT. IF NOT TIME OUT CHECK FOR
: READY IN. IF READY IN EXIT IF NOT READY IN
: DELAY A LITTLE AND CHECK FOR READY OUT. IF
: READY OUT REPORT ERROR AND EXIT ROUTINE.
: IF NOT READY OUT GO BACK AND CHECK FOR TIME OUT.
:
: INPUTS: R5= CALLING ADDRESS
: OUTPUTS: ERRWRD= -1 IF ERROR OCCURED IN ROUTINE
: SUBORDINATE ROUTINES USED:
: TOUT- TIME OUT
: WAIT50- DELAY A LITTLE
: CALLING SEQUENCE:
: JSR R5,WRDI ;OR
: JSR R5,WRDI1
:*****

```

```

WRDI:  MOV R5,ERRADD ;STORE AWAY ERROR ADD.
WRDI1: JSR R5,TOUT ;GO TO TIME OUT
      TST ERRWRD ;IF ERROR EXIT
      BMI WRDIE ;
      BIT #20,88SEL2 ;RDI SET?
      BNE WRDIE ;YES-EXIT
      JSR PC,WAIT50 ;SHORT DELAY
      BIT #200,88SEL2 ;RDYO SET?
      BEQ WRDI1 ;NO-LOOP.
;RDO INSTEAD OF RDI
      TRAP C#ERDF
      .WORD 2
      .WORD MEF15
      .WORD ERR26
      DEC ERRWRD ;SET ERROR OCCURRED
      CLRB 88SEL2 ;CLEAR RDYO
WRDIE: RTS R5 ;EXIT.

```

177466 14:
177452

002402
177430

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GLOBAL SUBROUTINES

```

1699
1700 ;*****
1701 ; FUNCTIONAL DESCRIPTION: WFPE - WAIT FOR PROCEDURE ERROR
1702 ; FIRST SAVE CALLING ADDRESS IN ERRADD.
1703 ; THEN WAIT FOR READY OUT, IF ERROR FROM
1704 ; WRDO ROUTINE EXIT THIS ROUTINE. ELSE
1705 ; GET CONTROL KEY FROM BSEL2 IF NOT CONTROL
1706 ; OUT REPORT ERROR AND EXIT. ELSE CHECK THAT
1707 ; CONTROL OUT CODE IS SAME AS IN PERR. IF
1708 ; EQUAL THEN EXIT ELSE REPORT ERROR AND EXIT.
1709 ;
1710 ; INPUTS: R5= CALLING ADDRESS
1711 ; PERR = PROCEDURE ERROR EXPECTED.
1712 ; OUTPUTS: ERRWRD= -1 IF ERROR OCCURED IN ROUTINE
1713 ; SUBORDINATE ROUTINES USED:
1714 ; WRD01 - WAIT FOR READY OUT
1715 ; CALLING SEQUENCE:
1716 ; JSR R5,WFPE
1717 ;-----
1718
1719 003016 010537 002406 WFPE: MOV R5,ERRADD ;STORE OFF ERROR ADDRESS
1720 003022 004537 002652 JSR R5,WRD01 ;WAIT FOR READY OUT
1721 003026 005737 002402 TST ERRWRD
1722 003032 100452 BHI 20# ;IF ERROR OCCURRED IN SR
1723 ; EXIT THIS SR
1724 003034 117737 177404 002340 MOVB BSEL2,#BDDAT
1725 003042 042737 177770 002340 BIC #7<7>,#BDDAT ; STRIP DATA TO CONTROL KEY
1726 003050 122737 000001 002340 CMPB #01,#BDDAT
1727 003056 001415 BEQ 10# ; GO TO 10 IF CONTROL OUT
1728 ; ELSE REPORT ERROR
1729 003060 012737 000001 002336 MOV #01,#GDDAT ;SET GOOD DATA TO 01
1730 003066 012737 012042 002430 MOV #M18F,COEW ;SET UP CODE WORD
1731
1732 ;ERROR NOT CONTROL OUT
1733
1734 003074 104455 TRAP C#ERDF
1735 003076 000003 .WORD 3
1736 003100 011550 .WORD EROIC
1737 003102 010366 .WORD ERR27
1738 003104 005337 002402 DEC ERRWRD ;SET ERROR OCCURRED
1739 003110 000423 BR 20# ;AND EXIT SUBROUTINE
1740 003112 117737 177336 002340 10#: MOVB BSEL6,#BDDAT ;MOVE ERROR CODE TO BDDAT
1741 003120 123737 002410 002340 CMPB PERR,#BDDAT ;IS IT WHAT IT SHOULD BE
1742 003126 001414 BEQ 20# ; IF SO GO TO 20
1743 003130 013737 002410 002336 MOV PERR,#GDDAT ;PUT EXPECTED IN GOOD DATA
1744 003136 012737 012024 002430 MOV #M13F,COEW ;SET UP ERROR WORD
1745
1746 ;ERROR BAD ERROR CODE RETURNED
1747
1748 003144 104455 TRAP C#ERDF
1749 003146 000004 .WORD 4
1750 003150 011550 .WORD EROIC
1751 003152 010366 .WORD ERR27
1752 003154 005337 002402 DEC ERRWRD ;SET ERROR INDICATOR
1753 003160 20#:
1754 003160 000205 RTS R5 ;RETURN TO CALLER

```

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GLOBAL SUBROUTINES

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*****
: FUNCTIONAL DESCRIPTION:      CONTIN - CONTROL IN ROUTINE
:                             THIS ROUTINE SAVES THE CALLING ADDRESS IN R5.
:                             THEN SETS RQI AND WAITS FOR RDI TO BE RETURNED BY
:                             THE DMP/V-11. IF WRDI REPORTS ERROR EXIT TEST. ELSE
:                             LOAD BSEL 3 WITH TRIB NUMBER FROM TRIBN,CLEAR THE RQI
:                             BIT,MOV DATA FROM R4 TO SEL4,DATA FROM R3 TO SEL6, AND
:                             THEN ISSURE CONTROL IN AND EXIT ROUTINE.
:
: INPUTS:                     R4 = SEL4 DATA
:                             R3 = SEL6 DATA
:                             TIRBN = TRIBUTARY NUMBER.
:                             R5 = CALLING ADDRESS
:
: OUTPUTS:                    ERRWRD = -1 IF ERROR REPORTED IN THIS OR ANY SUBODINATE
:                             SUB ROUTINE.
: SUBORDINATE ROUTINES USED:
:                             WRDI1 - WAIT FOR READY IN.
: CALLING SEQUENCE:
:                             JSR      R5,CONTIN
: *****

```

```

CONTIN: MOV      R5,ERRADD      ;SET UP ERROR ADDRESS
        BIS      #RQI,8BSELO    ;SET REQUEST
        JSR      R5,WRDI1      ;GO WAIT FOR RDI
        TST      ERRWRD
        BMI      43$           ;EXIT IF ERROR OCCURRED
        MOVB     TRIBN,8BSEL3   ;SET TRIBN
        BIC      #RQI,8BSELO    ;CLEAR REQUEST
        MOV      R4,8BSEL4     ;SET DATA
        MOV      R3,8BSEL6     ;SET REQUEST TYPE
        MOVB     #01,8BSEL2    ;DO CONTROL IN
43$:    RTS      R5            ;RETURN TO CALLER

```

177244
177232
177216
177204

CZDMTFO DMP/V 11 FCTNL TST #1
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GLOBAL SUBROUTINES

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;*****
; FUNCTIONAL DESCRIPTION:      GETOUT - GET OUTPUT CODE
;
;   THIS SUB-ROUTINE WAITS FOR RDO(REPORTS ERROR IF
;   RDI OR TIME OUT);CHECKS THAT OUTPUT COMMAND TYPE
;   IS THE SAME AS THE VALUE IN #GDDAT(REPORTS ERROR
;   IF NOT);THEN CHECKS THAT TRIB NUMBER IN BSEL3 IS
;   EQUAL TO THE VALUE IN TRIBN(REPORTS ERROR IF NOT
;   THEN RETURNS TO CALLER.
;
; INPUTS:      #GDDAT = OUTPUT COMMAND TYPE EXPECTED
;              TRIBN  = TRIBUTARY ADDRESS EXPECTED
;              R5     = ADDRESS OF CALLING ROUTINE
;
; OUTPUTS:     ERRWRD = -1 IF ERROR OCCURED
;
; SUBORDINATE ROUTINES USED:
;              WRD01 - WAIT FOR READY OUT
;
; CALLING SEQUENCE:
;              JSR   R5,GETOUT
;-----*****
    
```

```

GETOUT:  MOV     R5,ERRADD      ;STORE OFF ERROR ADD.
        JSR     R5,WRD01      ; GO WAIT FOR READY OUT
        TST     ERRWRD
        BMI     20$          ;EXIT IF ERROR OCCURRED
        MOVB   #BSEL2,#BDDAT ;GET COMMAND TYPE TO BDDAT
        BIC    #<C<7>,#BDDAT ;STRIP IT TO JUST COMMAND TYPE
        CMP    #BDDAT,#GDDAT ;IS IT THE RIGHT VALUE??
        BEQ    10$          ;IF YES GO TO 10
        ;ELSE REPORT ERROR
        MOV    #M28F,CODEW
        TRAP   C#ERDF
        .WORD  5
        .WORD  EROIC
        .WORD  ERR27
        DEC    ERRWRD
        BR     20$          ;AND EXIT ON ERROR

10$:    MOV     TRIBN,#GDDAT   ;SET UP GDDAT FOR GOOD TRIBN
        MOVB   #BSEL3,#BDDAT ;GET TRIB NUMBER RETURNED
        CMP    #BDDAT,#GDDAT ;ARE THEY THE SAME???
        BEQ    20$          ;IF YES GO TO 20
        ;ELSE REPORT ERROR
        TRAP   C#ERDF
        .WORD  6
        .WORD  MEF18A
        .WORD  ERR18
        DEC    ERRWRD
20$:    RTS     R5           ;RETURN TO CALLER
    
```

```

003242 010537 002406
003246 004537 002652
003252 005737 002402
003256 100444
003260 117737 177160 002340
003266 042737 177770 002340
003274 023737 002340 002336
003302 001412
003304 012737 012051 002430
003312 104455
003314 000005
003316 011550
003320 010366
003322 005337 002402
003326 000420
003330 013737 002360 002336 10$:
003336 117737 177104 002340
003344 023737 002340 002336
003352 001406
003354 104455
003356 000006
003360 012304
003362 007642
003364 005337 002402
003370 000205 20$:
    
```


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GLOBAL SUBROUTINES

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```

;.....
; FUNCTIONAL DESCRIPTION:   GETRKY - GET RETURN KEY VALUE
;                           THIS ROUTINE GETS THE VALUE OF THE RETURN KEY
;                           FROM BSEL6 AND COMPARES IT TO THE VALUE IN
;                           $GDDAT. IF EQUAL EXIT IF NOT EQUAL REPORT
;                           ERROR AND EXIT.
;
; INPUTS:                   R5      = ADDRESS OF CALLER
;                           $GDDAT  = VALUE OF EXPECTED RETURN KEY
;
; OUTPUTS:                  ERRWRD  = -1 IF ERROR OCCURS
; CALLING SEQUENCE:
;                           JSR      R5,GETRKY
;.....
GETRKY: MOV      R5,ERRADD      ; STORE OFF ERROR ADDRESS
        MOV      @BSEL6,$BDDAT ; GET RETURN KEY FROM BSEL6
        BIC      @?C<177>,$BDDAT ; STRIP TO VALID BITS
        CMP      $BDDAT,$GDDAT ; ARE THE VALUES EQUAL
        BEQ      10$          ; IF YES GO TO 10
                           ; ELSE ERROR.....
        MOV      @M12F,CODEW   ; SET UP CODE WORD
        TRAP    C$ERDF
        .WORD   7
        .WORD   EROIC
        .WORD   ERR27
        DEC     ERRWRD        ; SET ERROR OCCURRED
10$:    RTS      R5           ; RETURN TO CALLER

```

```

003372 010537 002406
003376 017737 177052 002340
003404 042737 177600 002340
003412 023737 002340 002336
003420 001411
003422 012737 012011 002430
003430 104455
003432 000007
003434 011550
003436 010366
003440 005337 002402
003444 000205

```

CZDMTFO DMP/V-11 FCTNL TST 01
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GLOBAL SUBROUTINES

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```

;.....
; FUNCTIONAL DESCRIPTION:      GETDAT - GET DATA CODE
;                               THIS ROUTINE GETS THE DATA CODE FROM BSEL4
;                               AND COMPARES IIT TO THE VALUE IN %GDDAT
;                               IF EQUAL EXIT ELSE REPORT ERROR AND EXIT
;
; INPUTS:      R5      - ADDRESS OF CALLER
;              %GDDAT - VALUE OF EXPECTED DATA
;
; OUTPUTS:     ERRWRD  - -1 IF ERROR OCCURED
; CALLING SEQUENCE:
;              JSR     R5,GETDAT
;.....

```

```

003446 010537 002406
003452 017737 176772 002340
003460 023737 002340 002336
003466 001411
003470 012737 012056 002430
003476 104455
003500 000010
003502 011550
003504 010366
003506 005337 002402
003512 000205

```

```

GETDAT: MOV     R5,ERRADD      ;STORE OFF ERROR ADDRESS
        MOV     %BSEL4,%BDDAT ;GET DATA
        CMP     %BDDAT,%GDDAT ;COMPARE GOOD AND BAD
        BEQ    100          ;IF OK GO TO 10
                          ;ELSE ERROR
                          ;ERROR BAD DATA CODE
        MOV     #%M30F,%CODEW
        TRAP   C%ERDF
        .WORD  8
        .WORD  ER0IC
        .WORD  ERR27
100:    DEC     ERRWRD      ;SET ERROR OCCURRED
        RTS     R5         ;RETURN TO CALLER

```

CZDMTFO DMP/V-11 FCTNL TST #1
CZDMTF.P11 08-NOV-84 10:38

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GLOBAL SUBROUTINES

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003514 010537 002406
003520 017737 176730 002340
003526 065737 002376
003532 001403
003534 017737 176720 002340
003542 042737 140000 002340
003550 023737 002340 002336
003556 001406

003560 104455
003562 000011
003564 012175
003566 010156
003570 005337 002402
003574 000205

```
*****  
: FUNCTIONAL DESCRIPTION: GETCC - GET CHARACTER COUNT  
: THIS ROUTINE GETS THE CHAR. COUNT FROM EITHER:  
: (1) CSR6 IF DMP OR DMV IN Q18 MODE  
: (2) CSR10 IF DMV IN Q22 MODE  
: AND THEN COMPARES IT TO THE VALUE IN #GDDAT.  
: IF EQUAL EXIT, ELSE REPORT ERROR AND EXIT  
:  
: INPUTS: R5 = ADDRESS OF CALLER  
: #GDDAT = VALUE OF EXPECTED DATA  
:  
: OUTPUTS: ERRWRD = -1 IF ERROR OCCURED  
: CALLING SEQUENCE:  
: JSR R5,GETCC  
:-----  
GETCC: MOV R5,ERRADD ;STORE OFF RETURN ADDRESS  
MOV #SEL6,#BDDAT ;GET CSR6 TO BDDAT  
TST MODQ22 ;IS THIS DMV W/Q22 ?  
BEQ 10 ;  
MOV #SEL10,#BDDAT ;IF YES: GET CSR10 INSTEAD  
10: BIC #140000,#BDDAT ;STRIP TO CHAR COUNT  
CMP #BDDAT,#GDDAT ;COMPARE  
BEQ 10 ;IF OK GO TO 10  
  
;ELSE REPORT ERROR : BAD CHAR COUNT  
  
TRAP C#ERDF  
.WORD 9  
.WORD HEF16A  
.WORD ERR23  
10: DEC ERRWRD ;SET ERROR OCCURRED  
RTS R5 ;RETURN TO CALLER
```

CZDMTFO DMP/V-11 FCTNL TST #1
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GLOBAL SUBROUTINES

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*****
; FUNCTIONAL DESCRIPTION:  GETBA - GET BUFFER ADDRESS
; THIS ROUTINE GETS THE BUFFER ADDRESS FROM SEL4
; AND THEN COMPARES IT TO THE VALUE IN %GDDAT
; IF EQUAL EXIT ELSE REPORT ERROR AND EXIT
; (IF DMV IN Q22 MODE: SEL6 IS CHECKED FOR 0).
;
; INPUTS:      R5      = ADDRESS OF CALLER
;              %GDDAT = VALUE OF EXPECTED BUFFER ADDRESS
;
; OUTPUTS:     ERRWRD = -1 IF ERROR OCCURED
; CALLING SEQUENCE:
;              JSR     R5,GETBA
;-----
```

003576 010537 002406
003602 017737 176642 002340
003610 023737 002340 002336
003616 001015
003620 005737 002376
003624 001420
003626 012737 000000 002340
003634 017737 176614 002336
003642 023737 002340 002336
003650 001406

003652
003652 104455
003654 000012
003656 012240
003660 010156
003662 005337 002402
003666 000205

```
GETBA:  MOV     R5,ERRADD      ;STORE OFF ERROR ADDRESS
        MOV     %SEL4,%BDDAT  ;GET ADDRESS OUTPUT
        CMP     %BDDAT,%GDDAT ;ARE THEY EQUAL ?
        BNE    1%           ;IF NOT: REPORT IN
        TST    MODQ22        ;* IS THIS Q22 MODE ?
        BEQ    10%          ;* IF NOT: EXIT
        MOV    %0,%BDDAT     ;* GET EXPECTED EXTENDED ADDRESS
        MOV    %SEL6,%GDDAT  ;* GET ACTUAL EXTENDED ADDRESS
        CMP    %BDDAT,%GDDAT ;* ARE THEY EQUAL ?
        BEQ    10%          ;IF YES: EXIT

;ELSE ERROR
1%:     TRAP    C%ERDF
        .WORD  10
        .WORD  MEF17A
        .WORD  ERR23
10%:   DEC     ERRWRD        ;SET ERROR OCCURRED
        RTS     R5           ;RETURN TO CALLER
```

CZDMTFO DMP/V-11 FCTNL TST #1
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GLOBAL SUBROUTINES

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```
*****
; FUNCTIONAL DESCRIPTION: GETOC - GET OUTPUT CODE
; THIS ROUTINE GETS THE OUTPUT CODE FROM
; BSEL6 AND THEN COMPARES IT TO
; THE VALUE IN $GDDAT
; IF EQUAL EXIT ELSE REPORT ERROR AND EXIT
;
; INPUTS: R5 = ADDRESS OF CALLER
; $GDDAT = VALUE OF EXPECTED OUTPUT CODE
;
; OUTPUTS: ERRWRD = -1 IF ERROR OCCURED
; CALLING SEQUENCE:
; JSR R5,GETOC
;-----*****
```

```
GETOC: MOV R5,ERRADD ;STORE OFF ERROR ADDRESS
MOV BSEL6,$BDDAT ;GET OUTPUT FROM BSEL6
BIC #1C<377>,$BDDAT ;STRIP TO VALID BITS
CMP $BDDAT,$GDDAT ;ARE THEY EQUAL
BEQ 10$ ;IF SO GO TO 10
;ELSE ERROR
MOV #M18F,CODEW
TRAP C#ERDF
.WORD 11
.WORD EROIC
.WORD ERR27
DEC ERRWRD ;SET ERROR OCCURRED
10$: RTS R5 ;RETURN TO CALLER
```

CZDMTFO DMP/V 11 FCTNL TST #1
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GLOBAL SUBROUTINES

```

2002 ;*****
2003 ; FUNCTIONAL DESCRIPTION: MEMEX - MEMORY EXTENSION CODE
2004 ; THIS ROUTINE IS USED WITH THE
2005 ; MEMORY EXTENSION TESTS. THE ROUTINE FIRST
2006 ; CHECKS FOR A CONTROL OUT.. IF THE CONTROL
2007 ; OUT IS A REC COMPLETE IT COMPARES THE FIRST
2008 ; DATA WORD ON THE EXTENSIONS PAGE IF GOOD
2009 ; THEN EXIT IF BAD REPORT ERROR AND EXIT.
2010 ; IF CONTROL OUT IS NON EXISTENT MEMORY THEN
2011 ; CHECK TO BE SURE MEMORY IS NON-EXISTENT
2012 ; IF MEMORY EXIST THEN PRINT ERROR AND
2013 ; EXIT ROUTINE.
2014 ;
2015 ; INPUTS: R5 = CALLING ADDRESS
2016 ;
2017 ; OUTPUTS: ERRWRD = -1 IF ERROR OCCURED
2018 ; SUBORDINATE ROUTINES USED:
2019 ; WRDO = WAIT FOR READY OUT
2020 ; CALLING SEQUENCE:
2021 ; JSR R4, MEMEX
2022 ;-----
2023 ;

```

```

2024 003744 MEMEX:
2025 003744 004537 002646 EXMEM: JSR R5, WRDO ;WAIT FOR READY OUT
2026 003750 005737 002402 TST ERRWRD
2027 003754 100524 BMI EXMEM
2028 003756 117737 176462 002340 MOVB @SEL2, @BDDAT ;
2029 003764 042737 177770 002340 BIC @C<7>, @BDDAT ;STRIP TO TYPE CODE
2030 003772 122737 000000 002340 CMPB @0, @BDDAT ;IS IT REC COMP
2031 004000 001450 BEQ EXMEMA ; IF YES THEN GO TO A
2032 004002 122737 000001 002340 CMPB @1, @BDDAT ;IF NOT IS IT CONTROL OUT
2033 004010 001012 BNE EXMEMB ;IF NOT GO TO B
2034 004012 012737 000302 002336 MOV @302, @GDDAT
2035 004020 117737 176430 002340 MOVB @SEL6, @BDDAT
2036 004026 123737 002336 002340 CMPB @GDDAT, @BDDAT ;IS IT NON EXISTENT MEM?
2037 004034 001412 BEQ EXMEMC ;IF YES GO TO C
2038 004036 012737 012024 002430 EXMEMB: MOV @M13F, CODEW
2039 004044 104455 TRAP C#ERDF
2040 004046 000014 .WORD 12
2041 004050 011550 .WORD EROIC
2042 004052 010366 .WORD ERR27
2043 004054 005337 002402 DEC ERRWRD ;SET ERROR FLAG
2044 004060 000462 BR EXMEMX ;PRINT ERROR AND EXIT
2045 004062 EXMEMC:
2046 ;IF ERROR IS NON EXISTENT
2047
2048 004062 005237 177572 INC 177572 ;INCREMENT MM
2049 004066 012737 004216 000004 MOV @METB, 4 ;SET UP TRAP
2050 004074 005737 120000 TST @120000 ;TEST THE NON EXISTENT
2051 004100 005037 177572 CLR 177572 ;CLEAR MM
2052 004104 104455 TRAP C#ERDF
2053 004106 000015 .WORD 13
2054 004110 000000 .WORD 0
2055 004112 007750 .WORD ERR20
2056 004114 005337 002402 DEC ERRWRD
2057 004120 000442 BR EXMEMX ;PRINT ERROR AND EXIT TEST

```

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 CZDMTF.P11 08-NOV-84 10:38 GLOBAL SUBROUTINES

```

2058
2059           ; GET HERE IF BUFFER RETURNED OK
2060
2061 004122 005237 177572      EXMEMA: INC 177572      ;ENABLE MM
2062 004126 012737 004202 000004  MOV #METC,4      ;SET UP TRAP
2063 004134 013737 033536 002336  MOV MR1.2,#GDDAT ;GET FIRST WORD FROM NEW PAGE
2064 004142 013737 120000 002340  MOV 120000,#BDDAT ;AND FIRST R4 WORD
2065 004150 005037 177572      CLR 177572      ;DISABLE MM
2066 004154 023737 002336 002340  CMP #GDDAT,#BDDAT ;COMPARE DATA
2067 004162 001421      BEQ EXMEMX      ;EXIT IF GOOD
2068 004164 104455      TRAP C#ERDF
2069 004166 000016      .WORD 14
2070 004170 000000      .WORD 0
2071 004172 010002      .WORD ERR21
2072 004174 005337 002402      DEC ERRWRD
2073 004200 000412      BR EXMEMX      ;AND EXIT
2074 004202 005037 177572      METC: CLR 177572 ;DISABLE MM
2075 004206 104455      TRAP C#ERDF
2076 004210 000017      .WORD 15
2077 004212 000000      .WORD 0
2078 004214 010064      .WORD ERR22
2079 004216 005037 177572      METB: CLR 177572 ;DISABLE MM
2080 004222 062706 000004      META: ADD #4,SP ;:(SP)
2081 004226 013737 002316 000004  EXMEMX: MOV SAVE4.4
2082 004234 013737 002320 000006  MOV SAVE6.6      ;RESTORE TRAPS
2083 004242 000205      RTS R5
2084

```

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CZDMTFO DMP/V-11 FCTNL TST #1
CZDMTF.P11 08-NOV-84 10:38

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GLOBAL SUBROUTINES

```

2085 ;*****
2086 ; FUNCTIONAL DESCRIPTION:      WAIT50 - WAIT 50 MICRO SECONDS
2087 ;                               THIS ROUTINE COUNTS DOWN R1 FROM 200 TO 0
2088 ;                               IF DMP AND FROM 600 TO 0 IF DMV. THIS
2089 ;                               IS USED AS A DELAY ROUTINE
2090 ;
2091 ; CALLING SEQUENCE:
2092 ;                               JSR      PC,WAIT50
2093 ;-----
2094
2095 WAIT50: MOV      R1,-(SP)          ;SAVE R1
2096         MOV      #4000.,R1      ;INIT COUNTER ;; N.M. (CHANGED FROM 200 TO 4000)
2097         TST     OPTYP
2098         BEQ     3$              ;IF DMP GO TO 3
2099         ADD     #400.,R1        ;ELSE TRIPLE UP TIMER FOR DMV
2100 3$:     DEC     R1              ;DECREMENT COUNTER
2101         BNE     3$              ;BR IF NOT DONE YET
2102         MOV     (SP)+,R1        ;RESTORE R1
2103         RTS     PC              ;RETURN
2104
2105 ;*****
2106 ; FUNCTIONAL DESCRIPTION:      GWORD - GET WORD
2107 ;                               THIS ROUTINE READS A WORD FROM THE M8207 ROM.
2108 ;
2109 ; INPUTS:      CADDR = ADDRESS TO BE READ
2110 ;
2111 ; OUTPUTS:     SEL6 = DATA READ
2112 ; SUBORDINATE ROUTINES USED:
2113 ;               ROMCLK - ROUTINE TO ISSUE CLOCKS TO ROM CIRCUIT
2114 ; CALLING SEQUENCE:
2115 ;               JSR      PC,GWORD
2116 ;-----
2117
2118 GWORD:  CLR     #SELO            ;INIT
2119         MOVB   CADDR+1,#SEL2    ;NOW HIGH BYTE OF ADDRESS
2120         JSR    R5,ROMCLK
2121         .WORD  121053           ;MOV IBUS* 2 TO OBUS* 13
2122         BIC   #377,1$          ;STRIP ADDR FLIED.
2123         BISB  CADDR,1$         ;ADD IN IMM ADDR.
2124         JSR   R5,ROMCLK        ;GO DO BRANCH.
2125 1$:     .WORD  10000           ;BRANCH EXT PUTS ADDR. IN PCREG.
2126         BIS   #2000,#SELO     ;SET READ ENABLE.
2127         RTS   PC              ;EXIT.

```


CZDMTFO DMP/V-11 FCTNL TST #1
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GLOBAL SUBROUTINES

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004346
004346 152777 000002 176066
004354 012577 176074
004360 152777 000003 176054
004366 142777 000007 176046
004374 000205

004376 010146
004400 010246
004402 012702 000020
004406 000241
004410 006037 002374
004414 006037 002372
004420 102011
004422 012701 102010
004426 043701 002374
004432 042737 102010 002374
004440 050137 002374
004444 005302
004446 003357
004450 012602
004452 012601
004454 000207

```
*****  
; FUNCTIONAL DESCRIPTION: ROMCLK - ROM CLOCK ROUTINE  
; THIS ROUTINE ISSUES A SINGE STEP TO THE  
; M8207.  
; INPUTS: R5 - POINTS TO INSTRUCTION TO BE STEPPED  
; RETURN: RETURN IS TO WORD FOLLWOING INSTRUCTION  
; CALLING SEQUENCE:  
; JSR R5,ROMCLK  
; .WORD INSTR ;INSTURCITON TO EXECUTE  
*****
```

```
ROMCLK:  
BISB #2,88SEL1 ;SET ROMI  
MOV (R5)+,88SEL6 ;SET INSTRUCTION.  
BISB #3,88SEL1 ;CLOCK INSTR.  
BICB #7,88SEL1 ;CLEAR.  
RTS R5
```

```
*****  
; FUNCTIONAL DESCRIPTION: CRCR - CRC CALCULATE ROUTINE  
; THIS ROUTINE TAKES 16 BITS OF DATA FROM WORDT  
; AND CONVERTS THEM INTO PART OF THE SERIAL STREAM  
; THAT IS BEING USED TO CALCULATE A CRC-CCITT WORD.  
; INPUTS: WORDT - WORD TO CALCULATE ON  
; IMPLICIT INPUTS:  
; CWORD - MUST BE A -1 FIRST TIME CALLED  
; OUTPUTS: CWORD - 16 BIT CALCULATED WORD  
; CALLING SEQUENCE:  
; JSR PC,CRCR  
*****
```

```
CRCR: MOV R1,-(SP)  
MOV R2,-(SP)  
MOV #16.,R2  
10$: CLC  
ROR CWORD  
ROR WORDT  
BVC 20$  
MOV #102010,R1  
BIC CWORD,R1  
BIC #102010,CWORD  
BIS R1,CWORD  
20$: DEC R2  
BGT 10$  
MOV (SP)+,R2  
MOV (SP)+,R1  
RTS PC
```

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GLOBAL SUBROUTINES

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2183 ;*****
2184 ; FUNCTIONAL DESCRIPTION:  MINITR - MASTER CLEAR ROUTINE
2185 ; THIS ROUTINE ISSUES A MASTER CLEAR TO THE DEVICE
2186 ; IF OPTION IS AN 8206 IT ALSO SETS THE RUN BIT.
2187 ;
2188 ; SUBORDINATE ROUTINES USED:
2189 ; WAIT50 - SHORT DELAY ROUTINE
2190 ; CALLING SEQUENCE:
2191 ; JSR PC,MINITR
2192 ;-----*****
2193 004456 112777 000100 175756 MINITR: MOVB #100,8BSEL1 ;SET MASTER CLEAR.
2194 004464 022737 000004 002472          CMP #04,OPTYP ;IS THIS 8206
2195 004472 001003          BNE MIN1R ;BRANCH IF NOT
2196 004474 112777 000200 175740          MOVB #200,8BSEL1 ;SET RUN
2197 004502 000240 MIN1R: NOP
2198 004504 004737 004244 1#: JSR PC,WAIT50 ;SHORT DELAY.
2199 004510 000207          RTS PC ;RETURN.
2200 ;*****
2201 ; FUNCTIONAL DESCRIPTION:  MINITS - MASTER CLEAR AND INIT
2202 ; THIS ROUTINE ISSUES A MASTER CLEAR, WAITS FOR THE
2203 ; RUN BIT TO SET, CHECKS FOR GOOD COMPLETION OF MICRO
2204 ; DIAGNOSTICS AND ISSUES THE MODE DEFINITION.
2205 ; IF ENTERED AT MINIT1 - SET MODE TO FULL DUPLEX POINT
2206 ; TO POINT
2207 ; IF ENTERED AT MINITS - SET MODE TO FULL DUPLEX CONTROL
2208 ; IF ENTERED AT MINTR - SET MODE TO VALUE IN AXNUM
2209 ;
2210 ; OUTPUTS:  ERRWRD = -1 IF ERROR OCCURS.
2211 ;
2212 ; IMPLICIT OUTPUTS:
2213 ; DMP EXITS WITH MODE DEFINED
2214 ;
2215 ; SUBORDINATE ROUTINES USED:
2216 ; TOUT - TIME OUT ROUTINE
2217 ; WAIT50 - SHORT DELAY ROUTINE
2218 ; WRDO - WAIT FOR READY OUT
2219 ;
2220 ; CALLING SEQUENCE:
2221 ; JSR PC,MINITS ;OR MINIT1 OR MINTR
2222 ;-----*****
2223 004512 012737 000003 002506 MINIT1: MOV #03,AXNUM
2224 004520 000403          BR MINTR
2225 004522 012737 000005 002506 MINITS: MOV #05,AXNUM
2226 004530 112777 000100 175704 MINTR: MOVB #100,8BSEL1 ;SET MASTER CLEAR.
2227 004536 022737 000004 002472          CMP #4,OPTYP ;IS THIS 8206
2228 004544 001003          BNE MIN2R ;SKIP IF NOT
2229 004546 112777 000200 175660          MOVB #200,8BSEL1 ;SET RUN BIT
2230 004554 000240 MIN2R: NOP
2231 004556 000240          NOP
2232 004560 012737 004600 002406          MOV #ERLB7,ERRADD ;SET ERROR ADDRESS
2233 004566 004537 005070          TLB7: JSR R5,TOUT
2234 004572 005737 002402          TST ERRWRD
2235 004576 100533          BMI MINTC ;EXIT IF ERROR
2236 004600          ERLB7:

```

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```

2237 004600 004737 004244      4: JSR PC, WAIT50
2238 004604 005777 175630      TST @BSEL0 ;NOW WAIT FOR RUN TO ACTUALLY SET.
2239 004610 100366      BPL TLB7
2240 004612 012737 004632 002406  MOV @ERLB8, ERRADD ;SET ERROR ADDRESS
2241 004620 004537 005070      TLB8: JSR R5, TOUT ;CHECK TIME OUT
2242 004624 005737 002402      TST ERRWRD
2243 004630 100516      BMI MINTE ;EXIT IF ERROR
2244 004632      ERLB8:
2245 004632 122777 000305 175614  5:  CMPB #305, @BSEL6 ;GOOD END TO MICRO DIAG?
2246 004640 001404      BEQ 2:
2247 004642 122777 000264 175604  CMPB #264, @BSEL6 ;LINE UNIT FAILURE.?
2248 004650 001363      BNE TLB8 ;NO-STAY IN LOOP.
2249 ;YES, CATCH THE PROBLEM LATER.
2250 004652 012737 000077 002336  2:  MOV #77, @GDDAT
2251 004660 032737 000003 002472  BIT #3, OPTYP ;IS THIS DMV
2252 004666 001403      BEQ 3: ;IF NOT GO TO 3
2253 004670 012737 000033 002336  MOV #33, @GDDAT
2254 004676 023777 002336 175544  3:  CMP @GDDAT, @BSEL4
2255 004704 001407      BEQ 4: ;IF CORRECT OPTYP CONTINUE
2256 004706 104457      TRAP C#ERSOFT
2257 004710 000025      .WORD 21
2258 004712 012630      .WORD MEF32
2259 004714 010464      .WORD ERR32
2260 004716 005337 002402      DEC ERRWRD
2261 004722 000461      BR MINTE ;EXIT TEST
2262 004724 032737 000003 002472  4:  BIT #3, OPTYP ;IS THIS DMV
2263 004732 001423      BEQ 6: ;IF NOT GO TO 6
2264 004734 005737 002400      TST EXLOOP ;DMV EXTERNAL LOOP FLAG SET?
2265 004740 001020      BNE 6: ;IF YES: THEN GO TO 6
2266 004742 112777 000301 175472  MOVB #301, @BSEL1
2267 004750 004537 002646      JSR R5, WRDO ;WAIT FOR READY OUT
2268 004754 012777 000006 175462  MOV #06, @BSEL2 ;DO MAINT LOOP FOR TTL LOOPBACK
2269 004762 004537 005070      60: JSR R5, TOUT
2270 004766 005737 002402      TST ERRWRD
2271 004772 100435      BMI MINTE
2272 004774 005777 175440      TST @SELO
2273 005000 100370      BPL 60:
2274 005002 152777 000010 175432  6:  BISB #BIT3, @BSEL1 ;SET LINE UNIT LOOP. -
2275 ;THIS ALLOWS US TO SET THE MODE.
2276 005010 052777 000200 175422      BIS #RQI, @BSEL0
2277 005016 012737 005036 002406  MCV @ERLB9, ERRADD ;SET ERROR ADDRESS
2278 005024 004537 005070      TLB9: JSR R5, TOUT
2279 005030 005737 002402      TST ERRWRD
2280 005034 100414      BMI MINTE ;EXIT IF ERROR
2281 005036 032777 000020 175400  ERLB9: BIT #20, @BSEL2 ;WAIT FOR RDI.
2282 005044 001767      BEQ TLB9
2283 005046 013777 002506 175400      MOV AXNUM, @BSEL6 ;SET UP FOR F/D CONTROL STATION
2284 005054 105077 175360      CLRB @BSEL0 ;NO MORE REQUESTS.
2285 005060 012777 000002 175356  MOV #2, @BSEL2 ;START.
2286 005066 000207      MINTE: RTS PC
2287

```

CZDMTFO DMP/V 11 FCTNL 1ST #1
CZDMTF.P11 08-NOV 84 10:38

MACY11 30A(1052) 08-NOV-84 10:42 PAGE 52
GLOBAL SUBROUTINES

2288			
2289			
2290			
2291			
2292			
2293			
2294			
2295			
2296			
2297	005070	020537	005136
2298	005074	001011	
2299	005076	000037	005134
2300	005102	001012	
2301	005104	104455	
2302	005106	000020	
2303	005110	011456	
2304	005112	010330	
2305	005114	005337	002402
2306	005120	005037	005134
2307	005124	010537	005136
2308	005130		
2309	005130	104422	
2310	005132	000205	
2311			
2312	005134	000000	
2313			
2314	005136	000000	
2315			

```

;*****
; FUNCTIONAL DESCRIPTION:      TOUT  - TIME OUT ROUTINE
;                             THIS ROUTINE INC COUNTT LOCATION EVERY
;                             TIME IT IS CALLED IF COUNTT OVERFLOWS THEN
;                             TIME OUT IS REPORTED AND THE ROUTINE IS EXITED.
; CALLING SEQUENCE:
;                             JSR    R5,TOUT
;*****
TOUT:  CMP    R5,LA5TR5
       BNE   TOUTE
       INC  COUNTT
       BNE  TOUTEX
       TRAP C#ERDF
       .WORD 16
       .WORD MEF7
       .WORD ERR26
TOUTE: DEC  ERRWRC
       CLR  COUNTT
       MOV  R5,LA5TR5      ;SAVE CURRENT PC.
TOUTEX: TRAP C#BRK
       RTS   R5           ;EXIT

COUNTT: 0                ;NUMBERS OF TIMES IN THIS ROUTINE FROM
LA5TR5: 0                 ;SAME CALLING LOCATION.
                          ;LAST CALLING LOCATION.

```

CZDMTFO DMP/V-11 FCTNL TST #1
CZDMTF.P11 08-NOV-84 10:38

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GLOBAL SUBROUTINES

2316				
2317				
2318				
2319				
2320				
2321				
2322				
2323				
2324				
2325				
2326				
2327				
2328				
2329				
2330	005140			
2331	005140	013746	002440	
2332	005144	013746	002332	
2333	005150	012746	005306	
2334	005154	012746	000003	
2335	005160	010600		
2336	005162	104415		
2337	005164	062706	000010	
2338	005170	017746	175260	
2339	005174	017746	175250	
2340	005200	017746	175240	
2341	005204	017746	175230	
2342	005210	012746	005373	
2343	005214	012746	000005	
2344	005220	010600		
2345	005222	104415		
2346	005224	062706	000014	
2347	005230	032737	000003	002472
2348	005236	001412		
2349	005240	017746	175214	
2350	005244	012746	005451	
2351	005250	012746	000002	
2352	005254	010600		
2353	005256	104415		
2354	005260	062706	000006	
2355	005264			
2356	005264	012746	005466	
2357	005270	012746	000001	
2358	005274	010600		
2359	005276	104415		
2360	005300	062706	000004	
2361	005304	000207		
2362	005306	047045	040445	040506
2363	005314	046111	047111	020107
2364	005322	041515	052520	044440
2365	005330	020123	047125	052111
2366	005336	021440	047445	022462
2367	005344	020101	044127	051517
2368	005352	020105	042101	051104
2369	005360	051505	020123	051511
2370	005366	022440	033117	000
2371	005373	045	022516	051501

```

*****
; FUNCTIONAL DESCRIPTION:      STAND - PRINT STANDARD REGS
;                             THIS ROUTINE PRINTS THE UNIT NUMBER AND
;                             CSR ADDRESS OF THE FAILING UNIT AS WELL AS THE
;                             CONTENTS OF ALL THE CSR REGS.
;                             THE ERROR MMSG ROUTINES USE THIS SUBROUTINE
; IMPLICIT INPUTS:
;     CSRS' - THE CSR ARE EXPECTED TO CONTAIN USEFUL DATA
;     LOGDEV - THE LOGICAL DEVICE NUMBER
;     SELO - ADDRESS OF THIS UNIT
; CALLING SEQUENCE:
;     JSR    PC,STAND
;-----

```

```

STAND:
MOV    SELO, -(SP)
MOV    LOGDEV, -(SP)
MOV    #CFM1, -(SP)
MOV    #3, -(SP)
MOV    SP, R0
TRAP   C#PNTX
ADD    #10, SP
MOV    #SEL6, -(SP)
MOV    #SEL4, -(SP)
MOV    #SEL2, -(SP)
MOV    #SELO, -(SP)
MOV    #CFM2, -(SP)
MOV    #5, -(SP)
MOV    SP, R0
TRAP   C#PNTX
ADD    #14, SP
BIT    #3, OPTYP           ;IS THIS A DMV-11 ?
BEQ    1#                 ;IF NOT: SKIP SEL10 PRINTOUT
MOV    #SEL10, -(SP)
MOV    #CFM3, -(SP)
MOV    #2, -(SP)
MOV    SP, R0
TRAP   C#PNTX
ADD    #6, SP

1#:
MOV    #CFM4, -(SP)
MOV    #1, -(SP)
MOV    SP, R0
TRAP   C#PNTX
ADD    #4, SP
RTS    PC

CFM1:  .ASCIZ  "N#AFAILING MCPU IS UNIT #02#A WHOSE ADDRESS IS #06"

CFM2:  .ASCIZ  "N#ASELO=#06#A SEL2=#06#A SEL4=#06#A SEL6=#06"

```

CZDMTFO DMP/V-11 FCTNL TST #1 MACY11 30A(1052) 08-NOV-84 10:42 PAGE 54
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2372	005400	046105	036460	047445
2373	005406	022466	020101	042523
2374	005414	031114	022475	033117
2375	005422	040445	051440	046105
2376	005430	036464	047445	022466
2377	005436	020101	042523	033114
2378	005444	022475	033117	000
2379	005451	045	020101	042523
2380	005456	030514	036460	047445
2381	005464	000066		
2382	005466	047045	000	
2383		005472		
2384				
2385				

CFM3: .ASCIZ "A SEL10-06"

CFM4: .ASCIZ "N"
.EVEN

```

2386 ;*****
2387 ; FUNCTIONAL DESCRIPTION: RMVRT - VERIFY ROM CONTENTS
2388 ; THIS ROUTINE READS DMV ROMS USING 256 BYTE READS
2389 ; AND CALCULATES/CHECKS THE CRC.
2390 ; SUBORDINATE ROUTINES:
2391 ; WRDO - WAIT FOR READY OUT (MRDY)
2392 ; CRCR - CALCULATE CRC
2393 ; IMPLICIT INPUTS:
2394 ; ROMADD - STARTING ADDRESS OF PARTICULAR ROM
2395 ; CALLING SEQUENCE:
2396 ; JSR RS,RMVRT
2397 ;-----
2398
2399 005472 012737 177777 002374 RMVRT: MOV #1,CWORD ;INIT CRC WORD
2400 005500 112777 000301 174734 MOVB #301,BSSEL1 ;ENTER MAINTENANCE LOOP
2401 005506 004537 002646 JSR RS,WRDO ;
2402 005512 005737 002402 TST ERRMRD ;
2403 005516 100477 BMI RMVEX ;EXIT IF ERROR
2404 005520 005003 CLR R3 ;CLEAR BLOCK_NUMBER
2405
2406 005522 012777 034014 174724 RMVXX: MOV #RECBU1,BSSEL6 ;READ 256 BYTES USING M-LOOP
2407 005530 105077 174724 CLRB BSSEL10 ;RCV BUFFER ADDR => BSR10:CSR6
2408 005534 013777 002436 174706 MOV ROMADD,BSSEL4 ;ROM ADDRESS => CSR4
2409 005542 112777 000003 174674 MOVB #05,BSSEL2 ;DO BLOCK READ OF 256 BYTES
2410 005550 004537 002646 JSR RS,WRDO ;WAIT FOR MRDY BIT (RDO)
2411 005554 005737 002402 TST ERRMRD ;
2412 005560 100456 BMI RMVEX ;EXIT IF ERROR
2413
2414 005562 005002 CLR R2 ;CLEAR WORD_INDEX
2415 005564 005703 TST R3 ;IS THIS THE 1ST BLOCK?
2416 005566 001014 BNE RMVYY ;
2417 005570 013737 034014 002434 MOV RECBU1,CRCAL ;YES: SAVE 1ST WORD OF 1ST BLOCK
2418 005576 005722 TST (R2) ; (CRC CHARACTER)
2419 005600 116237 034014 014024 MOVB RECBU1(R2),ROMNO ;SAVE ROM #
2420 005606 005202 INC R2 ;
2421 005610 116237 034014 014026 MOVB RECBU1(R2),REVNO ;SAVE REVISION #
2422 005616 005302 DEC R2 ;ADJUST INDEX FOR ROM#
2423
2424 005620 016237 034014 002372 RMVYY: MOV RECBU1(R2),WORDT ;GET INDEXED WORD FROM BUFFER
2425 005626 004737 004376 JSR PC,CRCR ;CALCULATE CRC WORD
2426 005632 062702 000002 ADD #2,R2 ;(BUMP INDEX)
2427 005636 022702 000400 CMP #256.,R2 ;IS THIS THE LAST WORD ?
2428 005642 001366 BNE RMVYY ;IF NOT: GET NEXT WORD.
2429
2430 005644 020327 000037 RMVAA: CMP R3,#31. ;IS THIS THE LAST 256 WORD BLOCK?
2431 005650 001405 BEQ RMVBB ;
2432 005652 062737 000400 002436 ADD #256.,ROMADD ;NO: ADD 256 TO ADDRESS
2433 005660 005203 INC R3 ; AND BUMP BLOCK NUMBER
2434 005662 000717 BR RMVXX ; AND GO GET SOME MORE

```

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CZDMTF.P11 08-NOV-84 10:38

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GLOBAL SUBROUTINES

2435 005664 000240
2436 005666 000240
2437 005670 013737 002434 002372
2438 005676 023737 002374 002372
2439 005704 001404
2440 005706 104455
2441 005710 000021
2442 005712 000000
2443 005714 010224
2444
2445 005716 000205
2446

RMVBB: NOP
NOP
MOV CRCCAL,WORDT
CMP CWORD,WORDT
BEQ RMVEX
TRAP C#ERDF
.WORD 17
.WORD 0
.WORD ERR24

RMVEX: RTS R5

;(COM CWORD=5137 2374)
;YES:
;
; COMPARE CRC WORDS...
; AND REPORT ERROR IF NO MATCH.

;RETURN TO CALLER

CZDMTFO DMP/V-11 FCTNL TST #1
CZDMTF.P11 08-NOV-84 10:38

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GLOBAL SUBROUTINES

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2486
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2494
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2497
2498
2499
2500
2501
2502

```

*****
; FUNCTIONAL DESCRIPTION: TXRXSR - TRANSMIT RECEIVE SUBROUTINE
; THIS ROUTINE IS USED BY ALL TESTS THAT TRANSMIT
; AND RECIEVE DATA. THE FIRST PART OF THE ROUTINE VERIFIES
; THE OPERATOR INPUTS AND MAKES SURE THAT INTERFACE
; SELECTION CORRESPOND TO SELECTED BAUD RATES.
; THE SECOND PART OF THE ROUTINE FORMS "TXRX3" AND DOES THE
; FOLLOWING. ESTABLISH TRIBUTARY. THEN EITHER DO ISTRT OR
; MAINT STATE DEPENDING ON FLAG. IF ISTRT THEN CHECK FOR
; RUN STATE IF MAINT STATE THEN GO TO NEXT STEP. NEXT QUE
; REC AND TRANSMIT BUFFERS THEN WAIT FOR OUTPUT. IF MEMORY
; MANAGEMENT EXIT TEST. IF ISTRT LOOK FOR REC COMPLETED
; FOLLOWED BY TX COMPLETED. IF MAINT LOOK FOR TRANSMIT FIRST.
;
; INPUTS: TXADD - ADDRESS OF TRANSMIT BUFFER
; TXCC - CHAR COUNT OF TX
; RXADD - ADDRESS OF REC BUFFER
; RXCC - CHAR COUNT OF REC BUFFER
; GENMRD - FLAG WORD IF BIT 15 SET-MAINT MODE
; IF BIT 14 SET THEN MEMORY MGT.
;
; SUBORDINATE ROUTINES USED:
; WAIT50 - SHORT DELAY
; CONTIN - CONTROL IN ROUTINE
; GETOUT - GET CONTROL OUT CODE
; GETOC - GET OUTPUT CODE
; MRDI - WAIT FOR READY IN
; GETCC - GET CHAR COUNT
; GETBA - GET BUFFER ADDRESS
;
; CALLING SEQUENCE:
; JSR R5, TXRXSR ;IF NOT INTERFACE CHECK
; ;CALL AT JSR R5, TXRX3
;-----

```

```

2482 005720 022737 000004 002476 TXRXSR: CMP #4, TSTCON
2483 005726 001002 006410 BNE 10; ;BRANCH IF NOT INTERNAL LOOP
2484 005730 000137 006410 JMP TXRX3 ;ELSE GO TO 3
2485
2486 ;JUMP TO TXRX 3 IF INTERNAL LOOP
2487
2488 005734 013737 002360 002506 10;: MOV TRIBN, AXNUM ;SAVE TRIBN.
2489 005742 005037 002360 CLR TRIBN ;MAKE TRIBN 0
2490 ;DMV-11 WILL IGNORE THE FOLLOWING...
2491
2492 005746 022737 000000 002476 TXRX1: CMP #0, TSTCON ;IS H3254, H3255 TURN AROUND SELECTED? ***JPB
2493 005754 001002 BNE 1; ;NO, TRY NEXT ONE. ***JPB
2494 005756 000137 006062 JMP TXRX1B ;YES, ***JPB
2495
2496 005762 022737 000001 002476 1;: CMP #1, TSTCON ;IS CABLE LOOP SELECTED? ***JPB
2497 005770 001011 BNE 2; ;NO, TRY NEXT ONE. ***JPB
2498 005772 142777 000010 174442 BICB #BITS, #BSEL1 ;CLEAR LLOOP FOR EXTERNAL CABLE LOOP. ***JPB
2499 006000 022737 000003 002474 CMP #3, IFTYP ;CHECK TO SEE IF V.35 WAS SELECTED? ***JPB
2500 006006 001472 BEQ V35TC ;YES, BR AND FORCE SET UP OF V.35 ***JPB
2501 006010 000137 006402 JMP TXRX2 ;NO, CONTINUE ***JPB
2502

```

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GLOBAL SUBROUTINES

```

2503 006014 022737 000002 002476 24:  CMP      #2,TSTCON      ;IS MODEM LOCAL SELECTED?      ***JPB
2504 006022 001004                BNE      34                ;NO, TRY NEXT ONE.           ***JPB
2505 006024 012704 000110                MOV      #110,R4          ;SET DTR AND MAINT1         ***JPB
2506 006030 000137 006040                JMP      TXRX1A           ;                               ***JPB
2507
2508 006034 012704 000104                34:  MOV      #104,R4          ;MUST BE REMOTE MODEM.      ***JPB
2509                                ;SET DTR AND MAINT2        ***JPB
2510 006040 012703 000021 TXRX1A: MOV      #21,R3          ;WRITE MODEM CONTROL-BSEL4,(R4)TO REG 13
2511 006044 004537 003162                JSR      R5,CONTIN        ; WRITE MODEM WITH CORRECT
2512                                ; TYPE OF LOOP CODE
2513 006050 005737 002402                TST      ERRWRD           ;
2514 006054 100002                BPL      TXRX1B           ;
2515 006056 000137 006540                JMP      TXRXA            ;
2516
2517 006062                TXRX1B:
2518 006062 004737 004244 154:  JSR      PC,WAIT50        ;WAIT FOR A WHILE           ...
2519 006066 142777 000010 174346 BICB     #BITS,BSSEL1      ;CLEAR LU LOOP (EXTERNAL LOOP SELECTED)
2520
2521                                ; IF INTEGRAL MODEM MAKE SURE OPTION
2522                                ; IS NOT 8053 AND SPEED IS 56K OR HIGHER
2523                                ; IF NOT INTEGRAL MODEM GO TO NEXT CHECK IF EIA
2524
2525 006074 022737 000001 002474  CMP      #1,IFTYP         ;IS THIS INTEGRAL MODEM
2526 006102 001014                BNE      XYZTC            ;IF NOT THEN GO CHECK FOR EIA
2527 006104 022737 000001 002472  CMP      #1,OPTYP         ;IS THIS 8053 (DMV NO INTEGRAL)
2528 006112 001453                BEQ      BADIF            ;IF SO PRINT BAD INTERFACE MMSG.
2529 006114 023727 002466 000004  CMP      SPEEDM,#4        ;IS THIS 56 K OR HIGHER
2530 006122 103464                BLO      BADBR            ;IF NOT PRINT BAD BAUD RATE
2531
2532                                ; GET HERE IF EVERYTHING OK FOR INTEGRAL
2533
2534 006124 012704 000323  MOV      #323,R4          ;LOAD R4 WITH INTERFACE TYPE
2535 006130 000137 006354  JMP      SETIF            ; AND GO SET IT
2536
2537                                ;IF THIS IS EIA THEN CHECK THAT OPTION IS NOT
2538                                ; M8054 AND THAT SPEED IS 56K OR LOWER
2539                                ;IF NOT EIA CHECK IF V.35
2540
2541 006134 022737 000002 002474 XYZTC:  CMP      #2,IFTYP         ;IS THIS EIA INTERFACE
2542 006142 001014                BNE      V35TC            ;IF NOT GO CHECK FOR V.35 TYPE
2543 006144 022737 000002 002472  CMP      #2,OPTYP         ;IS THIS 8054 (DMV INTEGRAL MODEM)
2544 006152 001433                BEQ      BADIF            ;IF SO PRINT BAD INTERFACE
2545 006154 023727 002466 000004  CMP      SPEEDM,#4        ;IS THIS HIGHER THAN 56K
2546 006162 101044                BHI      BADBR            ;IF SO PRINT BAD BAUD RATE
2547
2548                                ; GET HERE IF EVERYTHING OK FOR EIA
2549
2550 006164 012704 000233  MOV      #233,R4          ;LOAD R4 WITH INTERFACE TYPE
2551 006170 000137 006354  JMP      SETIF            ;AND GO SET IT.
2552
2553                                ;IF V.35 CHECK THAT OPTION IS NOT 8064
2554                                ;IF NOT V.35 MUST BE 422
2555
2556 006174 022737 000003 002474 V35TC:  CMP      #3,IFTYP         ;IS THIS V.35 INTERFACE
2557 006202 001010                BNE      T422C            ;IF NOT IT MUST BE 422
2558 006204 022737 000002 002472  CMP      #2,OPTYP         ;IS THIS 8064 (DMV INTEGRAL)

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CZDMTFO DMP/V-11 FCTNL TST #1
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GLOBAL SUBROUTINES

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2559 006212 001413          BEQ      BADIF          ;IF SO PRINT BAD INTERFACE
2560
2561                          ; GET HERE IF EVERYTHING OK FOR V.35
2562
2563 006214 012704 000313    MOV      #313,R4        ;LOAD R4 WITH INTERFACE TYPE AND
2564 006220 000137 006354    JMP      SETIF          ;GO SET IT
2565
2566                          ;IF OPTION TYPE IS DMV THEN ERROR ELSE OK FOR 422
2567
2568 006224 032737 000003 002472 T422C: BIT      #3,OPTYP        ;IS THIS DMV
2569 006232 001003          BNE      BADIF          ;IF SO PRINT BAD INTERFACE
2570
2571                          ; GET HERE IF EVERYTHING OK FOR 422
2572
2573 006234 012704 000133    MOV      #133,R4
2574 006240 000445          BR       SETIF          ;LOAD UP INTERFACE AND SET IT
2575
2576                          ;PRINTS BAD INTERFACE AND EXITS
2577
2578 006242 022737 000001 002346 BADIF: CMP      #1,STARES
2579 006250 001037          BNE      TABEN
2580 006252 012746 010530    MOV      #BADIFM,-(SP)
2581 006256 012746 000001    MOV      #1,-(SP)
2582 006262 010600          MOV      SP,R0
2583 006264 104417          TRAP    C:PNTF
2584 006266 062706 000004    ADD      #4,SP
2585 006272 000414          BR       TABM          ;PRINT 1ST PART OF MESSAGE
2586
2587                          ;PRINTS BAD BAUD RATE AND EXITS
2588
2589 006274 022737 000001 002346 BADBR: CMP      #1,STARES
2590 006302 001022          BNE      TABEN
2591 006304 012746 010606    MOV      #BADBRM,-(SP)
2592 006310 012746 000001    MOV      #1,-(SP)
2593 006314 010600          MOV      SP,R0
2594 006316 104417          TRAP    C:PNTF
2595 006320 062706 000004    ADD      #4,SP
2596 006324          TABM:
2597 006324 013746 002370    MOV      ROMN1,-(SP)
2598 006330 012746 010666    MOV      #TESTAB,-(SP)
2599 006334 012746 000002    MOV      #2,-(SP)
2600 006340 010600          MOV      SP,R0
2601 006342 104417          TRAP    C:PNTF
2602 006344 062706 000006    ADD      #6,SP
2603 006350 000137 007406    TABEN: JMP      TXRXEN          ;AND THEN EXIT SR.
2604
2605                          ; GET HERE TO SET INTERFACE
2606
2607 006354 032737 000003 002472 SETIF: BIT      #03,OPTYP        ;IS THIS A DMV11 ?
2608 006362 001007          BNE      TXRX2          ; YES: SKIP THIS SETUP STUFF !!!
2609 006364 012703 000023    MOV      #23,R3        ; NO: SET INTERFACE
2610                          ; WRITE MODEM TEST REGISTER
2611                          ; BSEL4 (R4) TO REG AX3-15.
2612 006370 004537 003162    JSR      R5,CONTIN
2613 006374 005737 002402    TST     ERRWRD
2614 006400 100457          BMI     TXPXA

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CZDMTFO DMP/V-11 FCTNL TST #1 MACY11 30A(1052) 08-NOV 84 10:42 PAGE 60
 CZDMTF.P11 08-NOV-84 10:38 GLOBAL SUBROUTINES

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2615
2616 006402 013737 002506 002360 TXRX2: MOV AXNUM,TRIBN ;GET TRIB NUMBER BACK
2617
2618 ;ESTABLISH TRIB
2619
2620 006410 012703 000001 TXRX3: MOV #01,R3
2621 006414 004537 003162 JSR R5,CONTIN ;ESTABLISH TRIB
2622
2623 006420 005737 002402 TST ERRWRD ;TIME OUT OR REAY ERORS PRINT PC
2624 006424 100445 BMI TXRXA ;EXIT IF ERROR OCCURRED
2625
2626 006426 032737 100000 002432 BIT #BIT15,GENWRD ;TEST THE MAINT STATE BIT
2627 006434 001033 BNE TXRXB ;IF SET GO TO 10
2628
2629 ;ISTRT TRIB IF NOT MAINT STATE
2630
2631 006436 012703 000003 MOV #03,R3
2632 006442 004537 003162 JSR R5,CONTIN ;ELSE;
2633 ;ISTRT THE TRIB
2634 006446 005737 002402 TST ERRWRD ; TIME OUT OR READY ERRORS REPORT THIS PC
2635 006452 100432 BMI TXRXA ;EXIT IF ERROR OCCURRED
2636
2637 ;CHECK FOR RUN STATE
2638
2639 006454 012737 000001 002336 MOV #01,#GDDAT ;CHECK FOR CONTROL OUT
2640 006462 004537 003242 JSR R5,GETOUT ; AND CORRECT TRIBN
2641 006466 005737 002402 TST ERRWRD ;
2642 006472 100422 BMI TXRXA ;EXIT IF ERROR OCCURRED
2643 006474 012737 000024 002336 MOV #24,#GDDAT ;CHECK FOR RUN STATE
2644 006502 004537 003670 JSR R5,GETOC ; IN OUTPUT CODE
2645 006506 005737 002402 TST ERRWRD ;
2646 006512 100412 BMI TXRXA ;EXIT IF ERROR OCCURRED
2647 006514 042777 000200 173722 BIC #RDO,#BSEL2 ;CLEAR OUTPUT
2648 006522 000411 BR TXRXC ;AND GO TO 20
2649
2650 ; PUT TRIB IN MAINT STATE
2651
2652 006524 012703 000004 TXRXB: MOV #04,R3 ;PUT TRIB IN MAINT STATE
2653 006530 004537 003162 JSR R5,CONTIN ;
2654 ; TIME OUT OR READY ERRORS REPORT THIS PC
2655 006534 005737 002402 TST ERRWRD ;
2656 006540 100002 TXRXA: BPL TXRXC ;
2657 006542 000137 007406 JMP TXRXEN ;EXIT IF ERROR OCCURRED
2658
2659 ;QUEUE RECEIVE BUFFER
2660
2661 006546 052777 000200 173664 TXRXC: BIS #RQI,#BSELO ;SET REQUEST
2662 006554 004537 002732 JSR R5,WRDI ;
2663 ; TIME OUT OR READY ERROR REPORT THIS PC
2664 006560 005737 002402 TST ERRWRD ;
2665 006564 100002 BPL S1 ;
2666 006566 000137 007406 JMP TXRXEN ;EXIT IF ERROR OCCURRED
2667 006572 013777 002422 173650 S1: MOV RXADD,#BSEL4 ;SET ADDRESS
2668 006600 113777 002360 173640 MOVB TRIBN,#BSEL3 ;SET TRIBN
2669
2670 006606 005737 002376 TST MODQ22 ;*IS THIS "Q22 MODE" ?

```

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```

2671 006612 001411          BEQ      1#          ;*
2672
2673 006614 013777 002424 173636      MOV      RXCC,8BSEL10 ;*YES: SET CHARACTER COUNT
2674 006622 005077 173626          CLR      8BSEL6      ;* CLEAR EXTENDED ADDR BITS
2675 006626 112777 000010 173610      MOVB     #10,8BSEL2  ;* SET RX BUFFER IN (+Q22 BIT)
2676 006634 000476          BR       2#          ;* AND CONTINUE...
2677
2678 006636 013777 002424 173610 1#:    MOV      RXCC, 8BSEL6 ;*NO: SET CHAR COUNT [+BA16/17]
2679 006644 112777 000000 173572      MOVB     #0, 8BSEL2  ; SET RX BUFFER IN
2680
2681          ;QUEUE TX BUFFER
2682
2683 006652 004537 002732          2#:    JSR      R5,WRDI     ;WAIT FOR READY
2684          ; TIME OUT OR READY ERROR REPORT THIS PC
2685 006656 005737 002702          TST      ERRWRD     ;
2686 006662 100002          BPL      35#        ;*
2687 006664 000137 007406          JMP      TXRXEN     ;*EXIT IF ERROR OCCURRED
2688 006670 013777 002420 173552 35#:   MOV      TXADD,8BSEL4 ;SET TX ADD
2689 006676 113777 002360 173542      MOVB     TRIBN,8BSEL3 ;SET TRIBN
2690
2691 006704 005737 002376          TST      MODQ22     ;*IS THIS "Q22 MODE" ?
2692 006710 001414          BEQ      3#          ;*
2693
2694 006712 013777 002426 173540      MOV      TXCC,8BSEL10 ;*YES: SET CHARACTER COUNT
2695 006720 005077 173530          CLR      8BSEL6      ;* CLEAR EXTENDED ADDR BITS
2696 006724 042777 000200 173506      BIC      #RQI,8BSEL0 ;* CLEAR REQUEST
2697 006732 112777 000014 173504      MOVB     #14,8BSEL2 ;* SET UP TX BUFFER (+Q22 BIT)
2698 006740 000411          BR       4#          ;* AND CONTINUE...
2699
2700 006742 013777 002426 173504 3#:    MOV      TXCC, 8BSEL6 ;*NO: SET CHAR COUNT [+BA16/17]
2701 006750 042777 000200 173462      BIC      #RQI,8BSEL0 ; CLEAR REQUEST
2702 006756 112777 000004 173460      MOVB     #04, 8BSEL2 ; SET UP TX BUFFER
2703
2704 006764 032737 040000 002432 4#:    BIT      #BIT14,GENWRD
2705 006772 001402          BEQ      20#        ;IF MM GO TO RETURN
2706 006774 000137 007406          JMP      TXRXEN     ;* CLEAR LOCAL_MAINT_FLAG
2707 007000 005037 007410          20#:   CLR      MTLG
2708 007004 005737 002432          TST      GENWRD
2709 007010 100052          BPL      TXRXG     ;GO AHEAD IF NOT MAINT STATE
2710
2711          ;CHECK FOR RX COMPLETED
2712
2713          ; NOTE: IF MAINT STATE THEN CHECK FOR RX AND TX BUFFERS
2714          ; RETURNED (ORDER NOT IMPORTANT).
2715          ; BUT: IF NOT MAINT STATE THEN RX BUFFER MUST BE RETURNED
2716          ; FIRST AND TX BUFFER SECOND (OR ERROR REPORTED).
2717          ;* IF WE ARE IN MAINT STATE ....
2718 007012 004537 002646          JSR      R5,WRD0    ;* WAIT FOR READY_OUT
2719 007016 005737 002402          TST      ERRWRD     ;*
2720 007022 100571          BMI      TXRXEN     ;* EXIT IF ERROR
2721 007024 117704 173414          MOVB     8BSEL2,R4  ;* GET COMMAND TYPE
2722 007030 042704 177770          BIC      #177770,R4 ;* STRIP EXCESS BITS
2723 007034 022704 000004          CMP      #4,R4      ;* CHECK FOR TX BUFFER RETURNED
2724 007040 001403          BEQ      40#        ;* IF YES: GO CHECK IT
2725 007042 005337 007410          DEC      MTLG
2726 007046 000433          BR       TXRXG     ;* NO: MTLG=(-1) TO INDICATE TXBUF
                    ;* RETURNED FIRST

```

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```

2727
2728 007050 012737 000004 002336 40$: MOV #04, #GDDAT
2729 007056 004537 003242 JSR R5, GETOUT ;GET OUTPUT CODE
2730 007062 005737 002402 TST ERRWRD
2731 007066 100547 BMI TXRXEN ;EXIT IF ERROR
2732 007070 013737 002426 002336 MOV TXCC, #GDDAT ;*
2733 007076 004537 003514 JSR R5, GETCC ;*ELSE CHECK TX CHAR COUNT
2734 007102 005737 002402 TST ERRWRD ;*
2735 007106 100537 BMI TXRXEN ;*EXIT IF ERROR
2736 007110 013737 002420 002336 MOV TXADD, #GDDAT
2737 007116 004537 003576 JSR R5, GETBA ;IS THE TX BUFFER ADDR RIGHT ?
2738 007122 005737 002402 TST ERRWRD ;
2739 007126 100527 BMI TXRXEN ;EXIT IF ERROR OCCURED
2740
2741 007130 042777 000200 173306 BIC #RDO, #BSEL2 ;CLEAR READY OUT
2742 007136 012737 000000 002336 TXRXG: MOV #0, #GDDAT ;
2743 007144 004537 003242 JSR R5, GETOUT ;CHECK FOR RX RETURNED
2744 007150 005737 002402 TST ERRWRD ;
2745 007154 100514 BMI TXRXEN ;EXIT IF ERROR OCCURRED
2746 007156 013737 002426 002336 MOV TXCC, #GDDAT ;
2747 007164 004537 003514 JSR R5, GETCC ;IS THE CHAR COUNT CORRECT
2748 007170 005737 002402 TST ERRWRD ;
2749 007174 100504 BMI TXRXEN ;EXIT IF ERROR OCCURRED
2750 007176 013737 002422 002336 MOV RXADD, #GDDATT
2751 007204 004537 003576 JSR R5, GETBA ;IS THE BUFFER ADD RIGHT
2752 007210 005737 002402 TST ERRWRD ;
2753 007214 100474 BMI TXRXEN ;EXIT IF ERROR OCCURRED
2754 ;*****
2755 ;DATA CHECK....
2756 007216 013703 002422 MOV RXADD, R3
2757 007222 013701 002420 MOV TXADD, R1 ;SET UP ADDRESS
2758 007226 005004 CLR R4 ;CLEAR R4
2759 007230 25$:
2760 007230 112337 002340 26$: MOVB (R3)+, #BDDAT ;GET BYTE OF RX
2761 007234 112137 002336 28$: MOVB (R1)+, #GDDAT ;GET BYTE OF TX
2762 007240 123737 002340 002336 CMPB #BDDAT, #GDDAT ;ARE THEY THE SAME
2763 007246 001411 BEQ 30$ ;IF SO GO TO 30
2764 007250 005204 INC R4 ;MAKE COUNT RIGHT
2765 007252 104455 TRAP C#ERDF
2766 007254 000022 .WORD 18
2767 007256 012401 .WORD MEF19A
2768 007260 007710 .WORD ERR19
2769 007262 005337 002402 DEC ERRWRD
2770 007266 005304 DEC R4 ;MAKE COUNT RIGHT
2771 007270 000446 BR TXRXEN ;EXIT IF ERROR
2772 007272 005204 30$: INC R4 ;BUMP TO NEXT BYTE
2773 007274 020437 002426 CMP R4, TXCC ;ARE WE DONE?
2774 007300 103753 BLO 25$ ;IF NOT GO BACK
2775 ;*****
2776 007302 005737 007410 TST MTFLG ;* CHECK LOCAL_MAINT_FLAG
2777 007306 001401 BEQ 31$ ;* IF CLEARED: GOTO 31$
2778 007310 000403 BR 32$ ;* SET: CHECK EXPECTED TXBUFF RETURN
2779
2780 007312 005737 002432 31$: TST GENWRD ;TEST FOR MAINT STATE
2781 007316 100433 BMI TXRXEN ;RETURN TO CALLER IF MAINT STATE
2782 007320 042777 000200 173116 32$: BIC #RDO, #BSEL2 ;CLEAR OUTPUT
    
```

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```

2783 007326 012737 000004 002336      MOV      #4, #GDDAT
2784 007334 004537 003242          JSR      R5, GETOUT      ;CHECK FOR TX BUFF COMP
2785 007340 005737 002402          TST      ERRWRD          ;*
2786 007344 100420          BMI      TXRXEN          ;*IF ERROR: THEN EXIT
2787 007346 013737 002426 002336      MOV      TXCC, #GDDAT    ;*
2788 007354 004537 003514          JSR      R5, GETCC      ;*ELSE CHECK TX CHAR COUNT
2789 007360 005737 002402          TST      ERRWRD          ;*
2790 007364 100410          BMI      TXRXEN          ;*EXIT IF ERROR
2791 007366 013737 002420 002336      MOV      TXADD, #GDDAT
2792 007374 004537 003576          JSR      R5, GETBA      ;IS THE TX BUFFER ADDR RIGHT ?
2793 007400 005737 002402          TST      ERRWRD          ;
2794 007404 100400          BMI      TXRXEN          ;EXIT IF ERROR OCCURED
2795 007406 000205          TXRXEN: RTS      R5
2796
2797 007410 000000          MTLFLG: 0
2798
2799
; * LOCAL_MAINT_FLAG
; * (IF MAINT MODE * MTLFLG SET THEN TXBUF
; * RETURN EXPECTED AFTER RXBUF RETURN)

```

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.SBTTL GLOBAL ERROR REPORT SECTION

;/ THE GLOBAL ERROR REPORT SECTION CONTAINS ERROR MESSAGES
;/ THAT ARE USED IN MORE THAN ONE TEST.

2800
2801
2802
2803
2804
2805
2806
2807 007412
2808 007412 013746 002440
2809 007416 012746 010737
2810 007422 012746 000002
2811 007426 010600
2812 007430 104414
2813 007432 062706 000006
2814 007436
2815 007436 104423
2816
2817
2818
2819
2820 007440
2821 007440 017746 173010
2822 007444 012746 011147
2823 007450 012746 000002
2824 007454 010600
2825 007456 104414
2826 007460 062706 000006
2827 007464 004737 005140
2828 007470
2829 007470 104423
2830
2831 007472
2832 007472 013746 002340
2833 007476 013746 002336
2834 007502 012746 011305
2835 007506 012746 000003
2836 007512 010600
2837 007514 104414
2838 007516 062706 000010
2839 007522 004737 005140
2840 007526
2841 007526 104423
2842
2843 007530
2844 007530 013746 002340
2845 007534 013746 002336
2846 007540 012746 011400
2847 007544 012746 000003
2848 007550 010600
2849 007552 104414
2850 007554 062706 000010
2851 007560 004737 005140
2852 007564
2853 007564 104423
2854
2855

ERR1::
MOV SELO,-(SP)
MOV #MEF1,-(SP)
MOV #2,-(SP)
MOV SP,R0
TRAP C#PNTB
ADD #6,SP
L10003:
TRAP C#MSG

;FAILING CODE

ERR3::
MOV #BSEL6,-(SP)
MOV #MEF3,-(SP)
MOV #2,-(SP)
MOV SP,R0
TRAP C#PNTB
ADD #6,SP
JSR PC,STAND
L10004:
TRAP C#MSG

ERR5::
MOV #BDDAT,-(SP)
MOV #GDDAT,-(SP)
MOV #MEF5,-(SP)
MOV #3,-(SP)
MOV SP,R0
TRAP C#PNTB
ADD #10,SP
JSR PC,STAND
L10005:
TRAP C#MSG

ERR6::
MOV #BDDAT,-(SP)
MOV #GDDAT,-(SP)
MOV #MEF6,-(SP)
MOV #3,-(SP)
MOV SP,R0
TRAP C#PNTB
ADD #10,SP
JSR PC,STAND
L10006:
TRAP C#MSG

;PRINT FAILED TO SET RDI

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2856
2857 007566
2858 007566 012746 011722
2859 007572 012746 000001
2860 007576 010600
2861 007600 104414
2862 007602 062706 000004
2863 007606 004737 005140
2864 007612
2865 007612 104423
2866
2867
2868
2869 007614
2870 007614 012746 011746
2871 007620 012746 000001
2872 007624 010600
2873 007626 104414
2874 007630 062706 000004
2875 007634 004737 005140
2876 007640
2877 007640 104423
2878
2879
2880
2881
2882
2883 007642
2884 007642 013746 002406
2885 007646 012746 011653
2886 007652 013746 002340
2887 007656 013746 002336
2888 007662 012746 012343
2889 007666 012746 000005
2890 007672 010600
2891 007674 104414
2892 007676 062706 000014
2893 007702 004737 005140
2894 007706
2895 007706 104423
2896
2897
2898
2899 007710
2900 007710 013746 002340
2901 007714 013746 002336
2902 007720 010446
2903 007722 012746 012434
2904 007726 012746 000004
2905 007732 010600
2906 007734 104414
2907 007736 062706 000012
2908 007742 004737 005140
2909 007746
2910 007746 104423
2911

ERR9::
MOV #MRDI,-(SP)
MOV #1,-(SP)
MOV SP,R0
TRAP C#PNTB
ADD #4,SP
JSR PC,STAND
L10007:
TRAP C#MSG
;PRINT FAILED TO SET RDO
ERR10::
MOV #MRDO,-(SP)
MOV #1,-(SP)
MOV SP,R0
TRAP C#PNTB
ADD #4,SP
JSR PC,STAND
L10010:
TRAP C#MSG
;PRINTS GOOD AND BAD DATA (BYTES) AND
;FAILING PC ADDRS AND STANDARD REGS
ERR18::
MOV ERRADD,-(SP)
MOV #MFPC,-(SP)
MOV #BDDAT,-(SP)
MOV #GDDAT,-(SP)
MOV #MEF18,-(SP)
MOV #5,-(SP)
MOV SP,R0
TRAP C#PNTB
ADD #14,SP
JSR PC,STAND
L10011:
TRAP C#MSG
;DATA COMPARE ERROR
ERR19::
MOV #BDDAT,-(SP)
MOV #GDDAT,-(SP)
MOV R4,-(SP)
MOV #MEF19,-(SP)
MOV #4,-(SP)
MOV SP,R0
TRAP C#PNTB
ADD #12,SP
JSR PC,STAND
L10012:
TRAP C#MSG

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;NON-EXISTENT MEMORY ERROR

2912
2913
2914 007750
2915 007750 013746 002542
2916 007754 012746 012675
2917 007760 012746 000002
2918 007764 010600
2919 007766 104414
2920 007770 062706 000006
2921 007774 004737 005140
2922 010000
2923 010000 104423
2924
2925 010002
2926 010002 012746 013020
2927 010006 012746 000001
2928 010012 010600
2929 010014 104414
2930 010016 062706 000004
2931 010022 013746 002340
2932 010026 013746 002336
2933 010032 013746 002542
2934 010036 012746 013107
2935 010042 012746 000004
2936 010046 010600
2937 010050 104414
2938 010052 062706 000012
2939 010056 004737 005140
2940 010062
2941 010062 104423
2942
2943 010064
2944 010064 012746 013170
2945 010070 012746 000001
2946 010074 010600
2947 010076 104414
2948 010100 062706 000004
2949 010104 013746 002542
2950 010110 012746 013256
2951 010114 012746 000002
2952 010120 010600
2953 010122 104414
2954 010124 062706 000006
2955 010130 012746 013345
2956 010134 012746 000001
2957 010140 010600
2958 010142 104414
2959 010144 062706 000004
2960 010150 004737 005140
2961 010154
2962 010154 104423
2963
2964
2965
2966
2967

ERR20::

MOV \$TMP0,-(SP)
MOV @TFM20,-(SP)
MOV @2,-(SP)
MOV SP,RO
TRAP C#PNTB
ADD @6,SP
JSR PC,STAND

L10013:

TRAP C#MSG

ERR21::

MOV @TFM21,-(SP)
MOV @1,-(SP)
MOV SP,RO
TRAP C#PNTB
ADD @4,SP
MOV @BDDAT,-(SP)
MOV @GDDAT,-(SP)
MOV @TMP0,-(SP)
MOV @TFM2A,-(SP)
MOV @4,-(SP)
MOV SP,RO
TRAP C#PNTB
ADD @12,SP
JSR PC,STAND

L10014:

TRAP C#MSG

ERR22::

MOV @TFM22,-(SP)
MOV @1,-(SP)
MOV SP,RO
TRAP C#PNTB
ADD @4,SP
MOV @TMP0,-(SP)
MOV @TFM22A,-(SP)
MOV @2,-(SP)
MOV SP,RO
TRAP C#PNTB
ADD @6,SP
MOV @TFM22B,-(SP)
MOV @1,-(SP)
MOV SP,RO
TRAP C#PNTB
ADD @4,SP
JSR PC,STAND

L10015:

TRAP C#MSG

;PRINTS GOOD AND BAD DATA (WORDS) AND
;FAILING PC ADDRS AND STANDARD REGS

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2968 010156
 2969 010156 013746 002406
 2970 010162 012746 011653
 2971 010166 013746 002340
 2972 010172 013746 002336
 2973 010176 012746 012522
 2974 010202 012746 000005
 2975 010206 010600
 2976 010210 104414
 2977 010212 062706 000014
 2978 010216 004737 005140
 2979 010222
 2980 010222 104423
 2981
 2982 010224
 2983 010224 013746 002374
 2984 010230 013746 002372
 2985 010234 013746 002366
 2986 010240 012746 013431
 2987 010244 012746 000004
 2988 010250 010600
 2989 010252 104414
 2990 010254 062706 000012
 2991 010260 004737 005140
 2992 010264
 2993 010264 104423
 2994
 2995 010266
 2996 010266 013746 002372
 2997 010272 013746 002370
 2998 010276 013746 002366
 2999 010302 012746 013523
 3000 010306 012746 000004
 3001 010312 010600
 3002 010314 104414
 3003 010316 062706 000012
 3004 010322 004737 005140
 3005 010326
 3006 010326 104423
 3007
 3008
 3009
 3010 010330
 3011 010330 013746 002406
 3012 010334 012746 011653
 3013 010340 012746 011645
 3014 010344 012746 000003
 3015 010350 010600
 3016 010352 104414
 3017 010354 062706 000010
 3018 010360 004737 005140
 3019 010364
 3020 010364 104423
 3021
 3022
 3023

ERR23::

MOV ERRADD,-(SP)
 MOV @MFPC,-(SP)
 MOV @BDDAT,-(SP)
 MOV @GDDAT,-(SP)
 MOV @MEF23,-(SP)
 MOV @5,-(SP)
 MOV SP,R0
 TRAP C@PNTB
 ADD @14,SP
 JSR PC,STAND

L10016:

TRAP C@MSG

ERR24::

MOV CWORD,-(SP)
 MOV WORDT,-(SP)
 MOV ROMN,-(SP)
 MOV @TFM24,-(SP)
 MOV @4,-(SP)
 MOV SP,R0
 TRAP C@PNTB
 ADD @12,SP
 JSR PC,STAND

L10017:

TRAP C@MSG

ERR25::

MOV WORDT,-(SP)
 MOV ROMN1,-(SP)
 MOV ROMB,-(SP)
 MOV @TFM25,-(SP)
 MOV @4,-(SP)
 MOV SP,R0
 TRAP C@PNTB
 ADD @12,SP
 JSR PC,STAND

L10020:

TRAP C@MSG

;PRINTS FAILING PC ADDRESS AND STANDARD REGS

ERR26::

MOV ERRADD,-(SP)
 MOV @MFPC,-(SP)
 MOV @MEF1A,-(SP)
 MOV @3,-(SP)
 MOV SP,R0
 TRAP C@PNTB
 ADD @10,SP
 JSR PC,STAND

L10021:

TRAP C@MSG

;PRINTS FAILING PC ADDRESS AND
;CODE IN ERROR FROM CODEW AND

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STANDARD REGISTERS

3024
3025
3026 010366
3027 010366 013746 002406
3028 010372 012746 011653
3029 010376 012746 011645
3030 010402 012746 000003
3031 010406 010600
3032 010410 104414
3033 010412 062706 000010
3034 010416 013746 002340
3035 010422 013746 002336
3036 010426 012746 011772
3037 010432 013746 002430
3038 010436 012746 011600
3039 010442 012746 000005
3040 010446 010600
3041 010450 104414
3042 010452 062706 000014
3043 010456 004737 005140
3044 010462
3045 010462 104423
3046
3047
3048
3049 010464
3050 010464 012746 010512
3051 010470 012746 000001
3052 010474 010600
3053 010476 104414
3054 010500 062706 000004
3055 010504 004737 005140
3056 010510
3057 010510 104423
3058
3059 010512 040445 040502 044523
3060 010520 020103 051105 047522
3061 010526 000122
3062 010530 047045 040445 044440
3063 010536 041516 051117 042522
3064 010544 052103 044440 052116
3065 010552 051105 040506 042503
3066 010560 043040 051117 047440
3067 010566 052120 047511 020116
3068 010574 047523 042514 052103
3069 010602 042105 000040
3070 010606 047045 040445 044440
3071 010614 041516 051117 042522
3072 010622 052103 041040 052501
3073 010630 020104 049522 042524
3074 010636 043040 051117 044440
3075 010644 052116 051105 040506
3076 010652 042503 051440 046105
3077 010660 041505 042524 000104
3078 010666 047045 040445 025040
3079 010674 025052 025052 020052

ERR27::

MOV ERRADD, -(SP)
MOV #MPC, -(SP)
MOV #MEF1A, -(SP)
MOV #3, -(SP)
MOV SP, R0
TRAP C#PNTB
ADD #10, SP
MOV #BDDAT, -(SP)
MOV #GDDAT, -(SP)
MOV #MGB, -(SP)
MOV CODEW, -(SP)
MOV #MEF11, -(SP)
MOV #5, -(SP)
MOV SP, R0
TRAP C#PNTB
ADD #14, SP
JSR PC, STAND

L10022:

TRAP C#MSG

PRINTS THE STANDARD REGS

ERR32::

MOV #BASER, -(SP)
MOV #1, -(SP)
MOV SP, R0
TRAP C#PNTB
ADD #4, SP
JSR PC, STAND

L10023:

TRAP C#MSG

BASER: .ASCIZ "BASIC ERROR"

BADIFM: .ASCIZ "N/A INCORRECT INTERFACE FOR OPTION SELECTED "

BADBRM: .ASCIZ "N/A INCORRECT BAUD RATE FOR INTERFACE SELECTED"

TESTAB: .ASCIZ "N/A ***** SUBTEST #02#A ABORTED ***** "

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3080	010702	052523	052102	051505	
3081	010710	020124	047445	022462	
3082	010716	020101	041101	051117	
3083	010724	042524	020104	025052	
3084	010732	025052	020052	000	
3085					
3086	010737	045	020101	042101	MEF1: .ASCIZ "A ADDRESSING PROBLEM UNIT ADDRESS #06#N"
3087	010744	051104	051505	044523	
3088	010752	043516	050040	047522	
3089	010760	046102	046505	052440	
3090	010766	044516	020124	042101	
3091	010774	051104	051505	020123	
3092	011002	047445	022466	000116	
3093	011010	042101	051104	051505	EMTO: .ASCIZ /ADDRESS ERROR -TRAP 4/
3094	011016	020123	051105	047522	
3095	011024	020122	052055	040522	
3096	011032	020120	000064		
3097	011036	051445	022463	041501	FMT0: .ASCIZ /#S3#ACSR (SEL#D1#A) DOES NOT RESPOND#N/
3098	011044	051123	024040	042523	
3099	011052	022514	030504	040445	
3100	011060	020051	047504	051505	
3101	011066	047040	052117	051040	
3102	011074	051505	047520	042116	
3103	011102	047045	000		
3104	011105	111	052116	051105	MEF3A: .ASCIZ /INTERNAL DMP-11 DIAGNOSTIC FAILED/
3105	011112	040516	020114	046504	
3106	011120	026520	030461	042040	
3107	011126	040511	047107	051517	
3108	011134	044524	020103	040506	
3109	011142	046111	042105	000	
3110	011147	045	052101	051505	MEF3: .ASCII "ATEST CODE- #03"
3111	011154	020124	047503	042504	
3112	011162	020055	047445	063	
3113	011167	045	022516	044501	MEF4: .ASCIZ /#N#INTERNAL DMP-11-LINE UNIT TEST FAILURE/
3114	011174	052116	051105	040516	
3115	011202	020114	046504	026520	
3116	011210	030461	046055	047111	
3117	011216	020105	047125	052111	
3118	011224	052040	051505	020124	
3119	011232	040506	046111	051125	
3120	011240	000105			
3121	011242	047111	042524	043122	MEFC: .ASCIZ /INTERFACE MICRO-DIAGNOSTIC FAILURE/
3122	011250	041501	020105	044515	
3123	011256	051103	026517	044504	
3124	011264	043501	047516	052123	
3125	011272	041511	043040	044501	
3126	011300	052514	042522	000	
3127	011305	045	020101	052515	MEF5: .ASCII "A MULTIPORT RAM WRITE/READ ERROR#N"
3128	011312	052114	050111	051117	
3129	011320	020124	040522	020115	
3130	011326	051127	052111	027505	
3131	011334	042522	042101	042440	
3132	011342	051122	051117	047045	
3133	011350	040445	043440	047517	.ASCIZ "A GOOD= #03#A BAD= #03"
3134	011356	036504	022440	031517	
3135	011364	040445	041040	042101	

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3136	011372	020075	047445	000063	
3137					
3138	011400	040445	047040	051120	MEF6: .ASCII "A NPR TRANSFER TEST"
3139	011406	052040	040522	051516	
3140	011414	042506	020122	042524	
3141	011422	052123			
3142	011424	047045	040445	043440	.ASCIZ "N A GOOD= 06 A BAD= 06"
3143	011432	047517	036504	022440	
3144	011440	033117	040445	041040	
3145	011446	042101	020075	047445	
3146	011454	000066			
3147					
3148	011456	047125	054105	042520	MEF7: .ASCIZ /UNEXPECTED TEST LOOP HANG/
3149	011464	052103	042105	052040	
3150	011472	051505	020124	047514	
3151	011500	050117	044040	047101	
3152	011506	000107			
3153	011510	046504	020120	047111	MEF8: .ASCIZ /DMP INTERRUPTED TO WRONG VECTOR/
3154	011516	042524	051122	050125	
3155	011524	042524	020104	047524	
3156	011532	053440	047522	043516	
3157	011540	053040	041505	047524	
3158	011546	000122			
3159	011550	047111	047503	051122	EROIC: .ASCIZ /INCORRECT CODE RETURNED/
3160	011556	041505	020124	047503	
3161	011564	042504	051040	052105	
3162	011572	051125	042516	000104	
3163	011600	047045	052045	040445	MEF11: .ASCIZ 'N T A CODE INCORRECT N T A 06 S 3 06'
3164	011606	041440	042117	020105	
3165	011614	047111	047503	051122	
3166	011622	041505	022524	022516	
3167	011630	022524	022516	033117	
3168	011636	051445	022463	033117	
3169	011644	000			
3170	011645	045	022524	033117	MEF1A: .ASCIZ 'T 06'
3171	011652	000			
3172	011653	106	044501	052514	MFPC: .ASCIZ 'FAILURE AT PC '
3173	011660	042522	040440	020124	
3174	011666	041520	000040		
3175					
3176	011672	047522	020115	052506	MRFT: .ASCIZ 'ROM FUNCTION TEST ERROR'
3177	011700	041516	044524	047117	
3178	011706	052040	051505	020124	
3179	011714	051105	047522	000122	
3180	011722	040445	042122	020111	MRDI: .ASCIZ 'ARDI FAILED TO SET'
3181	011730	040506	046111	042105	
3182	011736	052040	020117	042523	
3183	011744	000124			
3184	011746	040445	042122	020117	MRDO: .ASCIZ 'ARDO FAILED TO SET'
3185	011754	040506	046111	042105	
3186	011762	052040	020117	042523	
3187	011770	000124			
3188	011772	047507	042117	020040	MGB: .ASCIZ 'GOOD BAD'
3189	012000	020040	020040	041040	
3190	012006	042101	000		
3191	012011	122	052105	051125	M12F: .ASCIZ 'RETURN KEY'

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3192	012016	020116	042513	000131			
3193	012024	051105	047522	000122	M13F:	.ASCIZ	'ERROR'
3194	012032	042122	000117		MFRO:	.ASCIZ	'RDO'
3195	012036	042122	000111		MFRI:	.ASCIZ	'RDI'
3196	012042	052517	050124	052125	M18F:	.ASCIZ	'OUTPUT'
3197	012050	000					
3198	012051	124	050131	000105	M28F:	.ASCIZ	'TYPE'
3199	012056	040504	040524	000	M30F:	.ASCIZ	'DATA'
3200	012063	122	044504	051440	MEF14:	.ASCIZ	"RDI SET WHEN EXPECTING RDO TO BE SET"
3201	012070	052105	053440	042510			
3202	012076	020116	054105	042520			
3203	012104	052103	047111	020107			
3204	012112	042122	020117	047524			
3205	012120	041040	020105	042523			
3206	012126	000124					
3207	012130	042122	020117	042523	MEF15:	.ASCIZ	"RDO SET WHEN EXPECTING RDI TO BE SET"
3208	012136	020124	044127	047105			
3209	012144	042440	050130	041505			
3210	012152	044524	043516	051040			
3211	012160	044504	052040	020117			
3212	012166	042502	051440	052105			
3213	012174	000					
3214	012175	111	041516	051117	MEF16A:	.ASCIZ	/INCORRECT CHARACTER COUNT RETURNED/
3215	012202	042522	052103	041440			
3216	012210	040510	040522	052103			
3217	012216	051105	041440	052517			
3218	012224	052116	051040	052105			
3219	012232	051125	042516	000104			
3220	012240	047111	047503	051122	MEF17A:	.ASCIZ	/INCORRECT REC BUFFER ADDR. RETURNED/
3221	012246	041505	020124	042522			
3222	012254	020103	052502	043106			
3223	012262	051105	040440	042104			
3224	012270	027122	051040	052105			
3225	012276	051125	042516	000104			
3226	012304	047111	047503	051122	MEF18A:	.ASCIZ	/INCORRECT TRIB NUMBER RETURNED/
3227	012312	041505	020124	051124			
3228	012320	041111	047040	046525			
3229	012326	042502	020122	042522			
3230	012334	052524	047122	042105			
3231	012342	000					
3232	012343	045	043501	047517	MEF18:	.ASCII	"#AGOOD= #03#A BAD= #03"
3233	012350	036504	022440	031517			
3234	012356	040445	041040	042101			
3235	012364	020075	047445	063			
3236	012371	045	022516	022524		.ASCIZ	"#N#T#06"
3237	012376	033117	000				
3238	012401	115	051505	040523	MEF19A:	.ASCIZ	/MESSAGE DATA COMPARE ERROR/
3239	012406	042507	042040	052101			
3240	012414	020101	047503	050115			
3241	012422	051101	020105	051105			
3242	012430	047522	000122				
3243	012434	040445	044103	051101	MEF19:	.ASCII	"#A CHARACTER# #03#A SENT CODE"
3244	012442	041501	042524	021522			
3245	012450	022440	031517	040445			
3246	012456	051440	047105	020124			
3247	012464	047503	042504				

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3248	012470	022440	031517	040445		.ASCIZ " #03#A RECEIVED CODES #03"
3249	012476	051040	041505	044505		
3250	012504	042526	020104	047503		
3251	012512	042504	020123	047445		
3252	012520	000063				
3253	012522	040445	047507	042117	MEF23:	.ASCII "#AGOOD= #06#A BAD= #06'
3254	012530	020075	047445	022466		
3255	012536	020101	040502	036504		
3256	012544	022440	033117			
3257	012550	047045	052045	047445		.ASCIZ "#N#T#06"
3258	012556	000066				
3259	012560	042122	020117	046111	MEF30:	.ASCIZ /RDO ILLEGALLY SET/
3260	012566	042514	040507	046114		
3261	012574	020131	042523	000124		
3262	012602	047522	020115	042526	MEF31:	.ASCIZ /ROM VERSION INCORRECT/
3263	012610	051522	047511	020116		
3264	012616	047111	047503	051122		
3265	012624	041505	000124			
3266	012630	053440	047522	043516	MEF32:	.ASCIZ / WRONG OPTION TYPE SELECTED IN TABLE/
3267	012636	047440	052120	047511		
3268	012644	020116	054524	042520		
3269	012652	051440	046105	041505		
3270	012660	042524	020104	047111		
3271	012666	052040	041101	042514		
3272	012674	000				
3273	012675	045	052501	044516	TFM20:	.ASCII '#AUNIT RETURNED NON-EXISTENT MEM ERR FOR ADD'
3274	012702	020124	042522	052524		
3275	012710	047122	042105	047040		
3276	012716	047117	042455	044530		
3277	012724	052123	047105	020124		
3278	012732	042515	020115	051105		
3279	012740	020122	047506	020122		
3280	012746	042101	104			
3281	012751	040	047445	022462		.ASCIZ '#02#A00000#N#A-MEMORY DOES NOT EXIST!'
3282	012756	030101	030060	030060		
3283	012764	047045	040445	046455		
3284	012772	046505	051117	020131		
3285	013000	047504	051505	047040		
3286	013006	052117	042440	044530		
3287	013014	052123	000041			
3288	013020	040445	040504	040524	TFM21:	.ASCIZ '#ADATA ERROR IN TRANSFER TO RECEIVE BUFFER AT ADDRESS '
3289	013026	042440	051122	051117		
3290	013034	044440	020116	051124		
3291	013042	047101	043123	051105		
3292	013050	052040	020117	042522		
3293	013056	042503	053111	020105		
3294	013064	052502	043106	051105		
3295	013072	040440	020124	042101		
3296	013100	051104	051505	020123		
3297	013106	000				
3298	013107	045	031117	040445	TFM2A:	.ASCII '#02#A00000#N#ADATA SENT = #06'
3299	013114	030060	030060	022460		
3300	013122	022516	042101	052101		
3301	013130	020101	042523	052116		
3302	013136	036440	022440	033117		
3303	013144	040445	020054	040504		.ASCIZ '#A, DATA RECD = #06'

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3304	013152	040524	051040	041505	
3305	013160	020104	020075	047445	
3306	013166	000066			
3307	013170	040445	047125	052111	TFM22: .ASCIZ 'AUNIT FAILED TO DETECT NON-EXISTENT MEMORY, ADDRESS
3308	013176	043040	044501	042514	
3309	013204	020104	047524	042040	
3310	013212	052105	041505	020124	
3311	013220	047516	026516	054105	
3312	013226	051511	042524	052116	
3313	013234	046440	046505	051117	
3314	013242	026131	040440	042104	
3315	013250	042522	051523	000040	
3316	013256	047445	022462	030101	TFM22A: .ASCIZ '02%A00000%A W A R N I N G PARTS OF THIS DIAGNOSTIC
3317	013264	030060	030060	047045	
3318	013272	040445	053440	040440	
3319	013300	051040	047040	044440	
3320	013306	047040	043440	020040	
3321	013314	040520	052122	020123	
3322	013322	043117	052040	044510	
3323	013330	020123	044504	043501	
3324	013336	047516	052123	041511	
3325	013344	000			
3326	013345	045	020101	040515	TFM22B: .ASCIZ 'A MAY HAVE BEEN %ADESTROYED BY THE NPR TRANSFER!'
3327	013352	020131	040510	042526	
3328	013360	041040	042505	020116	
3329	013366	047045	040445	042504	
3330	013374	052123	047522	042531	
3331	013402	020104	054502	052040	
3332	013410	042510	047040	051120	
3333	013416	052040	040522	051516	
3334	013424	042506	020522	000	
3335	013431	045	041501	041522	TFM24: .ASCIZ "ACRC ERROR IN ROM E02%A READ = 06%A ; CALCULATED = 06"
3336	013436	042440	051122	051117	
3337	013444	044440	020116	047522	
3338	013452	020115	022505	031117	
3339	013460	040445	051040	040505	
3340	013466	020104	020075	047445	
3341	013474	022466	020101	020073	
3342	013502	040503	041514	046125	
3343	013510	052101	042105	036440	
3344	013516	022440	033117	000	
3345	013523	045	042501	051122	TFM25: .ASCII "AERROR IN ROM E02%A, "
3346	013530	051117	044440	020116	
3347	013536	047522	020115	022505	
3348	013544	031117	040445	020054	
3349	013552	044123	052517	042114	.ASCIZ "SHOULD BE ROM NO.: %T%A, NO. READ IS: %T'
3350	013560	041040	020105	047522	
3351	013566	020115	047516	035056	
3352	013574	020040	052045	040445	
3353	013602	020054	047516	020056	
3354	013610	042522	042101	044440	
3355	013616	035123	022440	000124	
3356	013624	047045	052045	047045	DFMT4: .ASCIZ /%N%T%N%T%N/
3357	013632	052045	047045	000	
3358	013637	045	031517	051445	DFMT5: .ASCIZ /%03%S5%03%S5%03%S5%03%N/
3359	013644	C22465	031517	051445	

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3360	013652	022465	031517	051445	
3361	013660	022465	031517	047045	
3362	013666	000			
3363	013667	045	032123	047445	DFMT6: .ASCIZ /#S4#03#S5#03#S5#03#S5#03#N/
3364	013674	022463	032523	047445	
3365	013702	022463	032523	047445	
3366	013710	022463	032523	047445	
3367	013716	022463	000116		
3368	013722	052045	047045	000	DFMT9: .ASCIZ /#T#N/
3369	013727	045	022516	020101	ROMMSG: .ASCIZ "#N#A UNIT NUMBER: #D5#A ROM NUMBER IS: #T#A REV. NO. IS: #T"
3370	013734	047125	052111	047040	
3371	013742	046525	042502	035122	
3372	013750	022440	032504	040445	
3373	013756	051040	046517	047040	
3374	013764	046525	042502	020122	
3375	013772	051511	020072	052045	
3376	014000	040445	020040	042522	
3377	014006	027126	047040	027117	
3378	014014	044440	035123	022440	
3379	014022	000124			
3380					.EVEN
3381	014024	000	000		ROMNO: .BYTE 0,0
3382	014026	000	000		REVNO: .BYTE 0,0
3383					.EVEN

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.SBTTL REPORT CODING SECTION

3384
3385
3386
3387
3388
3389
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3400
3401
3402
3403
3404
3405

; THE REPORT CODING SECTION CONTAINS THE
; "PRINTS" CALLS THAT GENERATE STATISTICAL REPORTS.
;--

L#RPT::

014030

014030 000167
014032 000000

.WORD J#JMP
.WORD L10024-2-

L10024:

014034
014034 104425

TRAP C#RPT

3406
3407
3408
3409
3410
3411
3412
3413 014036
3414 014036 010637 002322
3415 014042 005037 002324
3416 014046 005037 002326
3417 014052 005037 002376
3418 014056 005037 002400
3419 014062 005737 002330
3420 014066 001007
3421 014070 013737 000004 002316
3422 014076 013737 000006 002320
3423 014104 000406
3424 014106 013737 002316 000004 6#:
3425 014114 013737 002320 000006
3426 014122 012737 000001 002330 9#:
3427
3428 014130 012700 000040
3429 014134 104447
3430 014136 103415
3431
3432 014140 012700 000037
3433 014144 104447
3434 014146 103411
3435
3436 014150 012700 000035
3437 014154 104447
3438 014156 103411
3439
3440 014160 012700 000036
3441 014164 104447
3442 014166 103540
3443 014170 000416
3444 014172
3445 014172 005037 002346
3446
3447 014176 005037 002350
3448 014202
3449 014202 012737 177777 002332
3450 014210 005237 002354
3451 014214 005237 002346
3452 014220 012737 000001 002352
3453
3454
3455 014226
3456 014226 005237 002332
3457 014232 023737 002332 002012
3458 014240 002360
3459 014242 013700 002332
3460 014246 104442
3461 014250 010001

.SBTTL INITIALIZE SECTION

;/;;;/
;/ THE INITIALIZE SECTION CONTAINS THE CODING THAT IS PERFORMED
;/ AT THE BEGINNING OF THE TEST SEQUENCE ON THE NEXT UNIT.
;/;;;/

L#INIT::

```

MOV SP,PSTACK ;SAVE BASE-LEVEL STACK POINTER
CLR SUBRPC ;CLEAR SUBR CALL PC
CLR ERROR1 ;CLEAR ERROR FLAGS
CLR MODQ22 ;CLEAR DMV Q22 FORMAT FLAG.
CLR EXLOOP ;CLEAR DMV EXTERNAL LOOP FLAG
TST FRSTIM ;SEE IF FIRST TIME THROUGH AFTER LOAD
BNE 6# ;BR IF NOT
MOV 8#4,SAVE4 ;SAVE ERROR TRAP VECTOR
MOV 8#6,SAVE6
BR 9#
6#: MOV SAVE4,8#4 ;RESTORE ERROR TRAP VECTOR
MOV SAVE6,8#6
9#: MOV 9#1,FRSTIM ;MARK FLAG FOR NEXT TIME THROUGH
;SEE IF PROGRAM JUST STARTED, BR IF YES
MOV #EF.START,R0
TRAP C#REFG
BCS STARST
;SEE IF PROGRAM JUST RESTARTED, BR IF YES
MOV #EF.RESTART,R0
TRAP C#REFG
BCS STARST
;SEE IF THIS IS A NEW PASS, BR IF YES
MOV #EF.NEW,R0
TRAP C#REFG
BCS NEWST
;SEE IF PROGRAM WAS JUST CONTINUED
MOV #EF.CONTINUE,R0
TRAP C#REFG
BCS ENDIT
BR GETPRM
STARST:
CLR STARES ;CLEAR FLAG TO SHOW JUST HAD STA OR RES
;CLEAR DEVICE MAP
CLR DEVMAP
NEWST:
MOV #-1,LOGDEV ;RESET LOGICAL DEVICE TO -1
INC FRSPAS ;INCREMENT NO. OF PASSES AFTER LOAD
INC STARES ;INCREMENT NO. OF PASSES SINCE STA OR RES
MOV #BIT0,DEVPTR ;INIT DEVICE MAP BIT POINTER
; GET UNIBUS ADDRESS, VECTOR, PRIORITY LEVEL, SWITCH PACKS, TEST
; CONNECTOR INFORMATION FOR THIS LOGICAL DEVICE
GETPRM:
INC LOGDEV ;INCREMENT LOGICAL DEVICE NUMBER
CMP LOGDEV,L#UNIT ;SEE IF MAXIMUM UNIT NO. EXCEEDED
BGE NEWST ;BR IF YES....
MOV LOGDEV,R0
TRAP C#GPHRD
MOV R0,R1

```

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INITIALIZE SECTION

3462	014252	103403		BCS	10:		
3463	014254	006337	002352	ASL	DEVPTN	;SHIFT DEVICE MAP BIT POINTER	
3464	014260	000762		BR	GETPRM	;SKIP THIS DEVICE	
3465	014262						
3466	014262	053737	002352	002350	10:	BIS	DEVPTN,DEVMAP ;SHIFT DEVICE MAP BIT POINTER
3467	014270	006337	002352			ASL	DEVPTN ;
3468	014274	012137	002472			MOV	(R1)+,OPTYP ;SET THE OPTION TYPE
3469	014300	011137	002440			MOV	(R1),MPCSR ;STORE POINTER TO M8200,4,7 CSR'S
3470	014304	011137	002442			MOV	(R1),BSEL1
3471	014310	005237	002442			INC	BSEL1 ;GET POINTER TO BSEL1 (MAINTENANCE REGISTER)
3472	014314	011137	002450			MOV	(R1),SEL4
3473	014320	062737	000004	002450		ADD	#4,SEL4 ;GET POINTER TO SEL4
3474	014326	011137	002444			MOV	(R1),SEL2
3475	014332	062737	000002	002444		ADD	#2,SEL2
3476	014340	011137	002446			MOV	(R1),BSEL3
3477	014344	062737	000003	002446		ADD	#3,BSEL3
3478	014352	011137	002452			MOV	(R1),BSEL5
3479	014356	062737	000005	002452		ADD	#5,BSEL5
3480	014364	011137	002456			MOV	(R1),BSEL7
3481	014370	062737	000007	002456		ADD	#7,BSEL7
3482	014376	011137	002460			MOV	(R1),BSEL10 ;FOR DMV
3483	014402	062737	000010	002460		ADD	#10,BSEL10
3484	014410	012137	002454			MOV	(R1)+,SEL6
3485	014414	062737	000006	002454		ADD	#6,SEL6 ;STORE POINTER TO SEL6
3486	014422	011137	002462			MOV	(R1),MPIVEC ;GET M8200,4,7 INPUT INTRPT VECTOR
3487	014426	012137	002464			MOV	(R1)+,MPOVEC
3488	014432	062737	000004	002464		ADD	#4,MPOVEC ;GET M8200,4,7 OUTPUT INTRPT VECTOR
3489	014440	012137	002470			MOV	(R1)+,MPRIOR ;GET M8200,4,7 DEVICE PRIORITY
3490	014444	062701	000010			ADD	#10,R1 ;POINT TO TEST CON
3491	014450	012137	002476			MOV	(R1)+,TSTCON ;GET TEST CONNECTOR INDICATOR
3492	014454	012137	002466			MOV	(R1)+,SPEEDM ;GET SPEED
3493	014460	012137	002474			MOV	(R1)+,IFTYP
3494	014464	012137	002474			MOV	(R1)+,IFTYP ;FIRST TIME SKIP RUN WORD; THEN LOAD
3495							;INTERFACE TYPE
3496	014470					ENDIT:	
3497	014470					L10025:	
3498	014470	104411				TRAP	C#INIT
3499							
3500	014472					L#AUTO: :	
3501	014472	004737	004456			JSR	PC,MINITR ;INITIALIZE
3502	014476	005037	002342			CLR	COUNT ;+COUNTER
3503							
3504	014502	004737	004244			1#:	JSR PC,WAIT50 ;STALL
3505	014506	005777	165726			TST	BSEL0 ;HAS IT STARTED?
3506	014512	100406				BMI	4#
3507	014514	105337	002342			DECB	COUNT ;TIME UP?
3508	014520	001370				BNE	1# ;NO LOOP
3509	014522	013700	002332			MOV	LOGDEV,R0
3510	014526	104451				TRAP	C#DODU
3511							
3512	014530					4#:	
3513	014530	104433				TRAP	C#RESE1
3514	014532					L10026:	
3515	014532	104461				TRAP	C#AUTO
3516							

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CLEANUP CODING SECTION

.SBTTL CLEANUP CODING SECTION

;///
;// THE CLEANUP CODING SECTION CONTAINS THE CODING THAT IS PERFORMED
;// AT THE END OF THE TEST SEQUENCE ON A PARTICULAR UNIT.
;///

3517
3518
3519
3520
3521
3522
3523
3524
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3529
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3532
3533

014534
014534 104433

014536
014536 104412

L\$CLEAN:;
 TRAP C\$RESET

L10027:
 TRAP C\$CLEAN

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DROP UNIT SECTION

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3535
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3545
3546
3547
3548
3549
3550

014540
014540 104433
014542
014542 104453

.SBTTL DROP UNIT SECTION

;/;;;
;/ THE DROP-UNIT SECTION CONTAINS THE CODING THAT CAUSES A DEVICE
;/ TO NO LONGER BE TESTED.
;/;;;

L\$DU: :
;ISSUE UNIBUS RESET TO CLEAN UP
TRAP C\$RESET
L10030: TRAP C\$DU

CZDMTFO DMP/V-11 FCTNL TST #1
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ADD UNIT SECTION

.SBTTL ADD UNIT SECTION

3551
3552
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3559
3560
3561
3562
3563

```

:////////////////////
:/ THE ADD-UNIT SECTION CONTAINS THE CODING THAT CAUSES A DEVICE
:/ TO BE (A) TESTED FOR THE FIRST TIME, OR (B) RESUMED IN TESTING. IF
:/ "EF.AUNIT" IS SET, THE UNIT WILL BE TESTED AS A NEW UNIT.
:////////////////////
```

014544
014544
014544 104452

L1AU::
L10031:
TRAP C1AU

3564
3565
3566
3567
3568
3569
3570
3571
3572 014546
3573
3574
3575
3576
3577
3578
3579
3580
3581
3582
3583
3584 014546
3585 014546 012746 000340
3586 014552 012746 014660
3587 014556 012746 000004
3588 014562 012746 000003
3589 014566 104437
3590 014570 062706 000010
3591 014574 005037 014656
3592 014600 005001
3593 014602 005777 165632
3594 014606 012701 000002
3595 014612 005777 165626
3596 014616 012701 000004
3597 014622 005777 165622
3598 014626 012701 000006
3599 014632 005777 165616
3600 014636 005737 014656
3601 014642 001401
3602 014644 104444
3603 014646
3604 014646 012700 000004
3605 014652 104436
3606
3607 014654
3608 014654 104401
3609
3610 014656 000000
3611
3612 014660
3613 014660 005737 014656
3614 014664 001006
3615 014666 104455
3616 014670 000023
3617 014672 011010
3618 014674 007412
3619 014676 005237 014656

.SBTTL HARDWARE TESTS

.SBTTL ;***** TEST 1 *****
.SBTTL * ADDRESS TEST-VERIFY THAT ALL MCPU ADDRESSES RESPOND
ZZ
;*ECB
;*
;* THIS IS THE VERY FIRST TEST IN NORMAL SEQUENCE
;* IT IS USED TO VERIFY THAT DMP OR DMV-11 UNDER TEST, RESPONDS
;* TO THE ADDRESS THAT YOU THINK IT IS AT. ON DMP FAILURE CHECK
;* ADDRESS SWITCHES ON THE M8207 MICRO-CPU. WITH LITTLE
;* DOUBT, THIS FAILURE CAN ONLY BE ATTRIBUTED TO THE M8207 BOARD.
;* NOTE:8207 IS DMP ONLY.....
;*

.SBTTL ;***** TEST 1 *****

T1::
MOV @PRI07,-(SP)
MOV @ECBINT,-(SP)
MOV #4,-(SP)
MOV #3,-(SP)
TRAP C@SVEC
ADD #10,SP
CLR JMO ;CLEAR FLAG
CLR R1
TST @SEL0 ;TEST CSR 0
MOV #2,R1 ;SAVE OFFSET FOR NEXT CSR
TST @SEL2 ;TEST CSR 2
MOV #4,R1 ;SAVE OFFSET
TST @SEL4 ;TEST CSR 4
MOV #6,R1 ;SAVE OFFSET
TST @SEL6 ;TEST CSR 6
TST JMO ;WAS THERE A NXM TRAP
BEQ 104 ;IF NOT EXIT CLEANLY
TRAP C@DCLN
104:
MOV #4,R0
TRAP C@CVEC
L10032:
TRAP C@ETST
JMO: .WORD 0 ;FLAG FOR O'CONNOR CODE
ECBINT::
TST JMO ;HAVE WE HAD AT LEAST 1 TRAP
BNE 104
TRAP C@ERDF
.WORD 19
.WORD EMT0
.WORD ERR1
INC JMO ;SET FLAG

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;***** TEST 1 *****

3620 014702
3621 014702 010146
3622 014704 012746 011036
3623 014710 012746 000002
3624 014714 010600
3625 014716 104415
3626 014720 062706 000006
3627 014724
3628 014724 000002
3629
3630
3631

104:
MOV R1,-(SP)
MOV #FMT0,-(SP)
MOV #2,-(SP)
MOV SP,R0
TRAP C:PNTX
ADD #6,SP
L10033:
RTI

CZDMTFO DMP/V-11 FCTNL TST #1
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;***** TEST 2 *****

```

3632 .SBTTL ;***** TEST 2 *****
3633 .SBTTL ;DMP ONLY VERIFY CONTENTS OF ROM 3
3634 014726 ZZ
3635 ;* THIS TEST DONE FOR DMP ONLY
3636 ;*
3637 ;* IN THIS TEST WE'LL VERIFY THE CONTENTS OF ROM 3
3638 ;*
3639 .SBTTL ;***** TEST 2 *****
3640 ; -CROMT-
3641 014726 T2::
3642 014726 022737 000000 002472 CMP #0,OPTYP ;IS THIS AN 8207 DMP
3643 014734 001150 BNE 60# ;IF NOT END.....
3644 014736 012737 000003 002366 MOV #3,ROMN ;ROM NUMBER
3645 014744 012737 000000 002404 MOV #0,CADDR ;GET STARTING ADDR.
3646
3647 014752 012737 177777 002374 MOV #-1,CWORD ;INIT CRC WORD.
3648
3649 014760 004737 004274 10#:: JSR PC,GWORD ;GET FIRST BYTE.
3650 014764 117737 165464 002372 MOV BSEL6,WORDT ;STORE FIRST BYTE.
3651 014772 005237 002404 INC CADDR ;UPDATE ADDR.
3652 014776 004737 004274 JSR PC,GWORD ;GET NEXT BYTE.
3653 015002 117737 165446 002373 MOV BSEL6,WORDT+1 ;STORE IN HIGH BYTE OF WORDT
3654 015010 005237 002404 INC CADDR ;UPDATE ADDR.
3655 015014 023727 002404 004000 CMP CADDR,#3777+1 ;AT END?
3656 015022 001403 BEQ 20# ;YES.EXIT LOOP.
3657
3658 015024 004737 004376 JSR PC,CRCR ;NO-CALCULATE CRC ON THIS WORD.
3659 015030 000753 BR 10# ;LOOP.
3660
3661 015032 005137 002374 20#:: COM CWORD ;STORED CRC WORD IS COMPLEMENT.
3662 015036 023737 002374 002372 CMP CWORD,WORDT ;EQUAL?
3663 015044 001404 BEQ 30#
3664
3665 ;ROM CRC WORD BAD.
3666 015046 104455 TRAP C#ERDF
3667 015050 000024 .WORD 20
3668 015052 000000 .WORD 0
3669 015054 010224 .WORD ERR24
3670 015056 012737 003775 002404 30#:: MOV #3777-2,CADDR ;SET ROM NUMBER ADDRESS
3671 015064 012737 000060 002370 MOV #60,ROMN1 ;ROM NUMBER
3672 015072 004737 004274 JSR PC,GWORD ;READ ROM NUMBER
3673 015076 117737 165352 002372 MOV BSEL6,WORDT ;STORE BYTE
3674 015104 123737 002370 002372 CMPB ROMN1,WORDT ;GOOD?
3675 015112 001404 BEQ 40#
3676 015114 104455 TRAP C#ERDF
3677 015116 000025 .WORD 21
3678 015120 000000 .WORD 0
3679 015122 010266 .WORD ERR25
3680
3681 015124 022737 000001 002346 40#:: CMP #1,STARES ;IS THIS FIRST PASS
3682 015132 001031 BNE 50# ;IF NOT THEN GO TO 50
3683 015134 113737 002372 014024 MOVB WORDT,ROMNO ;PUT ROM NO IN PRINT CONDITION
3684 015142 012737 003774 002404 MOV #3777-3,CADDR
3685 015150 004737 004274 JSR PC,GWORD ;READ REV NO.
3686 015154 117737 165274 014026 MOV BSEL6,REVNO ;STORE BYTE
3687 015162 012746 014026 MOV #REVNO,-(SP)

```

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;***** TEST 2 *****

3688	015166	012746	014024			MOV	#ROMNO,-(SP)	
3689	015172	013746	002332			MOV	LOGDEV,-(SP)	
3690	015176	012746	013727			MOV	#ROMMSG,-(SP)	
3691	015202	012746	000004			MOV	#4,-(SP)	
3692	015206	010600				MOV	SP,R0	
3693	015210	104417				TRAP	C#PNTF	
3694	015212	062706	000012			ADD	#12,SP	
3695	015216	012737	003773	002404	50#:	MOV	#3777-4,CADDR	;GET VERSION
3696	015224	004737	004274			JSR	PC,GWORD	;READ IT
3697	015230	117737	165220	002372		MOVB	#SEL6,WORDT	
3698	015236	122737	000131	002372		CMPB	#131,WORDT	
3699	015244	001404				BEQ	60#	
3700	015246	104455				TRAP	C#ERDF	
3701	015250	000026				.WORD	22	
3702	015252	012602				.WORD	MEF31	
3703	015254	010464				.WORD	ERR32	
3704	015256				60#:			
3705	015256				L10034:			
3706	015256	104401				TRAP	C#ETST	

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***** TEST 3 *****

```

3707 .SBTTL ;***** TEST 3 *****
3708 .SBTTL *DMP ONLY VERIFY CONTENTS OF ROM 2
3709 015260 ZZ
3710 ;* THIS TEST DONE FOR DMP ONLY
3711 ;*
3712 ;* IN THIS TEST WE'LL VERIFY THE CONTENTS OF ROM 2
3713 ;*
3714 .SBTTL ;***** TEST 3 *****
3715 ;-CROMT-
3716 015260 T3::
3717 015260 022737 000000 002472 CMP #0,OPTYP ;IS THIS AN 8207 DMP
3718 015266 001150 BNE 60$ ;IF NOT END.....
3719 015270 012737 000002 002366 MOV #2,ROMN ;ROM NUMBER
3720 015276 012737 000000 002404 MOV #0,CADDR ;GET STARTING ADDR.
3721
3722 015304 012737 177777 002374 MOV #-1,CWORD ;INIT CRC WORD.
3723
3724 015312 004737 004274 10$: JSR PC,GWORD ;GET FIRST BYTE.
3725 015316 117737 165134 002372 MOVB #BSEL7,WORDT ;STORE FIRST BYTE.
3726 015324 005237 002404 INC CADDR ;UPDATE ADDR.
3727 015330 004737 004274 JSR PC,GWORD ;GET NEXT BYTE.
3728 015334 117737 165116 002373 MOVB #BSEL7,WORDT+1 ;STORE IN HIGH BYTE OF WORDT.
3729 015342 005237 002404 INC CADDR ;UPDATE ADDR.
3730 015346 023727 002404 004000 CMP CADDR,#3777+1 ;AT END?
3731 015354 001403 BEQ 20$ ;YES.EXIT LOOP.
3732
3733 015356 004737 004376 JSR PC,CRCR ;NO-CALCULATE CRC ON THIS WORD.
3734 015362 000753 BR 10$ ;LOOP.
3735
3736 015364 005137 002374 20$: COM CWORD ;STORED CRC WORD IS COMPLEMENT.
3737 015370 023737 002374 002372 CMP CWORD,WORDT ;EQUAL?
3738 015376 001404 BEQ 30$
3739
3740 ;ROM CRC WORD BAD.
3741 015400 104455 TRAP C$ERDF
3742 015402 000024 .WORD 20
3743 015404 000000 .WORD 0
3744 015406 010224 .WORD ERR24
3745 015410 012737 003775 002404 30$: MOV #3777-2,CADDR ;SET ROM NUMBER ADDRESS
3746 015416 012737 000061 002370 MOV #61,ROMN1 ;ROM NUMBER
3747 015424 004737 004274 JSR PC,GWORD ;READ ROM NUMBER
3748 015430 117737 165022 002372 MOVB #BSEL7,WORDT ;STORE BYTE
3749 015436 123737 002370 002372 CMPB ROMN1,WORDT ;GOOD?
3750 015444 001404 BEQ 40$
3751 015446 104455 TRAP C$ERDF
3752 015450 000025 .WORD 21
3753 015452 000000 .WORD 0
3754 015454 010266 .WORD ERR25
3755 015456
3756 015456 022737 000001 002346 40$: CMP #1,STARES ;IS THIS FIRST PASS
3757 015464 001031 BNE 50$ ;IF NOT THEN GO TO 50
3758 015466 113737 002372 014024 MOVB WORDT,ROMNO ;PUT ROM NO IN PRINT CONDITION
3759 015474 012737 003774 002404 MOV #3777-3,CADDR
3760 015502 004737 004274 JSR PC,GWORD ;READ REV NO.
3761 015506 117737 164744 014026 MOVB #BSEL7,REVNO ;STORE BYTE
3762 015514 012746 014026 MOV #REVNO,-(SP)

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CZDMTFO DMP/V-11 FCTNL TST #1
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;***** TEST 3 *****

3763	015520	012746	014024			MOV	#ROMNO,-(SP)	
3764	015524	013746	002332			MOV	LOGDEV,-(SP)	
3765	015530	012746	013727			MOV	#ROMMSG,-(SP)	
3766	015534	012746	000004			MOV	#4,-(SP)	
3767	015540	010600				MOV	SP,R0	
3768	015542	104417				TRAP	C#PNTF	
3769	015544	062706	000012			ADD	#12,SP	
3770	015550	012737	003773	002404	50#:	MOV	#3777-4,CADDR	;GET VERSION
3771	015556	004737	004274			JSR	PC,GWORD	;READ IT
3772	015562	117737	164670	002372		MOVB	#SEL7,WORDT	
3773	015570	122737	000131	002372		CMPB	#131,WORDT	
3774	015576	001404				BEQ	60#	
3775	015600	104455				TRAP	C#ERDF	
3776	015602	000026				.WORD	22	
3777	015604	012602				.WORD	MEF31	
3778	015606	010464				.WORD	ERR32	
3779	015610				60#:			
3780	015610				L10035:			
3781	015610	104401				TRAP	C#ETST	

CZDMTFO DMP/V-11 FCTNL TST #1
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;***** TEST 4 *****

```

3782 .SBTTL ;***** TEST 4 *****
3783 .SBTTL *DMP ONLY VERIFY CONTENTS OF ROM 4
3784 015612 ZZ
3785 ;* THIS TEST DONE FOR DMP ONLY
3786 ;*
3787 ;* IN THIS TEST WE'LL VERIFY THE CONTENTS OF ROM 4
3788 ;*
3789 .SBTTL ;***** TEST 4 *****
3790 ;-CROMT-
3791 015612 T4::
3792 015612 022737 000000 002472 CMP #0,OPTYP ;IS THIS AN 8207 DMP
3793 015620 001150 BNE 60$ ;IF NOT END.....
3794 015622 012737 000004 002366 MOV #4,ROMN ;ROM NUMBER
3795 015630 012737 004000 002404 MOV #4000,CADDR ;GET STARTING ADDR.
3796
3797 015636 012737 177777 002374 MOV #-1,CWORD ;INIT CRC WORD.
3798
3799 015644 004737 004274 10$: JSR PC,GWORD ;GET FIRST BYTE.
3800 015650 117737 164600 002372 MOVB #SEL6,WORDT ;STORE FIRST BYTE.
3801 015656 005237 002404 INC CADDR ;UPDATE ADDR.
3802 015662 004737 004274 JSR PC,GWORD ;GET NEXT BYTE.
3803 015666 117737 164562 002373 MOVB #SEL6,WORDT+1 ;STORE IN HIGH BYTE OF WORDT
3804 015674 005237 002404 INC CADDR ;UPDATE ADDR.
3805 015700 023727 002404 010000 CMP CADDR,#7777+1 ;AT END?
3806 015706 001403 BEQ 20$ ;YES.EXIT LOOP.
3807
3808 015710 004737 004376 JSR PC,CRCR ;NO-CALCULATE CRC ON THIS WORD.
3809 015714 000753 BR 10$ ;LOOP.
3810
3811 015716 005137 002374 20$: COM CWORD ;STORED CRC WORD IS COMPLEMENT.
3812 015722 023737 002374 002372 CMP CWORD,WORDT ;EQUAL?
3813 015730 001404 BEQ 30$
3814
3815 ;ROM CRC WORD BAD.
3816 015732 104455 TRAP C$ERDF
3817 015734 000024 .WORD 20
3818 015736 000000 .WORD 0
3819 015740 010224 .WORD ERR24
3820 015742 012737 007775 002404 30$: MOV #7777-2,CADDR ;SET ROM NUMBER ADDRESS
3821 015750 012737 000062 002370 MOV #62,ROMN1 ;ROM NUMBER
3822 015756 004737 004274 JSR PC,GWORD ;READ ROM NUMBER
3823 015762 117737 164466 002372 MOVB #SEL6,WORDT ;STORE BYTE
3824 015770 123737 002370 002372 CMPB ROMN1,WORDT ;GOOD?
3825 015776 001404 BEQ 40$
3826 016000 104455 TRAP C$ERDF
3827 016002 000025 .WORD 21
3828 016004 000000 .WORD 0
3829 016006 010266 .WORD ERR25
3830 016010 40$:
3831 016010 022737 000001 002346 CMP #1,STARES ;IS THIS FIRST PASS
3832 016016 001031 BNE 50$ ;IF NOT THEN GO TO 50
3833 016020 113737 002372 014024 MOVB WORDT,ROMNO ;PUT ROM NO IN PRINT CONDITION
3834 016026 012737 007774 002404 MOV #7777-3,CADDR
3835 016034 004737 004274 JSR PC,GWORD ;READ REV NO.
3836 016040 117737 164410 014026 MOVB #SEL6,REVNO ;STORE BYTE
3837 016046 012746 014026 MOV #REVNO,-(SP)

```

CZDMTFO DMP/V-11 FCTNL TST #1
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;***** TEST 4 *****

3838	016052	012746	014024			MOV	#ROMNO,-(SP)	
3839	016056	013746	002332			MOV	LOGDEV,-(SP)	
3840	016062	012746	013727			MOV	#ROMMSG,-(SP)	
3841	016066	012746	000004			MOV	#4,-(SP)	
3842	016072	010600				MOV	SP,R0	
3843	016074	104417				TRAP	C#PNTF	
3844	016076	062706	000012			ADD	#12,SP	
3845	016102	012737	007773	002404	50#:	MOV	#7777-4,CADDR	;GET VERSION
3846	016110	004737	004274			JSR	PC,GWORD	;READ IT
3847	016114	117737	164334	002372		MOVB	#SEL6,WORDT	
3848	016122	122737	000131	002372		CMPB	#131,WORDT	
3849	016130	001404				BEQ	60#	
3850	016132	104455				TRAP	C#ERDF	
3851	016134	000026				.WORD	22	
3852	016136	012602				.WORD	MEF31	
3853	016140	010464				.WORD	ERR32	
3854	016142				60#:			
3855	016142				L10036:			
3856	016142	104401				TRAP	C#ETST	

CZDMTFO DMP/V-11 FCTNL TST #1
CZDMTF.P11 08-NOV-84 10.38

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;***** TEST 5 *****

```

3857 .SBTTL ;***** TEST 5 *****
3858 .SBTTL *DMP ONLY VERIFY CONTENTS OF ROM 1
3859 016144 ZZ
3860 ;* THIS TEST DONE FOR DMP ONLY
3861 ;*
3862 ;* IN THIS TEST WE'LL VERIFY THE CONTENTS OF ROM 1
3863 ;*
3864 .SBTTL ;***** TEST 5 *****
3865 ;-CROMT-
3866 016144 T5::
3867 016144 022737 000000 002472 CMP #0,OPTYP ;IS THIS AN 8207 DMP
3868 016152 001150 BNE 60$ ;IF NOT END.....
3869 016154 012737 000001 002366 MOV #1,ROMN ;ROM NUMBER
3870 016162 012737 004000 002404 MOV #4000,CADDR ;GET STARTING ADDR.
3871
3872 016170 012737 177777 002374 MOV #-1,CWORD ;INIT CRC WORD.
3873
3874 016176 004737 004274 10$: JSR PC,GWORD ;GET FIRST BYTE.
3875 016202 117737 164250 002372 MOVB BBSEL7,WORDT ;STORE FIRST BYTE.
3876 016210 005237 002404 INC CADDR ;UPDATE ADDR.
3877 016214 004737 004274 JSR PC,GWORD ;GET NEXT BYTE.
3878 016220 117737 164232 002373 MOVB BBSEL7,WORDT+1 ;STORE IN HIGH BYTE OF WORDT.
3879 016226 005237 002404 INC CADDR ;UPDATE ADDR.
3880 016232 023727 002404 010000 CMP CADDR,#7777+1 ;AT END?
3881 016240 001403 BEQ 20$ ;YES,EXIT LOOP.
3882
3883 016242 004737 004376 JSR PC,CRCR ;NO-CALCULATE CRC ON THIS WORD.
3884 016246 000753 BR 10$ ;LOOP.
3885
3886 016250 005137 002374 20$: COM CWORD ;STORED CRC WORD IS COMPLEMENT.
3887 016254 023737 002374 002372 CMP CWORD,WORDT ;EQUAL?
3888 016262 001404 BEQ 30$
3889
3890 ;ROM CRC WORD BAD.
3891 016264 104455 TRAP C$ERDF
3892 016266 000024 .WORD 20
3893 016270 000000 .WORD 0
3894 016272 010224 .WORD ERR24
3895 016274 012737 007775 002404 30$: MOV #7777-2,CADDR ;SET ROM NUMBER ADDRESS
3896 016302 012737 000063 002370 MOV #63,ROMN1 ;ROM NUMBER
3897 016310 004737 004274 JSR PC,GWORD ;READ ROM NUMBER
3898 016314 117737 164136 002372 MOVB BBSEL7,WORDT ;STORE BYTE
3899 016322 123737 002370 002372 CMPB ROMN1,WORDT ;GOOD?
3900 016330 001404 BEQ 40$
3901 016332 104455 TRAP C$ERDF
3902 016334 000025 .WORD 21
3903 016336 000000 .WORD 0
3904 016340 010266 .WORD ERF25
3905 016342
3906 016342 022737 000001 002346 40$: CMP #1,STARES ;IS THIS FIRST PASS
3907 016350 001031 BNE 50$ ;IF NOT THEN GO TO 50
3908 016352 113737 002372 014024 MOVB WORDT,ROMNO ;PUT ROM NO IN PRINT CONDITION
3909 016360 012737 007774 002404 MOV #7777-3,CADDR
3910 016366 004737 004274 JSR PC,GWORD ;READ REV NO.
3911 016372 117737 164060 014026 MOVB BBSEL7,REVNO ;STORE BYTE
3912 016400 012746 014026 MOV #REVNO,-(SP)

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;***** TEST 5 *****

3913	016404	012746	014024			MOV	#ROMNO,-(SP)	
3914	016410	013746	002332			MOV	LOGDEV,-(SP)	
3915	016414	012746	013727			MOV	#ROMMSG,-(SP)	
3916	016420	012746	000004			MOV	#4,-(SP)	
3917	016424	010600				MOV	SP,R0	
3918	016426	104417				TRAP	C#PNTF	
3919	016430	062706	000012			ADD	#12,SP	
3920	016434	012737	007773	002404	50#:	MOV	#7777-4,CADDR	;GET VERSION
3921	016442	004737	004274			JSR	PC,GWORD	;READ IT
3922	016446	117737	164004	002372		MOVB	88SEL7,WORDT	
3923	016454	122737	000131	002372		CMPB	#131,WORDT	
3924	016462	001404				BEQ	60#	
3925	016464	104455				TRAP	C#ERDF	
3926	016466	000026				.WORD	22	
3927	016470	012602				.WORD	MEF31	
3928	016472	010464				.WORD	ERR32	
3929	016474				60#:			
3930	016474				L10037:			
3931	016474	104401				TRAP	C#ETST	

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***** TEST 6 *****

```

3932 .SBTTL ;***** TEST 6 *****
3933 .SBTTL *DMP ONLY VERIFY CONTENTS OF ROM 5
3934 016476 ZZ
3935 ;* THIS TEST DONE FOR DMP ONLY
3936 ;*
3937 ;* IN THIS TEST WE'LL VERIFY THE CONTENTS OF ROM 5
3938 ;*
3939 .SBTTL ;***** TEST 6 *****
3940 ;-CROMT-
3941 016476 T6::
3942 016476 022737 000000 002472 CMP #0,OPTYP ;IS THIS AN 8207 DMP
3943 016504 001150 BNE 60$ ;IF NOT END.....
3944 016506 012737 000005 002366 MOV #5,ROMN ;ROM NUMBER
3945 016514 012737 010000 002404 MOV #10000,CADDR ;GET STARTING ADDR.
3946
3947 016522 012737 177777 002374 MOV #-1,CWORD ;INIT CRC WORD.
3948
3949 016530 004737 004274 10$: JSR PC,GWORD ;GET FIRST BYTE.
3950 016534 117737 163714 002372 MOVB #SEL6,WORDT ;STORE FIRST BYTE.
3951 016542 005237 002404 INC CADDR ;UPDATE ADDR.
3952 016546 004737 004274 JSR PC,GWORD ;GET NEXT BYTE.
3953 016552 117737 163676 002373 MOVB #SEL6,WORDT+1 ;STORE IN HIGH BYTE OF WORDT
3954 016560 005237 002404 INC CADDR ;UPDATE ADDR.
3955 016564 023727 002404 014000 CMP CADDR,#13777+1 ;AT END?
3956 016572 001403 BEQ 20$ ;YES.EXIT LOOP.
3957
3958 016574 004737 004376 JSR PC,CRCR ;NO-CALCULATE CRC ON THIS WORD.
3959 016600 000753 BR 10$ ;LOOP.
3960
3961 016602 005137 002374 20$: COM CWORD ;STORED CRC WORD IS COMPLEMENT.
3962 016606 023737 002374 002372 CMP CWORD,WORDT ;EQUAL?
3963 016614 001404 BEQ 30$
3964
3965 ;ROM CRC WORD BAD.
3966 016616 104455 TRAP C$ERDF
3967 016620 000024 .WORD 20
3968 016622 000000 .WORD 0
3969 016624 010224 .WORD ERR24
3970 016626 012737 013775 002404 30$: MOV #13777-2,CADDR ;SET ROM NUMBER ADDRESS
3971 016634 012737 000064 002370 MOV #64,ROMN1 ;ROM NUMBER
3972 016642 004737 004274 JSR PC,GWORD ;READ ROM NUMBER
3973 016646 117737 163602 002372 MOVB #SEL6,WORDT ;STORE BYTE
3974 016654 123737 002370 002372 CMPB ROMN1,WORDT ;GOOD?
3975 016662 001404 BEQ 40$
3976 016664 104455 TRAP C$ERDF
3977 016666 000025 .WORD 21
3978 016670 000000 .WORD 0
3979 016672 010266 .WORD ERR25
3980 016674
3981 016674 022737 000001 002346 40$: CMP #1,STARES ;IS THIS FIRST PASS
3982 016702 001031 BNE 50$ ;IF NOT THEN GO TO 50
3983 016704 113737 002372 014024 MOVB WORDT,ROMNO ;PUT ROM NO IN PRINT CONDITION
3984 016712 012737 013774 002404 MOV #13777-3,CADDR
3985 016720 004737 004274 JSR PC,GWORD ;READ REV NO.
3986 016724 117737 163524 014026 MOVB #SEL6,REVNO ;STORE BYTE
3987 016732 012746 014026 MOV #REVNC,-(SP)

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***** TEST 6 *****

3988	016736	012746	014024			MOV	#ROMNO,-(SP)	
3989	016742	013746	002332			MOV	LOGDEV,-(SP)	
3990	016746	012746	013727			MOV	#ROMMSG,-(SP)	
3991	016752	012746	000004			MOV	#4,-(SP)	
3992	016756	010600				MOV	SP,R0	
3993	016760	104417				TRAP	C#PNTF	
3994	016762	062706	000012			ADD	#12,SP	
3995	016766	012737	013773	002404	50\$:	MOV	#13777-4,CADDR	:GET VERSION
3996	016774	004737	004274			JSR	PC,GWORD	:READ IT
3997	017000	117737	163450	002372		MOVB	#SEL6,WORDT	
3998	017006	122737	000131	002372		CMPB	#131,WORDT	
3999	017014	001404				BEQ	60\$	
4000	017016	104455				TRAP	C#ERDF	
4001	017020	000026				.WORD	22	
4002	017022	012602				.WORD	MEF31	
4003	017024	010464				.WORD	ERR32	
4004	017026				60\$:			
4005	017026				L10040:			
4006	017026	104401				TRAP	C#ETST	

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TEST 7

```

4007 .SBTTL ;***** TEST 7 *****
4008 .SBTTL ;DMP ONLY VERIFY CONTENTS OF ROM 14
4009 017030 ZZ
4010 ;* THIS TEST DONE FOR DMP ONLY
4011 ;*
4012 ;* IN THIS TEST WE'LL VERIFY THE CONTENTS OF ROM 14
4013 ;*
4014 .SBTTL ;***** TEST 7 *****
4015 ;-CROMT-
4016 017030 T7::
4017 017030 022737 000000 002472 CMP #0,OPTYP ;IS THIS AN 6207 DMP
4018 017036 001150 BNE 60# ;IF NOT END.....
4019 017040 012737 000014 002366 MOV #14,ROMN ;ROM NUMBER
4020 017046 012737 010000 002404 MOV #10000,CADDR ;GET STARTING ADDR.
4021
4022 017054 012737 177777 002374 MOV #-1,CWORD ;INIT CRC WORD.
4023
4024 017062 004737 004274 10#:: JSR PC,GWORD ;GET FIRST BYTE.
4025 017066 117737 163364 002372 MOV# BBSEL7,WORDT ;STORE FIRST BYTE.
4026 017074 005237 002404 INC CADDR ;UPDATE ADDR.
4027 017100 004737 004274 JSR PC,GWORD ;GET NEXT BYTE.
4028 017104 117737 163346 002373 MOV# BBSEL7,WORDT+1 ;STORE IN HIGH BYTE OF WORDT.
4029 017112 005237 002404 INC CADDR ;UPDATE ADDR.
4030 017116 023727 002404 014000 CMP CADDR,#13777+1 ;AT END?
4031 017124 001403 BEQ 20# ;YES.EXIT LOOP.
4032
4033 017126 004737 004376 JSR PC,CRCR ;NO-CALCULATE CRC ON THIS WORD.
4034 017132 000753 BR 10# ;LOOP.
4035
4036 017134 005137 002374 20#:: COM CWORD ;STORED CRC WORD IS COMPLEMENT.
4037 017140 023737 002374 002372 CMP CWORD,WORDT ;EQUAL?
4038 017146 001404 BEQ 30#
4039
4040 ;ROM CRC WORD BAD.
4041 017150 104455 TRAP C1ERDF
4042 017152 000024 .WORD 20
4043 017154 000000 .WORD 0
4044 017156 010224 .WORD ERR24
4045 017160 012737 013775 002404 30#:: MOV #13777-2,CADDR ;SET ROM NUMBER ADDRESS
4046 017166 012737 000065 002370 MOV #65,ROMN1 ;ROM NUMBER
4047 017174 004737 004274 JSR PC,GWORD ;READ ROM NUMBER
4048 017200 117737 163252 002372 MOV# BBSEL7,WORDT ;STORE BYTE
4049 017206 123737 002370 002372 CMPB ROMN1,WORDT ;GOOD?
4050 017214 001404 BEQ 40#
4051 017216 104455 TRAP C1ERDF
4052 017220 000025 .WORD 21
4053 017222 000000 .WORD 0
4054 017224 010266 .WORD ERR25
4055 017226
4056 017226 022737 000001 002346 40#:: CMP #1,STARES ;IS THIS FIRST PASS
4057 017234 001031 BNE 50# ;IF NOT THEN GO TO 50
4058 017236 113737 002372 014024 MOV# WORDT,ROMNO ;PUT ROM NO IN PRINT CONDITION
4059 017244 012737 013774 002404 MOV #13777-3,CADDR
4060 017252 004737 004274 JSR PC,GWORD ;READ REV NO.
4061 017256 117737 163174 014026 MOV# BBSEL7,REVNC ;STORE BYTE
4062 017264 012746 014026 MOV #REVNO,-(SP)

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***** TEST 7 *****

4063	017270	012746	014024			MOV	@ROMNO,-(SP)	
4064	017274	013746	002332			MOV	LOGDEV,-(SP)	
4065	017300	012746	013727			MOV	@ROMMSG,-(SP)	
4066	017304	012746	000004			MOV	@4,-(SP)	
4067	017310	010600				MOV	SP,R0	
4068	017312	104417				TRAP	C1PNTF	
4069	017314	062706	000012			ADD	@12,SP	
4070	017320	012737	013773	002404	50:	MOV	@13777-4,CADDR	;GET VERSION
4071	017326	004737	004274			JSR	PC,GWORD	;READ IT
4072	017332	117737	163120	002372		MOVB	@SEL7,WORDT	
4073	017340	122737	000131	002372		CHPB	@131,WORDT	
4074	017346	001404				BEQ	60:	
4075	017350	104455				TRAP	C1ERDF	
4076	017352	000026				.WORD	22	
4077	017354	012602				.WORD	MEF31	
4078	017356	010464				.WORD	ERR32	
4079	017360				60:			
4080	017360				L10041:			
4081	017360	104401				TRAP	C1ETST	

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;***** TEST 8 *****

4082
4083
4084 017362
4085
4086
4087
4088
4089
4090
4091
4092 017362
4093 017362 032737 000003 002472
4094 017370 001453
4095 017372 012737 000001 002366
4096 017400 012737 000060 002370
4097 017406 012737 140000 002436
4098 017414 004537 005472
4099 017420 005037 002402
4100 017424 104410
4101 017426 000072
4102 017430 022737 000001 002346
4103 017436 001030
4104
4105 017440 023737 014024 002370
4106 017446 001406
4107 017450 104455
4108 017452 000027
4109 017454 000000
4110 017456 010266
4111
4112 017460 104410
4113 017462 000036
4114 017464
4115 017464 012746 014026
4116 017470 012746 014024
4117 017474 013746 002332
4118 017500 012746 013727
4119 017504 012746 000004
4120 017510 010600
4121 017512 104417
4122 017514 062706 000012
4123
4124
4125
4126 017520
4127 017520
4128 017520 104401

.SBTTL ;***** TEST 8 *****
.SBTTL * ROM VERIFY ROM 1 DMV
ZZ
;*
;*
;*
;* THIS TEST IS USED TO VERIFY THE CONTENTS OF ROM 1
;* THIS TEST IS NOT DONE FOR DMP
;*-
.SBTTL ;***** TEST 8 *****

T8::
BIT #3,OPTYP ;IS THIS DMV
BEQ RDVEX ;IF NOT EXIT
MOV #1,ROMN
MOV #60,ROMN1 ;SET UP ROM NUMBER(ASCII 0)
MOV #140000,ROMADD ;SET UP 1ST ROM ADDRESS
JSR R5,RMVRT ;GO CHECK ROM CRC
CLR ERRWRD
TRAP C#ESCAPE
.WORD L10042-.
CMP #1,STARES ;IS IT FIRST PASS
BNE RDVEX ;IF NOT EXIT
CMP ROMNO,ROMN1 ;COMPARE ROM NUMBER
BEQ 104
TRAP C#ERDF
.WORD 23
.WORD 0
.WORD ERR25
TRAP C#ESCAPE
.WORD L10042-.
104:
MOV #REVNO,-(SP)
MOV #ROMNO,-(SP)
MOV LOGDEV,-(SP)
MOV #ROMMSG,-(SP)
MOV #4,-(SP)
MOV SP,RO
TRAP C#PNTF
ADD #12,SP

RDVEX:
L10042:
TRAP C#ETST

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***** TEST 9 *****

4129
4130
4131 017522
4132
4133
4134
4135
4136
4137
4138 017522
4139 017522 032737 000003 002472
4140 017530 001453
4141 017532 012737 000002 002366
4142 017540 012737 000061 002370
4143 017546 012737 160000 002436
4144 017554 004537 005472
4145 017560 005037 002402
4146 017564 104410
4147 017566 000072
4148 017570 022737 000001 002346
4149 017576 001030
4150
4151 017600 123737 014024 002370
4152 017606 001406
4153 017610 104455
4154 017612 000030
4155 017614 000000
4156 017616 010266
4157 017620 104410
4158 017622 000036
4159 017624
4160 017624 012746 014026
4161 017630 012746 014024
4162 017634 013746 002332
4163 017640 012746 013727
4164 017644 012746 000004
4165 017650 010600
4166 017652 104417
4167 017654 062706 000012
4168
4169
4170 017660
4171 017660
4172 017660 104401
4173

```

.SBTTL ;***** TEST 9 *****
.SBTTL * ROM VERIFY ROM 2 DMV ONLY
ZZ
;*
;*
;* THIS IS THE TEST THAT VERIFIES THE CONTENTS OF ROM 2
;* OF THE DMV OPTION. THIS TEST IS NOT RUN FOR DMP
;*
.SBTTL ;***** TEST 9 *****
T9::
BIT #3,OPTYP ;IS THIS DMV
BEQ RDVEX2 ;IF NOT EXIT
MOV #2,ROMN
MOV #61,ROMN1 ;SETUP ROM NUMBER(ASCII 1)
MOV #160000,ROMADD ;SETUP 1ST ROM ADDRESS
JSR R5,RMVRT ;GO CHECK ROM CRC
CLR ERPRD
TRAP C$ESCAPE
.WORD L10043-
CMP #1,STARES
BNE RDVEX2 ;IF NOT FIRST PASS EXIT

CMPB ROMNO,ROMN1 ;CHECK ROM #
BEQ 10$
TRAP C$ERDF
.WORD 24
.WORD 0
.WORD ERR25
TRAP C$ESCAPE
.WORD L10043-

10$:
MOV #REVNO,-(SP)
MOV #ROMNO,-(SP)
MOV LOGDEV,-(SP)
MOV #ROMMSG,-(SP)
MOV #4,-(SP)
MOV SP,R0
TRAP C$PNTF
ADD #12,SP

RDVEX2:
L10043:
TRAP C$ETST

```


CZDMTFO DMP/V-11 FCTNL TST #1
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;***** TEST 10 *****

4174
4175
4176 017662
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4221
4222
4223
4224
4225
4226 017662
4227
4228 017662 012737 000000 002342
4229 017670 004737 004456

```
.SBTTL ;***** TEST 10 *****
.SBTTL *INITIALIZATION TEST (INTERNAL DIAGNOSTICS)
ZZ
;*
;* IN THIS TEST WE'LL START OUT BY SETTING THE MASTER CLEAR BIT (BIT 14 OF SELO)
;* THE LOGIC CLEARS AND STARTS THE MICRO DIAGNOSTICS. IF THE MICRO-DIAGNOSTICS
;* PASS, THE RUN BIT (BIT15 OF SELO) WILL SET.
;* IF THE RUN BIT FAILS TO SET WITHIN 300 MILLI-SEC, IT
;* PROBABLY MEANS THAT MICRO DIAGNOSTICS HAVE DETECTED AN
;* ERROR AND THE TEST CODE IS IN BSEL6
;*
;* DMP
;*
;* TEST CODE TEST ENTERED
;*
;* 143 BRANCH TEST
;* 135 BRANCH EXTENDED TESTS
;* 125,252,0 IBUS/OBUS TESTS
;* 123 SCRATCH PAD TEST
;* 151 ALU TESTS
;* 222 MAIN MEMORY DATA TEST
;* 132 MAIN MEMORY DUAL ADDRESS TEST
;* 264 LINE UNIT TESTS
;* 305 TESTS COMPLETE
;*
;* DMV TEST
;*
;* 101 BRANCH TEST
;* 102 INTERNAL REG TEST
;* 103 LOAD AND STORE INSTR.
;* 104 COMPARE INSTR. TEST
;* 105 INC/DEC INSTR.
;* 106 SHIFT AND ROTATE INSTR.
;* 107 LOGIC INSTR.
;* 110 ADC,SBC,SED,CLD INSTRU.
;* 111 STACK PUSH,PULL INSTR.
;* 112 SUBROUTINE INSTR.
;* 113 SCRATCH PAD,CSR,AND NPR
;* 114 " "
;* 115 FALSE INT TEST
;* 116 RAM DATA AND ADDRESS
;* 117 RAM ALTERNATING TEST
;* 120 INDEX INDIRECT TEST
;* 121 LINE UNIT TEST
;*
;* NOTE THE RUN BIT WILL BE SET EVEN IF THE LINE UNIT
;* TEST FAILS. TEST CODE MUST BE CHECKED TO FIND ERROR.
;* THESE CODES ARE SET UPON ENTRY OF EACH TEST
;* ONE SHOULD NOT BE DEPENDENT ON A BAD DMP-DMV MODULE
;* TO PASS A CORRECT TEST CODE. IF THIS TEST FAILS, YOU
;* SHOULD RUN THE REPAIR LEVEL DIAGNOSTIC
;*
;* NOTE
;* IF THIS TEST FAILS, CHECK SW7 OF SP#1 TO SEE IF RUN IS ENABLED.
;*
.SBTTL ;***** TEST 10 *****
T10::
MOV #0,COUNT ;CLEAR COUNTER
JSR PC,MINITR
```

CZDHTFO DMP/V-11 FCTNL TST #1 MACY11 30A(1052) 08-NOV-84 10:42 PAGE 98
 CZDHTF.P11 08-NOV-84 10:38 ;***** TEST 10 *****

```

4230 017674
4231 017674 004737 004244
4232 017700 005777 162534
4233 017704 100411
4234 017706 005337 002342
4235 017712 001370
4236
4237
4238
4239 017714 104455
4240 017716 000031
4241 017720 011105
4242 017722 007440
4243 017724 104410
4244 017726 000116
4245 017730 122777 000305 162516 20:
4246 017736 001420
4247 017740 122777 000264 162506
4248 017746 001406
4249
4250 017750 104455
4251 017752 000032
4252 017754 011105
4253 017756 007440
4254
4255
4256 017760 104410
4257 017762 000062
4258
4259 017764
4260 017764 104455
4261 017766 000033
4262 017770 011167
4263 017772 010464
4264 017774 104410
4265 017776 000046
4266
4267 020000
4268 020000 112777 000200 162432
4269 020006 012737 020030 002406
4270 020014
4271 020014 004537 005070
4272 020020 005037 002402
4273 020024 104410
4274 020026 000016
4275 020030
4276
4277
4278
4279 020030 032777 000020 162406 47:
4280 020036 001766
4281 020040
4282 020040 104410
4283 020042 000002
4284 020044
4285 020044 104401

10:
JSR PC, WAIT50
TST BSELO ;TEST DONE?
BHI 20: ;YES TEST FOR ERROR
DEC COUNT ;UPDATE COUNT IF NOT TOO LONG
BNE 10: ;IN THIS WAIT LOOP, GO BACK

;INTERNAL DIAG FAILED

TRAP C#ERDF
.WORD 25
.WORD MEF3A
.WORD ERR3
TRAP C#ESCAPE
.WORD L10044-.
CMPB #305, BSEL6 ;LEGAL TEST COMPLETE CODE?
BEQ 40:
CMPB #264, BSEL6 ;LINE UNIT TEST FAILURE?
BEQ 30:

TRAP C#ERDF
.WORD 26
.WORD MEF3A
.WORD ERR3
;UNKNOWN ERROR WHILE INITIALLING
;DMP-11

TRAP C#ESCAPE
.WORD L10044-.

30:
TRAP C#ERDF
.WORD 27
.WORD MEF4
.WORD ERR32
TRAP C#ESCAPE
.WORD L10044-.
;MODULE FAULT

40:
MOVB #RQI, BSELO ;SET RQI AND THEN WAIT FOR RDI TO SET.
MOV #ERLB1, ERRADD ;SET UP ERROR ADD.

TLB1:
JSR R5, TOUT
CLR ERRWRD
TRAP C#ESCAPE
.WORD L10044-.

ERLB1:
;*****
; TIME OUT ERROR REPORTS THIS ADDRESS
;*****

47:
BIT #RDI, BSEL2 ;DID RDI SET?
BEQ TLB1

50:
TRAP C#ESCAPE
.WORD L10044-.

L10044:
TRAP C#ETST
    
```

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CZDMTF.P11 08-NOV-84 10:38

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;***** TEST 10 *****

```

4286
4287
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4290 020046
4291
4292
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4297
4298
4299
4300
4301
4302
4303
4304
4305 020046
4306
4307 020046 032737 000003 002472
4308 020054 001402
4309 020056 000137 021176
4310 020062
4311 020062
4312 020062 004737 004522
4313
4314
4315
4316 020066 005037 002402
4317 020072 104410
4318 020074 001102
4319 020076 105077 162354
4320 020102 112777 000200 162330
4321 020110
4322 020110 004537 002732
4323
4324 020114 005037 002402
4325 020120 104410
4326 020122 001054
4327
4328
4329
4330
4331 020124 105077 162310
4332 020130 112777 000022 162316
4333 020136 105077 162314
4334 020142 112777 000001 162274
4335
4336 020150
4337 020150 012737 020172 002406
4338 020156 004537 005070
4339 020162 005037 002402
4340 020166 104410
4341 020170 001006

.SBTTL ;***** TEST 11 *****
.SBTTL * MICRO-DIAGNOSTIC-INTERFACE TESTING DMP ONLY
ZZ
;* DMP ONLY THIS TEST...
;* THIS TEST WILL EXERCISE THE MICRO-CPU'S INTERFACE TO THE PDP-11
;* WE FIRST START THE MCPU. NEXT WE GIVE THE COMMAND THAT
;* TAKES US TO THE INTERFACE DIAGNOSTIC CODE. ONCE THIS CODE IS
;* STARTED, WE MUST GO THROUGH ALL TESTS. THEREFORE, YOU WILL NOTICE
;* FIVE DISTINCT TESTS PERFORMED
;* AT THE END OF THIS TEST, THE MICRO-CODE IS LISTED.
;* VARIOUS SCOPE POINTS DO EXIST IF YOU NEED THEM. IT IS NOT
;* COMMON PRACTICE TO USE THEM, HOWEVER, WHERE SOME USE OF THEM
;* COULD BE MADE, THEY ARE NOTED.
;*
.SBTTL ;***** TEST 11 *****

T11::
BIT #3,OPTYP ;IS THIS DMV
BEQ 10$ ;IF NOT GO TO 10;ELSE
JMP EXMDT ;EXIT TEST

10$:
T98G:
JSR PC,MINITS
;****
; JUMP TO END OF TEST IF ERROR
; ; ;
CLR ERRWRD
TRAP C$ESCAPE
.WORD L10045-.
CLRB $BSEL7
MOVB #DRUN,$BSEL0 ;REQUEST INTERFACE DIAGNOSTICS

25$:
JSR R5,WRDI ;WAIT FOR RDI TO SET

CLR ERRWRD ;CLEAR ERROR
TRAP C$ESCAPE
.WORD L10045-.
; ; ; ; ;
; TIME OUT OR READY ERROR REPORTS THIS
; ADDRESS AS FAILING PC
; ; ; ; ;
CLRB $BSEL0 ;NO MORE REQUESTS.
MOVB #22,$BSEL6 ;DIAGNOSTIC CODE.
CLRB $BSEL7 ;CLEAR BSEL7
MOVB #1,$BSEL2 ;START.!

TLB2:
MOV #ERLB2,ERRADD ;SET UP ERROR ADDRESS
JSR R5,TOUT
CLR ERRWRD
TRAP C$ESCAPE
.WORD L10045-.

```

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***** TEST 11 *****

```

4342 020172          ERLB2:
4343                ;;;;;;;;;;
4344                ; TIME OUT ERROR REPORTS THIS ADDRESS
4345                ;;;;;;;;;;
4346 020172 122777 000377 162256 26:  CMPB  #377,0BSEL7 ;LOOK FOR SYNC OF CODE 377 IN LAST REG
4347 020200 001363          BNE    TLB2      ;IF "HANG" OCCURS HERE THEN ITS POSSIBLE
4348                ; THAT EITHER THE DATA PATHS ARE BAD OR
4349                ; THAT THE MCPU FAILED TO START
4350
4351 020202 012737 000377 002336          MOV    #377,%GDDAT ;EXPECT 377 BACK FROM ALL REGS
4352 020210 013701 002440          MOV    BSEL0,R1    ;EXCEPT REG 1 (MAINTENANCE)
4353 020214 012737 000000 002344          MOV    #0,REG
4354 020222 111137 002340          4:  MOVB  (R1),%BDDAT ;READ REG, EXPECT 377
4355 020226 123737 002340 002336          CMPB  %BDDAT,%GDDAT ;OK?
4356 020234 001412          BEQ    5:          ;YES-CONTINUE
4357 020236 022737 000001 002344          CMP    #1,REG     ;NO ERROR? (EXCEPT REG 1)
4358 020244 001406          BEQ    5:          ;IF REG 1, SKIP
4359
4360 020246 104455          TRAP  C#ERDF
4361 020250 000034          .WORD 28
4362 020252 011242          .WORD MEFC
4363 020254 007472          .WORD ERR5
4364 020256 104410          TRAP  C#ESCAPE
4365 020260 000716          .WORD L10045-.
4366 020262 005237 002344          5:  INC    REG        ;UPDATE REGISTER #
4367 020266 005201          INC    R1         ;AND ADDRESS
4368 020270 023727 002344 000010          CMP    REG, #10   ;DONE ALL REGS?
4369 020276 001351          BNE    4:
4370 020300 105077 162134          CLRB  %BSEL0     ;CAUSES MCPU TO EXIT TSTA
4371
4372
4373                ;TEST B
4374
4375
4376 020304          TLB3:
4377 020304 012737 020326 002406          MOV    %ERLB3,ERRADD ;SET ERROR ADDRESS
4378 020312 004537 005070          JSR    R5,TOUT
4379 020316 005037 002402          CLR   ERRWRD
4380 020322 104410          TRAP  C#ESCAPE
4381 020324 000652          .WORD L10045-.
4382 020326          ERLB3:
4383                ;;;;;;;;;;
4384                ; TIME OUT ERROR REPORTS THIS ADDRESS
4385                ;;;;;;;;;;
4386 020326 105777 162124          27:  TSTB  %BSEL7     ;LOOK FOR A ZERO IN BSEL7
4387 020332 001364          BNE    TLB3
4388
4389 020334 005037 002336          CLR   %GDDAT     ;EXPECT ALL ZEROS EXCEPT SBEL1
4390 020340 013701 002440          MOV   BSEL0,R1   ;GET ADDR OF MCPU.
4391 020344 012737 000000 002344          MOV   #0,REG
4392 020352 005037 002340          CLR   %BDDAT
4393 020356 111137 002340          7:  MOVB  (R1),%BDDAT ;READ REG
4394 020362 001412          BEQ   8:          ;IF ZERO-CONTINUE
4395 020364 022737 000001 002344          CMP   #1,REG     ;IF REG #1 CONTINUE
4396 020372 001406          BEQ   8:
4397

```

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;***** TEST 11 *****

```

4398 020374 104455 TRAP C#ERDF
4399 020376 000035 .WORD 29
4400 020400 011242 .WORD MEFC
4401 020402 007472 .WORD ERR5
4402 020404 104410 TRAP C#ESCAPE
4403 020406 000570 .WORD L10045-
4404 020410 005237 002344 8#: INC REG ;UPDATE REGISTER #
4405 020414 005201 INC R1 ;AND ADDRESS
4406 020416 122737 000010 002344 CMPB #10,REG ;DONE ALL REGS (0-7)?
4407 020424 001354 BNE 7# ;NO-DO NEXT ONE
4408
4409 020426 000404 BR 9# ;REPLACE THIS INSTRUCTION WITH CODE 240
4410 ;(NOP) IF YOU WITH TO COOP IN
4411 ;TESTS A&B
4412 020430 112777 000200 162002 MOVB #200,#BSELO ;ALL MICRO-CODE TO LOOP
4413 020436 000611 BR T98G ;LOOP
4414
4415 020440 112777 000377 161772 9#: MOVB #377,#BSELO ;TELL MICRO-CODE TO EXIT TEST B,
4416 ;PROCEED TO TEST C.
4417
4418
4419 ;TEST C
4420 ;: WAS #KMLVL VRG021582
4421 020446 013746 002470 MOV KMLVL,-(SP)
4422 020452 012746 021106 MOV #INTCO,-(SP)
4423 020456 013746 002462 MOV KMRVEC,-(SP)
4424 020462 012746 000003 MOV #3,-(SP)
4425 020466 104437 TRAP C#SVEC
4426 020470 062706 000010 ADD #10,SP
4427 ;INTERRUPT VECTOR
4428
4429 ;: WAS #KMTLVL VRG021582
4430 020474 013746 002470 MOV KMTLVL,-(SP)
4431 020500 012746 021122 MOV #INTC4,-(SP)
4432 020504 013746 002464 MOV KMTVEC,-(SP)
4433 020510 012746 000003 MOV #3,-(SP)
4434 020514 104437 TRAP C#SVEC
4435 020516 062706 000010 ADD #10,SP
4436 ;ILLEGAL INTERRUPT TO WRONG VECTOR
4437
4438 020522 005037 002334 CLR IFLAG
4439 020526 112777 000377 161712 MOVB #377,#BSEL3 ;TELL MICRO-CODE TO FORCE INTERRUPT
4440 020534 012700 000000 MOV #0,R0
4441 020540 104441 TRAP C#SPRI
4442
4443 020542 TLB4:
4444 020542 012737 020564 002406 MOV #ERLB4,ERRADD ;SET UP ERROR ADDRESS
4445 020550 004537 005070 JSR R5,TOUT
4446 020554 005037 002402 CLR ERRWRD
4447 020560 104410 TRAP C#ESCAPE
4448 020562 000414 .WORD L10045-
4449 020564 ERLB4:
4450 ;: TIME OUT REPORTS THIS ADDRESS
4451 ;: TIME OUT REPORTS THIS ADDRESS
4452 ;: TIME OUT REPORTS THIS ADDRESS
4453 020564 005737 002334 28#: TST IFLAG ;IFLAG=1 SET BY INTERRUPT SERVICE ROUTINE

```

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:***** TEST 11 *****

```

4454 020570 001764          BEQ      TLB4          ;LOOP UNIT DONE
4455                                ;NOTE: IF HANGS HERE, MCPU FAILS TO
4456                                ;GENERATE INTERRUPT TO PDP-11.
4457
4458
4459                                ;TEST      D
4460
4461 020572 013746 002470    MOV      KMRLVL, -(SP)
4462 020576 012746 021142    MOV      @INTD0, -(SP)
4463 020602 013746 002462    MOV      KMRVEC, -(SP)
4464 020606 012746 000003    MOV      #3, -(SP)
4465 020612 104437          TRAP     C#SVEC
4466 020614 062706 000010    ADD     #10, SP
4467 020620 013746 002470    MOV      KMTLVL, -(SP)
4468 020624 012746 021162    MOV      @INTD4, -(SP)
4469 020630 013746 002464    MOV      KMTVEC, -(SP)
4470 020634 012746 000003    MOV      #3, -(SP)
4471 020640 104437          TRAP     C#SVEC
4472 020642 062706 000010    ADD     #10, SP
4473
4474 020646 005037 002334    CLR     IFLAG          ;NO INTERRUPT INDICATOR
4475 020652 012700 000000    MOV     #0, R0
4476 020656 104441          TRAP     C#SPRI
4477 020660 105077 161562    CLR     @SEL3          ;TELL MCPU TO INTERRUPT
4478
4479 020664          TLB5:
4480 020664 012737 020706 002406    MOV     @ERLBS,ERRADD ;SET UP ERROR ADDRESS
4481 020672 004537 005070          JSR     R5, TOUT
4482 020676 005037 002402          CLR     ERRWRD
4483 020702 104410          TRAP     C#ESCAPE
4484 020704 000272          .WORD  L10045-.
4485 020706          ERLB5:
4486          ;:
4487          ; TIME OUT REPORTS THIS ADDRESS
4488          ;:
4489 020706 005737 002334    29$:  TST     IFLAG          ;DID MCPU INTERRUPT (IFLAG NOT 0)?
4490 020712 001764          BEQ     TLB5          ;NO - LOOP
4491                                ;NOTE: IF PROGRAM "HANGS" HERE, MCPU
4492                                ;FAILED TO INTERRUPT TO VECTOR XX4
4493                                ;WE KNOW MCPU IS ABLE TO INTERRUPT
4494                                ;TO XX0 (TEST C)
4495
4496 020714 013700 002462    MOV     KMRVEC, R0
4497 020720 104436          TRAP     C#CVEC
4498 020722 013700 002464    MOV     KMTVEC, R0
4499 020726 104436          TRAP     C#CVEC
4500
4501
4502                                ;TEST E NPR TEST
4503
4504
4505 020730 012701 033774    MOV     @DATLST, R1    ;GET DATA LIST
4506 020734 152777 000010 161500    BISB   @BIT3, @SEL1   ;SET INDICATOR THAT WE ARE STILL IN TEST.
4507
4508 020742 011137 002336    TLB6A: MOV     (R1), @GDDAT ;GET NEXT PATTERN
4509 020746 010177 161476    MOV     R1, @SEL4     ;SET NPR IN ADDR

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CZDMTFO DMP/V-11 FCTNL TST #1 MACY11 30A(1052) 08-NOV-84 10:42 PAGE 103
CZDMTF.P11 08-NOV-84 10:38 ;***** TEST 11 *****

4510 020752 012777 002340 161474      MOV    #BDDAT, BSEL6 ;SET NPR OUT ADDR
4511 020760 105077 161454      CLR    BSEL0        ;TELL MCPU TO DO NPRS
4512
4513 020764
4514 020764 012737 021006 002406      TLB6:  MOV    #ERLB6, ERRADD ;SET ERROR ADDRESS
4515 020772 004537 005070      JSR    R5, TOUT
4516 020776 005037 002402      CLR    ERRWRD
4517 021002 104410      TRAP   C#ESCAPE
4518 021004 000172      .WORD  L10045-.
4519 021006      ERLB6:
4520      ;*****
4521      ; TIME OUT ERROR REPORTS THIS ADDRESS
4522      ;*****
4523 021006 132777 000010 161426 30#:  BITB   #BITS, BSEL1 ;DID WE ACCIDENTILY ESCAPE THIS TEST???
4524 021014 001006      BNE    135#
4525 021016 104455      TRAP   C#ERDF
4526 021020 000036      .WORD  30
4527 021022 011456      .WORD  MEF7
4528 021024 010464      .WORD  ERR32
4529      ;UNKNOWN MCPU ERROR CAUSED ABORT OF TEST.
4530 021026 104410      TRAP   C#ESCAPE
4531 021030 000146      .WORD  L10045-.
4532 021032      135#:
4533
4534 021032 122777 000377 161400      CMPB   #377, BSELO ;WHEN MCPU DONE, IT PUTS 377 INTO BSELO
4535 021040 001351      BNE    TLB6        ;IF WE "HANG" HERE, MCPU FAILS TO DO
4536      ;EITHER NPR IN OR NPR OUT
4537
4538 021042 023737 002336 002340      CMP    #GDDAT, #BDDAT ;NPRD FRO PATTERN LIST TO #BDDAT
4539      ;DID XFER OCCUR SUCCESSFULLY?
4540 021050 001405      BEQ    14#
4541
4542 021052 104455      TRAP   C#ERDF
4543 021054 000037      .WORD  31
4544 021056 011242      .WORD  MEF7
4545 021060 007530      .WORD  ERR6
4546 021062 104410      TRAP   C#ESCAPE
4547 021064 000112      .WORD  L10045-.
4548 021066 022721 000562      14#:  CMP    #562, (R1)+ ;IS IT THE LAST PATTERN (562) IS TERM)?
4549 021072 001323      BNE    TLB6A
4550 021074 112777 000200 161336      MOVB   #200, BSELO ;TELL MCPU TO EXIT TEST
4551 021102 104432      TRAP   C#EXIT
4552 021104 000072      .WORD  L10045-.
4553
4554 021106      INTC0::
4555 021106 013700 000006      MOV    6, R0
4556 021112 104441      TRAP   C#SPRI
4557 021114 005237 002334      INC    IFLAG
4558 021120      L10046:
4559 021120 000002      RTI
4560
4561 021122      INTC4::
4562 021122 013700 000006      MOV    6, R0
4563 021126 104441      TRAP   C#SPRI
4564 021130 104455      TRAP   C#ERDF
4565 021132 000040      .WORD  32

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;***** TEST 11 *****

4566 021134 011510
 4567 021136 010464
 4568 021140
 4569 021140 000002
 4570
 4571 021142
 4572 021142 013700 000006
 4573 021146 104441
 4574 021150 104455
 4575 021152 000041
 4576 021154 011510
 4577 021156 010464
 4578 021160
 4579 021160 000002
 4580
 4581 021162
 4582 021162 013700 000006
 4583 021166 104441
 4584 021170 005237 002334
 4585 021174
 4586 021174 000002
 4587
 4588 021176
 4589
 4590 021176
 4591 021176 104401
 4592
 4593

.WORD MEF8
 .WORD ERR32
 L10047:
 RTI
 INTD0::
 MOV 6,R0
 TRAP C#SPRI
 TRAP C#ERDF
 .WORD 33
 .WORD MEF8
 .WORD ERR32
 L10050:
 RTI
 INTD4::
 MOV 6,R0
 TRAP C#SPRI
 INC IFLAG
 L10051:
 RTI
 EXMDT:
 L10045:
 TRAP C#ETST

;CORRECT VECTOR (XX4)

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***** TEST 12 *****

```

4594 .SBTTL ;***** TEST 12 *****
4595 .SBTTL RDI REMAINS SET TEST
4596 021200 ZZ
4597 ;*
4598 ;*ROM FUNCTION TEST      IN THIS TEST, WE'RE GOING TO SET RQI, GET A
4599 ;*                          RDI, DO A CONTROL IN COMMAND WITH A REQUEST
4600 ;*                          KEY OF 00 (NO REQUEST). NEXT WE'LL WAIT
4601 ;*                          FOR RDI TO SET AGAIN SINCE RQI WAS
4602 ;*                          LEFT SET
4603 ;*
4604 .SBTTL ;***** TEST 12 *****
4605 021200 T12::
4606 021200 004737 004522 JSR      PC,MINITS      ;INITIALIZE & START MCPU
4607
4608 021204 005037 002402 CLR      ERRWRD
4609 021210 104410 TRAP    C#ESCAPE
4610 021212 000076 .WORD  L10052-.
4611 ;*
4612 ;* JUMP TO END OF TEST IF ERROR
4613 ;*
4614 021214 7#:
4615 021214 052777 000200 161216 BIS      #RQI,#BSELO    ;SET RQI
4616 021222 10#:
4617 021222 004537 002732 JSR      R5,WRDI       ;WAIT FOR RDI TO SET
4618
4619 021226 005037 002402 CLR      ERRWRD       ;CLEAR ERROR
4620 021232 104410 TRAP    C#ESCAPE
4621 021234 000054 .WORD  L10052-.
4622 ;*
4623 ;* TIME OUT - OR READY ERROR REPORTS
4624 ;* THIS ADDRESS
4625 ;*
4626 ;*
4627 021236 005077 161212 20#: CLR      #BSEL6      ;CLEAR RDI, ISSUE REQUEST OF NO REQUEST
4628 ;* THIS SHOULD CAUSE RDI TO SET AGAIN
4629 ;* SINCE RQI HAD REMAINED SET
4630 021242 112777 000001 161174 MOVB    #1,#BSEL2     ;START
4631
4632 021250 004737 004244 JSR      PC,WAIT50    ;WAIT THIS SHORT TIME SO THAT THE
4633 021254 004737 004244 JSR      PC,WAIT50    ;DMP MICRO-CODE MAY RESET "RDI" IF
4634 021260 004737 004244 JSR      PC,WAIT50
4635 021264 004737 004244 JSR      PC,WAIT50
4636 ;*
4637 021270 032777 000020 161146 BIT      #RDI,#BSEL2   ;IT IS GOING TO
4638 021276 001004 BNE     30#           ;IS RDI SET?
4639
4640 021300 104455 TRAP    C#ERDF
4641 021302 000042 .WORD  34
4642 021304 011672 .WORD  MRFT
4643 021306 007566 .WORD  ERR9
4644 ;*
4645 ;* COMPLETING A "NO REQUEST" CONTROL
4646 021310 30#:
4647 021310 L10052:
4648 021310 104401 TRAP    C#ETST
    
```

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;***** TEST 12 *****

```

4649
4650 .SBTTL ;***** TEST 13 *****
4651 .SBTTL ;ROM FUNC TEST. VERIFY RDO SETS
4652 021312 ZZ
4653 ;ROM FUNC IN THIS TEST WE'LL DO A CONTROL IN WITH
4654 ;* READ MODEM AS THE REQUEST KEY. WE'LL MAKE
4655 ;* SURE THAT RDO SETS. WE SHOULD GET A
4656 ;* RETURN KEY OF 10 "RETURN MODEM"
4657 ;*
4658 .SBTTL ;***** TEST 13 *****
4659 021312 T13::
4660
4661 021312 004737 004522 JSR PC,MINITS ;INIT & START MCPU
4662
4663 021316 005037 002402 CLR ERRWRD
4664 021322 104410 TRAP C#ESCAPE
4665 021324 000174 .WORD L10053-.
4666
4667 ;*****
4668 ; JUMP TO END OF TEST IF ERROR
4669 ;*****
4670 021326 052777 000200 161104 BIS #RQI,#BSELO ;SET REQUEST IN
4671 021334 004537 002732 JSR R5,WRDI ;WAIT FOR RDI TO SET
4672
4673 021340 005037 002402 CLR ERRWRD ;CLEAR ERROR
4674 021344 104410 TRAP C#ESCAPE
4675 021346 000152 .WORD L10053-.
4676
4677 ;*****
4678 ; TIME OUT OR READY ERROR REPORTS
4679 ; THIS ADDRESS AS FAILING PC
4680 021350 042777 000200 161062 201: BIC #RQI,#BSELO ;DROP REQUEST
4681 021356 012777 000020 161070 MOV #20,#BSEL6 ;READ MODEM
4682 021364 112777 000001 161052 MOVB #1,#BSEL2
4683
4684 021372 004737 004244 JSR PC,WAIT50 ;STALL
4685 021376 004737 004244 JSR PC,WAIT50
4686
4687 021402 032777 000200 161034 BIT #RDO,#BSEL2 ;DID "RDO" SET?
4688 021410 001006 BNE 301
4689
4690 021412 104455 TRAP C#ERDF
4691 021414 000043 .WORD 35
4692 021416 011672 .WORD MRFT
4693 021420 007614 .WORD ERR10
4694
4695 021422 104410 TRAP C#ESCAPE ;REQUEST FOR READ MODEM
4696 021424 000074 .WORD L10053-.
4697
4698 021426 117737 161012 002340 301: MOVB BSEL2,#BDOAT ;NOW GET CSR AND
4699 021434 042737 177770 002340 BIC #<C<7>,#BDOAT ;STRIP FOR
4700 021442 012737 000002 002336 MOV #2,#GDOAT ;TYPE CODE OF INFORMATION OUT
4701 021450 023737 002336 002340 CMP #GDOAT,#BDOAT
4702 021456 001411 BEQ 401
4703 021460 012737 012051 002430 MOV #M28F,CODEW
4704 021466 104455 TRAP C#ERDF

```

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;***** TEST 13 *****

4705	021470	000044			.WORD	36		
4706	021472	011550			.WORD	EROIC		
4707	021474	010366			.WORD	ERR27		
4708								; IN RDO
4709	021476	104410			TRAP	C!ESCAPE		
4710	021500	000020			.WORD	L10053-		
4711								
4712	021502							
4713	021502	112737	000010	002336	404:	MOVB	#10, #GDDAT	; SHOULD=10 "RETURN MODEM"
4714	021510	004537	003372			JSR	R5,GETRKY	; GO GET AND CHECK RETURN KEY
4715								
4716	021514	005037	002402			CLR	ERRWRD	
4717	021520				L10053:			
4718	021520	104401				TRAP	C!ETST	

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***** TEST 14 *****

4719
4720
4721 021522
4722
4723
4724
4725
4726
4727
4728
4729 021522
4730
4731 021522 112777 000100 160712
4732 021530 022737 000004 002472
4733 021536 001003
4734 021540 112777 000200 160674
4735
4736 021546
4737 021546 004537 005070
4738 021552 005037 002402
4739 021556 104410
4740 021560 000204
4741
4742 021562
4743 021562 005777 160652
4744 021566 100367
4745 021570 052777 000200 160642
4746 021576 004537 002732
4747
4748 021602 005037 002402
4749 021606 104410
4750 021610 000154
4751 021612 105077 160622
4752 021616 105077 160624
4753 021622 112777 000052 160624
4754 021630 112777 000001 160606
4755 021636 004537 002646
4756 021642 005037 002402
4757 021646 104410
4758 021650 000114
4759 021652 117737 160566 002340
4760 021660 042737 177770 002340
4761 021666 022737 000002 002340
4762 021674 001433
4763 021676 022737 000001 002340
4764 021704 001411
4765 021706 012737 012042 002430
4766 021714 104455
4767 021716 000045
4768 021720 011550
4769 021722 010366
4770 021724 104410
4771 021726 000036
4772 021730
4773 021730 117737 160520 002340
4774 021736 022737 000100 002340

.SBTTL ***** TEST 14 *****
.SBTTL * NON-MODE DEF AFTER MC PROCEDURE ERR CHECK
ZZ
; *
; *
; * THIS TEST CHECKS FOR PROCEDURE ERROR WHEN
; * NON-MODE DEFINITION IS DONE AFTER MC
; *
; *
; *-

.SBTTL ***** TEST 14 *****

T14::

MOVW #100,8BSEL1 ;MASTER CLEAR
CMP #4,OPTYP ;8206
BNE TLB10 ;IF NOT GO TO TLB10
MOVW #200,8BSEL1 ;SET RUN 8206

TLB10:
JSR R5,TOUT
CLR ERRWRD
TRAP C1ESCAPE
.WORD L10054-.

ERLB10:
TST 8BSEL0
BPL TLB10 ;LOOP IF NOT RUN
BIS #RQI,8BSEL0 ;SET REQUEST
JSR R5,WRDI ;WAIT FOR RDI TO SET

CLR ERRWRD ;CLEAR ERROR
TRAP C1ESCAPE
.WORD L10054-.

CLRB 8BSEL0 ;CLEAR REQUEST
CLRB 8BSEL3 ;MAKE TRIB ADD 0
MOVW #52,8BSEL6 ;READ TSS
MOVW #01,8BSEL2 ; EXECUTE CONTROL IN
JSR R5,WRDO ;WAIT FOR RDO
CLR ERRWRD
TRAP C1ESCAPE
.WORD L10054-.

MOVW 8BSEL2,8BDDAT
BIC #1C<7>,8BDDAT ;STRIP TO COMMAND CODE
CMP #2,8BDDAT ;IS IT INFO OUT
BEQ T14EX ;IF YES EXIT TEST
CMP #01,8BDDAT ;IF NOT IS IT CONTROL OUT
BEQ T14A
MOV #M18F,CODEW
TRAP C1ERDF
.WORD 37
.WORD EROIC
.WORD ERR27
TRAP C1ESCAPE
.WORD L10054-.

T14A:
MOVW 8BSEL6,8BDDAT
CMP #100,8BDDAT ;IS IT 100

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4775	021744	001407			BEQ	T14EX		;IF SO END TEST ELSE ER, JR
4776	021746	012737	012024	002430	MOV	#M13F, CODEW		
4777	021754	104455			TRAP	C#ERDF		
4778	021756	000046			.WORD	38		
4779	021760	011550			.WORD	EROIC		
4780	021762	010366			.WORD	ERR27		
4781	021764				T14EX:			
4782	021764				L10054:			
4783	021764	104401			TRAP	C#ETST		
4784								

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***** TEST 14 *****

```

4785
4786 .SBTTL ;***** TEST 15 *****
4787 .SBTTL * MODE DEF,MODE DEF PROCEDURE ERROR
4788 021766 ZZ
4789 ;*
4790 ;*
4791 ;*
4792 ;* THIS TEST CHECKS THAT AFTER THE SEQUENCE OF
4793 ;* MASTER CLEAR MODE DEF FOLLOWED BY MODE DEF
4794 ;* DIFFERENT TYPE PRODUCES A PROCEDURE ERROR OF
4795 ;* OCTAL 104
4796 ;*
4797 ;*-
4798 .SBTTL ;***** TEST 15 *****
4799 021766 T15::
4800
4801 021766 004737 004522 JSR PC,MINITS ;DO MC,MODE DEF(CONT STA/FD)
4802
4803
4804 021772 005037 002402 CLR ERRWRD
4805 021776 104410 TRAP C#ESCAPE
4806 022000 000174 .WORD L10055-.
4807 ;::::
4808 ; JUMP TO END OF TEST IF ERROR
4809 ;::::
4810 022002 004737 004244 JSR PC,WAIT50 ;WAIT A WHILE TO BE SURE MODEM READY
4811 ;IS SET
4812 022006 004737 004244 JSR PC,WAIT50
4813 022012 142777 000010 160422 BIC #BIT3,#BSEL1 ;CLEAR LU LOOP
4814 022020 022737 000004 002476 CMP #4,TSTCON ;IS THIS NO LOOPBACK
4815 022026 001027 BNE 20# ;IF LOOPBACK GO TO 20
4816 022030 032777 000200 160406 BIT #RDO,#BSEL2 ;IS RDO SET?
4817 022036 001423 BEQ 20# ;IF NOT GO TO 20
4818 022040 012737 000304 002336 MOV #304,#GDDAT
4819 022046 117737 160402 002340 MOVB #BSEL6,#BDDAT ;IF YES.IS IT 304
4820 022054 023737 002340 002336 CMP #BDDAT,#GDDAT
4821 022062 001406 BEQ 25# ;IF EQUAL GO TO 25
4822 022064 104455 TRAP C#ERDF
4823 022066 000047 .WORD 39
4824 022070 012560 .WORD MEF30
4825 022072 010464 .WORD ERR32
4826 022074 104432 TRAP C#EXIT
4827 022076 000076 .WORD L10055-.
4828 022100 25#:
4829 022100 042777 000200 160336 BIC #RDO,#BSEL2 ;CLEAR RDO
4830 022106 052777 000200 160324 20#: BIS #RQI,#BSELO ;SET REQUEST
4831 022114 004537 002732 JSR R5,WRDI ;WAIT FOR RDI TO SET
4832
4833 022120 005037 002402 CLR ERRWRD ;CLEAR ERROR
4834 022124 104410 TRAP C#ESCAPE
4835 022126 000046 .WORD L10055-.
4836 022130 043777 000200 160302 BIC RQI,#BSELO ; CLEAR REQUEST
4837 022136 012777 000007 160310 MOV #7,#BSEL6 ;SET MODE FOR TRIB/FD
4838 022144 012777 000002 160272 MOV #02,#BSEL2 ;DO MODE DEF
4839 022152 012737 000104 002410 MOV #104,PERR ;SET PROCEDURE ERROR OF
4840 ; 104 TO BE CHECKED

```

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;***** TEST 15 *****

```

4841 022160 004537 003016      JSR      R5,WFPE      ;WAIT FOR PROCEDURE ERROR
4842
4843 022164 005037 002402      CLR      ERRWRD
4844 022170 104410      TRAP    C#ESCAPE
4845 022172 000002      .WORD   L10055-.
4846
4847
4848
4849
4850
4851 022174
4852 022174 104401      L10055: TRAP    C#ETST

```

```

;*****
; ESCAPE TEST IF ERROR
;*****
; ERROR,OR TIME OUT.

```

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;***** TEST 15 *****

```

4853
4854
4855
4856 022176
4857
4858
4859
4860
4861
4862
4863
4864 022176
4865
4866 022176 004737 004522
4867 022202 004737 004244
4868
4869 022206 005037 002402
4870 022212 104410
4871 022214 000236
4872
4873
4874
4875 022216 022737 000002 002476
4876 022224 001004
4877 022226 012704 000110
4878 022232 000137 022252
4879
4880 022236 022737 000003 002476 1$:
4881 022244 001011
4882 022246 012704 000104
4883 022252 100$:
4884 022252 012703 000021
4885 022256 004537 003162
4886
4887 022262 005737 002402
4888 022266 100471
4889
4890 022270 004737 004244 2$:
4891 022274 142777 000010 160140
4892
4893 022302 004737 004244
4894 022306 004737 004244
4895 022312 022737 000004 002476
4896 022320 001020
4897 022322 032777 000200 160114
4898 022330 001414
4899 022332 012737 000304 002410
4900 022340 004537 003016
4901
4902 022344 005037 002402
4903 022350 104410
4904 022352 000100
4905
4906
4907
4908 022354 042777 000200 160062

```

```

.SBTTL ;***** TEST 16 *****
.SBTTL * MODE DEF ,MODE DEF CHANGE DUPLEX ONLY.
ZZ
;*
;*
;* THIS CHECKS THAT YOU CAN CHANGE THE DUPLEX PORTION
;* OF A MODE DEF
;*
;*-
.SBTTL ;***** TEST 16 *****
T16::
JSR PC,MINITS ;MC,MODE DEF(CONT/FD)
JSR PC,WAIT50 ;DELAY
CLR ERRWRD
TRAP C$ESCAPE
.WORD L10056-.
; JUMP TO END OF TEST IF ERROR
CMP #2,TSTCON ;IS IT LOCAL MODEM *****JPB
BNE 1$ ;NO, BR AND TRY REMOTE *****JPB
MOV #110,R4 ;YES, SET DTR AND MAINT1 *****JPB
JMP 100$ ;SET IT *****JPB
CMP #3,TSTCON ;IS IT REMOTE MODEM
BNE 2$ ;IF NOT THEN GO TO 2A
MOV #104,R4 ;SET DTR AND MAINT2
MOV #21,R3
JSR R5,CONTIN ; WRITE MODEM WITH CORRECT
; TYPE OF LOOP CODE
TST ERRWRD
BMI 10$ ;EXIT IF ERROR
JSR PC,WAIT50 ;LET IT SETTLE. **JPB
BICB #BIT3,88SEL1 ;CLEAR LU LOOP
JSR PC,WAIT50 ;WAIT A WHILE
JSR PC,WAIT50
CMP #4,TSTCON
BNE 20$ ;IF LOOPBACK GO TO 20
BIT #RD0,88SEL2 ;ELSE SEE IF READY OUT
BEQ 20$ ;IF NOT GO TO 20
MOV #304,PERR
JSR R5,WFPE ;WAIT FOR PROCEDURE ERROR
CLR ERRWRD
TRAP C$ESCAPE
.WORD L10056-.
;*****
; ESCAPE TEST IF ERROR
;*****
BIC #RD0,88SEL2 ;CLEAR OUTPUT

```


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;***** TEST 16 *****

```

4909 022362 052777 000200 160050 204:  BIS      #RQI,8BSELO  ;SET REQUEST
4910 022370 004537 002732          JSR      R5,WRDI  ;WAIT FOR RDI TO SET
4911                                     CLR      ERRWRD   ;CLEAR ERROR
4912 022374 005037 002402          TRAP    C#ESCAPE
4913 022400 104410          .WORD   L10056-.
4914 022402 000050          ;*****
4915                                     ; TIME OUT OR READY ERRORS REPORT THIS PC
4916                                     ;*****
4917                                     BIC      RQI,8BSELO  ;NO MORE REQUESTS
4918 022404 043777 000200 160026  MOVB    #04,8BSEL6 ;CONT/FD FOR MODE
4919 022412 112777 000004 160034  MOVB    #02,8BSEL2 ;DO MODE DEF
4920 022420 112777 000002 160016  JSR     PC,WAIT50  ;DELAY A WHILE
4921 022426 004737 004244          BIT     #RDO,8BSEL2 ;IS RDO SET
4922 022432 032777 000200 160004  BEQ     104      ;BRANCH IF NOT
4923 022440 001404          TRAP    C#ERDF
4924 022442 104455          .WORD   40
4925 022444 000050          .WORD   MEF30
4926 022446 012560          .WORD   ERR32
4927 022450 010464          104:
4928 022452          L10056:
4929 022452          TRAP    C#ETST
4930 022452 104401
4931

```

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***** TEST 17 *****

```

4932 .SBTTL ;***** TEST 17 *****
4933 .SBTTL *ROM FUNC. TEST. VERIFY THAT MAX TRIBS CAN BE ESTABLISHED
4934 022454 ZZ
4935 ;*ROM FUNCTION TEST-ESTABLISHING TRIBS-
4936 ;* THIS TEST WILL ESTABLISH MAX TRIBS
4937 ;* THEN TRY TO ESTABLISH MAX+1 TRIBS
4938 ;* AND CHECK FOR PROCEDURE ERROR.
4939 ;* THE TEST ALSO CHECKS FOR PROCEDURE
4940 ;* ERROR WHEN TRYING TO ESTABLISH AN
4941 ;* ALREADY ESTABLISHED TRIB.
4942 ;*
4943 .SBTTL ;***** TEST 17 *****
4944
4945 022454 T17::
4946 022454 012737 000040 002362 MOV #32.,TRIBMX ;SET MAX TRIB TO 32
4947 022462 032737 000003 002472 BIT #3,OPTYP ;IS THIS DMV
4948 022470 001403 BEQ XX ;IF NOT BRANCH
4949 022472 012737 000014 002362 MOV #12.,TRIBMX ;ELSE SET THE MAX TO 12
4950 022500 XX:
4951
4952 022500 112737 000161 002360 MOVB #161,TRIBN ;NUMBER OF TRIBUTARY,
4953 022506 112737 000161 002364 MOVB #161,TRIBH ;START TRIB HIGH AT SAME AS TRIBN
4954 022514 063737 002362 002364 ADD TRIBMX,TRIBH ;ADD MAX NUMBER OF TRIBS TO TRIBH
4955
4956 022522 004737 004522 JSR PC,MINITS ;INITIALIZE
4957
4958 022526 005037 002402 CLR ERRWRD
4959 022532 104410 TRAP C#ESCAPE
4960 022534 000150 .WORD L10057-.
4961
4962 ;*****
4963 ; JUMP TO END OF TEST IF ERROR
4964 ;*****
4965 022536 30$: MOVB #01,R3 ;SET ESTABLISH TRIB
4966 022542 004537 003162 JSR R5,CONTIN ;
4967
4968 ;*****
4969 ; READY OR TIME OUT ERRORS REPORT THIS PC
4970 ;*****
4971 022546 005037 002402 CLR ERRWRD
4972 022552 104410 TRAP C#ESCAPE
4973 022554 000130 .WORD L10057-.
4974
4975 ;*****
4976 ; JUMP TO END OF TEST IF ERROR
4977 ;*****
4977 022556 005237 002360 INC TRIBN ;UPDATE TRIB#
4978 022562 023737 002364 002360 CMP TRIBH, TRIBN ;ONLY ALLOW MAX TRIBS TO BE SET
4979 022570 001362 BNE 30$
4980
4981 022572 37$: MOVB #01, R3 ;ESTABLISH MAX +1 TRIBS
4982 022572 112703 000001 JSR R5,CONTIN ; DO IT
4983 022576 004537 003162
4984
4985 ;*****
4986 ; READY OR TIME OUT ERRORS REPORT THIS PC
4987 ;*****

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;***** TEST 17 *****

```

4988 022602 005037 002402      CLR      ERRWRD
4989 022606 104410              TRAP     C#ESCAPE
4990 022610 000074              .WORD   L10057-.
4991                               ;*****
4992                               ; JUMP TO END OF TEST IF ERROR
4993                               ;*****
4994
4995 022612 012737 000114 002410  MOV      #114,  PERR      ;SHOULD READ 114, PROCEDURE ERROR
4996                               ;TRYING TO ESTABLISH MAX+1 TRIBUTARIES
4997
4998 022620 004537 003016              JSR      R5,WFPE          ;WAIT FOR PROCEDURE ERROR
4999
5000 022624 005037 002402      CLR      ERRWRD
5001 022630 104410              TRAP     C#ESCAPE
5002 022632 000052              .WORD   L10057-.
5003                               ;*****
5004                               ; ESCAPE TEST IF ERROR
5005                               ;*****
5006 022634                               60$:
5007 022634 042777 000200 157602  BIC      #RDO,#BSEL2     ;CLEAR RDO
5008 022642 005337 002360              DEC      TRIBN           ;DEC TRIB NUMBER
5009 022646 112703 000001              MOVB     #01,  R3        ;SET ESTABLISH TRIB
5010 022652 004537 003162              JSR      R5,CONTIN      ;DO IT
5011                               ;*****
5012                               ;; READY OR TIME OUT ERRORS REPORT THIS PC
5013                               ;*****
5014
5015 022656 005037 002402      CLR      ERRWRD
5016 022662 104410              TRAP     C#ESCAPE
5017 022664 000020              .WORD   L10057-.
5018                               ;*****
5019                               ; JUMP TO END OF TEST IF ERROR
5020                               ;*****
5021
5022 022666 112737 000116 002410  MOVB     #116,  PERR      ;SHOULD BE PROCEDURE ERROR
5023                               ; OF 116 ESTABLISH ALREADY
5024                               ;ESTABLISHED TRIB.
5025 022674 004537 003016              JSR      R5,WFPE          ;GO CHECK FOR PROCEDURE ERROR
5026 022700 005037 002402      CLR      ERRWRD
5027 022704                               70$:
5028 022704                               L10057:
5029 022704 104401              TRAP     C#ETST
5030

```

CZD: TFO DMP/V-11 FCTNL TST #1
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;***** TEST 18 *****

```

5031      .SBTTL ;***** TEST 18 *****
5032      .SBTTL * READ/WRITE TSS TEST
5033 022706 ZZ
5034      ;*
5035      ;*
5036      ;* THIS TEST CHECKS THAT A TRIB STATUS SLOT CAN
5037      ;* BE WRITTEN AND READ
5038      ;*
5039      ;*-
5040      .SBTTL ;***** TEST 18 *****
5041 022706 T18::
5042 022706 012737 000030 002412 MOV #30,TSSADD ;START ADD AT 30
5043 022714 005002 NEWSLT: CLR R2 ;CLEAR R2
5044
5045 022716 004737 004522 NEWPAT: JSR PC,MINITS ;MASTER CLEAR MODE DEF
5046
5047 022722 005037 002402 CLR ERRWRD
5048 022726 104410 TRAP C#ESCAPE
5049 022730 000240 .WORD L10060-.
5050      ;*****
5051      ; JUMP TO END OF TEST IF ERROR
5052      ;*****
5053
5054 022732 012737 000055 002360 MOV #55,TRIBN ;PUT 55 IN TRIB NUMBER
5055 022740 012703 000001 MOV #01,R3 ;THIS WILL ESTABLISH
5056 022744 004537 003162 JSR R5,CONTIN ; A TRIB
5057      ;*****
5058      ; TIME OUT AND READY ERRORS REPORT THIS PC
5059      ;*****
5060
5061 022750 005037 002402 CLR ERRWRD
5062 022754 104410 TRAP C#ESCAPE
5063 022756 000212 .WORD L10060-.
5064      ;*****
5065      ; JUMP TO END OF TEST IF ERROR
5066      ;*****
5067
5068 022760 016204 033774 MOV DATLST(R2),R4 ;PATTERN TO BE WRITTEN
5069 022764 013703 002412 MOV TSSADD,R3 ;WRITE TO TSS
5070 022770 052703 000200 BIS #BIT7,R3 ;SET THE WRITE BIT
5071 022774 004537 003162 JSR R5,CONTIN ; GO DO IT!!!
5072      ;*****
5073      ; TIME OUT AND READY ERRORS REPORT THIS PC
5074      ;*****
5075
5076 023000 005037 002402 CLR ERRWRD
5077 023004 104410 TRAP C#ESCAPE
5078 023006 000162 .WORD L10060-.
5079      ;*****
5080      ; JUMP TO END OF TEST IF ERROR
5081      ;*****
5082
5083 023010 013703 002412 MOV TSSADD,R3 ;SET UP TO READ SLOT
5084 023014 052703 000040 BIS #BIT5,R3 ;SET THE READ BIT
5085 023020 004537 003162 JSR R5,CONTIN ;DO CONTROL IN
5086      ;*****

```

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;***** TEST 18 *****

```

5087 ; TIME OUT AND READY ERRORS REPORT THIS PC
5088 ; : : : : : : : : : : : :
5089
5090 023024 005037 002402 CLR ERRWRD
5091 023030 104410 TRAP C#ESCAPE
5092 023032 000136 .WORD L10060-
5093 ; : : : : : : : : : :
5094 ; JUMP TO END OF TEST IF ERROR
5095 ; : : : : : : : : : :
5096 023034 012737 000002 002336 MOV #02,%GDDAT ; COMPARE FOR A INFO OUT
5097 023042 004537 003242 JSR R5,GETOUT ; CHECK FOR INFO OUT AND
5098 ; CORRECT TRIB NO. IF ERROR
5099 ; REPORT THIS PC.
5100 023046 005037 002402 CLR ERRWRD
5101 023052 104410 TRAP C#ESCAPE
5102 023054 000114 .WORD L10060-.
5103 ; : : : : : : : : : :
5104 ; JUMP TO END OF TEST IF ERROR
5105 ; : : : : : : : : : :
5106
5107 023056 013737 002412 002336 MOV TSSADD,%GDDAT ; MOVE EXPECTED ADDRESS TO GDDAT
5108 023064 052737 000040 002336 BIS #BITS,%GDDAT ; SET THE READ TSS BIT IN EXPECTED
5109 023072 004537 003372 JSR R5,GETRKY ; GO CHECK FOR GOOD RETURN KEY
5110
5111 023076 005037 002402 CLR ERRWRD
5112 023102 104410 TRAP C#ESCAPE
5113 023104 000064 .WORD L10060-.
5114 ; : : : : : : : : : :
5115 ; JUMP TO END OF TEST IF ERROR
5116 ; : : : : : : : : : :
5117
5118 023106 016237 033774 002336 30#: MOV DATLST(R2),%GDDAT ; MOVE EXPECTED PATTERN
5119 023114 004537 003446 JSR R5,GETDAT ; GET DATA RETURNED.
5120 ; IF ERROR REPORT THIS PC.
5121 023120 005037 002402 CLR ERRWRD
5122 023124 104410 TRAP C#ESCAPE
5123 023126 000042 .WORD L10060-.
5124 ; : : : : : : : : : :
5125 ; JUMP TO END OF TEST IF ERROR
5126 ; : : : : : : : : : :
5127
5128 023130 022762 000562 033774 CMP #562,DATLST(R2) ; ARE WE DONE WITH PATTERN
5129 023136 001404 BEQ 50# ; IF SO DO NEXT SLOT
5130 023140 062702 000002 ADD #2,R2 ; BUMP LIST POINTER
5131 023144 000137 022716 JMP NEWPAT ; GO BACK FOR THIS PATTERN.
5132 023150 022737 000037 002412 50#: CMP #37,TSSADD ; IS THIS THE LAST SLOT
5133 023156 001404 BEQ 60# ; IF SO END TEST
5134 023160 005237 002412 INC TSSADD ; ELSE BUMP ADD
5135 023164 000137 022714 JMP NEWSLT ; AND DO NEXT SLOT
5136 023170 60#:
5137
5138 023170 L10060:
5139 023170 104401 TRAP C#ETST
5140

```

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***** TEST 19 *****

```

5141 .SBTTL ;***** TEST 19 *****
5142 .SBTTL *WRITE RESERVED AREA OF TSS. P.E. 132
5143 023172 ZZ
5144 ;*
5145 ;*
5146 ;* THIS TEST CHECKS FOR PROCEDURE ERROR
5147 ;* ON WRITING TO ILLEGAL SLOT
5148 ;*
5149 ;*-
5150 .SBTTL ;***** TEST 19 *****
5151
5152 023172 T19::
5153 023172 004737 004522 JSR PC,MINITS ;MASTER CLEAR MODE DEF
5154
5155 023176 005037 002402 CLR ERRWRD
5156 023202 104410 TRAP C#ESCAPE
5157 023204 000072 .WORD L10061-.
5158
5159 ;:::::
5160 ; JUMP TO END OF TEST IF ERROR
5161 ;:::::
5162
5163 023206 012737 000022 002360 MOV #22,TRIBN ;SET TRIB NUMBER TO 22
5164 023214 012703 000001 MOV #01,R3
5165 023220 004537 003162 JSR R5,CONTIN ;ESTABLISH TRIB
5166
5167 ;:::::
5168 ; TIME OUT OR READY ERRORS REPORT THIS PC
5169 ;:::::
5170
5171 023224 005037 002402 CLR ERRWRD
5172 023230 104410 TRAP C#ESCAPE
5173 023232 000044 .WORD L10061-.
5174
5175 ;:::::
5176 ; JUMP TO END OF TEST IF ERROR
5177 ;:::::
5178
5179 023234 012703 000204 MOV #204,R3 ;SEL6*204
5180 023240 004537 003162 JSR R5,CONTIN ;WRITE TSS (ILLEGAL)
5181
5182 ;:::::
5183 ; TIME OUT OR READY ERROR REPORT THIS PC
5184 ;:::::
5185
5186 023244 005037 002402 CLR ERRWRD
5187 023250 104410 TRAP C#ESCAPE
5188 023252 000024 .WORD L10061-.
5189
5190 ;:::::
5191 ; JUMP TO END OF TEST IF ERROR
5192 ;:::::
5193
5194 023254 012737 000132 002410 MOV #132,PERR ;CHECK FOR PROCEDURE ERROR
5195
5196 023262 004537 003016 JSR R5,WFPE ;WAIT FOR PROCEDURE ERROR
    
```

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;..... TEST 19

5197
5198 023266 005037 002402
5199 023272 104410
5200 023274 000002
5201
5202
5203
5204
5205 023276
5206 023276 104401
5207

CLR ERRWRD
TRAP CIESCAPE
.WORD L10061.
; ; ; ; ; ;
; ESCAPE TEST IF ERROR
; ; ; ; ; ;
L10061:
TRAP C1ETST

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***** TEST 20 *****

```

S208 .SBTTL ;***** TEST 20 *****
S209 .SBTTL *READ (CLEAR WRONG ADD P.E.132
S210 023300 ZZ
S211 ;*
S212 ;*
S213 ;* THIS TEST CHECKS FOR PROCEDURE ERROR
S214 ;* FOR RD/CLR TSS WRONG ADD(132)
S215 ;*
S216 ;*-
S217 .SBTTL ;***** TEST 20 *****
S218 023300 T20::
S219 023300 004737 004522 JSR PC,MINITS ;MASTER CLEAR MODE DEF
S220 023304 005037 002402 CLR ERRWRD
S221 023310 104410 TRAP C#ESCAPE
S222 023312 000072 .WORD L10062-.
S223 ;*****
S224 ; JUMP TO END OF TEST IF ERROR
S225 ;*****
S226
S227 023314 012737 000077 002360 MOV #77,TRIBN ;MAKE TRIBN 77
S228 023322 012703 000001 MOV #01,R3 ;ESTABLISH TRIB
S229 023326 004537 003162 JSR R5,CONTIN
S230 ;*****
S231 ; TIME OUT OR READY ERROR REPORTS THIS PC
S232 ;*****
S233
S234 023332 005037 002402 CLR ERRWRD
S235 023336 104410 TRAP C#ESCAPE
S236 023340 000044 .WORD L10062-.
S237 ;*****
S238 ; JUMP TO END OF TEST IF ERROR
S239 ;*****
S240
S241 023342 012703 000106 MOV #106,R3
S242 023346 004537 003162 JSR R5,CONTIN ;READ/CLEAR ADD 6
S243 ;*****
S244 ; TIME OUT OR READY ERRORS REPORT THIS PC
S245 ;*****
S246
S247 023352 005037 002402 CLR ERRWRD
S248 023356 104410 TRAP C#ESCAPE
S249 023360 000024 .WORD L10062-.
S250 ;*****
S251 ; JUMP TO END OF TEST IF ERROR
S252 ;*****
S253 023362 012737 000132 002410 MOV #132,PERR ;SET PROCEDURE ERROR TO BE CHECKED TO 132
S254 023370 004537 003016 JSR R5,WFPE ;WAIT FOR PROCEDURE ERROR
S255
S256 023374 005037 002402 CLR ERRWRD
S257 023400 104410 TRAP C#ESCAPE
S258 023402 000002 .WORD L10062-.
S259 ;*****
S260 ; ESCAPE TEST IF ERROR
S261 ;*****
S262 023404 L10062:
S263 023404 104401 TRAP C#ETST
    
```


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;***** TEST 20 *****

```

5264
5265 .SBTTL ;***** TEST 21 *****
5266 .SBTTL *READ/CLEAR TSS
5267 023406 ZZ
5268 ;*
5269 ;*
5270 ;* THIS TEST THAT READ CLEAR WORKS
5271 ;*
5272 ;*-
5273 .SBTTL ;***** TEST 21 *****
5274
5275 023406 T21::
5276 023406 004737 004522 JSR PC,MINITS ;MASTER CLEAR MODE-DEF
5277
5278 023412 005037 002402 CLR ERRWRD
5279 023416 104410 TRAP C#ESCAPE
5280 023420 000100 .WORD L10063-.
5281
5282 ;*****
5283 ; JUMP TO END OF TEST IF ERROR
5284 ;*****
5285
5286 023422 012737 000003 002360 MOV #03,TRIBN ;SET TRIB NUMBER
5287 023430 012703 000001 MOV #01,R3
5288 023434 004537 003162 JSR R5,CONTIN ;ESTABLISH TRIB
5289
5290 ;*****
5291 ; TIME OUT OR READY ERRORS REPORT THIS PC
5292 ;*****
5293
5294 023440 005037 002402 CLR ERRWRD
5295 023444 104410 TRAP C#ESCAPE
5296 023446 000052 .WORD L10063-.
5297
5298 ;*****
5299 ; JUMP TO END OF TEST IF ERROR
5300 ;*****
5301
5302 023450 012703 000107 MOV #107,R3
5303 023454 004537 003162 JSR R5,CONTIN ;READ/CLEAR ADD 7
5304
5305 ;*****
5306 ; TIME OUT OR READY ERRORS REPORT THIS PC
5307 ;*****
5308
5309 023460 005037 002402 CLR ERRWRD
5310 023464 104410 TRAP C#ESCAPE
5311 023466 000032 .WORD L10063-.
5312
5313 ;*****
5314 ; JUMP TO END OF TEST IF ERROR
5315 ;*****
5316
5317 023470 004737 004244 JSR PC,WAIT50
5318 023474 004737 004244 JSR PC,WAIT50 ;DELAY
5319

```

CZDMTFO DMP/V-11 FCTNL TST #1 MACY11 30A(1052) 08-NOV-84 10:42 PAGE 122
CZDMTF.P11 08-NOV-84 10:38 ;*****-***** TEST 21 *****

5320	023500	032777	000200	156736	BIT	#R00, #BSEL2	
5321	023506	001004			BNE	104	;IF R00 THEN END ELSE ERROR
5322							
5323	023510	104455			TRAP	C#ERDF	
5324	023512	000051			.WORD	41	
5325	023514	011672			.WORD	MRFT	
5326	023516	007614			.WORD	ERR10	
5327	023520						
5328	023520						
5329	023520	104401			TRAP	C#ETST	

104:
L10063:

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***** TEST 22 *****

5330
5331
5332 023522
5333
5334
5335
5336
5337
5338
5339 023522
5340
5341 023522
5342 023522 104402
5343
5344
5345
5346
5347 023524 005037 002412
5348 023530 005037 002360
5349 023534
5350 023534 004737 004522
5351
5352 023540 005037 002402
5353 023544 104410
5354 023546 000114
5355
5356
5357
5358
5359 023550 013703 002412
5360 023554 052703 000040
5361 023560 004537 003162
5362
5363 023564 005037 002402
5364 023570 104410
5365 023572 000070
5366
5367
5368
5369
5370 023574 012737 000002 002336
5371 023602 004537 003242
5372
5373
5374 023606 005037 002402
5375 023612 104410
5376 023614 000046
5377
5378
5379
5380
5381 023616
5382 023616 013737 002412 002336
5383 023624 052737 000040 002336
5384 023632 004537 003372
5385

```

.SBTTL ;***** TEST 22 *****
.SBTTL *GLOBAL STATUS SLOT TESTS
ZZ
;*
;* THIS TEST CHECKS THAT GLOBAL STATUS
;* SLOTS RESPOND TO COMMANDS
;*
.SBTTL ;***** TEST 22 *****
T22::
T22.1:
TRAP C#BSUB
;*****
; READ ALL SLOTS TEST ;
;*****
54:
CLR TSSADD ;CLEAR ADD
CLR TRIBN ;MAKE TRIB #0(GLOBAL COMM)
JSR PC,MINITS ;MASTER CLEAR INIT

CLR ERRWRD
TRAP C#ESCAPE
.WORD L10065-.
;*****
; JUMP TO END OF TEST IF ERROR
;*****

MOV TSSADD,R3
BIS #BITS,R3 ;SET UP READ GSS COMMAND
JSR R5,CONTIN ;GO DO IT

CLR ERRWRD
TRAP C#ESCAPE
.WORD L10065-.
;*****
; JUMP TO END OF TEST IF ERROR
;*****

MOV #2,#GDDAT
JSR R5,GETOUT ;CHECK CORRECT TYPE AND
; TRIB NO.

CLR ERRWRD
TRAP C#ESCAPE
.WORD L10065-.
;*****
; ESCAPE SUB IF ERROR
;*****

104:
MOV TSSADD,#GDDAT
BIS #BITS,#GDDAT ;SET THE READ TSS BIT
JSR R5,GETRKY ;CHECK RETURN KEY
    
```

```

CZDMTFO DMP/V-11 FCTNL TST #1 MACY11 30A(105?) 08-NOV-84 10:42 PAGE 124
CZDMTF.P11 08-NOV-84 10:38 ;***** TEST 22 *****
5386 023636 005037 002402 CLR ERRWRD
5387 023642 104410 TRAP C#ESCAPE
5388 023644 000016 .WORD L10065-.
5389 ;*****
5390 ; GO TO END OF SUB IF ERROR
5391 ;*****
5392
5393
5394 023646 005237 002412 30#: INC TSSADD ;BUMP ADDRESS
5395 023652 022737 000040 002412 CMP #40,TSSADD ; ARE WE ALL DONE
5396 023660 001325 BNE 5# ; IF NOT GO BACK
5397 ;ELSE END SUBTEST
5398 023662 L10065:
5399 023662 104403 TRAP C#ESUB
5400 023664 T22.2:
5401 023664 104402 TRAP C#BSUB
5402 ;*****
5403 ; WRITE ALL SLOTS TEST ;
5404 ;*****
5405
5406 023666 012737 000034 002412 MOV #34,TSSADD ;START WITH FIRST WRITABLE ADD
5407 023674 005037 002360 CLR TRIBN ;AND TRIBN AT ZERO
5408 023700 004737 004522 40#: JSR PC,AINITS ;MASTER CLEAR INT
5409
5410 023704 005037 002402 CLR ERRWRD
5411 023710 104410 TRAP C#ESCAPE
5412 023712 000226 .WORD L10066-.
5413 ;*****
5414 ; JUMP TO END OF SUB IF ERROR
5415 ;*****
5416
5417 023714 013703 002412 45#: MOV TSSADD,R3
5418 023720 052703 000200 BIS #BIT7,R3 ;WRITE TSS(GLOBAL BECAUSE TRIBN=0)
5419 023724 013704 002412 MOV TSSADD,R4 ;PUT IN ADD FOR DATA
5420 023730 004537 003162 JSR R5,CONTIN ;DO IT
5421
5422 023734 005037 002402 CLR ERRWRD
5423 023740 104410 TRAP C#ESCAPE
5424 023742 000176 .WORD L10066-.
5425 ;*****
5426 ; JUMP TO END OF SUB IF ERROR
5427 ;*****
5428
5429 023744 005237 002412 INC TSSADD ;BUMP ADD
5430 023750 022737 000040 002412 CMP #40,TSSADD ;DONE ALL
5431 023756 001356 BNE 45# ;NO GO FINISH!!!
5432 023760 012703 000227 MOV #227,R3
5433 023764 013704 002412 MOV TSSADD,R4
5434 023770 004537 003162 JSR R5,CONTIN ; TRY TO WRITE BAD ADDRESS
5435
5436 023774 005037 002402 CLR ERRWRD
5437 024000 104410 TRAP C#ESCAPE
5438 024002 000136 .WORD L10066-.
5439 ;*****
5440 ; JUMP TO END OF SUB IF ERROR
5441 ;*****

```

CZDMTFO DMP/V-11 FCTNL TST #1 MACY11 30A(1052) 08-NOV-84 10:42 PAGE 125
CZDMTF.P11 08-NOV-84 10:38 ;***** TEST 22 *****

```

5442 024004 012737 000132 002410      MOV      #132,PERR
5443 024012 004537 003016      JSR      R5,WFPE          ;WAIT FOR PROCEDURE ERROR
5444
5445 024016 005037 002402      CLR      ERRWRD
5446 024022 104410      TRAP    C#ESCAPE
5447 024024 000222      .WORD   L10064-
5448      ;*****
5449      ; ESCAPE TEST IF ERROR
5450      ;*****
5451
5452 024026 042777 000200 156410 GSSREP: BIC      #R00,#BSEL2      ;CLEAR OUTPUT
5453 024034 005337 002412      DEC      TSSADD          ;GET TSSADD BACK TO MAX
5454 024040 013703 002412      MOV      TSSADD,R3
5455 024044 052703 000040      BIS      #BIT5,R3        ;SET READ BIT
5456 024050 004537 003162      JSR      R5,CONTIN       ;READ TSS
5457
5458 024054 005037 002402      CLR      ERRWRD
5459 024060 104410      TRAP    C#ESCAPE
5460 024062 000056      .WORD   L10066-
5461      ;*****
5462      ; JUMP TO END OF SUB IF ERROR
5463      ;*****
5464
5465 024064 012737 000002 002336      MOV      #2,#GDDAT
5466 024072 004537 003242      JSR      R5,GETOUT       ;CHECK FOR INFOR. OUT AND
5467
5468 024076 005037 002402      CLR      ERRWRD
5469      ;CORRECT TRIBN.
5470 024102 104410      TRAP    C#ESCAPE
5471 024104 000034      .WORD   L10066-
5472      ;*****
5473      ; JUMP TO END OF SUB IF ERROR
5474      ;*****
5475 024106 013737 002412 002336 60#: MOV      TSSADD,#GDDAT
5476 024114 004537 003446      JSR      R5,GETDAT       ;CHECK FOR GOOD DATA
5477
5478 024120 005037 002402      CLR      ERRWRD
5479 024124 104410      TRAP    C#ESCAPE
5480 024126 000012      .WORD   L10066-
5481      ;*****
5482      ;JUMP TO END OF SUB IF ERROR
5483      ;*****
5484
5485 024130 022737 000034 002412 70#: CMP      #34,TSSADD      ;ARE WE ALL DONE
5486 024136 001333      BNE     GSSREP          ;GO BACK IF NOT
5487
5488 024140      L10066:
5489 024140 104403      TRAP    C#ESUB
5490 024142      T22.3:
5491 024142 104402      TRAP    C#BSUB
5492      ;*****
5493      ; READ CLEAR SLOT TEST :
5494      ;*****
5495
5496 024144 004737 004522      JSR      PC,MINITS       ;MASTER CLEAR MODE DEF
5497

```


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;***** TEST 22 *****

```

5535
5536 .SBTTL ;***** TEST 23 *****
5537 .SBTTL *HALT TRIB COMMAND TEST
5538 024250 ZZ
5539 ;*
5540 ;*
5541 ;* THIS TEST CHECKS THE HALT TRIB COMMAND
5542 ;* AND THEN CHECKS THAN A 2ND HALT TRIB
5543 ;* DOES NOT CAUSE A CONTROL OUT.
5544 ;*-
5545 .SBTTL ;***** TEST 23 *****
5546 024250 T23::
5547
5548 024250 004737 004522 JSR PC,MINITS ;MASTER CLEAR -MODE DEF
5549 024254 005037 002402 CLR ERRWRD ;IF ERROR GO TO END TEST
5550 024260 104410 TRAP C#ESCAPE
5551 024262 000412 .WORD L10070-.
5552 024264 012737 000036 002360 MOV #36,TRIBN ;SET TRIBN
5553 024272 012703 000001 MOV #01,R3
5554 024276 004537 003162 JSR R5,CONTIN ;ESTABLISH TRIB
5555
5556 ;IF TIME OUT OR READY ERRORS THE PROGRAM WILL
5557 ;REPORT THIS PC AS FAILING PC
5558
5559 024302 005037 002402 CLR ERRWRD ; JUMP TO END OF TEST IF ERROR
5560 024306 104410 TRAP C#ESCAPE
5561 024310 000364 .WORD L10070-.
5562 024312 012703 000003 MOV #03,R3
5563 024316 004537 003162 JSR R5,CONTIN ;ISTRIB TRIB
5564
5565 ;IF TIME OUT OR READY ERRORS THE PROGRAM WILL
5566 ;REPORT THIS PC AS FAILING PC
5567 024322 005037 002402 CLR ERRWRD ; JUMP TO END OF TEST IF ERROR
5568 024326 104410 TRAP C#ESCAPE
5569 024330 000344 .WORD L10070-.
5570 024332 012737 000001 002336 MOV #01,#GDDAT ;CHECK
5571 024340 004537 003242 JSR R5,GETOUT ;FOR CONTROL OUT AND
5572 ;CORRECT TRIBN
5573 ;IF ERROR REPORT
5574 ;THIS PC AND ESCAPE TEST
5575 024344 005037 002402 CLR ERRWRD ; JUMP TO END OF TEST IF ERROR
5576 024350 104410 TRAP C#ESCAPE
5577 024352 000322 .WORD L10070-.
5578 024354 012737 000024 002336 MOV #24,#GDDAT
5579 024362 004537 003670 JSR R5,GETOC ;CHECK FOR GOOD OUTPUT CODE
5580 024366 005037 002402 CLR ERRWRD ; JUMP TO END OF TEST IF ERROR
5581 024372 104410 TRAP C#ESCAPE
5582 024374 000300 .WORD L10070-.
5583
5584 ; QUE REC BUFFER WITH 100 DECIMAL LOCATIONS
5585
5586 024376 042777 000200 156040 201: BIC #RDO,#BSEL2 ;CLEAR READY OUT
5587 024404 052777 000200 156026 BIS #RQI,#BSELO ;SET REQUEST IN
5588 ;WAIT FOR READY IN
5589 024412 004537 002732 JSR R5,WRDI ;WAIT FOR RDI TO SET
5590

```

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;***** TEST 23 *****

```

5591 024416 005037 002402      CLR      ERRWRD      ;CLEAR ERROR
5592 024422 104410      TRAP     C#ESCAPE
5593 024424 000250      .WORD   L10070-
5594 024426 042777 000200 156004      BIC      #RQI,#BSEL0 ;CLEAR REQUEST IN
5595 024434 012777 034014 156006      MOV      #RECBU1,#BSEL4 ;
5596 024442 012777 000144 156004      MOV      #100.,#BSEL6
5597 024450 113777 002360 155770      MOV     TRIBN,#BSEL3
5598 024456 105077 155762      CLR     #BSEL2      ;QUE UP BUFF
5599 024462 012703 000005      MOV     #05,R3
5600 024466 004537 003162      JSR     R5,CONTIN   ;HALT TRIB
5601                                     ;IF TIME OUT OR READY ERRORS THE PROGRAM WILL
5602                                     ;REPORT THIS PC AS FAILING PC
5603
5604 024472 005037 002402      CLR      ERRWRD      ; JUMP TO END OF TEST IF ERROR
5605 024476 104410      TRAP     C#ESCAPE
5606 024500 000174      .WORD   L10070-
5607 024502 012737 000003 002336      MOV     #03,#GDDAT
5608 024510 004537 003242      JSR     R5,GETOUT   ;CHECK FOR BUFFER UNUSED
5609                                     ;AND CORRECT TRIBN.
5610 024514 005037 002402      CLR      ERRWRD      ; JUMP TO END OF TEST IF ERROR
5611 024520 104410      TRAP     C#ESCAPE
5612 024522 000152      .WORD   L10070-
5613 024524 012737 000144 002336      MOV     #100.,#GDDAT
5614 024532 004537 003514      JSR     R5,GETCC    ;CHECK FOR GOOD CHAR.COUNT
5615 024536 005037 002402      CLR      ERRWRD      ; JUMP TO END OF TEST IF ERROR
5616 024542 104410      TRAP     C#ESCAPE
5617 024544 000130      .WORD   L10070-
5618 024546 012737 034014 002336      MOV     #RECBU1,#GDDAT
5619 024554 004537 003576      JSR     R5,GETBA    ;CHECK FOR GOOD BUFF. ADD.
5620 024560 005037 002402      CLR      ERRWRD      ; JUMP TO END OF TEST IF ERROR
5621 024564 104410      TRAP     C#ESCAPE
5622 024566 000106      .WORD   L10070-
5623 024570 042777 000200 155646 234:      BIC     #RDO,#BSEL2 ;CLEAR OUTPUT AND LOOK FOR NEXT
5624 024576 012737 000002 002336      MOV     #2,#GDDAT
5625 024604 004537 003242      JSR     R5,GETOUT   ;NEXT GET INFO OUT
5626 024610 005037 002402      CLR      ERRWRD      ; JUMP TO END OF TEST IF ERROR
5627 024614 104410      TRAP     C#ESCAPE
5628 024616 000056      .WORD   L10070-
5629 024620 012737 000020 002336      MOV     #20,#GDDAT
5630 024626 004537 003372      JSR     R5,GETRKY   ;CHECK FOR GOOD RETURN KEY
5631                                     ; BUFFER RETURN COMPLETE
5632 024632 005037 002402      CLR      ERRWRD      ; JUMP TO END OF TEST IF ERROR
5633 024636 104410      TRAP     C#ESCAPE
5634 024640 000034      .WORD   L10070-
5635 024642 042777 000200 155574 254:      BIC     #RDO,#BSEL2 ;CLEAR OUTPUT
5636 024650 004737 004244      JSR     PC,WAIT50
5637 024654 004737 004244      JSR     PC,WAIT50   ;WAIT A WHILE
5638 024660 012703 000000      MOV     #0,R3       ;DO A NO REQUEST
5639 024664 004537 003162      JSR     R5,CONTIN
5640 024670 005037 002402      CLR      ERRWRD      ;IF ERROR OCCURS THE SECOND
5641                                     ;HALT TRIB CAUSED AN OUTPUT
5642                                     ;AND SHOULD NOT HAVE.
5643 024674                                     L10070:
5644 024674 104401      TRAP     C#ETST

```


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***** TEST 23 *****

```

5645
5646 .SBTTL ;***** TEST 24 *****
5647 .SBTTL *KILL TRIB TESTS
5648 024676 ZZ
5649 ;*
5650 ;* THIS TEST CHECKS THE KILL TRIB FUNCTIONS
5651 ;*-
5652 .SBTTL ;***** TEST 24 *****
5653 024676 T24::
5654
5655 024676 004737 004522 JSR PC,MINITS
5656
5657 024702 005037 002402 CLR ERRWRD
5658 024706 104410 TRAP C#ESCAPE
5659 024710 000412 .WORD L10071-.
5660 ;*****
5661 ; JUMP TO END OF TEST IF ERROR
5662 ;*****
5663
5664 024712 012737 000143 002360 MOV #143,TRIBN ;SET TRIB NUMBER
5665 024720 012703 000001 MOV #01,R3
5666 024724 004537 003162 JSR R5,CONTIN ;ESTABLISH TRIB
5667 ;*****
5668 ; TIME OUT OR READY ERRORS REPORT THIS P
5669 ;*****
5670
5671 024730 005037 002402 CLR ERRWRD
5672 024734 104410 TRAP C#ESCAPE
5673 024736 000364 .WORD L10071-.
5674 ;*****
5675 ; JUMP TO END OF TEST IF ERROR
5676 ;*****
5677
5678 024740 012703 000041 MOV #41,R3
5679 024744 004537 003162 JSR R5,CONTIN ;READ TRIB STATUS SLOT 1
5680 ;*****
5681 ; TIME OUT OR READY ERRORS REPORT THIS PC
5682 ;*****
5683
5684 024750 005037 002402 CLR ERRWRD
5685 024754 104410 TRAP C#ESCAPE
5686 024756 000344 .WORD L10071-.
5687 ;*****
5688 ; JUMP TO END OF TEST IF ERROR
5689 ;*****
5690
5691 024760 012737 000002 002336 MOV #02,#GDDAT ;SET TYPE FOR INFO OUT
5692 024766 004537 003242 JSR R5,GETOUT ;CHECK FOR INFO OUT AND
5693 ;CORRECT TRIBN.
5694
5695 024772 005037 002402 CLR ERRWRD
5696 024776 104410 TRAP C#ESCAPE
5697 025000 000322 .WORD L10071-.
5698 ;*****
5699 ; JUMP TO END OF TEST IF ERROR
5700 ;*****

```

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***** TEST 24 *****

```

5701
5702 025002 000377 155442      20:  SWAB      @BSEL4      ;SWAB BYTES
5703 025006 117737 155436 002340  MOVB      @BSEL4,@BDDAT ;MOVE TRIB ADD TO BDDAT
5704 025014 113737 002360 002336  MOVB      TRIBN,@GDDAT  ;MOVE TRIB NUMBER TO GDDAT
5705 025022 123737 002336 002340  CMPB      @GDDAT,@BDDAT ;COMPARE
5706 025030 001407                      BEQ       30:          ;IF OK GO TO 30
5707                                     ;ELSE ERROR
5708 025032 012737 012056 002430  MOV       @M30F,COEW
5709 025040 104455                      TRAP     C#ERDF
5710 025042 000052                      .WORD   42
5711 025044 011550                      .WORD   EROIC
5712 025046 010366                      .WORD   ERR27
5713
5714 025050 042777 000200 155366 30:  BIC       @RDO,@BSEL2  ;CLEAR OUTPUT
5715 025056 012703 000004                      MOV      #04,R3
5716 025062 004537 003162                      JSR      R5,CONTIN    ;MAINT STATE TRIB
5717                                     ;*****
5718                                     ;TIME OUT OR READY ERRORS REPORT THIS PC
5719                                     ;*****
5720
5721 025066 005037 002402                      CLR      ERRWRD
5722 025072 104410                      TRAP     C#ESCAPE
5723 025074 000226                      .WORD   L10071-.
5724                                     ;*****
5725                                     ; JUMP TO END OF TEST IF ERROR
5726                                     ;*****
5727
5728 025076 012703 000002                      MOV      #02,R3
5729 025102 004537 003162                      JSR      R5,CONTIN    ;KILL TRIB
5730                                     ;*****
5731                                     ; TIME OUT OR READY ERRORS REPORT THIS PC
5732                                     ;*****
5733
5734 025106 005037 002402                      CLR      ERRWRD
5735 025112 104410                      TRAP     C#ESCAPE
5736 025114 000206                      .WORD   L10071-.
5737                                     ;*****
5738                                     ; JUMP TO END OF TEST IF ERROR
5739                                     ;*****
5740
5741 025116 012737 000112 002410  MOV      #112,PERR      ;CHECK FOR KILL TO UNHALTED
5742 025124 004537 003016                      JSR      R5,WPE        ;WAIT FOR PROCEDURE ERROR
5743
5744 025130 005037 002402                      CLR      ERRWRD
5745 025134 104410                      TRAP     C#ESCAPE
5746 025136 000164                      .WORD   L10071-.
5747                                     ;*****
5748                                     ; ESCAPE TEST IF ERROR
5749                                     ;*****
5750 025140 042777 000200 155276  BIC      @RDO,@BSEL2  ;CLEAR OUTPUT
5751 025146 012703 000005                      MOV      #05,R3
5752 025152 004537 003162                      JSR      R5,CONTIN    ;HALT TRIB
5753                                     ;*****
5754                                     ; TIME OUT OR READY ERRORS REPORT THIS PC
5755                                     ;*****
5756

```

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;***** TEST 24 *****

```

5757 025156 005037 002402      CLR      ERRWRD
5758 025162 104410              TRAP     C$ESCAPE
5759 025164 000136              .WORD   L10071-.
5760                               ;*****
5761                               ; JUMP TO END OF TEST IF ERROR
5762                               ;*****
5763
5764 025166 012737 000002 002336  MOV     #2,$GDDAT
5765 025174 004537 003242      JSR     R5,GETOUT      ;CHECK FOR INFO OUT
5766                               ;AND CORRECT PC
5767
5768 025200 005037 002402      CLR      ERRWRD
5769 025204 104410              TRAP     C$ESCAPE
5770 025206 000114              .WORD   L10071-.
5771                               ;*****
5772                               ; JUMP TO END OF TEST IF ERROR
5773                               ;*****
5774
5775 025210 012737 000020 002336  MOV     #20,$GDDAT
5776 025216 004537 003372      JSR     R5,GETRKY     ;CHECK FOR GOOD RETURN KEY
5777
5778
5779 025222 005037 002402      CLR      ERRWRD
5780 025226 104410              TRAP     C$ESCAPE
5781 025230 000072              .WORD   L10071-.
5782                               ;*****
5783                               ; JUMP TO END OF TEST IF ERROR
5784                               ;*****
5785
5786 025232 042777 000200 155204 2# BIC     #RDO,$BSEL2   ;CLEAR OUTPUT
5787 025240 012703 000002      MOV     #02,R3       ;KILL TRIB
5788 025244 004537 003162      JSR     R5,CONTIN
5789                               ;*****
5790                               ; TIME OUT OR READY ERRORS REPORT THIS PC
5791                               ;*****
5792
5793 025250 005037 002402      CLR      ERRWRD
5794 025254 104410              TRAP     C$ESCAPE
5795 025256 000044              .WORD   L10071-.
5796                               ;*****
5797                               ; JUMP TO END OF TEST IF ERROR
5798                               ;*****
5799
5800 025260 012703 000041      MOV     #41,R3       ;READ SLOT 1
5801 025264 004537 003162      JSR     R5,CONTIN
5802                               ;*****
5803                               ; TIME OUT OR READY ERRORS REPORT THIS PC
5804                               ;*****
5805
5806 025270 005037 002402      CLR      ERRWRD
5807 025274 104410              TRAP     C$ESCAPE
5808 025276 000024              .WORD   L10071-.
5809                               ;*****
5810                               ; JUMP TO END OF TEST IF ERROR
5811                               ;*****
5812

```

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;..... TEST 24

5813	025300	012737	000106	002410	MOV	#106,PERR	;CHECK FOR PROCEDURE 106 ERROR
5814	025306	004537	003016		JSR	R5,WFPE	;WAIT FOR PROCEDURE ERROR
5815							
5816	025312	005037	002402		CLR	ERRWRD	
5817	025316	104410			TRAP	C#ESCAPE	
5818	025320	000002			.WORD	L10071-	
5819					!!!!!!		
5820					; ESCAPE TEST IF ERROR		
5821					!!!!!!		
5822							
5823	025322			L10071:			
5824	025322	104401			TRAP	C#ETST	
5825							
5826							

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***** TEST 24 *****

```

5827
5828
5829
5830 025324
5831
5832
5833
5834
5835
5836
5837
5838
5839 025324
5840 025324 012702 002414
5841
5842 025330 004737 004522
5843
5844 025334 005037 002402
5845 025340 104410
5846 025342 000074
5847
5848
5849
5850
5851 025344 052777 000200 155066
5852 025352 004537 002732
5853
5854 025356 005037 002402
5855 025362 104410
5856 025364 000052
5857 025366 042777 000200 155044
5858 025374 112277 155044
5859 025400 012737 000102 002410
5860 025406 004537 003016
5861
5862 025412 005037 002402
5863 025416 104410
5864 025420 000016
5865
5866
5867
5868 025422 042777 000200 155014
5869 025430 022702 002420
5870 025434 001335
5871
5872
5873 025436
5874 025436 104401
5875

```

```

.SBTTL ***** TEST 25 *****
.SBTTL *CHECK FOR PROCEDURE ERROR 102
ZZ
;*
;*
;* THIS TEST CHECKS THAT ILLEGAL TYPE CODES
;* ON INPUT COMMANDS WILL PRODUCE PROCEDURE
;* ERRORS.
;*
;*
.SBTTL ***** TEST 25 *****
T25::
MOV #TYLST,R2 ;SET R2 TO START OF LIST
104: JSR PC,MINITS ;MASTER CLEAR-MODE DEF
CLR ERRWRD ;CLEAR ERROR
TRAP C#ESCAPE
.WORD L10072-.
*****
; JUMP TO END OF TEST IF ERROR
*****
BIS #RQI, #BSELO ;SET REQUEST
JSR R5,MRDI ;WAIT FOR RDI TO SET
CLR ERRWRD ;CLEAR ERROR
TRAP C#ESCAPE
.WORD L10072-.
BIC #RQI, #BSELO ;CLEAR REQUEST
MOVB (R2), #BSEL2 ;DO FIRST BAD CODE
MOV #102, PERR
JSR R5, WFPE ;WAIT FOR PROCEDURE ERROR
CLR ERRWRD
TRAP C#ESCAPE
.WORD L10072-.
*****
; ESCAPE TEST IF ERROR
*****
BIC #RDO, #BSEL2 ;CLEAR READY OUT
CMP #TYEND, R2 ;IS IT END
BNE 104 ;IF NOT GO BACK
L10072: TRAP C#ETST

```

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;***** TEST 25 *****

```

5876
5877 .SBTTL ;***** TEST 26 *****
5878 .SBTTL * CHECK FOR PROCEDURE ERROR 110
5879 025440 ZZ
5880 ;*
5881 ;*
5882 ;* THIS TEST CHECKS FOR THE PROCEDURE ERROR
5883 ;* NON-GLOBAL COMMAND TO TRIB ADDRESS OF 0
5884 ;*
5885 ;*-
5886 .SBTTL ;***** TEST 26 *****
5887 025440 T26::
5888
5889 025440 004737 004522 JSR PC,MINITS ;MASTER CLEAR -MODE-DEF
5890
5891 025444 005037 002402 CLR ERRWRD
5892 025450 104410 TRAP C$ESCAPE
5893 025452 000050 .WORD L10073-.
5894 ;*****
5895 ; JUMP TO END OF TEST IF ERROR
5896 ;*****
5897
5898 025454 005037 002360 CLR TRIBN ;MAKE TRIB ADDRESS 0
5899 025460 012703 000001 MOV #01,R3
5900 025464 004537 003162 JSR R5,CONTIN ;TRY TO DO ISTRT
5901
5902 025470 005037 002402 CLR ERRWRD
5903 025474 104410 TRAP C$ESCAPE
5904 025476 000024 .WORD L10073-.
5905 ;*****
5906 ; JUMP TO END OF TEST IF ERROR
5907 ;*****
5908
5909 025500 012737 000110 002410 MOV #110,PERR ;CHECK FOR PE ^ 110
5910 025506 004537 003016 JSR R5,WFPE ;WAIT FOR PROCEDURE ERROR
5911
5912 025512 005037 002402 CLR ERRWRD
5913 025516 104410 TRAP C$ESCAPE
5914 025520 000002 .WORD L10073-.
5915 ;*****
5916 ; ESCAPE TEST IF ERROR
5917 ;*****
5918
5919 025522 L10073: TRAP C$ETST
5920 025522 104401

```

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;***** TEST 26 *****

```

5921
5922
5923 .SBTTL ;***** TEST 27 *****
5924 .SBTTL * CHECKS FOR PROCEDURE ERROR 120
5925 025524 ZZ
5926 ;*
5927 ;*
5928 ;* THIS TEST ISSUES A CONTROL IN WITH A REQUEST
5929 ;* KEY OF 7 AND LOOKS FOR A PROCEDURE ERROR OF
5930 ;* ILLEGAL REQUEST KEY ON CONTROL IN (120)
5931 ;*
5932 ;*-
5933 .SBTTL ;***** TEST 27 *****
5934 025524 T27::
5935
5936 025524 004737 004522 JSR PC,MINITS ;MASTER CLEAR - MODE DEF
5937
5938 025530 005037 002402 CLR ERRWRD
5939 025534 104410 TRAP C#ESCAPE
5940 025536 000212 .WORD L10074-.
5941 ;*****
5942 ; JUMP TO END OF TEST IF ERROR
5943 ;*****
5944
5945 025540 012737 000003 002360 MOV #3,TRIBN
5946 025546 012703 000001 MOV #01,R3
5947 025552 004537 003162 JSR R5,CONTIN ;ESTABLISH TRIB
5948 ;*****
5949 ;TIME OUT OR READY ERRORS REPORT HERE
5950 ;*****
5951
5952 025556 005037 002402 CLR ERRWRD
5953 025562 104410 TRAP C#ESCAPE
5954 025564 000164 .WORD L10074-.
5955 ;*****
5956 ; JUMP TO END OF TEST IF ERROR
5957 ;*****
5958
5959 025566 012703 000007 MOV #07,R3
5960 025572 004537 003162 JSR R5,CONTIN ;DO CONTROL IN WITH KEY OF 07
5961
5962 025576 005037 002402 CLR ERRWRD
5963 025602 104410 TRAP C#ESCAPE
5964 025604 000144 .WORD L10074-.
5965 ;*****
5966 ; JUMP TO END OF TEST IF ERROR
5967 ;*****
5968
5969 025606 012737 000120 002410 MOV #120,PERR ;LOOK FOR ERROR
5970 025614 004537 003016 JSR R5,WFPE ;WAIT FOR PROCEDURE ERROR
5971
5972 025620 005037 002402 CLR ERRWRD
5973 025624 104410 TRAP C#ESCAPE
5974 025626 000122 .WORD L10074-.
5975 ;*****
5976 ; ESCAPE TEST IF ERROR

```

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***** TEST 27 *****

```

5977
5978 025630 042777 000200 154606      ;;;;;;;;;
5979 025636 012703 000017              BIC   #R00,8BSEL2      ;CLEAR R00
5980 025642 004537 003162              MOV   #17,R3          ;MOV 17 TO KEY WORD
5981                                     JSR   R5,CONTIN       ;DO CONTROL IN WITH KEY OF 17
5982 025646 005037 002402              CLR   ERRWRD
5983 025652 104410                      TRAP  C#ESCAPE
5984 025654 000074                      .WORD L10074-.
5985                                     ;;;;;;;;;
5986                                     ; JUMP TO END OF TEST IF ERROR
5987                                     ;;;;;;;;;
5988
5989 025656 012737 000120 002410      MOV   #120,PERR       ;LOOK FOR ERROR
5990 025664 004537 003016              JSR   R5,WFPE         ;WAIT FOR PROCEDURE ERROR
5991
5992 025670 005037 002402              CLR   ERRWRD
5993 025674 104410                      TRAP  C#ESCAPE
5994 025676 000052                      .WORD L10074-.
5995                                     ;;;;;;;;;
5996                                     ; ESCAPE TEST IF ERROR
5997                                     ;;;;;;;;;
5998 025700 042777 000200 154536      BIC   #R00,8BSEL2     ;CLEAR OUTPUT
5999 025706 005003                       CLR   R3
6000 025710 004537 003162              JSR   R5,CONTIN       ;DO A NO REQUEST
6001
6002 025714 005037 002402              CLR   ERRWRD
6003 025720 104410                      TRAP  C#ESCAPE
6004 025722 000026                      .WORD L10074-.
6005                                     ;;;;;;;;;
6006                                     ; JUMP TO END OF TEST IF ERROR
6007                                     ;;;;;;;;;
6008
6009 025724 004737 004244                JSR   PC,WAIT50       ;THEN DELAY
6010 025730 032777 000200 154506      BIT   #R00,8BSEL2
6011 025736 001404                      BEQ   10#              ;IF NOT SET THEN END
6012                                     ;ELSE ERROR
6013 025740 104455                      TRAP  C#ERDF
6014 025742 000053                      .WORD 43
6015 025744 012560                      .WORD MEF30
6016 025746 010464                      .WORD ERR32
6017 025750
6018 025750
6019 025750 104401                      10#:
L10074: TRAP  C#ETST
6020

```


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***** TEST 28 *****

```

6021 .SBTTL ;***** TEST 28 *****
6022 .SBTTL * CHECK FOR PROCEDURE ERROR 134
6023 025752 ZZ
6024 ;*
6025 ;*
6026 ;* THIS TEST CHECKS FOR PROCEDURE ERROR OF USING
6027 ;* RESERVED BITS IN BSEL7 ON CONTROL IN
6028 ;*
6029 ;*-
6030 .SBTTL ;***** TEST 28 *****
6031 025752 T28::
6032
6033 025752 004737 004522 JSR PC,MINITS ;MASTER CLEAR MODE DEF
6034
6035 025756 005037 002402 CLR ERRWRD
6036 025762 104410 TRAP C#ESCAPE
6037 025764 000212 .WORD L10075-.
6038 ;*****
6039 ; JUMP TO END OF TEST IF ERROR
6040 ;*****
6041
6042 025766 012737 000005 002360 MOV #5,TRIBN
6043 025774 012703 000001 MOV #1,R3
6044 026000 004537 003162 JSR R5,CONTIN ;ESTABLISH TRIB
6045 ;*****
6046 ;TIME OUT OR READY ERRORS REPORT THIS PC
6047 ;*****
6048
6049 026004 005037 002402 CLR ERRWRD
6050 026010 104410 TRAP C#ESCAPE
6051 026012 000164 .WORD L10075-.
6052 ;*****
6053 ; JUMP TO END OF TEST IF ERROR
6054 ;*****
6055
6056 026014 012703 100000 MOV #100000,R3 ;SET BIT 7
6057 026020 004537 003162 JSR R5,CONTIN
6058
6059 026024 005037 002402 CLR ERRWRD
6060 026030 104410 TRAP C#ESCAPE
6061 026032 000144 .WORD L10075-.
6062 ;*****
6063 ; JUMP TO END OF TEST IF ERROR
6064 ;*****
6065
6066 026034 012737 000134 002410 MOV #134,PERR
6067 026042 004537 003016 JSR R5,WFPE ;WAIT FOR PROCEDURE ERROR
6068
6069 026046 005037 002402 CLR ERRWRD
6070 026052 104410 TRAP C#ESCAPE
6071 026054 000122 .WORD L10075-.
6072 ;*****
6073 ; ESCAPE TEST IF ERROR
6074 ;*****
6075 026056 042777 000200 154360 BIC #R00,#BSEL2 ;CLEAR OUTPUT
6076 026064 012703 046000 MOV #46000,R3 ;SET 6 3 AND2

```

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;***** TEST 28 *****

6077	026070	004537	003162		JSR	R5,CONTIN	;DO CONTROL IN
6078							
6079	026074	005037	002402		CLR	ERRWRD	
6080	026100	104410			TRAP	C#ESCAPE	
6081	026102	000074			WORD	L10075-.	
6082					;	;	
6083					;	JUMP TO END OF TEST IF ERROR	
6084					;	;	
6085							
6086	026104	012737	000134	002410	MOV	#134,PERR	
6087	026112	004537	003016		JSR	R5,WFE	;WAIT FOR PROCEDURE ERROR
6088							
6089	026116	005037	002402		CLR	ERRWRD	
6090	026122	104410			TRAP	C#ESCAPE	
6091	026124	000052			.WORD	L10075-.	
6092					;	;	
6093					;	ESCAPE TEST IF ERROR	
6094					;	;	
6095	026126	005003			CLR	R3	
6096	026130	042777	000200	154306	BIC	#R00,8BSEL2	;CLEAR OUTPUT
6097	026136	004537	003162		JSR	R5,CONTIN	;DO CONTROL IN
6098							
6099	026142	005037	002402		CLR	ERRWRD	
6100	026146	104410			TRAP	C#ESCAPE	
6101	026150	000026			.WORD	L10075-.	
6102					;	;	
6103					;	JUMP TO END OF TEST IF ERROR	
6104					;	;	
6105							
6106	026152	004737	004244		JSR	PC,WAIT50	;WAIT A WHILE
6107	026156	032777	000200	154260	BIT	#R00,8BSEL2	;IS R00 SET NOW
6108	026164	001404			BEQ	10#	;IF NOT THEN GO ON
6109							;ELSE ERROR
6110	026166	104455			TRAP	C#ERDF	
6111	026170	000054			.WORD	44	
6112	026172	012560			.WORD	MEF30	
6113	026174	010464			.WORD	ERR32	
6114	026176						
6115	026176						
6116	026176	104401			TRAP	C#ETST	
6117							

10#:
 L10075:

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***** TEST 29 *****

6118
6119
6120 026200
6121
6122
6123
6124
6125
6126
6127
6128
6129
6130 026200
6131
6132 026200 004737 004522
6133
6134 026204 005037 002402
6135 026210 104410
6136 026212 000312
6137
6138
6139
6140
6141 026214 012737 000027 002360
6142 026222 012703 000001
6143 026226 004537 003162
6144
6145
6146
6147
6148 026232 005037 002402
6149 026236 104410
6150 026240 000264
6151
6152
6153
6154
6155 026242 012704 000003
6156 026246 012703 020000
6157 026252 004537 003162
6158
6159
6160
6161
6162 026256 005037 002402
6163 026262 104410
6164 026264 000240
6165
6166
6167
6168
6169 026266 012703 000042
6170 026272 004537 003162
6171
6172
6173

```
.SBTTL ;***** TEST 29 *****
.SBTTL *LATCH - UNLATCH POLL CHECK
ZZ
;*
;*
;* THIS TEST CHECKS THE LATCH - UNLATCH POLL
;* COMMANDS. FIRST LATCH TRIB IN DEAD STATE
;* MAKE SURE ITS DEAD. THEN UNLATCH AND MAKE
;* SURE THAT IT GOES ACTIVE.
;*
.SBTTL ;***** TEST 29 *****
T29::
JSR PC,MINITS ;MASTER CLEAR MODE DEF
CLR ERRWRD
TRAP C#ESCAPE
.WORD L10076-.
; JUMP TO END OF TEST IF ERROR
; JUMP TO END OF TEST IF ERROR
MOV #27,TRIBN
MOV #01,R3 ;ESTABLISH TRIB
JSR R5,CONTIN
; TIME OUT OR READY ERROR REPORT THIS PC
CLR ERRWRD
TRAP C#ESCAPE
.WORD L10076-.
; JUMP TO END OF TEST IF ERROR
; JUMP TO END OF TEST IF ERROR
MOV #3,R4
MOV #20000,R3 ;LATCH POLL DEAD
JSR R5,CONTIN
; TIME OUT OR READY ERRORS REPORT THIS PC
CLR ERRWRD
TRAP C#ESCAPE
.WORD L10076-.
; JUMP TO END OF TEST IF ERROR
; JUMP TO END OF TEST IF ERROR
MOV #42,R3
JSR R5,CONTIN ;READ SLOT 2 TSS
; TIME OUT OR READY ERRORS REPORT THIS PC
```

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;***** TEST 29 *****

6174					
6175	026276	005037	002402		CLR ERRWRD
6176	026302	104410			TRAP C\$ESCAPE
6177	026304	000220			.WORD L10076-.
6178					*****
6179					; JUMP TO END OF TEST IF ERROR
6180					*****
6181					
6182	026306	012737	000002	002336	MOV #02,\$GDDAT
6183	026314	004537	003242		JSR R5,GETOUT
6184					*****
6185					; CHECK FOR INFO OUT AND CORRECT TRIBN
6186					; IF ERROR REPORT THIS PC
6187					*****
6188					
6189	026320	005037	002402		CLR ERRWRD
6190	026324	104410			TRAP C\$ESCAPE
6191	026326	000176			.WORD L10076-.
6192					*****
6193					; JUMP TO END OF TEST IF ERROR
6194					*****
6195					
6196	026330	012737	000042	002336	MOV #42,\$GDDAT
6197	026336	004537	003372		JSR R5,GETRKY
6198					*****
6199					; CHECK FOR CORRECT RETURN KEY
6200					*****
6201					
6202	026342	005037	002402		CLR ERRWRD
6203	026346	104410			TRAP C\$ESCAPE
6204	026350	000154			.WORD L10076-.
6205					*****
6206					; JUMP TO END OF TEST IF ERROR
6207					*****
6208					
6209	026352	012737	100220	002336	MOV #100220,\$GDDAT ;
6210	026360	004537	003446		JSR R5,GETDAT
6211					*****
6212					; CHECK FOR DEAD STATE
6213					*****
6214					
6215	026364	005037	002402		CLR ERRWRD
6216	026370	104410			TRAP C\$ESCAPE
6217	026372	000132			.WORD L10076-.
6218					*****
6219					; JUMP TO END OF TEST IF ERROR
6220					*****
6221					
6222	026374	042777	000200	154042	BIC #R00,\$BSEL2 ;CLEAR OUTPUT
6223	026402	012703	010000		MOV #10000,R3
6224	026406	004537	003162		JSR R5,CONTIN ;UNLATCH POLL
6225					*****
6226					;TIME OUT OR READY ERRORS REPORT THIS PC
6227					*****
6228					
6229	026412	005037	002402		CLR ERRWRD

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;***** TEST 29 *****

6230	026416	104410			TRAP	C#ESCAPE
6231	026420	000104			.WORD	L10076-.
6232					;	*****
6233					;	JUMP TO END OF TEST IF ERROR
6234					;	*****
6235						
6236	026422	012703	000042		MOV	#42,R3
6237	026426	004537	003162		JSR	R5,CONTIN ;READ TSS SLOT 2
6238					;	*****
6239					;	TIME OUT OR READY ERRORS REPORT THIS PC
6240					;	*****
6241						
6242	026432	005037	002402		CLR	ERRWRD
6243	026436	104410			TRAP	C#ESCAPE
6244	026440	000064			.WORD	L10076-.
6245					;	*****
6246					;	JUMP TO END OF TEST IF ERROR
6247					;	*****
6248						
6249	026442	012737	000002	002336	MOV	#02,#GDDAT ;
6250	026450	004537	003242		JSR	R5,GETOUT
6251					;	*****
6252					;	CHECK FOR INFORMATION OUT AND CORRECT TRIBN
6253					;	*****
6254						
6255	026454	005037	002402		CLR	ERRWRD
6256	026460	104410			TRAP	C#ESCAPE
6257	026462	000042			.WORD	L10076-.
6258					;	*****
6259					;	JUMP TO END OF TEST IF ERROR
6260					;	*****
6261						
6262	026464	012737	000042	002336	MOV	#42,#GDDAT
6263	026472	004537	003372		JSR	R5,GETRKY
6264					;	*****
6265					;	CHECK FOR CORRECT RETURN KEY
6266					;	*****
6267						
6268	026476	005037	002402		CLR	ERRWRD
6269	026502	104410			TRAP	C#ESCAPE
6270	026504	000020			.WORD	L10076-.
6271					;	*****
6272					;	JUMP TO END OF TEST IF ERROR
6273					;	*****
6274						
6275	026506	012737	000600	002336	MOV	#600,#GDDAT
6276	026514	004537	003446		JSR	R5,GETDAT
6277					;	*****
6278					;	CHECK FOR ACTIVE STATE
6279					;	*****
6280	026520	005037	002402		CLR	ERRWRD
6281	026524					
6282	026524	104401			L10076:	TRAP
6283						C#ETST

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;***** TEST 29 *****

6284
6285
6286
6287
6288 026526
6289
6290
6291
6292
6293
6294
6295
6296
6297
6298 026526
6299 026526 012737 001750 002424
6300 026534 012737 034014 002422
6301 026542 012737 033534 002420
6302 026550 012737 000004 002426
6303 026556 005037 002432
6304 026562 012737 000003 002360
6305 026570 004737 004522
6306
6307
6308 026574 005037 002402
6309 026600 104410
6310 026602 000016
6311
6312
6313
6314
6315 026604 004537 006410
6316 026610 005037 002402
6317 026614 104410
6318 026616 000002
6319 026620
6320 026620 104401
6321

.SBTTL ;***** TEST 30 *****
.SBTTL SHORT MESSAGE SENDING TEST, WITH INTERNAL LOOPBACK
ZZ
;*
;* THIS TEST SENDS A 4 BYTE MESSAGE FROM AN EVEN TRANSMIT
;* BUFFER TO AN EVEN REC BUFFER IN DDMP FORMAT CONFIGURED
;* AS A MULTIPOINT CONTROL STATION FULL DUPLEX. THE TEST
;* CHECKS THAT REC BUFFERS ARE RETURNED AND THAT THE DATA
;* IS CORRECT. IT ALSO CHECKS THAT THE NEXT OUTPUT COMMAND
;* IS A TX BUFFER COMPLETE.
.SBTTL ;***** TEST 30 *****

T30::
MOV #1000.,RXCC ;SET UP RX CC
MOV #RECBU1,RXADD ;SET UP RX ADD
MOV #MR1,TXADD ;SET UP TX ADD
MOV #4,TXCC ;SET UP TX COUNT
CLR GENWRD ;CLEAR GEN WORD
MOV #3,TRIBN ;SET TRIB ADDRESS
JSR PC,MINITS ;INITIALIZE

CLR ERRWRD
TRAP C#ESCAPE
.WORD L10077-.
;*****
; JUMP TO END OF TEST IF ERROR
;*****
JSR R5,TXR#3 ;TRANSMIT AND REC.
CLR ERRWRD
TRAP C#ESCAPE
.WORD L10077-.
L10077: TRAP C#ETST

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;***** TEST 31 *****

```

6322 .SBTTL ;***** TEST 31 *****
6323 .SBTTL * PROCEDURE ERROR 122 CHECK
6324 026622 ZZ
6325 ;*
6326 ;*
6327 ;* THIS TEST CHECKS FOR PROCEDURE ERROR 122
6328 ;* ESTABLISH BUFFER FOR UNESTABLISHED TRIB.
6329 ;*
6330 .SBTTL ;***** TEST 31 *****
6331 026622 T31::
6332
6333 026622 004737 004522 JSR PC,MINITS ;MASTER CLEAR MODE DEF
6334
6335 026626 005037 002402 CLR ERRWRD
6336 026632 104410 TRAP C$ESCAPE
6337 026634 000104 .WORD L10100-.
6338 ;*****
6339 ; JUMP TO END OF TEST IF ERROR
6340 ;*****
6341
6342 026636 052777 000200 153574 BIS #RQI,8BSELO ;SET REQUEST FOR INPUT
6343 026644 004537 002732 JSR R5,WRDI ;WAIT FOR RDI TO SET
6344
6345 026650 005037 002402 CLR ERRWRD ;CLEAR ERROR
6346 026654 104410 TRAP C$ESCAPE
6347 026656 000062 .WORD L10100-.
6348 026660 042777 000200 153552 BIC #RQI,8BSELO ;CLEAR REQUEST
6349 026666 112777 000003 153552 MOVB #03,8BSEL3
6350 026674 012777 000010 153552 MOV #10,8BSEL6 ;SET CC
6351 026702 012777 034014 153540 MOV #RECBUI,8BSEL4 ;SET BA
6352 026710 112777 000000 153526 MOVB #0, 8BSEL2 ;ESTABLISH BUFFER
6353 026716 012737 000122 002410 MOV #122,PERR ;WAIT
6354 026724 004537 003016 JSR R5,WFPE ;WAIT FOR PROCEDURE ERROR
6355
6356 026730 005037 002402 CLR ERRWRD
6357 026734 104410 TRAP C$ESCAPE
6358 026736 000002 .WORD L10100-.
6359 ;*****
6360 ; ESCAPE TEST IF ERROR
6361 ;*****
6362 026740 L10100:
6363 026740 104401 TRAP C$ETST
6364

```

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***** TEST 32 *****

6365
6366
6367 026742
6368
6369
6370
6371
6372
6373
6374 026742
6375 026742 004737 004522
6376 026746 005037 002402
6377 026752 104410
6378 026754 000132
6379
6380
6381
6382 026756 012737 000047 002360
6383 026764 012703 000001
6384 026770 004537 003162
6385
6386
6387
6388 026774 005037 002402
6389 027000 104410
6390 027002 000104
6391
6392
6393
6394
6395 027004 052777 000200 153426
6396 027012 004537 002732
6397
6398 027016 005037 002402
6399 027022 104410
6400 027024 000062
6401 027026 042777 000200 153404
6402 027034 012777 000010 153412
6403 027042 012777 034014 153400
6404 027050 113777 002360 153370
6405 027056 112777 000000 153360
6406 027064 012737 000124 002410
6407 027072 004537 003016
6408
6409 027076 005037 002402
6410 027102 104410
6411 027104 000002
6412
6413
6414
6415 027106
6416 027106 104401
6417
6418
6419
6420

```

.SBTTL ;***** TEST 32 *****
.SBTTL *PROCEDURE ERROR 124 CHECK
ZZ
;*
;*
;* THIS TEST CHECKS FOR PROCEDURE ERROR 124
;* ESTABLISHING BUFFER FOR HALTED TRIB
;*
.SBTTL ;***** TEST 32 *****
T32::
JSR PC,MINITS ;MASTER CLEAR MODE DEF
CLR ERRWRD
TRAP C#ESCAPE
.WORD L10101-.
;*****
; JUMP TO END OF TEST IF ERROR
;*****
MOV #47,TRIBN
MOV #01,R3
JSR R5,CONTIN ;ESTABLISH TRIB
;*****
; TIME OUT AND READY ERRORS REPORT THIS PC
;*****
CLR ERRWRD
TRAP C#ESCAPE
.WORD L10101-.
;*****
; JUMP TO END OF TEST IF ERROR
;*****
BIS #RQI,#BSELO ;SET REQUEST
JSR R5,WRDI ;WAIT FOR RDI TO SET
CLR ERRWRD ;CLEAR ERROR
TRAP C#ESCAPE
.WORD L10101-.
BIC #RQI,#BSELO ;CLEAR REQUEST
MOV #10,#BSEL6 ;SET CC
MOV #RECBU1,#BSEL4 ;SET BA
MOVB TRIBN,#BSEL3 ;SET TRIB NO.
MOVB #0,#BSEL2 ;ESTABLISH BUFFER
MOV #124,PERR ;WAIT FOR ERROR
JSR R5,WFPE ;WAIT FOR PROCEDURE ERROR

CLR ERRWRD
TRAP C#ESCAPE
.WORD L10101-.
;*****
; ESCAPE TEST IF ERROR
;*****
L10101: TRAP C#ETST

```


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..... TEST 33

6421
6422
6423 027110
6424
6425
6426
6427
6428
6429
6430
6431 027110
6432
6433 027110 004737 004522
6434
6435 027114 005037 002402
6436 027120 104410
6437 027122 000152
6438
6439
6440
6441
6442 027124 012737 000074 002360
6443 027132 012703 000001
6444 027136 004537 003162
6445
6446 027142 005037 002402
6447 027146 104410
6448 027150 000124
6449
6450
6451
6452
6453 027152 012703 000004
6454 027156 004537 003162
6455
6456 027162 005037 002402
6457 027166 104410
6458 027170 000104
6459
6460
6461
6462
6463 027172 052777 000200 153240
6464 027200 004537 002732
6465
6466 027204 005037 002402
6467 027210 104410
6468 027212 000062
6469 027214 042777 000200 153216
6470 027222 012777 000000 153224
6471 027230 012777 034014 153212
6472 027236 113777 002360 153202
6473 027244 112777 000000 153172
6474 027252 012737 000126 002410
6475 027260 004537 003016
6476

```
.SBTTL ..... TEST 33 .....  
.SBTTL *PROCEDURE ERROR #126 CHECK  
ZZ  
; *  
; *  
; * THIS TEST CHECKS FOR A PROCEDURE ERROR OF #126  
; * ASSIGNING A BUFFER WITH A ZERO BYTE COUNT  
; *  
; *-  
.SBTTL ..... TEST 33 .....  
T33:;  
JSR PC,MINITS ;MASTER CLEAR MODE DEF  
CLR ERRWRD  
TRAP C#ESCAPE  
.WORD L10102-  
; ; ; ; ; ; ;  
; JUMP TO END OF TEST IF ERROR  
; ; ; ; ; ; ;  
MOV #74,TRIBN  
MOV #01,R3  
JSR R5,CONTIN ; ESTABLISH TRIB  
CLR ERRWRD  
TRAP C#ESCAPE  
.WORD L10102-  
; ; ; ; ; ; ;  
; JUMP TO END OF TEST IF ERROR  
; ; ; ; ; ; ;  
MOV #04,R3  
JSR R5,CONTIN ;MAINT STATE  
CLR ERRWRD  
TRAP C#ESCAPE  
.WORD L10102-  
; ; ; ; ; ; ;  
; JUMP TO END OF TEST IF ERROR  
; ; ; ; ; ; ;  
BIS #RQI,#BSELO ;SET REQUEST  
JSR R5,WRDI ;WAIT FOR RDI TO SET  
CLR ERRWRD ;CLEAR ERROR  
TRAP C#ESCAPE  
.WORD L10102-  
BIC #RQI,#BSELO ;CLEAR REQUEST  
MOV #0,#BSEL6 ;0 BYTES  
MOV #RRCBU1,#BSEL4 ;BA  
MOVB TRIBN,#BSEL3 ;SET TRIBN  
MOVB #0,#BSEL2 ;SET BUFFER  
MOV #126,PERR ;WAIT FOR ERROR  
JSR R5,WFPE ;WAIT FOR PROCEDURE ERROR
```

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..... TEST 33

6477 027264 005037 002402
6478 027270 104410
6479 027272 000002
6480
6481
6482
6483
6484 027274
6485 027274 104401
6486

CLR ERRWRD
TRAP C#ESCAPE
.WORD L10102.
!!!!!!
; ESCAPE TEST IF ERROR
!!!!!!

L10102:
TRAP C#ETST

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***** TEST 34 *****

6487
6488
6489 027276
6490
6491
6492
6493
6494
6495
6496
6497 027276
6498
6499 027276 004737 004522
6500
6501 027302 005037 002402
6502 027306 104410
6503 027310 000102
6504
6505
6506
6507
6508 027312 052777 000200 153120
6509
6510 027320 004537 002732
6511
6512 027324 005037 002402
6513 027330 104410
6514 027332 000060
6515 027334 042777 000200 153076
6516 027342 105077 153100
6517 027346 012777 000010 153100
6518 027354 012777 033534 153066
6519 027362 012777 000004 153054
6520
6521 027370 012737 000130 002410
6522 027376 004537 003016
6523
6524 027402 005037 002402
6525 027406 104410
6526 027410 000002
6527
6528
6529
6530 027412
6531 027412 104401
6532
6533
6534

```
.SBTTL ***** TEST 34 *****
.SBTTL *CHECK FOR PROCEDURE ERROR 130
ZZ
;*
;*
;* THIS TEST CHECKS FOR A PROCEDURE ERROR OF 130
;* ASSIGNING TRANSMIT BUFFER FOR TRIB 0
;*
.SBTTL ***** TEST 34 *****
T34::

JSR PC,MINITS ;MASTER CLEAR MODE DEF

CLR ERRMRD
TRAP C$ESCAPE
.WORD L10103-.
;*****
; JUMP TO END OF TEST IF ERROR
;*****

BIS @RQI,@BSELO ;SET REQUEST
;WAIT FOR READY
JSR R5,WRDI ;WAIT FOR RDI TO SET

CLR ERRMRD ;CLEAR ERROR
TRAP C$ESCAPE
.WORD L10103-.
BIC @RQI,@BSELO ;CLEAR REQUEST.
CLRB @BSEL3 ;MAKE TRIB NO. 0
MOV @10,@BSEL6 ;MAKE CC 10
MOV @MR1,@BSEL4 ;MAKE ADD MR1
MOV @4,@BSEL2 ;CLEAR RDI AND ESTAB
;TRANSMIT BUFFER
MOV @130,PERR ;WAIT FOR PROCEDURE ERROR
JSR R5,WFPE ;WAIT FOR PROCEDURE ERROR

CLR ERRMRD
TRAP C$ESCAPE
.WORD L10103-.
;*****
; ESCAPE TEST IF ERROR
;*****

L10103: TRAP C$ETST
```

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;***** TEST 34 *****

```

6535
6536
6537
6538 027414
6539
6540
6541
6542
6543
6544
6545
6546
6547
6548
6549 027414
6550 027414 012737 000035 002370
6551
6552 027422 012737 001750 002424
6553 027430 012737 034014 002422
6554 027436 012737 000400 002426
6555 027444 012737 033534 002420
6556 027452 005037 002432
6557 027456 012737 000001 002360
6558 027464 022737 000004 002476
6559 027472 001402
6560 027474 005237 002400
6561 027500 004737 004512
6562 027504 005037 002400
6563 027510 005037 002402
6564 027514 104410
6565 027516 000016
6566
6567
6568
6569
6570 027520 004537 005720
6571
6572 027524 005037 002402
6573 027530 104410
6574 027532 000002
6575
6576
6577
6578
6579 027534
6580 027534 104401
6581
6582

.SBTTL ;***** TEST 35 *****
.SBTTL * TRANSMIT REC 256,PTP,DDCMP
ZZ
;*
;*
;* THIS TEST WILL TRANSMIT 256 BYTE MESSAGE
;* DDCHP PROTOCOL
;* THIS WILL BE DONE EXTERNAL LOOPBACK IF
;* IT EXISTS ELSE INTERNAL LOOPBACK WILL
;* BE USED
;*
;*-
.SBTTL ;***** TEST 35 *****
T35::
MOV #35,ROMN1 ;SET UP TEST NUMBER
MOV #1000.,RXCC ;SET REC BUFFER FOR 1000BYTES
MOV #RECBU1,RXADD ; SET UP BUFF ADD
MOV #256.,TXCC ;SET UP RX CHAR COUNT
MOV #MR1,TXADD ;AND ADDRESS
CLR GENWRD ;CLEAR GEN WORD
MOV #01,TRIBN ;SET THE TRIB TO 01
CMP #4,TSTCON ;CHECK FOR LOOPBACK CONNECTOR.
BEQ 1$ ;
INC EXLOOP ;EXT CONNECTOR PRESENT: SET EXT LOOP FLAG
1$: JSR PC,MINIT1 ;MASTER CLEAR-MODE DEF
CLR EXLOOP ;CLEAR EXTERNAL LOOP FLAG
CLR ERRWRD
TRAP C#ESCAPE
.WORD L10104-.
;*****
; JUMP TO END OF TEST IF ERROR
;*****
JSR R5,TXRXSR ;GO TRANSMIT RX AND CHECK
CLR ERRWRD
TRAP C#ESCAPE
.WORD L10104-.
;*****
; JUMP TO END OF TEST IF ERROR
;*****
L10104: TRAP C#ETST

```

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;***** TEST 35 *****

6583
6584
6585
6586 027536
6587
6588
6589
6590
6591
6592
6593
6594
6595
6596 027536
6597 027536 032737 000003 002472
6598 027544 001454
6599
6600 027546 012737 000036 002370
6601 027554 012737 001750 002424
6602 027562 012737 034014 002422
6603 027570 012737 000400 002426
6604 027576 012737 033534 002420
6605 027604 005037 002432
6606 027610 012737 000001 002360
6607 027616 022737 000004 002476
6608 027624 001402
6609 027625 005237 002400
6610 027632 004737 004512
6611 027636 005037 002400
6612 027642 005037 002402
6613 027646 104410
6614 027650 000026
6615
6616
6617
6618 027652 005237 002376
6619 027656 004537 005720
6620 027662 005037 002402
6621 027666 005037 002376
6622 027672 104410
6623 027674 000002
6624
6625
6626
6627 027676
6628 027676
6629 027676 104401
6630

```

.SBTTL ;***** TEST 36 *****
.SBTTL * DMV Q22 MODE TX AND RX,256 BYTES,DDCMP
ZZ
;*
;*          **** DMV ONLY ****
;* THIS TEST WILL TRANSMIT A 256 BYTE MESSAGE DDCMP PROTOCOL
;* USING THE "Q22" CSR MODE OF THE DMV-11
;* THIS WILL BE DONE EXTERNAL LOOPBACK IF IT EXISTS ( ELSE
;* INTERNAL LOOPBACK WILL BE USED).
;*
;*-
.SBTTL ;***** TEST 36 *****
T36::
BIT      #3,OPTYP      ;IS THIS A DMV ?
BEQ      T36END       ;IF NOT: EXIT TEST

MOV      #36,ROMN1     ;SET UP TEST NUMBER
MOV      #1000.,RXCC   ;SET REC BUFFER FOR 1000BYTES
MOV      @RECBU1,RXADD ; SET UP BUFF ADD
MOV      #256.,TXCC    ;SET UP RX CHAR COUNT
MOV      @MR1,TXADD    ;AND ADDRESS
CLR      GENWRD        ;CLEAR GEN WORD
MOV      #01,TRIBN     ;SET THE TRIB TO 01
CMP      #4,TSTCON     ;CHECK FOR LOOPBACK CONNECTOR.
BEQ      1$           ;
INC      EXLOOP        ;EXT CONNECTOR PRESENT: SET EXT LOOP FLAG
1$:      JSR      PC,MINIT1 ;MASTER CLEAR-MODE DEF
CLR      EXLOOP        ;CLEAR NO TTLOOP FLAG
CLR      ERRWRD
TRAP    C$ESCAPE
.WORD   L10105-.

;*****
; JUMP TO END OF TEST IF ERROR
;*****
INC      MODQ22        ;SET Q22 MODE FLAG (FOR TXRXSR)
JSR      R5,TXRXSR    ;GO TRANSMIT RX AND CHECK
CLR      ERRWRD
CLR      MODQ22
TRAP    C$ESCAPE
.WORD   L10105-.

;*****
; JUMP TO END OF TEST IF ERROR
;*****
T36END:
L10105: TRAP    C$ETST

```

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;***** TEST 37 *****

6631
6632
6633 027700
6634
6635
6636
6637
6638
6639
6640
6641
6642
6643 027700
6644 027700 012737 000377 002426
6645 027706 012737 033534 002420
6646 027714 012737 000764 002424
6647 027722 012737 034015 002422
6648 027730 012737 000075 002360
6649 027736 005037 002432
6650 027742 004737 004522
6651
6652
6653 027746 005037 002402
6654 027752 104410
6655 027754 000016
6656
6657
6658
6659
6660 027756 004537 006410
6661
6662
6663 027762 005037 002402
6664 027766 104410
6665 027770 000002
6666
6667
6668
6669
6670 027772
6671 027772 104401
6672

```
.SBTTL ;***** TEST 37 *****
.SBTTL * TX AND RX,255 BYTES,EVEN TX,ODD RX,DDCMP,MULTIPOINT
ZZ
;*
;*
;* THIS TEST WILL TRANSMIT A MESSAGE OF 255
;* BYTES FROM AN EVEN TX START ADD TO AN ODD
;* REC START ADD. IN DDCMP MODE MULTI POINT
;* CONTROL STATION.
;*
;*-
.SBTTL ;***** TEST 37 *****
T37::
MOV #255.,TXCC ;SET UP TRANSMIT CHAR COUNT
MOV #MR1,TXADD ;SET UP TRANSMIT ADD
MOV #500.,RXCC ;SET UP REC CHAR COUNT
MOV #RECBU1+1,RXADD ;SET UP REC ADD
MOV #75,TRIBN ;SET UP TRIB NO.
CLR GENWRD ;CLEAR THE GENWRD
JSR PC,MINITS ;MASTER CLEAR MODE DEF
;MULTI POINT CONTROL

CLR ERRWRD
TRAP C#ESCAPE
.WORD L10106-.
;::::::
; JUMP TO END OF TEST IF ERROR
;::::::

201: JSR R5,TXRX3 ;GO TRANSMIT AND REC
; AND CHECK DATA.

CLR ERRWRD
TRAP C#ESCAPE
.WORD L10106-.
;::::::
; JUMP TO END OF TEST IF ERROR
;::::::

L10106: TRAP C#ETST
```

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***** TEST 38 *****

6673
6674
6675 027774
6676
6677
6678
6679
6680
6681
6682
6683

.SBTTL ***** TEST 38 *****
.SBTTL *READ/WRITE MODEM TESTS
ZZ
;*
;*
;* THIS TEST WILL SELECT EACH OF THE 4 MODEM
;* INTERFACES AND WRITE AND READ THEM. THIS IS
;* ONLY DONE IF CONNECTORS ARE PRESENT
;* (DMP ONLY).
;*-

6684 027774
6685

.SBTTL ***** TEST 38 *****
T38::

6686 027774 032737 000003 002472
6687 030002 001402
6688 030004 104432
6689 030006 000412
6690
6691 030010 005002
6692 030012 022737 000000 002476
6693 030020 001135
6694 030022 016237 030374 002506
6695 030030 004737 004530
6696 030034 004737 004244
6697
6698 030040 005037 002402
6699 030044 104410
6700 030046 000352

BIT #3,OPTYP ;IS THIS A DMV11 ?
BEQ 1\$; NO: GOOD, CONTINUE TEST
TRAP C#EXIT
.WORD L10107-.
1\$: CLR R2 ;CLEAR R2
CMP #0,TSTCON ;IS THIS WITH TEST CONN LOOPBACK
BNE MODEX ;IF NOT GO TO END
MODEB: MOV DUPTYP(R2),AXNUM
JSR PC,MINTR ;MASTER CLEAR MODE DEF
JSR PC,WAIT50 ;DELAY

6701
6702
6703
6704

CLR ERRWRD
TRAP C#ESCAPE
.WORD L10107-.
; JUMP TO END OF TEST IF ERROR

6705 030050 022702 000010
6706 030054 101403
6707
6708 030056 142777 000010 152356
6709
6710 030064 005037 002360
6711 030070 016204 030320
6712 030074 012703 000023
6713 030100 004537 003162
6714

CMP #10,R2
BLOS MODEA ;DON'T TURN OFF LINE UINT LOOP
;IF PAST THIS POINT IN TABLES
BICB #BIT3,8BSEL1
MODEA: CLR TRIBN ;MAKE TRIB NO. = 0
MOV MODTYP(R2),R4 ;SELECT TYPE OF INTERFACE
MOV #23,R3 ;SELECT INTERFACE
JSR R5,CONTIN

6715
6716
6717

; TIME OUT OR READY ERRORS REPORT THIS PC

6718 030104 005037 002402
6719 030110 104410
6720 030112 000306
6721

CLR ERRWRD
TRAP C#ESCAPE
.WORD L10107-.
; JUMP TO END OF TEST IF ERROR

6722
6723
6724 030114 012704 000100
6725 030120 012703 000021
6726 030124 004537 003162
6727
6728

MODED: MOV #100,R4
MOV #21,R3 ;WRITE MODEM
JSR R5,CONTIN
; TIME OUT OR READY ERRORS REPORT THIS PC

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;***** TEST 38 *****

```

6729                                     ;*****
6730
6731 030130 005037 002402             CLR   ERRWRD
6732 030134 104410                   TRAP  C#ESCAPE
6733 030136 000262                   .WORD L10107-.
6734                                     ;*****
6735                                     ; JUMP TO END OF TEST IF ERROR
6736                                     ;*****
6737
6738 030140 012703 000020             MOV   #20,R3
6739 030144 004537 003162             JSR   R5,CONTIN      ;READ MODEM
6740                                     ;*****
6741                                     ; TIME OUT OR READY ERRORS REPORT THIS PC
6742                                     ;*****
6743
6744 030150 005037 002402             CLR   ERRWRD
6745 030154 104410                   TRAP  C#ESCAPE
6746 030156 000242                   .WORD L10107-.
6747                                     ;*****
6748                                     ; JUMP TO END OF TEST IF ERROR
6749                                     ;*****
6750
6751 030160 012737 000002 002336      MOV   #02,#GDDAT
6752 030166 004537 003242             JSR   R5,GETOUT
6753                                     ;*****
6754                                     ; CHECK FOR INFORMATION OUT AND CORRECT TRIBN
6755                                     ;*****
6756
6757 030172 005037 002402             CLR   ERRWRD
6758 030176 104410                   TRAP  C#ESCAPE
6759 030200 000220                   .WORD L10107-.
6760                                     ;*****
6761                                     ; JUMP TO END OF TEST IF ERROR
6762                                     ;*****
6763
6764 030202 012737 000010 002336      MOV   #10,#GDDAT
6765 030210 004537 003372             JSR   R5,GETRKY
6766                                     ;*****
6767                                     ;CHECK FOR CORRECT RETURN KEY MODEM STATUS
6768                                     ;*****
6769
6770 030214 005037 002402             CLR   ERRWRD
6771 030220 104410                   TRAP  C#ESCAPE
6772 030222 000176                   .WORD L10107-.
6773                                     ;*****
6774                                     ; JUMP TO END OF TEST IF ERROR
6775                                     ;*****
6776 030224 005037 002336             CLR   #GDDAT
6777 030230 005037 002340             CLR   #BDDAT
6778 030234 117737 152210 002340      MOVB  #BSEL4,#BDDAT
6779 030242 116237 030350 002336      MOVB  MODOUT(R2),#GDDAT
6780 030250 123737 002340 002336      CMPB  #BDDAT,#GDDAT
6781 030256 001411                   BEQ   10#
6782 030260 012737 012056 002430      MOV   #M30F,CODEW
6783 030266 104455                   TRAP  C#ERDF
6784 030270 000055                   .WORD 45

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;***** TEST 38 *****

6785	030272	011550			.WORD	EROIC
6786	030274	010366			.WORD	ERR27
6787	030276	104410			TRAP	C#ESCAPE
6788	030300	000120			.WORD	L10107-.
6789	030302	062702	000002	104:	ADD	#2,R2
6790						
6791	030306	022702	000024		CMP	#24,R2
6792	030312	001243			BNE	MODEB ;IF NOT DONE GO TO B
6793	030314			MODEX:		
6794	030314	104432			TRAP	C#EXI;
6795	030316	000102			.WORD	L10107-.
6796						
6797	030320	000323		MODTYP:	.WORD	323
6798	030322	000313			.WORD	313
6799	030324	000233			.WORD	233
6800	030326	000133			.WORD	133
6801	030330	000133			.WORD	133
6802	030332	000233			.WORD	233
6803	030334	000323			.WORD	323
6804	030336	000323			.WORD	323
6805	030340	000323			.WORD	323
6806	030342	000313			.WORD	313
6807	030344	000377		MODIN:	.WORD	377
6808	030346	000100			.WORD	100
6809						
6810	030350	000310		MODOUT:	.WORD	310
6811	030352	000310			.WORD	310
6812	030354	000330			.WORD	330
6813	030356	000330			.WORD	330
6814	030360	000330			.WORD	330
6815	030362	000330			.WORD	330
6816	030364	000330			.WORD	330
6817	030366	000330			.WORD	330
6818	030370	000310			.WORD	310
6819	030372	000310			.WORD	310
6820						
6821						
6822						
6823	030374	000005		DUPTYP:	.WORD	5
6824	030376	000005			.WORD	5
6825	030400	000004			.WORD	4
6826	030402	000004			.WORD	4
6827	030404	000004			.WORD	4
6828	030406	000004			.WORD	4
6829	030410	000004			.WORD	4
6830	030412	000004			.WORD	4
6831	030414	000005			.WORD	5
6832	030416	000005			.WORD	5
6833						
6834	030420			L10107:		
6835	030420	104401			TRAP	C#ETST
6836						
6837						
6838						
6839						
6840						

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***** TEST 39 *****

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6841 .SBTTL ;***** TEST 39 *****
6842 .SBTTL TEST OF MEM EXTENSION BIT 16, ADDRESS 200000
6843 030422 ZZ
6844 ;*
6845 ;*
6846 ;* THIS TEST WE'LL TRY TRANSMITTING A MESSAGE
6847 ;* TO VIRTUAL ADDRESS 200000 (BIT 16 SET).
6848 ;* IF MEMORY MANAGEMENT AND/OR SUFFICIENT MEMORY IS NOT
6849 ;* AVAILABLE FOR MESSAGE STORAGE, WE WILL EXPECT THE LMP-11
6850 ;* TO RETURN A NON-EXISTENT MEMORY ERROR FOR THE BUFFER.
6851 ;* IF ENOUGH MEMORY EXISTS,WE'LL MAKE SURE THE TRANSFER TAKES
6852 ;* PLACE PROPERLY.
6853 ;*
6854 ;*-
6855 .SBTTL ;***** TEST 39 *****
6856 030422 T39::
6857
6858 030422 012737 004222 000004 MOV #META,4 ;SET UP TRAP FOR NO MEM
6859 030430 005037 000006 CLR 6
6860 030434 012737 000002 002542 MOV #2,#TMP0
6861 030442 012746 000002 MOV #2,-(SP) ;DUMMY MOVE TO STACK
6862 030446 012705 030656 MOV #RET16,R5 ;SET UP R5 FOR RETURN IF TRAP
6863 ; TAKES U TO SR.
6864 030452 005737 177572 TST #177572 ;DOES MEM MANAGEMENT EXIST
6865 ;IF NOT TRAP TO META
6866 ; ELSE CONTINUE
6867 030456 062706 000002 ADD #2,SP ;FIX THE STACK ;:(SP) VRG021882
6868 030462 012700 000000 MOV #0,R0
6869 030466 104441 TRAP C$SPRI
6870 030470 012701 172300 MOV #172300,R1 ;GET ADDRESS OF KERNEL PDR REQD/
6871 030474 012702 000010 MOV #8.,R2 ; DO 8 TIMES
6872 030500 10$:
6873 030500 012721 077406 MOV #77406,(R1)+
6874 030504 005302 DEC R2
6875 030506 001374 BNE 10$
6876 030510 012701 172340 MOV #172340,R1
6877 030514 005011 CLR (R1)
6878 030516 012761 000200 000002 MOV #200,2(R1)
6879 030524 012761 000400 000004 MOV #400,4(R1)
6880 030532 012761 000600 000006 MOV #600,6(R1)
6881 030540 012761 001000 000010 MOV #1000,10(R1)
6882 030546 012761 177600 000016 MOV #177600,16(R1) ;:CHANGED FROM 7600 FOR
;:AN 11/24 VRG030482
6883
6884 030554 012761 002000 000012 MOV #2000,12(R1)
6885 030562 005037 002432 CLR GENWRD
6886 030566 012737 000033 002360 MOV #33,TRIBN ;MAP MEM CLEAR GEN AND SET UP TRIB
6887 030574 052737 040000 002432 BIS #BIT14,GENWRD ;SET MM BIT
6888 030602 012737 177776 002422 MOV #177776,RXADD ;SET UP RX ADD
6889 030610 012737 001750 002424 MOV #1750,RXCC ;SET UP RX COUNT(1000 DEC)
6890 030616 012737 033534 002420 MOV #MR1,TXADD ;SET UP TRANSMIT COUNT
6891 030624 012737 001000 002426 MOV #512.,TXCC ;SET UP TRANSMIT COUNT

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;***** TEST 39 *****

6892 030632 004737 004522
6893 030636 004537 006410
6894 030642 005037 002402
6895 030646 104410
6896 030650 000012
6897 030652 004537 003744
6898 030656 005037 002402
6899 030662
6900 030662 104401

JSR PC,MINITS ; MASTER CLEAR MODE DEF
JSR R5,TRRX3 ;GO TRANSMIT AND RX
CLR ERRWRD ; IF ERROR GO TO END
TRAP C\$ESCAPE
.WORD L10,10-.
JSR R5,MEMEX ;CHECK MEM EXTENSION
RET16: CLR ERRWRD ;CLEAR ERROR WORD
L10110:
TRAP C\$ETST

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 ;***** TEST 40 *****

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6901      .SBTTL ;***** TEST 40 *****
6902      .SBTTL TEST OF MEM EXTENSION BIT 17, ADDRESS 400000
6903 030664 ZZ
6904      ;*
6905      ;*
6906      ;* THIS TEST WE'LL TRY TRANSMITTING A MESSAGE
6907      ;* TO VIRTUAL ADDRESS 400000 (BIT 17 SET).
6908      ;* IF MEMORY MANAGEMENT AND/OR SUFFICIENT MEMORY IS NOT
6909      ;* AVAILABLE FOR MESSAGE STORAGE, WE WILL EXPECT THE DMP-11
6910      ;* TO RETURN A NON-EXISTENT MEMORY ERROR FOR THE BUFFER.
6911      ;* IF ENOUGH MEMORY EXISTS, WE'LL MAKE SURE THE TRANSFER TAKES
6912      ;* PLACE PROPERLY.
6913      ;*
6914      ;*-
6915      .SBTTL ;***** TEST 40 *****
6916 030664 T40:
6917
6918 030664 012737 004222 000004      MOV     #META,4      ;SET UP TRAP FOR NO MEM
6919 030672 005037 000006              CLR     6
6920 030676 012737 000004 002542      MOV     #4,#TMP0
6921 030704 012746 000004              MOV     #,-(SP)      ;DUMMY MOVE ON STACK IF TRAP
6922 030710 012705 031120              MOV     #RET17,R5    ;SET UP R5 FOR RETURN IF TRAP IS
6923                                      ; TO SR.EXNEM.
6924 030714 005737 177572              TST     @177572      ;DOES MEM MANAGEMENT EXIST
6925                                      ;IF NOT TRAP TO META
6926                                      ; ELSE CONTINUE
6927 030720 062706 000002              ADD     #2,SP        ;FIX THE STACK ;:(SP)          VRG021882
6928 030724 012700 000000              MOV     #0,R0
6929 030730 104441              TRAP   C$SPRI
6930 030732 012701 172300              MOV     #172300,R1   ;GET ADDRESS OF KERNEL PDR REQD/
6931 030736 012702 000010              MOV     #8.,R2      ; DO 8 TIMES
6932 030742
6933 030742 012721 077406      10$:  MOV     #77406,(R1)+
6934 030746 005302              DEC     R2
6935 030750 001374              BNE    10$
6936 030752 012701 172340      MOV     #172340,R1
6937 030756 005011              CLR    (R1)
6938 030760 012761 000200 000002      MOV     #200,2(R1)
6939 030766 012761 000400 000004      MOV     #400,4(R1)
6940 030774 012761 000600 000006      MOV     #600,6(R1)
6941 031002 012761 001000 000010      MOV     #1000,10(R1)
6942 031010 012761 177600 000016      MOV     #177600,16(R1)
6943                                      ;:CHANGED FROM 7600 FOR
6944                                      ;:AN 11/24          VRG030482
6945 031016 012761 004000 000012      MOV     #4000,12(R1)
6946 031024 005037 002432              CLR    GENWRD
6947 031030 012737 000033 002360      MOV     #33,TRIBN    ;MAP MEM CLEAR GEN AND SET UP TRIB
6948 031036 052737 040000 002432      BIS    #BIT14,GENWRD ;SET MM BIT
6949 031044 012737 177776 002422      MOV     #177776,RXADD ;SET UP RX ADD
    
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;***** TEST 40 *****

6950	031052	012737	041750	002424	MOV	#41750,RXCC	;SET UP RX COUNT (1000 DEC)*BA16
6951	031060	012737	033534	002420	MOV	#MR1,TXADD	;SET UP TRANSMIT COUNT
6952	031066	012737	001000	002426	MOV	#512.,TXCC	;SET UP TRANSMIT COUNT
6953	031074	004737	004522		JSR	PC,MINITS	; MASTER CLEAR MODE DEF
6954	031100	004537	006410		JSR	R5,TXRX3	;GO TRANSMIT AND RX
6955	031104	005037	002402		CLR	ERRWRD	; IF ERROR GO TO END
6956	031110	104410			TRAP	C#ESCAPE	
6957	031112	000012			.WORD	L10111-	
6958	031114	004537	003744		JSR	R5,MEMEX	;CHECK MEM EXTENSION
6959	031120	005037	002402		CLR	ERRWRD	;CLEAR ERROR WORD
6960	031124						
6961	031124	104401					
6962							

RET17:
L10111:

TRAP C#ETST

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;***** TEST 41 *****

6963
6964
6965 031126
6966
6967
6968
6969
6970
6971
6972
6973
6974
6975
6976
6977
6978 031126
6979
6980 031126 012737 004222 000004
6981 031134 005037 000006
6982 031140 012737 000006 002542
6983 031146 012746 000006
6984
6985 031152 012705 031362
6986
6987 031156 005737 177572
6988
6989
6990 031162 062706 000002
6991 031166 012700 000000
6992 031172 104441
6993 031174 012701 172300
6994 031200 012702 000010
6995 031204
6996 031204 012721 077406
6997 031210 005302
6998 031212 001374
6999 031214 012701 172340
7000 031220 005011
7001 031222 012761 000200 000002
7002 031230 012761 000400 000004
7003 031236 012761 000600 000006
7004 031244 012761 001000 000010
7005 031252 012761 177600 000016
7006
7007
7008 031260 012761 006000 000012
7009 031266 005037 002432
7010 031272 012737 000033 002360
7011 031300 052737 040000 002432
7012 031306 012737 177776 002422
7013 031314 012737 101750 002424

```

.SBTTL ;***** TEST 41 *****
.SBTTL TEST OF MEM EXTENSION BIT 16 AND 17. ADDRESS 600000
ZZ
;
;
; THIS TEST WE'LL TRY TRANSMITTING A MESSAGE
; TO VIRTUAL ADDRESS 600000 (BIT 16 AND 17 SET).
; IF MEMORY MANAGEMENT AND/OR SUFFICIENT MEMORY IS NOT
; AVAILABLE FOR MESSAGE STORAGE, WE WILL EXPECT THE DMP-11
; TO RETURN A NON-EXISTENT MEMORY ERROR FOR THE BUFFER.
; IF ENOUGH MEMORY EXISTS, WE'LL MAKE SURE THE TRANSFER TAKES
; PLACE PROPERLY.
;
;
.SBTTL ;***** TEST 41 *****
T41::
MOV @META,4 ;SET UP TRAP FOR NO MEM
CLR 6
MOV @6,@THPO
MOV @6,-(SP) ;DUPPY MOVE TO STACK IF
;TRAP TAKES U TO SR.
MOV @RET18,R5 ;SET UP R5 FOR RETURN
TST @0177572 ;DOES MEM MANAGEMENT EXIST
;IF NOT TRAP TO META
; ELSE CONTINUE
;FIX STACK ;(SP) VRG021882
ADD @2,SP
MOV @0,R0
TRAP C@SPRI
MOV @172300,R1 ;GET ADDRESS OF KERNEL PDR REQD/
MOV @8,,R2 ; DO 8 TIMES
104:
MOV @77406,(R1)
DEC R2
BNE 104
MOV @172340,R1
CLR (R1)
MOV @200,2(R1)
MOV @400,4(R1)
MOV @600,6(R1)
MOV @1000,10(R1)
MOV @177600,16(R1) ;;CHANGED FROM 7600 FOR
;AN 11/24 VRG030482
MOV @6000,12(R1)
CLR GENMRD
MOV @33,TRIBN ;MAP MEM CLEAR GEN AND SET UP TRIB
BIS @BIT14,GENMRD ;SET MM BIT
MOV @177776,RXADD ;SET UP RX ADD
MOV @101750,RXCC ;SET UP RX COUNT (1000 DEC)*BA17

```

CZDHTFO DMP/V-11 FCTNL TST #1
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***** TEST 41 *****

7014	031322	012737	033534	002420	MOV	@R1, TXADD	;SET UP TRANSMIT COUNT
7015	031330	012737	001000	002426	MOV	@512, TXCC	;SET UP TRANSMIT COUNT
7016	031336	004737	004522		JSR	PC, MINITS	; MASTER CLEAR MODE DEF
7017	031342	004537	006410		JSR	R5, TXRX3	;GO TRANSMIT AND RX
7018	031346	005037	002402		CLR	ERRWRD	; IF ERROR GO TO END
7019	031352	104410			TRAP	C!ESCAPE	
7020	031354	000012			.WORD	L10112..	
7021	031356	004537	003744		JSR	R5, MEMEX	;CHECK MEM EXTENSION
7022	031362	005037	002402		CLR	ERRWRD	;CLEAR ERROR WORD
7023	031366						
7024	031366	104401			TRAP	C!ETST	
7025							

RET18:
L10112:

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;***** TEST 42 *****

7026
7027
7028 031370
7029
7030
7031
7032
7033
7034
7035
7036
7037
7038
7039
7040 031370
7041
7042 031370 012737 000042 002370
7043
7044 031376 005037 002432
7045 031402 012737 000401 002426
7046 031410 012737 033535 002420
7047 031416 012737 034015 002422
7048 031424 012737 001750 002424
7049 031432 012737 000001 002360
7050 031440 022737 000004 002476
7051 031446 001402
7052 031450 005237 002400
7053 031454 004737 004512
7054 031460 005037 002400
7055 031464 005037 002402
7056 031470 104410
7057 031472 000012
7058
7059
7060
7061 031474 004537 005720
7062 031500 005037 002402
7063 031504
7064 031504 104401
7065

.SBTTL ;***** TEST 42 *****
.SBTTL ;TX AND RX 257 BYTES,ODD TX,ODD RX,DDCMP,POINT TO POINT
ZZ
;
;
; THIS TEST WILL TRANSMIT A MESSAGE OF 257 BYTES
; FROM A TX BUFFER STARTING WITH AN ODD BYTE TO
; A RECEIVE BUFFER STARTING WITH AN ODD BYTE IN
; DDCMP MODE,POINT TO POINT IF THERE IS EXTERNAL LOOP
; BACK THEN THE TEST WILL BE DONE OVER THAT LOOPBACK
; ELSE THE LOOPBACK WILL BE SET TO INTERNAL(TTL).
;
;*-

.SBTTL ;***** TEST 42 *****
T42.:

MOV #42,R0PM1 ;SET UP TEST NUMBER
CLR GENWRD ;CLEAR THE GEN WORD
MOV #257.,TXCC ;SET UP TRANSMIT CHAR COUNT
MOV #R1+1,TXADD ;SET UP ADD FOR TX
MOV #RECBUI+1,RXADD ;SET UP RX
MOV #1000.,RXCC ;SET UP RX COUNT 1000 DECIMAL
MOV #01,TRIBN ;SET TRIB # TO 1
CMP #4,TSTCON ;CHECK FOR LOOPBACK CONNECTOR
BEQ 11 ;
INC EXLOOP ;EXT CONNECTOR PRESENT: SET EXT LOOP FLAG
11: JSR PC,MINIT1 ;MASTER CLEAR-MODE DEF
CLR EXLOOP ;CLEAR EXTERNAL LOOP FLAG
CLR ERRWRD
TRAP C!ESCAPE
.WORD L10113-.
;ESCAPE TEST IF ERROR
201: JSR R5,TXRXSR ;GO DO IT
CLR ERRWRD
L10113: TRAP C!ETST

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***** TEST 43 *****

7066
7067
7068 031506
7069
7070
7071
7072
7073
7074
7075
7076
7077 031506
7078
7079 031506 012737 000001 002360
7080 031514 012737 000001 002426
7081 031522 012737 033535 002420
7082 031530 012737 000764 002424
7083 031536 012737 034014 002422
7084 031544 005037 002432
7085 031550 052737 100000 002432
7086 031556 004737 004522
7087 031562 005037 002402
7088 031566 104410
7089 031570 000012
7090
7091
7092
7093 031572 004537 006410
7094 031576 005037 002402
7095 031602
7096 031602 104401

```

.SBTTL ***** TEST 43 *****
.SBTTL *TX AND RX 1 BYTE,ODD TX,EVEN RX,MAINT,MULTIPOINT
ZZ
;*
;*
;* THIS TEST TRANSMITS AND RECEIVES 1 BYTE MESSAGE
;* FROM AND ODD TRANSMIT BUFFER TO AN EVEN RX BUFFER
;* IN MAINTAINCE MODE,MULTIPOINT
;*
;*-
.SBTTL ***** TEST 43 *****
T43::
MOV #01,TRIBN
MOV #01,TXCC
MOV #MR1-1,TXADD
MOV #500.,RXCC
MOV #RECBUI,RXADD
CLR GENWRD
BIS #BIT15,GENWRD ;SET UP TX RX AND MAINT STATE
JSR PC,MINITS ;MASTER CLEAR MULTIPOINT
CLR ERRWRD
TRAP C#ESCAPE
.WORD L10114-.
;*****
; ESCAPE TEST IF ERROR
;*****
201: JSR R5,TXRX3 ;GO DO IT
CLR ERRWRD ;CLEAR ERROR WORD
L10114: TRAP C#ETST

```

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;***** TEST 44 *****

7097
7098
7099 031604
7100
7101
7102
7103
7104
7105
7106
7107 031604
7108
7109 031604 005037 002432
7110 031610 004737 004522
7111 031614 005037 002402
7112 031620 104410
7113 031622 000774
7114
7115
7116
7117 031624 005037 002360
7118 031630 012703 000237
7119 031634 012704 000100
7120 031640 004537 003162
7121 031644 005037 002402
7122 031650 104410
7123 031652 000744
7124
7125
7126
7127
7128 031654 012737 000034 002360
7129 031662 012703 000001
7130 031666 004537 003162
7131 031672 005037 002402
7132 031676 104410
7133 031700 000716
7134
7135
7136
7137 031702 012703 000236
7138 031706 012704 002000
7139 031712 032737 000003 002472
7140 031720 001402
7141 031722 012704 000144
7142 031726 004537 003162
7143 031732 005037 002402
7144 031736 104410
7145 031740 000656
7146
7147
7148
7149 031742 012704 002010
7150 031746 012703 000234
7151 031752 004537 003162
7152 031756 005037 002402

```

.SBTTL ;***** TEST 44 *****
.SBTTL POLLING STATE TESTS
ZZ
;*
;*
;* THIS TEST CHECKS THE DEGRADING OF THE POLLING
;* STATES FROM ACTIVE TO INACTIVE TO POTEN. DEAD
;* TO DEAD.
;*
.SBTTL ;***** TEST 44 *****
T44::

BEGPOL: CLR      GENWRD      ;CLEAR FLAG WORD
        JSR      PC,MINITS ;MASTER CLEAR MODE DEF(FD/CS/MP)
        CLR      ERRWRD
        TRAP     C#ESCAPE
        .WORD    L10115-.

        ;*****
        ;SET POLL DELAY
        ;*****
        CLR      TRIBN
        MOV      #237,R3
        MOV      #100,R4
        JSR      R5,CONTIN
        CLR      ERRWRD
        TRAP     C#ESCAPE
        .WORD    L10115-.

        ;*****
        ; ESTABLISH TRIB
        ;*****
        MOV      #34,TRIBN ;SET TRIB NO.
        MOV      #01,R3
        JSR      R5,CONTIN
        CLR      ERRWRD
        TRAP     C#ESCAPE
        .WORD    L10115-.

        ;*****
        ; SET SELECTION TIMER TO 1 SEC
        ;*****
        MOV      #236,R3
        MOV      #2000,R4
        BIT      #3,OPTYP ;* IS THIS A DMV ?
        BEQ      1# ;*
        MOV      #144,R4 ;* IF YES: ADJUST VALUE.
        JSR      R5,CONTIN
        CLR      ERRWRD
        TRAP     C#ESCAPE
        .WORD    L10115-.

        ;*****
        ; WRITE NDM > INACTIVE AND #TO > PDEAD
        ;*****
        MOV      #2010,R4
        MOV      #234,R3
        JSR      R5,CONTIN ;WRITE TSS SLOT
        CLR      ERRWRD

```

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;***** TEST 44 *****

7153	031762	104410				TRAP	C#ESCAPE	
7154	031764	000632				.WORD	L10115-.	
7155						;	ISTRT TRIB	
7156						;		
7157						;		
7158	031766	012703	000003			MOV	#03,R3	
7159	031772	004537	003162			JSR	R5,CONTIN	
7160	031776	005037	002402			CLR	ERRWRD	
7161	032002	104410				TRAP	C#ESCAPE	
7162	032004	000612				.WORD	L10115-.	
7163						;		
7164						;	WAIT FOR RUN STATE	
7165						;		
7166	032006	012737	000001	002336		MOV	#01,#GDDAT	
7167	032014	004537	003242			JSR	R5,GETOUT	
7168	032020	005037	002402			CLR	ERRWRD	
7169	032024	104410				TRAP	C#ESCAPE	
7170	032026	000570				.WORD	L10115-.	
7171	032030	012737	000024	002336		MOV	#24,#GDDAT	
7172	032036	004537	003670			JSR	R5,GETOC	
7173	032042	005037	002402			CLR	ERRWRD	
7174	032046	104410				TRAP	C#ESCAPE	
7175	032050	000546				.WORD	L10115-.	
7176						;		
7177						;	READ TSS SLOT WITH POLL STATUS	
7178						;		
7179	032052	042777	000200	150364	20:	BIC	#RDO,#BSEL2	;CLEAR RDO
7180	032060	012703	000042			MOV	#42,R3	
7181	032064	004537	003162			JSR	R5,CONTIN	;READ TSS SLOT 2
7182	032070	005037	002402			CLR	ERRWRD	
7183	032074	104410				TRAP	C#ESCAPE	
7184	032076	000520				.WORD	L10115-.	
7185	032100	012737	000002	002336		MOV	#02,#GDDAT	
7186	032106	004537	003242			JSR	R5,GETOUT	;GET INFO OUT
7187	032112	005037	002402			CLR	ERRWRD	
7188	032116	104410				TRAP	C#ESCAPE	
7189	032120	000476				.WORD	L10115-.	
7190	032122	032777	001000	150320		BIT	#BIT9,#BSEL4	;IS IT INACTIVE
7191	032130	001750				BEQ	20:	;IF NOT GO BACK
7192						;		
7193						;	GET HERE WHEN STATE GOES TO INACTIVE	
7194						;		
7195	032132	042777	000200	150304		BIC	#RDO,#BSEL2	;CLEAR OUTPUT
7196						;		
7197						;	READ # OF SELECTION INTERVALS	
7198						;		
7199	032140	012703	000051			MOV	#51,R3	
7200	032144	004537	003162			JSR	R5,CONTIN	
7201	032150	005037	002402			CLR	ERRWRD	
7202	032154	104410				TRAP	C#ESCAPE	
7203	032156	000440				.WORD	L10115-.	
7204	032160	012737	000002	002336		MOV	#02,#GDDAT	
7205	032166	004537	003242			JSR	R5,GETOUT	
7206						;		
7207						;	MAKE SURE #OF SELC. INTV IS CORRECT	
7208						;		

```

CZDMTFO DMP/V-11 FCTNL TST #1 MACY11 30A(1052) 08-NOV-84 10:42 PAGE 164
CZDMTF.P11 08-NOV-84 10:38 ;***** TEST 44 *****

```

7209	032172	012737	000010	002336		MOV	#10, #GDDAT	
7210	032200	004537	003446			JSR	R5, GETDAT	
7211						;	*****	
7212						;	GET HERE IN INACTIVE STATE	
7213						;	*****	
7214	032204				40:	BIC	#RDO, #BSEL2	; CLEAR OUTPUT
7215	032204	042777	000200	150232		;	*****	
7216						;	CHANGE MODE TO HALF DUPLEX	
7217						;	*****	
7218						BIS	#RQI, #BSELO	
7219	032212	052777	000200	150220		JSR	R5, WRDI	; WAIT FOR RDI TO SET
7220	032220	004537	002732					
7221								
7222	032224	005037	002402			CLR	ERRWRD	; CLEAR ERROR
7223	032230	104410				TRAP	C#ESCAPE	
7224	032232	000364				.WORD	L10115-	
7225	032234	042777	000200	150176		BIC	#RQI, #BSELO	
7226	032242	012777	000004	150204		MOV	#04, #BSEL6	
7227	032250	112777	000002	150166		MOVB	#02, #BSEL2	
7228	032256	042777	000200	150160	50:	BIC	#RDO, #BSEL2	
7229								
7230								
7231						;	*****	
7232						;	READ POLL STATUS SLOT	
7233						;	*****	
7234	032264	012703	000042			MOV	#42, R3	
7235	032270	004537	003162			JSR	R5, CONTIN	
7236	032274	005037	002402			CLR	ERRWRD	
7237	032300	104410				TRAP	C#ESCAPE	
7238	032302	000314				.WORD	L10115-	
7239	032304	012737	000002	002336		MOV	#02, #GDDAT	
7240								
7241	032312	004537	003242			JSR	R5, GETOUT	
7242								
7243						;	*****	
7244						;	IS THE STATE POTN. DEAD??	
7245						;	*****	
7246								
7247	032316	032777	010000	150124		BIT	#BIT12, #BSEL4	
7248	032324	001754				BEQ	50:	
7249								
7250						;	*****	
7251						;	IF NOT GO BACK TO 50	
7252						;	*****	
7253								
7254						;	*****	
7255						;	IF SO READ THE SELECTION TIMER	
7256						;	*****	
7257								
7258	032326	012703	000056			MOV	#56, R3	
7259	032332	042777	000200	150104		BIC	#RDO, #BSEL2	
7260	032340	004537	003162			JSR	R5, CONTIN	
7261	032344	005037	002402			CLR	ERRWRD	
7262	032350	104410				TRAP	C#ESCAPE	
7263	032352	000244				.WORD	L10115-	
7264	032354	012737	000002	002336		MOV	#02, #GDDAT	

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;***** TEST 44 *****

7265	032362	004537	003242		JSR	R5,GETOUT
7266	032366	005037	002402		CLR	ERRWRD
7267	032372	104410			TRAP	C#ESCAPE
7268	032374	000222			.WORD	L10115-.
7269						
7270					;	*****
7271						; COMPARE SELECTION TIME OUTS WITH # WRITTEN
7272						;
7273						*****
7274						
7275	032376	012737	001004	002336	MOV	#1004,#GDDAT
7276	032404	004537	003446		JSR	R5,GETDAT
7277						
7278					;	*****
7279						; WAIT FOR TRIB TO POST SELECT. THRESH. ERROR
7280						*****
7281						
7282	032410	042777	000200	150026	BIC	#R00,#BSEL2 ;CLEAR OUTPUT CODE
7283						
7284	032416	012737	000001	002336	MOV	#01,#GDDAT
7285	032424	004537	003242		JSR	R5,GETOUT
7286	032430	005037	002402		CLR	ERRWRD
7287	032434	104410			TRAP	C#ESCAPE
7288	032436	000160			.WORD	L10115-.
7289	032440	012737	000006	002336	MOV	#6,#GDDAT
7290	032446	004537	003670		JSR	R5,GETOC
7291	032452	005037	002402		CLR	ERRWRD
7292	032456	104410			TRAP	C#ESCAPE
7293	032460	000136			.WORD	L10115-.
7294	032462	042777	000200	147754	BIC	#R00,#BSEL2
7295						
7296					;	*****
7297						; NOW WAIT FOR TRIB TO POST DEAD STATUS
7298						*****
7299						
7300	032470	012737	000001	002336	MOV	#01,#GDDAT
7301	032476	004537	003242		JSR	R5,GETOUT
7302	032502	005037	002402		CLR	ERRWRD
7303	032506	104410			TRAP	C#ESCAPE
7304	032510	000106			.WORD	L10115-.
7305	032512	012737	000022	002336	MOV	#22,#GDDAT
7306	032520	004537	003670		JSR	R5,GETOC
7307						
7308	032524	005037	002402		CLR	ERRWRD
7309	032530	104410			TRAP	C#ESCAPE
7310	032532	000064			.WORD	L10115-.
7311						
7312					;	*****
7313						; NOW READ SELECTION TIMER AND
7314						; SEE IF IT IS EQUAL TO 10
7315						*****
7316						
7317	032534	042777	000200	147702	BIC	#R00,#BSEL2
7318	032542	012703	000056		MOV	#56,R3
7319	032546	004537	003162		JSR	R5,CONTIN
7320	032552	005037	002402		CLR	ERRWRD

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7321	032556	104410			TRAP	C#ESCAPE
7322	032560	000036			.WORD	L10115-
7323	032562	012737	000002	002336	MOV	#02,#GDDAT
7324	032570	004537	003242		JSR	R5,GETOUT
7325	032574	005037	002402		CLR	ERRWRD
7326	032600	104410			TRAP	C#ESCAPE
7327	032602	000014			.WORD	L10115-
7328	032604	012737	001010	002336	MOV	#1010,#GDDAT
7329	032612	004537	003446		JSR	R5,GETDAT
7330						
7331						
7332	032616			L10115:		
7333	032616	104401			TRAP	C#ETST
7334						
7335						.SBTTL ----- END OF HARDWARE TESTS -----
7336						
7337						
7338						
7339						

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.SBTTL HARDWARE PARAMETER CODING SECTION

```

;////////////////////////////////////
; / THE HARDWARE PARAMETER CODING SECTION CONTAINS MACROS
; / THAT ARE USED BY THE SUPERVISOR TO BUILD P-TABLES. THE
; / MACROS ARE NOT EXECUTED AS MACHINE INSTRUCTIONS BUT ARE
; / INTERPRETED BY THE SUPERVISOR AS DATA STRUCTURES. THE
; / MACROS ALLOW THE SUPERVISOR TO ESTABLISH COMMUNICATIONS
; / WITH THE OPERATOR.
;////////////////////////////////////

```

.WORD L10116-L#HARD/2

L#HARD: .WORD T#CODE
.WORD OPTYPM
.WORD 7
.WORD T#LOLIM
.WORD T#HILIM
.WORD T#CODE
.WORD ADDRES
.WORD T#LOLIM
.WORD T#HILIM
.WORD T#CODE
.WORD VECTOR
.WORD T#LOLIM
.WORD T#HILIM
.WORD T#CODE
.WORD PRIORITY
.WORD 7000
.WORD T#LOLIM
.WORD T#HILIM
.WORD T#CODE
.WORD LOOPBK
.WORD 7
.WORD T#LOLIM
.WORD T#HILIM
.WORD T#CODE
.WORD SPEDM
.WORD 7
.WORD T#LOLIM
.WORD T#HILIM
.WORD T#CODE
.WORD IFTYPM
.WORD 7
.WORD T#LOLIM
.WORD T#HILIM

.EVEN

L10116:

OPTYPM: .ASCIZ /SELECT TYPE (0=8207'DMP',1=8053'DMV',2=8064'DMV):/

032620 000041
032622
032622 000032
032624 032724
032626 000007
032630 000000
032632 000007
032634 001031
032636 033007
032640 160000
032642 177776
032644 002031
032646 033035
032650 000000
032652 000674
032654 003032
032656 033066
032660 007000
032662 000004
032664 000007
032666 010032
032670 033117
032672 000007
032674 000000
032676 000004
032700 011032
032702 033223
032704 000007
032706 000000
032710 000007
032712 013032
032714 033434
032716 000007
032720 000000
032722 000007

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7396	032740	020050	036460	031070	
7397	032746	033460	042047	050115	
7398	032754	026047	036461	030070	
7399	032762	031465	042047	053115	
7400	032770	026047	036462	030070	
7401	032776	032066	042047	053115	
7402	033004	035051	000		
7403	033007	104	053105	041511	ADDRES: .ASCIZ /DEVICE CSR ADDRESS : /
7404	033014	020105	051503	020122	
7405	033022	042101	051104	051505	
7406	033030	020123	020072	000	
7407	033035	104	053105	041511	VECTOR: .ASCIZ /DEVICE VECTOR ADDRESS : /
7408	033042	020105	042526	052103	
7409	033050	051117	040440	042104	
7410	033056	042522	051523	035040	
7411	033064	000040			
7412	033066	042504	044526	042503	PRIPTY: .ASCIZ /DEVICE PRIORITY LEVEL : /
7413	033074	050040	044522	051117	
7414	033102	052111	020131	042514	
7415	033110	042526	020114	020072	
7416	033116	000			
7417	033117	124	051125	040516	LOOPBK: .ASCII /TURNAROUND TYPE -/
7418	033124	047522	047125	020104	
7419	033132	054524	042520	026440	
7420	033140	030050	044075	031063	.ASCIZ /(0=M3254&M3255,1=CABLE,2=MOD LOC,3=MOD REM,4=NONE)/
7421	033146	032065	044046	031063	
7422	033154	032465	030454	041475	
7423	033162	041101	042514	031054	
7424	033170	046475	042117	046040	
7425	033176	041517	031454	046475	
7426	033204	042117	051040	046505	
7427	033212	032054	047075	047117	
7428	033220	024505	000		
7429	033223	120	042514	051501	SPEDM: .ASCII "PLEASE SELECT BAUD RATE;TYPE '0' FOR 2.4K; '1' FOR 4.8K;"
7430	033230	020105	042523	042514	
7431	033236	052103	041040	052501	
7432	033244	020104	040522	042524	
7433	033252	052073	050131	020105	
7434	033260	030047	020047	047506	
7435	033266	020122	027062	045464	
7436	033274	020073	030447	020047	
7437	033302	047506	020122	027064	
7438	033310	045470	073		
7439	033313	015	023412	023462	.ASCII<15><12>"'2' FOR 9.6K; '3' FOR 19.2K; '4' FOR 56K; '5' FOR 250K;"
7440	033320	043040	051117	034440	
7441	033326	033056	035513	023440	
7442	033334	023463	043040	051117	
7443	033342	030440	027071	045462	
7444	033350	020073	032047	020047	
7445	033356	047506	020122	033065	
7446	033364	035513	023440	023465	
7447	033372	043040	051117	031040	
7448	033400	030065	035513		
7449	033404	005015	051117	023440	.ASCIZ<15><12>"OR '6' FOR 500K BAUDS"
7450	033412	023466	043040	051117	
7451	033420	032440	030060	020113	

CZDMTFO DMP/V-11 FCTNL TST #1 MACY11 30A(1052) 08-NOV-84 10:42 PAGE 169
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7452	033426	040502	042125	000123	
7453	033434	042523	042514	052103	IFTYPM: .ASCIZ /SELECT INTERFACE TYPE (1-INTEGRAL,2-EIA,3-V.35,4-422):/
7454	033442	044440	052116	051105	
7455	033450	040506	042503	052040	
7456	033456	050131	020105	030450	
7457	033464	044475	052116	043505	
7458	033472	040522	026114	036462	
7459	033500	044505	026101	036463	
7460	033506	027126	032463	032054	
7461	033514	032075	031062	035051	
7462	033522	000			
7463					
7464	033524				.EVEN
7465					
7466					
7467					

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 SOFTWARE PARAMETER CODING SECTION

.SBTTL SOFTWARE PARAMETER CODING SECTION

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033524 000000
 033526
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 033526
 033526
 033526 000240
 033526 000240
 033530 000240
 033532 000240
 033534 041101 000103
 033540
 033540 047516 020127 051511
 033546 052040 042510 052040
 033554 046511 020105 047506
 033562 020122 046101 020114
 033570 047507 042117 050040
 033576 047505 046120 020105
 033604 047524 041440 046517
 033612 020105 047524 052040
 033620 042510
 033622 044124 020105 052521
 033630 041511 020113 051102
 033636 053517 020116 047506
 033644 020130 052512 050115
 033652 042105 047440 042526
 033660 020122 044124 020105
 033666 040514 054532 042040
 033674 043517 051447
 033700 040502 045503 020056
 033706 047514 051520 040440

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 ;// ;

.WORD L10117-L\$SOFT/2
 L\$SOFT:;
 .EVEN
 L10117:

***** PATCH AREA FOR DEBUG *****
 PATCH:
 NOP
 NOP
 NOP
 ;***** ;

MR1: .ASCIZ "ABC"
 MR1E:
 MR12: .ASCII "NOW IS THE TIME FOR ALL GOOD PEOPLE TO COME TO THE"
 .ASCII "THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S"
 .ASCII "BACK. LOPS ARE TOPS!"

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7524	033714	042522	052040	050117	
7525	033722	020523			
7526	033724	041101	042103	043105	.ASCII "ABCDEFGHIJKLMNOPQRSTUVWXYZ"
7527	033732	044107	045111	046113	
7528	033740	047115	050117	051121	
7529	033746	052123	053125	054127	
7530	033754	055131			
7531	033756	041501	043505	045511	.ASCII "ACEGIKMOQSUY"
7532	033764	04715	051521	053525	
7533	033772	131			
7534					
7535		033774			.EVEN
7536	033774				NR12E:
7537					
7538	033774	000000			DATLST: 0
7539	033776	125252			125252
7540	034000	052525			052525
7541	034002	000000			0
7542	034004	177777			-1
7543	034006	000377			377
7544	034010	177400			177400
7545	034012	000562			562
7546					
7547	034014	001750			RECBU1: .BLKW 1000.
7548					
7549					.EVEN
7550	037734	000000			.WORD 0
7551	037736	000000			.WORD 0
7552	037740				L&LAST::
7553					
7554		000001			.END

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CZDHTF.P11 08-NOV-84 10:38 CROSS REFERENCE TABLE -- USER SYMBOLS

ADDRES	033007	7362	7403#																
ADR	= 000020 G	1403#																	
ASSEM#	000010	1102																	
AXNUM	002506	1525#	2223#	2225#	2283	2488#	2616	6694#											
BADBR	006274	2530	2546	2589#															
BADBRM	010606	2591	3070#																
BADIF	006242	2528	2544	2559	2569	2578#													
BADIFM	010530	2580	3062#																
BASER	010512	3050	3059#																
BEGPOL	031610	7110#																	
BIT0	= 000001 G	1376#	1430	3452															
BIT00	= 000001 G	1365#	1376																
BIT01	= 000002 G	1364#	1375																
BIT02	= 000004 G	1363#	1374																
BIT03	= 000010 G	1362#	1373																
BIT04	= 000020 G	1361#	1372																
BIT05	= 000040 G	1360#	1371																
BIT06	= 000100 G	1359#	1370																
BIT07	= 000200 G	1358#	1369																
BIT08	= 000400 G	1357#	1368																
BIT09	= 001000 G	1356#	1367																
BIT1	= 000002 G	1375#	1429																
BIT10	= 002000 G	1355#																	
BIT11	= 004000 G	1354#																	
BIT12	= 010000 G	1353#	7247																
BIT13	= 020000 G	1352#																	
BIT14	= 040000 G	1351#	2704	6887	6948	7011													
BIT15	= 100000 G	1350#	2626	7085															
BIT2	= 000004 G	1374#	1428																
BIT3	= 000010 G	1373#	1427	1435	2274	2498	2519	4506	4523	4813	4891	6708							
BIT4	= 000020 G	1372#	1426																
BIT5	= 000040 G	1371#	5084	5108	5360	5383	5455												
BIT6	= 000100 G	1370#	1425																
BIT7	= 000200 G	1369#	1424	5070	5418														
BIT8	= 000400 G	1368#																	
BIT9	= 001000 G	1367#	7190																
BOE	= 000400 G	1407#																	
BSELO	002440	1496#	1779#	1784#	2238	2276#	2284#	2661#	2696#	2701#	4268#	4320#	4331#	4352					
		4370#	4390	4412#	4415#	4511#	4534	4550#	4615#	4670#	4680#	4743	4745#	4751#					
		4830#	4836#	4909#	4918#	5587#	5594#	5851#	5857#	6342#	6348#	6395#	6401#	6463#					
		6469#	6508#	6515#	7219#	7225#													
BSEL1	002442	1499#	2143#	2145#	2146#	2193#	2196#	2226#	2229#	2266#	2274#	2400#	2498#	2519#					
		3470#	3471#	4506#	4523	4731#	4734#	4813#	4891#	6708#									
BSEL10	002460	1509#	2407#	2673#	2694#	3482#	3483#												
BSEL2	002444	1501#	1636	1639	1649#	1679	1682	1692#	1724	1787#	1818	2028	2268#	2281					
		2285#	2409#	2647#	2675#	2679#	2697#	2702#	2721	2741#	2782#	4279	4334#	4630#					
		4637	4682#	4687	4698	4754#	4759	4816	4829#	4838#	4897	4908#	4920#	4922					
		5007#	5320	5452#	5586#	5598#	5623#	5635#	5714#	5750#	5786#	5858#	5868#	5978#					
		5998#	6010	6075#	6096#	6107	6222#	6352#	6405#	6473#	6519#	7179#	7195#	7215#					
		7227#	7228#	7259#	7282#	7294#	7317#												
BSEL3	002446	1502#	1783#	1832	2668#	2689#	3476#	3477#	4439#	4477#	4752#	5597#	6349#	6404#					
		6472#	6516#																
BSEL4	002450	1503#	1785#	1888	2254	2667#	2688#	4509#	5595#	5702#	5703	6351#	6403#	6471#					
		6518#	6778	7190	7247														
BSEL5	002452	1505#	3478#	3479#															
BSEL6	002454	1506#	1740	1786#	1859	1989	2035	2144#	2245	2247	2283#	2674#	2678#	2695#					

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CROSS REFERENCE TABLE -- USER SYMBOLS

		2700*	2821	4245	4247	4332*	4510*	4627*	4681*	4753*	4773	4819	4837*	4919*
		5596*	6350*	6402*	6470*	6517*	7226*							
BSEL7	002456	1508*	3480*	3481*	3725	3728	3748	3761	3772	3875	3878	3898	3911	3922
		4025	4028	4048	4061	4072	4319*	4333*	4346	4386				
CADDR	002404	1479*	2119	2123	3645*	3651*	3654*	3655	3670*	3684*	3695*	3720*	3726*	3729*
		3730	3745*	3759*	3770*	3795*	3801*	3804*	3805	3820*	3834*	3845*	3870*	3876*
		3879*	3880	3895*	3909*	3920*	3945*	3951*	3954*	3955	3970*	3984*	3995*	4020*
		4026*	4029*	4030	4045*	4059*	4070*							
CFM1	005306	2333	2362*											
CFM2	005373	2342	2371*											
CFM3	005451	2350	2379*											
CFM4	005466	2356	2382*											
CODEM	002430	1490*	1730*	1744*	1823*	1864*	1894*	1994*	2038*	3037	4703*	4765*	4776*	5708*
		6782*												
CONTIN	003162	1778*	2511	2612	2621	2632	2653	4885	4966	4983	5010	5056	5071	5085
		5165	5180	5229	5242	5288	5303	5361	5420	5434	5456	5507	5554	5563
		5600	5639	5666	5679	5716	5729	5752	5788	5801	5900	5947	5960	5980
		6000	6044	6057	6077	6097	6143	6157	6170	6224	6237	6384	6444	6454
		6713	6726	6739	7120	7130	7142	7151	7159	7181	7200	7235	7260	7319
COUNT	002342	1461*	3502*	3507*	4228*	4234*								
COUNTT	005134	2299*	2306*	2312*										
CRCCAL	002434	1492*	2417*	2437										
CRCR	004376	2164*	2425	3658	3733	3808	3883	3958	4033					
CWORD	002374	1475*	2168*	2172	2173*	2174*	2399*	2438	2983	3647*	3661*	3662	3722*	3736*
		3737	3797*	3811*	3812	3872*	3886*	3887	3947*	3961*	3962	4022*	4036*	4037
C#AU	= 000052	1102*	3561											
C#AUTO	= 000061	1102*	3515											
C#BRK	= 000022	1102*	2309											
C#BSEG	= 000004	1102*												
C#BSUB	= 000002	1102*	5342	5401	5491									
C#CEFG	= 000045	1102*												
C#CLCK	= 000062	1102*												
C#CLEA	= 000012	1102*	3528											
C#CLOS	= 000035	1102*												
C#CLP1	= 000006	1102*												
C#CVEC	= 000036	1102*	3605	4497	4499									
C#DCLN	= 000044	1102*	3602											
C#DODU	= 000051	1102*	3510											
C#DRPT	= 000024	1102*												
C#DU	= 000053	1102*	3545											
C#EDIT	= 000003	1102*	1179											
C#ERDF	= 000055	1102*	1644	1687	1734	1748	1824	1836	1865	1895	1928	1964	1995	2039
		2052	2068	2075	2301	2440	2765	3615	3666	3676	3700	3741	3751	3775
		3816	3826	3850	3891	3901	3925	3966	3976	4000	4041	4051	4075	4107
		4153	4239	4250	4260	4360	4398	4525	4542	4564	4574	4640	4690	4704
		4766	4777	4822	4924	5323	5709	6013	6110	6783				
C#ERMR	= 000056	1102*												
C#ERRO	= 000060	1102*												
C#ERSF	= 000054	1102*												
C#ERSO	= 000057	1102*	2256											
C#ESCA	= 000010	1102*	4100	4112	4146	4157	4243	4256	4264	4273	4282	4317	4325	4340
		4364	4380	4402	4447	4483	4517	4530	4546	4609	4620	4664	4674	4695
		4709	4739	4749	4757	4770	4805	4834	4844	4870	4903	4913	4959	4972
		4989	5001	5016	5048	5062	5077	5091	5101	5112	5122	5156	5172	5187
		5199	5221	5235	5248	5257	5279	5295	5310	5353	5364	5375	5387	5411
		5423	5437	5446	5459	5470	5479	5499	5510	5520	5550	5560	5568	5576

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	4927	6016	6113											
ERR5 007472 G	2831#	4363	4401											
ERR6 007530 G	2843#	4545												
ERR9 007566 G	2857#	4643												
EVL = 000004 G	1401#													
EXLOOP 002400	1477#	2264	3418*	6560*	6562*	6609*	6611*	7052*	7054*					
EXMDT 021176	4309	4588#												
EXMEM 003744	2025#													
EXMEMA 004122	2031	2061#												
EXMEMB 004036	2033	2038#												
EXMEMC 004062	2037	2045#												
EXMEMX 004226	2027	2044	2057	2067	2073	2081#								
E\$END = 002100	1102#													
E\$LOAD= 000035	1102#	1202												
FMT0 011036	3097#	3622												
FRSPAS 002354	1466#	3450*												
FRSTIM 002330	1456#	3419	3426*											
F\$AU = 000015	1102#	3559	3560											
F\$AUTO= 000020	1102#	3500	3514											
F\$BGN = 000040	1102#	1110	1220	2807	2820	2831	2843	2857	2869	2883	2899	2914	2925	
	2943	2968	2982	2995	3010	3026	3049	3392	3397	3413	3500	3524	3541	
	3559	3584	3607	3612	3641	3705	3716	3780	3791	3855	3866	3930	3941	
	4005	4016	4080	4092	4100	4112	4127	4138	4146	4157	4171	4226	4243	
	4256	4264	4273	4282	4284	4305	4317	4325	4340	4364	4380	4402	4447	
	4483	4517	4530	4546	4551	4554	4561	4571	4581	4590	4605	4609	4620	
	4647	4659	4664	4674	4695	4709	4717	4729	4739	4749	4757	4770	4782	
	4799	4805	4826	4834	4844	4851	4864	4870	4903	4913	4929	4945	4959	
	4972	4989	5001	5016	5028	5041	5048	5062	5077	5091	5101	5112	5122	
	5138	5152	5156	5172	5187	5199	5205	5218	5221	5235	5248	5257	5262	
	5275	5279	5295	5310	5328	5339	5341	5353	5364	5375	5387	5398	5400	
	5411	5423	5437	5446	5459	5470	5479	5488	5490	5499	5510	5520	5530	
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	5794	5807	5817	5823	5839	5845	5855	5863	5873	5887	5892	5903	5913	
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	6060	6070	6080	6090	6100	6115	6130	6135	6149	6163	6176	6190	6203	
	6216	6230	6243	6256	6269	6281	6298	6309	6317	6319	6331	6336	6346	
	6357	6362	6374	6377	6389	6399	6410	6415	6431	6436	6447	6457	6467	
	6478	6484	6497	6502	6513	6525	6530	6549	6564	6573	6579	6596	6613	
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	6771	6787	6794	6834	6856	6895	6899	6916	6956	6960	6978	7019	7023	
	7040	7056	7063	7077	7088	7095	7107	7112	7122	7132	7144	7153	7161	
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	7321	7326	7332	7354	7480									
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F\$DU = 000016	1102#	3541	3544											
F\$END = 000041	1102#	1110	2816	2830	2842	2854	2866	2878	2896	2911	2924	2942	2963	
	2981	2994	3007	3021	3046	3058	3395	3401	3499	3516	3529	3546	3562	
	3584	3607	3609	3629	3641	3705	3707	3716	3780	3782	3791	3855	3857	
	3866	3930	3932	3941	4005	4007	4016	4080	4082	4092	4100	4112	4127	
	4129	4138	4146	4157	4171	4173	4226	4243	4256	4264	4273	4282	4284	
	4286	4305	4317	4325	4340	4364	4380	4402	4447	4483	4517	4530	4546	
	4551	4560	4570	4580	4587	4590	4592	4605	4609	4620	4647	4649	4659	
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	4799	4805	4826	4834	4844	4851	4853	4864	4870	4903	4913	4929	4931	
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 CZDMTF.P11 08-NOV-84 10:38 CROSS REFERENCE TABLE - USER SYMBOLS

L#DUT	002072	G	1195#		
L#DVTY	002564	G	1186	1574#	
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L#ICP	002104	G	1205#		
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L#LADP	002026	G	1159#		
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L#PRT	002112	G	1211#		
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L#SOFT	033526	G	7480	7481#	
L#SPC	002056	G	1183#		
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L#SPTP	002024	G	1157#		
L#STA	002030	G	1161#		
L#SW	002316	G	1325	1326#	
L#TEST	002114	G	1213#		
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L#UNIT	002012	G	1147#	3457	
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L10023	010510		3056#		
L10024	014034		3396	3399#	

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CROSS REFERENCE TABLE -- USE ? SYMBOLS

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	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	
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	1218	1220	1221	1231	1232	1290	1291	1292	1326	1327	1328	1574	1575	
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4283	4284	4285	4286	4317	4318	4319	4325	4326	4327	4340	4341	4342
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5685	5686	5687	5696	5697	5698	5709	5710	5711	5712	5713	5722	5723
5724	5735	5736	5737	5745	5746	5747	5758	5759	5760	5769	5770	5771
5780	5781	5782	5794	5795	5796	5807	5808	5809	5817	5818	5819	5824
5825	5845	5846	5847	5855	5856	5857	5863	5864	5865	5874	5875	5892
5893	5894	5903	5904	5905	5913	5914	5915	5920	5921	5939	5940	5941
5953	5954	5955	5963	5964	5965	5973	5974	5975	5983	5984	5985	5993
5994	5995	6003	6004	6005	6013	6014	6015	6016	6017	6019	6020	6036

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 CROSS REFERENCE TABLE -- USER SYMBOLS

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TYLST 002414	1483#	5840												
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	4160#	4167												
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	7088#	7112#	7122#	7132#	7144#	7153#	7161#	7169#	7174#	7183#	7188#	7202#	7223#	
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T\$HILI= 000007	7356#	7360	7361#	7364	7365#	7368	7369#	7373	7374#	7378	7379#	7383	7384#	
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T\$LAST= 000001	1102#	7550#												
T\$LOLI= 000000	7356#	7359	7361#	7363	7365#	7367	7369#	7372	7374#	7377	7379#	7382	7384#	
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	3608	3628	3706	3781	3856	3931	4006	4081	4128	4172	4285	4559	4569	
	4579	4586	4591	4648	4718	4783	4852	4930	5029	5139	5206	5263	5329	
	5399	5489	5531	5533	5644	5824	5874	5920	6019	6116	6282	6320	6363	
	6416	6485	6531	6580	6629	6671	6835	6900	6961	7024	7064	7096	7333	
	7393	7485												
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	3044#	3049#	3056#	3392#	3399#	3413#	3497#	3500#	3514#	3524#	3527#	3541#	3544#	
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	4782#	4800#	4851#	4865#	4929#	4946#	5028#	5042#	5138#	5153#	5205#	5219#	5262#	
	5276#	5328#	5340#	5342#	5398#	5401#	5488#	5491#	5530#	5532#	5547#	5643#	5654#	
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	2943#	2961	2968#	2979	2982#	2992	2995#	3005	3010#	3019	3026#	3044	3049#
	3056	3392#	3399	3413#	3497	3500#	3514	3524#	3527	3541#	3544	3559#	3560
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	6857#	6899	6917#	6960	6979#	7023	7041#	7063	7078#	7095	7108#	7332	7354#
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	5530												
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T#SAVL= 177777	1102#												
T#SEGL= 177777	1102#												
T#SUBN= 000000	1102#	3584#	3641#	3716#	3791#	3866#	3941#	4016#	4092#	4138#	4226#	4305#	4605#
	4659#	4729#	4799#	4864#	4945#	5041#	5152#	5218#	5275#	5339#	5341#	5400#	5490#
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	5276#	5340#	5342#	5401#	5491#	5547#	5654#	5840#	5888#	5935#	6032#	6131#	6299#
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	7108#	7354#	7480#										
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	4484	4517#	4518	4530#	4531	4546#	4547	4551#	4552	4558#	4568#	4578#	4585#
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5795	5807	5808	5817	5818	5923	5845	5846	5855	5856	5863	5864	5873
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7057	7063	7088	7089	7095	7112	7113	7122	7123	7132	7133	7144	7145
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7203	7223	7224	7237	7238	7262	7263	7267	7268	7287	7288	7292	7293
7303	7304	7309	7310	7321	7322	7326	7327	7332	7356	7361	7365	7369
7374	7379	7384	7391	7483								
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5839	5877	5886	5887	5923	5933	5934	6021	6030	6031	6118	6129	6130
6286	6296	6298	6322	6330	6331	6365	6373	6374	6421	6430	6431	6487
6496	6497	6536	6548	6549	6584	6595	6596	6631	6642	6643	6673	6683
6684	6841	6855	6856	6901	6915	6916	6963	6977	6978	7026	7039	7040
7066	7076	7077	7097	7106	7107	7553						
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2962	2976	2980	2989	2993	3002	3006	3016	3020	3032	3041	3045	3053
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5437	5446	5459	5470	5479	5489	5491	5499	5510	5520	5531	5533	5550
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T&TSTM= 177777

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CZDMTFO DMP/V-11 FCTNL TST #1
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CROSS REFERENCE TABLE -- MACRO NAMES

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CZDMTF.P11 08-NOV-84 10:38 CROSS REFERENCE TABLE -- MACRO NAMES

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. ABS. 037740 000

ERRORS DETECTED: 0
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RUN-TIME RATIO: 108/80=1 3
CORE USED: 21K (41 PAGES)