

KMV11-B

LINE CNT DIAG  
CVKMEAO

AH-T378A-MC  
FICHE 1 OF 1

MAY 1983  
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The main body of the document is a large grid of approximately 15 columns and 25 rows of small, illegible data blocks. Each block appears to contain technical specifications, possibly related to line counts or diagnostic data as indicated by the header. The text within these blocks is too small to be read accurately.



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IDENTIFICATION

PRODUCT CODE: AC-T377A-MC  
PRODUCT NAME: CVKMEAO KMV11B LINE CNT DIAG  
PRODUCT DATE: JAN 1983  
MAINTAINER: CSS ANNECY  
AUTHOR: MICHELET, GUY

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## 1.0 INTRODUCTION

## 1.1 PROGRAM ABSTRACT

THIS DIAGNOSTIC WAS DESIGNED TO TEST OUT THE KMV11 MODULE  
THE PROGRAM WAS IMPLEMENTED USING THE DIAGNOSTIC SUPERVISOR.  
THROUGH DIALOGUE WITH THE OPERATOR, THE PROGRAM WILL ALLOW  
MODIFICATION OF DEVICE PARAMETERS, SUCH AS UNIBUS ADDRESS,  
VECTOR ADDRESS, AND PROCESSOR TYPE.

## 1.2 HARDWARE INTRODUCTION

THIS DIAGNOSTIC WILL TEST ALL THE HARDWARE PART OF THE KMV11 B  
MODULE (M7501).  
TO TEST COMPLETELY THIS PART ,EXTERNAL LOOP BACK CONNECTOR  
MUST BE INSTALLED.  
DIAGNOSTIC WILL AUTOMATICALLY DETECT IF LOOPBACK CONNECTOR IS  
PLUGGED OR NOT (IF NOT ,DROP EXTERNAL TEST AND REPORT ERROR)  
DIAGNOSTIC WILL AUTOMATICALLY DETECT IF LOOPBACK CONNECTOTS  
ARE PLUGGED OR NOT.(IF NO LOOPBACK,EXTERNAL LOOP TEST WILL  
BE DROPPED AND AN ERROR MESAGE WILL BE REPORTED).

## EXTERNAL LOOP BACK CONNECTOR:

-----  
KMV11 B CAN OPERATE EITHER IN RS422 OR RS 423 LEVEL CONVERTERS  
IN RS422 MODEM SIGNAL 103,104,114,AND 115 ARE SUPPORTED.  
IN RS 423 MODEM SIGNAL 103,104,105,107,108,106,109,113,114,115  
ARE SUPPORTED.

## RS422 LOOP BACK:

TO TEST COMPLETELY A KMV11 B IN RS422 MODE ,RUN THIS DIAGNOSTIC  
WHITH THE ZIF LOOP BACK CONNECTOR 2P-E155A-00 PLUG ON THE ZIF  
SOCKET (12-11591-35)AT THE END OF BC05 CABLE

## RS423 LOOP BACK:

TO TEST COMPLETELY A KMV11 B IN RS423 MODE ,RUN THIS DIAGNOSTIC  
WHITH ZIF LOOP BACK CONNECTOR 2P-E156A-00 PLUG ON THE ZIF  
SOCKET (12-11591-35) AT THE END OF BC05 CABLE.

## RS423 LOOP BACK:



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DIAGNOSTIC WILL TEST KMV11 CLOCKS, LINE INTERRUPTS, TX AND RX FUNCTION  
IN INTERNAL AND EXTERNAL LOOP BACK AND MODEM SIGNALS.

CAUTION:

\*\*\*\*\*

IF LOOP BACK CONNECTORS ARE NOT PLUGGED IN BOTH CHANNEL A AND B,  
THE DIAGNOSTIC WILL AUTOMATICALLY REPORT AN ERROR AND DROP THE  
TEST CORRESPONDING TO THE EXTERNAL LOOP BACK.

KMV11 B IS FULLY TESTED ONLY WHEN DIAGNOSTIC HAS BEEN RUN  
SUCCESSFULLY IN BOTH RS422 AND RS423 LOOP BACK.

2.0 HARDWARE REQUIREMENTS

THE FOLLOWING HARDWARE IS REQUIRED TO RUN THE KMV11A/B  
LINE CONTROLLER STATIC TESTS:

PDP-11/03,23,23 PLUS  
16K MEMORY  
CONSOLE TERMINAL

3.0 PRELIMINARY PROGRAM REQUIREMENTS

THE PROCESSOR AND MEMORY SHOULD BE THOROUGHLY TESTED PRIOR  
TO RUNNING THIS DIAGNOSTIC.

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

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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 KMV11 STATIC TESTS IS ABOUT 220 SECONDS PER PASS FOR EACH UNIT.

#### 4.3 XXDP+

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

#### 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

MEMORY MANAGEMENT IS NOT UTILIZED IN THIS PROGRAM. IF IT IS INSTALLED, IT IS DISABLED BY THE PROGRAM.

#### 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



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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 UNDER XXDP+ WITHOUT READING THE REMAINDER OF THIS DOCUMENT, AS FOLLOWS:

- A) LOAD AND START DIAGNOSTIC USING RUN COMMAND
- B) RECEIVE DIAGNOSTIC SUPERVISOR 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 AND THE PROGRAM IS STARTED, THE FOLLOWING IDENTIFICATION IS TYPED:

```
DRS LOADED
DIAG. RUN-TIME SERVICES
VKMEAO
KMV11 B LINE CONTROLLER DIAGNOSTIC
DR>
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THE OPERATOR THEN PROCEEDS BY TYPING ONE OR MORE OF THE  
COMMANDS DESCRIBED IN THE FOLLOWING SECTION 6.3. (FOR MORE  
DETAILED 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.  
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 OCCURANCE 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



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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.

#### 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.

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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>/FLACS:  
<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 DIAGLOGUE. 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.



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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>  
\*\*\*\*\*

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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



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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>  
\*\*\*\*\*

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.

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6.3.10 ZFLAGS COMMAND

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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 SURPRESSED FOR THE REMAINDER OF THE DIAGNOSTIC OR UNTIL ANOTHER O IS TYPED, WHICH RESTORES NORMAL TELETYPE OUTPUT.

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.

2. MICRO-CPU CSR ADDRESS: (O) 177000?

THIS IS THE ADDRESS AT WHICH THE CSR REGISTERS (SELO) RESIDE ON THE UNIBUS. THE ALLOWABLE RANGE IS 160000-177776 (OCTAL), AND THE DEFAULT IS 177000.

3. MICRO CPU VECTOR ADDRESS: (O) 300?

THE ALLOWABLE RANGE IS 300-770, AND DEFAULT VALUE IS 300



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#### 4. MICRO CPU PRIORITY LEVEL: (4) 7?

DEFFAULT VALYE IS 4

NOTE:

M7501 MODULE MOUNTED WITH DC003 CHIPS CAN ONLY  
INTERUPT ON LEVEL 4

#### 6.3.13 SOFTWARE PARAMETERS

NO SOFTWARE PARAMETER QUESTIONS ARE ASKED BY PART 2 OF THE  
STATIC LOGIC TESTS.

#### 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).

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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:

# UNITS (D) ? 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.

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).



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7.0 TEST DESCRIPTIONS

\*\*\*\*\* TEST 1 \*\*\*\*\*  
\*VERIFY THAT REFERENCED QBUS DEVICE REGISTERS  
\*DO NOT CAUSE TIME OUT TRAP  
\*\*\*\*\*

\*\*\*\*\* TEST 2 \*\*\*\*\*  
\*  
\*CHECK PROM REVISION COMPATIBILITY  
\*  
\*\*\*\*\*

\*\*\*\*\* TEST 3 \*\*\*\*\*  
\*  
\*REAL TIME CLOCK TEST  
\*  
\*\*\*\*\*

\*\*\*\*\* TEST 4 \*\*\*\*\*  
\*  
\*BAUD RATE GENERATOR TEST  
\*  
\*\*\*\*\*

\*\*\*\*\* TEST 5 \*\*\*\*\*  
\*  
\*TRANSMIT AND RECEIVE FRAMES AT LOW SPEED IN INTERNAL  
\*LOOPBACK MODE WITHOUT INTERRUPTIONS ON CHANEL A.  
\*  
\*\*\*\*\*

\*\*\*\*\* TEST 6 \*\*\*\*\*  
\*  
\*TRANSMIT AND RECEIVE FRAMES AT LOW SPEED IN INTERNAL  
\*LOOPBACK MODE WITHOUT INTERRUPTIONS ON CHANEL B.  
\*  
\*\*\*\*\*

\*\*\*\*\* TEST 7 \*\*\*\*\*  
\*  
\*TRANSMIT AND RECEIVE FRAMES AT DIFFERNT SPEED IN  
\*INTERNAL LOOPBACK ON CHANAEL A WITH INTERRUPT

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\*\*\*\*\* TEST 8 \*\*\*\*\*  
\*  
\*TRANSMIT AND RECEIVE FRAMES AT DIFFERNT SPEED IN  
\*INTERNAL LOOPBACK ON CHANAEL B WITH INTERUPT  
\*  
\*\*\*\*\*

NOTE: TEST 9 TO THE END REQUIRE EXTERNAL LOOPBACK  
CONNECTORS.

\*\*\*\*\* TEST 9 \*\*\*\*\*  
\*  
\*TRANSMIT FRAMES IN EXTERNAL LOOP BACK ON CHANEL A  
\*(LOOPBACK CONNECTOR INSTALLED)  
\*  
\*\*\*\*\*

\*\*\*\*\* TEST 10 \*\*\*\*\*  
\*  
\*TRANSMIT FRAMES IN EXTERNAL LOOP BACK ON CHANEL B  
\*(LOOPBACK CONNECTOR INSTALLED)  
\*  
\*\*\*\*\*

\*\*\*\*\* TEST 11 \*\*\*\*\*  
\*  
\*TEST MODEM SIGNAL CCITT 107 AND CCITT 108 ON  
\*CHANEL A WITH EXTERNAL LOOPBACK  
\*(LOOP BACK CONNECTOR INSTALLED)  
\*  
\*\*\*\*\*

\*\*\*\*\* TEST 12 \*\*\*\*\*  
\*  
\*TEST MODEM SIGNAL CCITT 107 AND CCITT 108 ON  
\*CHANEL B WITH EXTERNAL LOOPBACK  
\*(LOOP BACK CONNECTOR INSTALLED)  
\*



KMV11B LINE CNT DIAG  
PROGRAM DOCUMENT

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\*\*\*\*\* TEST 13 \*\*\*\*\*

\*  
\*TEST MODEM SIGNAL CCITT 105,106,109 ON CHANEL A  
\* WITH EXTERNAL LOOPBACK  
\*(LOOP BACK CONNECTOR INSTALLED)

\*  
\*\*\*\*\*

\*\*\*\*\* TEST 13 \*\*\*\*\*

\*  
\*TEST MODEM SIGNAL CCITT 105,106,109 ON CHANEL B  
\* WITH EXTERNAL LOOP BACK  
\*(LOOP BACK CONNECTOR INSTALLED)

\*  
\*\*\*\*\*

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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.

9.0 HISTORY

- DESIGN STARTED ON JANUARY 82
- REVIEW ON DECEMBER 82

a



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 PROGRAM DOCUMENT

```

983          .TITLE KMV11 B LINE CNT DIAG.
991          002000          .=2000
992
993
994
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996
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998          .MCALL  SVC
999 002000          SVC          ; INITIALIZE SUPERVISOR MACROS
1000
1001
1002
1003
1004
1005 002000          BGNMOD  KMV11B
1006
1007
1008          000000          $LSTIN= 0
1009          000000          $LSTTAG= 0
1010          177777          SVCINS= -1      ; LIST INSTRUCTIONS, SHIFTED RIGHT
1011          177777          SVCTST= -1     ; LIST TEST TAGS, SHIFTED RIGHT
1012          177777          SVCSUB= -1    ; LIST SUBTEST TAGS, SHIFTED RIGHT
1013          177777          SVCGBL= -1   ; LIST GLOBAL TAGS, SHIFTED RIGHT
1014          177777          SVCTAG= -1   ; LIST OTHER TAGS, SHIFTED RIGHT
1015
1016          : CHANGE THE VALUES OF THE SVC... SYMBOLS TO BE ZERO IF YOU WISH
1017          : TO ALIGN THE MACRO CALLS AND THEIR EXPANSIONS. CHANGE THE
1018          : SYMBOLS TO BE MINUS-ONE TO NOT LIST THE EXPANSIONS. YOU MAY
1019          : CHANGE THE SYMBOLS AT ANY POINT IN YOUR PROGRAM.
1020
1021

```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 19  
PROGRAM HEADER

1023  
1024  
1025  
1026  
1027  
1028  
1029 002000  
1030  
1031  
1032  
1050  
1051 002000  
1052  
1053  
1064

.SBTTL PROGRAM HEADER  
:++  
: THE PROGRAM HEADER IS THE INTERFACE BETWEEN  
: THE DIAGNOSTIC PROGRAM AND THE SUPERVISOR.  
:--

POINTER BGNSW,BGNDU,BGNSETUP

HEADER VKMEA0,A,0,240.,0

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1067  
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1072  
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1077  
1078  
1092  
1093  
1094  
1095

002122

000000  
177777  
177777

002130

:+  
: THIS TABLE IS USED BY THE RUNTIME SERVICES  
: TO PROTECT THE LOAD MEDIA.  
:--

BGNPROT

0  
-1  
-1

:OFFSET INTO P-TABLE FOR CSR ADDRESS  
:OFFSET INTO P-TABLE FOR MASSBUS ADDRESS  
:OFFSET INTO P-TABLE FOR DRIVE NUMBER

ENDPROT



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 21  
DISPATCH TABLE

1097  
1098  
1099  
1100  
1101  
1102  
1103  
1104  
1105  
1112  
1113  
1114  
1115  
1116

002130

.SBTTL DISPATCH TABLE

:/   
:/ THE DISPATCH TABLE CONTAINS THE STARTING ADDRESS OF EACH TEST.   
:/ IT IS USED BY THE SUPERVISOR TO DISPATCH TO EACH TEST.   
:/

DISPATCH 12



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 23  
DEFAULT HARDWARE P-TABLE

1147  
1148  
1149  
1150  
1151  
1152



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 24  
DEFAULT HARDWARE P-TABLE

1154  
1155  
1156  
1157  
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1159  
1160  
1161  
1162  
1163  
1164  
1165  
1175  
1176  
1191  
1192 002174

.SBTTL GLOBAL EQUATES SECTION

////////////////////////////////////  
:/ THE GLOBAL EQUATES SECTION CONTAINS PROGRAM EQUATES THAT  
:/ ARE USED IN MORE THAN ONE TEST.  
////////////////////////////////////

EQUALS

:  
: BIT DIFINITIONS

100000	BIT15== 100000
040000	BIT14== 40000
020000	BIT13== 20000
010000	BIT12== 10000
004000	BIT11== 4000
002000	BIT10== 2000
001000	BIT09== 1000
000400	BIT08== 400
000200	BIT07== 200
000100	BIT06== 100
000040	BIT05== 40
000020	BIT04== 20
000010	BIT03== 10
000004	BIT02== 4
000002	BIT01== 2
000001	BIT00== 1

001000	BIT9== BIT09
000400	BIT8== BIT08
000200	BIT7== BIT07
000100	BIT6== BIT06
000040	BIT5== BIT05
000020	BIT4== BIT04
000010	BIT3== BIT03
000004	BIT2== BIT02
000002	BIT1== BIT01
000001	BIT0== BIT00

:  
: EVENT FLAG DEFINITIONS  
: EF32:EF17 RESERVED FOR SUPERVISOR TO PROGRAM COMMUNICATION

000040	EF.START== 32.	: START COMMAND WAS ISSUED
000037	EF.RESTART== 31.	: RESTART COMMAND WAS ISSUED
000036	EF.CONTINUE== 30.	: CONTINUE COMMAND WAS ISSUED
000035	EF.NEW== 29.	: A NEW PASS HAS BEEN STARTED
000034	EF.PWR== 28.	: A POWER-FAIL/POWER-UP OCCURRED

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 24-1  
GLOBAL EQUATES SECTION

: PRIORITY LEVEL DEFINITIONS

000340	PRI07== 340
000300	PRI06== 300
000240	PRI05== 240
000200	PRI04== 200
000140	PRI03== 140
000100	PRI02== 100
000040	PRI01== 40
000000	PRI00== 0

: OPERATOR FLAG BITS

000004	EVL== 4
000010	LOT== 10
000020	ADR== 20
000040	IDU== 40
000100	ISR== 100
000200	UAM== 200
000400	BOE== 400
001000	PNT== 1000
002000	PRI== 2000
004000	IXE== 4000
010000	IBE== 10000
020000	IER== 20000
040000	LOE== 40000
100000	HOE== 100000

1193  
1194  
1195  
1196  
1197  
1198  
1199  
1200  
1201  
1202  
1203  
1204  
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1218

000340	MAXPRI==340
054000	MAINT0==54000
044000	MAINT1==44000
040000	MCLR==40000
052525	DATA1== 052525
125252	DATA2== 125252
013224	KB1.2== 5780.
005473	KB2.4==2875.
000154	KB64== 108.
000174	KB56== 124.
000146	KB68== 102.
000143	KB70== 99.
000141	KB72== 97.

:MASTER CLEAR = 1,MODE = 1 ,MAINT 1 = 1 ,T11=HOLD  
:MASTER CLEAR = 1,MODE = 0 ,MAINT 1 = 0 ,T11=NOT HOLD

:	OCTAL	VALUE	OF	1.2	KBAUDS
:	..	..	..	2,4	..
:	..	..	..	64	..
:	..	..	..	56	..
:	..	..	..	68	..
:	..	..	..	70	..
:	..	..	..	72	..

DIVIDER CALCULATION= DECIMAL VALUE=6912 / X KBAUDS

```

:*****
:* PROGRAM EVENT FLAG DEFINITIONS
:*****

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1220  
1221  
1222  
1223  
1224  
1225  
1226  
1232  
1233  
1234  
1235  
1236  
1237 002174  
1238  
1239  
1240  
1253  
1254 002222  
002222 000000  
002224 000000  
002226 000000  
002230 000000  
1255  
1256  
1257  
1258  
1259  
1260  
1261  
1262 002232 000000  
1263 002234 000005  
1264 002236 000000  
1265 002240 000000  
1266 002242 000000  
1267 002244 000000  
1268 002246 000000  
1269 002250 000000  
1270 002252 000000  
1271 002254 000000  
1272 002256 000000  
1273 002260 000000  
1274 002262 000015  
1275 002264 000000

.SBTTL GLOBAL DATA SECTION

```

://////
:/ THE GLOBAL DATA SECTION CONTAINS DATA THAT ARE USED
:/ IN MORE THAN ONE TEST.
://////

```

```

:*****
:* STORAGE FOR DEVICE REGISTERS
:*****
: DESCRIPT <KMV11B LINE CNT DIAG.>

```

```

ERRTBL
ERRTYP: .WORD 0
ERRNBR: .WORD 0
ERRMSG: .WORD 0
ERRBLK: .WORD 0

```

```

:*****
:* PROGRAM CONTROL PARAMETERS
:*****
LOCK: .WORD 0 ;ADDRESS FOR LOCK CURRENT DATA
MAXERR: .WORD 5 ;MAX ERROR BEFORE DROPPING UNIT
ERRCNT: .WORD 0 ;ERROR COUNT
LOGDEV: .WORD 0 ;LOGICAL DEVICE NUMBER
PSTACK: .WORD 0 ;BASE LEVEL PROGRAM STACK POINTER
SAVSP: .WORD 0 ;STACK POINTER STORAGE
SAVPC: .WORD 0 ;PROGRAM COUNTER STORAGE
FLAG: .WORD 0 ;SCRATCH STORAGE
FTIME: .WORD 0
SAVE4: .WORD 0
SAVE6: .WORD 0
LSSW: .WORD 0
LSUIT: .WORD 15
UNIT: .WORD 0

```



```

1277 ;*****
1278 ;* MISCELLANEOUS STORAGE
1279 ;*****
1280
1281 002266 000000 DELCT1: .WORD 0
1282 002270 000000 DELCT2: .WORD 0
1283 002272 000000 GOOD: .WORD 0
1284 002274 000000 GOOD0: .WORD 0
1285 002276 000000 GOOD1: .WORD 0
1286 002300 000000 GOOD2: .WORD 0
1287 002302 000000 GOOD4: .WORD 0
1288 002304 000000 GOOD6: .WORD 0
1289 002306 000000 GOOD10: .WORD 0
1290 002310 000000 GOOD12: .WORD 0
1291 002312 000000 GOOD14: .WORD 0
1292 002314 000000 GOOD16: .WORD 0
1293 002316 000000 SELO: .WORD 0
1294 002320 000000 SEL1: .WORD 0
1295 002322 000000 SEL2: .WORD 0
1296 002324 000000 SEL4: .WORD 0
1297 002326 000000 SEL6: .WORD 0
1298 002330 000000 SEL10: .WORD 0
1299 002332 000000 SEL12: .WORD 0
1300 002334 000000 SEL14: .WORD 0
1301 002336 000000 SEL16: .WORD 0
1302 002340 000000 BSEL1: .WORD 0
1303 002342 000000 RANST: .WORD 0
1304 002344 000000 RANSEL: .WORD 0
1305 002346 000000 RANMTA: .WORD 0
1306 002350 000000 RANDN: .WORD 0
1307 002352 000000 SAVPC1: .WORD 0
1308 002354 000000 SAVSTA: .WORD 0
1309 002356 000000 COUNT: .WORD 0
1310 002360 000000 NUMBER: .WORD 0
1311 002362 000000 ADDR: .WORD 0
1312 002364 000000 GDDAT: .WORD 0
1313 002366 000000 BDDAT: .WORD 0
1314
1315 002370 TTABLE: .BLKW 2000
1316 006370 RTABLE: .BLKW 2000
1317
1318 012370 000000 EXADDR: .WORD 0
1319 012372 000000 INTFLG: .WORD 0
1320 012374 000000 BAD: .WORD 0
1321 012376 000000 BSELO: .WORD 0
1322 012400 000000 DATA: .WORD 0
1323 012402 000000 VECT: .WORD 0
1324
1325
1326 012404 000000 KIND: .WORD 0
1327 012406 000000 CHANEL: .WORD 0
1328
1329 012410 000000 TXDATA: .WORD 0
1330 012412 000000 RXDATA: .WORD 0
1331 012414 000000 TSPEED: .WORD 0
1332 012416 000000 LENGTH: .WORD 0
1333 012420 000000 NUB: .WORD 0

```

:=0 IF KMV11A ,=1 IF KMV11B

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 26-1  
GLOBAL DATA SECTION

1334	012422	000000	RXCNT: .WORD	0
1335	012424	000000	STAERR: .WORD	0
1336	012426	000000	WRDCNT: .WORD	0

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 27  
GLOBAL DATA SECTION

1338  
1339  
1340  
1341  
1342  
1343  
1344  
1345  
1346  
1347  
1348  
1349  
1350  
1351  
1352  
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1355  
1356  
1357  
1358

```
*****  
:LOAD IN LOCATION "GDREV" THE PROM VERSION NUMBER THAT IS *  
:COMPATIBLE WITH THIS DIAGNOSTIC *  
: *  
:EACH PROM CONTAIN A REV LEVEL AND A ECO LEVEL: *  
:THE REV LEVEL IS MODIFIED EACH TIME A MODIFICATION IS DONE *  
:THE ECO LEVEL IS MODIFIED WHEN THE PROM MODIFICATION NEED *  
:A DIAGNOSTIC MODIFICATION *  
:*****
```

012430 000001

GDREV: .WORD 1



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 28  
GLOBAL DATA SECTION

1360  
1361  
1362  
1363 012432 000  
1364  
1365 012434 000  
1366 012435 000  
1367  
1368 012436 000000  
1369  
1370  
1371  
1372  
1373  
1374  
1375  
1376  
1377 012440 000000  
1378 012442 000000  
1379 012444 000000  
1380 012446 000000  
1381 012450 000000  
1382 012452 000000  
1383 012454 000000  
1384 012456 000000  
1385 012460 000000  
1386 012462 000000  
1387  
1388 012464 000000  
1389 012466 000000  
1390 012470 000000  
1391 012472 000000  
1392  
1393 012474 000000  
1394  
1395  
1396  
1397  
1398 012476  
1399  
1400  
1401 012476  
1402 012676  
1403  
1404  
1405  
1406  
1407  
1408  
1409

\*\*\*\*\*  
;\* PROGRAM CONTROL FLAGS  
\*\*\*\*\*

INIFLG: .BYTE 0 ;PROGRAM INITIALIZING FLAG  
          .EVEN  
LOKFLG: .BYTE 0 ;LOCK ON CURRENT TEST FLAG  
QV.FLG: .BYTE 0 ;QUICK VERIFY FLAG  
          .EVEN  
UUT: .WORD 0 ;CURRENT UNIT UNDER TEST

\*\*\*\*\*  
;\* POINTERS TO KMV11 VECTORS AND REGISTERS  
\*\*\*\*\*

KMVV00: 0 ;POINTER TO KMV11 INTRPT VECTOR 0  
KMVLVL: 0 ;POINTER TO KMV11 INTRPT SERVICE  
KMVV04: 0 ;POINTER TO KMV11 INTRPT VECTOR 04  
          " " " " 02  
KMVV06: 0 ; " " " " 06  
KMTLVL: 0 ;POINTER TO KMV11 TX INTRPT SERVICE PS  
KMVCSR: 0 ;POINTER TO KMV11 CONTROL STATUS REGISTER  
KMVP02: 0 ;POINTER TO KMV11 PORT REGISTER - SEL2  
KMVP04: 0 ;POINTER TO KMV11 PORT REGISTER - SEL4  
KMVP06: 0 ;POINTER TO KMV11 PORT REGISTER - SEL6  
  
KMVP10: 0 ;POINTER TO KMV11 PORT REG -SEL10  
KMVP12: 0 ;POINTER TO PORT REG -SEL 14  
KMVP14: 0 ;POINTER TO PORT REG -SEL14  
KMVP16: 0 ;POINTER TO PORT REG 16  
  
LOOP: 0 ;POINTER TO LOOP BACK CONNECTOR

\*\*\*\*\* PRIMARY REG ADRS STORAGE FOR THIS UNIT \*\*\*\*\*  
;THESE LOCATIONS WILL BE LOADED FOR THE CURRENT UNIT, IN INIT CODE  
REGADR:

\*\*\*\*\* STACK USED FOR SUBROUTINE LINKAGE \*\*\*\*\*  
      .BLKW 100  
SSTACK:

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 29  
GLOBAL TEXT SECTION

1411  
1412  
1413  
1414  
1415  
1416  
1417  
1418  
1419  
1420  
1421  
1422 012676  
1423  
1424  
1425  
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1428  
1435  
1436  
1437  
1438  
1439

.SBTTL GLOBAL TEXT SECTION

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

:\*\*\*\*\*  
:\* NAMES OF DEVICES SUPPORTED BY PROGRAM  
:\*\*\*\*\*  
: DEVTYP <KMV11B>

:  
: FORMAT STATEMENTS USED IN PRINT CALLS  
:

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 30  
GLOBAL SUBROUTINES

1441  
1442  
1443  
1444  
1445  
1446  
1447  
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1449  
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1451  
1452  
1453  
1454

.SBTTL GLOBAL SUBROUTINES

-----  
: MACRO'S NEEDED TO CALL SUBROUTINES  
:-----

.MACRO CLRMAR  
ROMCLK  
004000  
.ENDM CLRMAR



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 31  
GLOBAL SUBROUTINES

```

1456           ;ROUTINE TO WAIT FOR EVENT OR TIMEOUT
1457
1458
1459
1460           ;CALLING SEQUENCE:      JSR   PC,WAIT1
1461           ;                          JSR   PC,WAIT2
1462
1463
1464           ;INPUTS PARAMETERS:      DELCT1,DELCT2
1465
1466
1467           ;                          INC DELCT1 UNTIL 0
1468           ;                          DEC DELCT2 UNTIL 0      DELCT2= NUMB OF WAIT1 PASSES
1469
1470
1471
1472
1473
1474
1475
1476 012706 005237 002266      WAIT2:  INC   DELCT1
1477 012712 001375              BNE   WAIT2
1478
1479 012714              BREAK
1480
1481 012716 005337 002270      DEC   DELCT2
1482 012722 001371              BNE   WAIT2
1483
1484 012724 000207              RTS    PC
1485
1486
1487
1488
1489
1490
1491 012726 005237 002266      WAIT1:  INC   DELCT1
1492 012732 001375              BNE   WAIT1
1493 012734              BREAK
1494
1495 012736 000207              RTS    PC

```



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 33  
GLOBAL SUBROUTINES

```

1524
1525           ;ROUTINE TO DROP UNIT AFTER 5 ERROR
1526
1527
1528           ;JSR   PC,CHKMAX
1529
1530
1531
1532
1533
1534
1535
1536
1537 012740     CHKMAX: INLOOP
1538 012742     BCOMPLETE      1$           ;LOOPING ON ERROR?
                                           ;IF YES, EXIT
1539
1540
1541 012744     RFLAGS   R0           ;GET OPERATOR FLAG
1542 012746     032700   000040     BIT     #IDU,R0       ;IS DROPPING INHIBITED?
1543 012752     001026     BNE     1$           ;IF YES EXIT
1544
1545
1546 012754     005237   002236     INC     ERRCNT       ;UPDATE ERROR COUNT
1547 012760     023737   002236   002234     CMP     ERRCNT,MAXERR ;TOO MANY ERROR?
1548 012766     003420     BLE     1$           ;IF NOT JUMP
1549
1550
1551 012770     PRINTF   #NERRS,MAXERR,UT      ;TOO MANY ERROR!
1552 013020     DODU     UUT                   ;DROP UNIT
1553
1554 013026     DOCLN
                                           ;END THE SUBPASS
1555
1556 013030     000207     1$:   RTS     PC
1557
1558
1559
1560
1561
1562 013032     045      116      045  NERRS: .NLIST  BEX
                                           /%N%AMORE THAN %D3%A  ERRORS ON UNIT %D2/
1563           .ASCIZ  BEX
1564           .LIST?
1565           .EVEN
1566
1567
1568
1569

```



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 34  
 GLOBAL SUBROUTINES

1571  
 1572  
 1573  
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 1624

:ROUTINE TO CHECK REGISTER BSELO AND TO REPORT ERROR

:CALLING SEQUENCE: JSR PC,TSTERR

:OUTPUT PARAMETERS: RETURN TO PC IF TEST IS OK  
 : PC+2 IF TIMEOUT DURING TEST  
 : PC+4 IF NO KMV11 ANSWER  
 : PC+6 IF DATA CMP ERROR

```

TSTERR: JSR R5,CBSELO ;LOOK IF BSELO=0
        .WORD 0 ;TEST IS OK ,RTS PC
        BR 1$

        JSR R5,CBSELO ;LOOK IF BSELO=200
        .WORD 200 ;TIMEOUT DURING TEST,RTS PC+2
        BR 2$

        JSR R5,CBSELO ;LOOK IF BSELO=100
        .WORD 100 ;DATA CMP ERROR,RTS PC+6
        BR 3$

        BR 4$ ;NO KMV11 ANSWER ,RTS PC+4

1$: RTS PC ;TEST OK

2$: ADD #2,(SP) ;TIMEOUT ERROR
   RTS PC

3$: ADD #6,(SP) ;DATA CMP ERROR
   RTS PC

4$: ADD #4,(SP) ;NO KMV11 ANSWER
   RTS PC
    
```

K  
 R

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 35  
 NUMBER GENERATOR

1626  
 1627  
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 1682

.SBTTL NUMBER GENERATOR

DESCRIPTION:

ROUTINE TO GENERATE DATA PATTERNS,  
 THE TYPE OF PATTERN IS SELECTED BY R3, AND THE  
 PATTERN GENERATED IS RETURNED IN LOCATION "DATA"  
 AND LOCATION "GOOD"

CALLING SEQUENCE:

JSR PC,GENER

INPUT PARAMETERS:

R3 CONTAINS THE PATTERN NUMBER

R3=0	ALL ZEROES
1	ALL ONES
2	010101 ETC BIT PATTERN
3	101010 ETC BIT PATTERN
4	ROTATING 1 IN A ZERO WORD
5	ROTATING 0 IN AN ALL ONE WORD
6	PSEUDO RANDOM NUMBER
7	INCREMENTING DATA PATTERN, GOOD CONTAINS THE VALUE TO BE UPDATED

IMPLICIT INPUT PARAMETERS:

NONE

OUTPUT PARAMETERS:

THE NUMBER GENERATED IS HELD IN  
 DATA AND GOOD.

IMPLICIT OUTPUT PARAMETERS:

NONE

COMPLETION CODES:

NONE

POSSIBLE ERROR CODES:

NONE

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 35-1  
NUMBER GENERATOR

```

1683
1684
1685 013160 042703 177770
1686 013164 004737 013460
1687 013170 006303
1688 013172 000173 013176
1689 013176 013216
1690 013200 013222
1691 013202 013230
1692 013204 013236
1693 013206 013244
1694 013210 013254
1695 013212 013312
1696 013214 013432
1697 013216 005000
1698 013220 000507
1699 013222 005000
1700 013224 005100
1701 013226 000504
1702 013230 012700 052525
1703 013234 000501
1704 013236 012700 125252
1705 013242 000476
1706 013244 000241
1707 013246 004737 013266
1708 013252 000472
1709 013254 000241
1710 013256 004737 013266
1711 013262 005100
1712 013264 000465
1713 013266 006037 013310
1714 013272 001003
1715 013274 012737 100000 013310
1716 013302 013700 013310
1717 013306 000207
1718 013310 000001
1719 013312 012737 000005 002344
1720 013320 004737 013332
1721 013324 013700 002350
1722 013330 000443
1723 013332 013702 002350
1724 013336 001002
1725 013340 013702 002342
1726 013344 032737 000777 002344
1727 013352 001003
1728 013354 012737 000001 002344
1729 013362 013703 002344
1730 013366 013702 002350
1731 013372 033702 002346
1732 013376 001405
1733 013400 005102
1734 013402 033702 002346
1735 013406 001401
1736 013410 000402
1737 013412 000241
1738 013414 000401
1739 013416 000261
:
:
: GENER: BIC #177770,R3
: JSR PC,SAVRÉG
: ASL R3
: JMP @GENSEL(R3)
GENSEL: GEN0 :ALL ZERO WORD
: GEN1 :ALL ONE WORD
: GEN52 :52 PATTERN
: GEN25 :25 PATTERN
: GENR1 :ROTATE '1' EACH CALL
: GENRO :ROTATE '0' EACH CALL
: GENRAN :RANDOM NUMBER
: GENINC :INCREMENTING COUNT
GENO: CLR R0 :0>R0
: BR GENEX
GEN1: CLR R0 :NOT0>R0
: COM R0
: BR GENEX
GEN52: MOV #52525,R0 :5252>R0
: BR GENEX
GEN25: MOV #125252,R0 :125252>R0
: BR GENEX
GENR1: CLC
: JSR PC,GENROT :SHIFT 1 > R0
: BR GENEX
GENRO: CLC
: JSR PC,GENROT
: COM R0 :SHIFT 0 > R0
: BR GENEX
GENROT: ROR GENISH :ROTATE 1 PATTERN
: BNE GENER1 := 0?
: MOV #100000,GENISH :YES, SET MSB
: MOV GENISH,R0 :PUT 1 IN R0
: RTS PC :AND EXIT
GENISH: 1
GENRAN: MOV #5,RANSEL :SET SELECT VALUE TO 5
: JSR PC,RANGEN :GENERATE RANDOM NUMBER IN R0
: MOV RANDN,R0
: BR GENEX
RANGEN: MOV RANDN,R2
: BNE RAN1
: MOV RANST,R2
: BIT #777,RANSEL :IS RANDOM = 0
: BNE RAN2 :YES, PUT RANDOM START VALUE IN
: MOV #1,RANSEL :NO; IS RANSEL SELECT VALUE = 0
: MOV RANSEL,R3 :NO
: MOV RANDN,R2 :YES: SET RANSEL = 1
: BIT RANMTA,R2
: BEQ RANCLC :GET R2 <0 AND 1>
: COM R2
: BIT RANMTA,R2
: BEQ RANCLC
: BR RANSEC
RANCLC: CLC
RANSEC: SEC

```



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 35-2  
NUMBER GENERATOR

1740	013420	006037	002350	
1741	013424	005303		
1742	013426	001357		
1743	013430	000207		
1744	013432	013700	002272	
1745	013436	005200		
1746	013440	010037	002272	
1747	013444	004737	013540	
1748	013450	013737	002272	012400
1749	013456	000207		
1750				

RAN4:	ROR	RANDN
	DEC	R3
	BNE	RAN2+4
RANEX:	RTS	PC
GENINC:	MOV	GOOD,RO
	INC	RO
GENEX:	MOV	RO,GOOD
	JSR	PC,RSTREG
	MOV	GOOD,DATA
	RTS	PC

```

:ROTATE C TO B15
:IS THIS NUMBER REQUIRED?
:NO, GET ANOTHER
:YES, EXIT
:INCREMENTS LOC. 'GOOD'

```

1752  
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1796  
1797  
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1799  
1800  
1801  
1802  
1803  
1804  
1805

.SBTTL SAVE REGISTERS

DESCRIPTION:

ROUTINE TO SAVE ALL THE GENERAL PURPOSE  
REGISTERS ON THE STACK, AND LEAVE THE ADDRESS OF THE  
CALLING ROUTINE ON THE STACK. THE ROUTINE WILL RUN AT  
PRIORITY 7 TO AVOID ANY INTERRUPTS

CAUTION::REGISTER R0 IS NOT SAVED

CALLING SEQUENCE:

JSR PC,SAVREG

INPUT PARAMETERS:

NONE

IMPLICIT INPUT PARAMETERS:

NONE

OUTPUT PARAMETERS:

REGISTERS 0 THRU 5 ARE SAVED ON THE STACK  
AND THE RETURN ADDRESS OF THE CALLING ROUTINE IS  
SET AS THE LAST ENTRY ON THE STACK

IMPLICIT OUTPUT PARAMETERS:

NONE

COMPLETION CODES:

NONE

POSSIBLE ERROR CODES:

NONE

1806 013460  
1807 013466  
1808 013474 012637 002246

SAVREG: GETPRI SAVSTA  
          SETPRI MAXPRI  
          MOV (SP)+,SAVPC ;SAVE PC FOR RETURN FROM THIS ROUTINE

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 36-1  
SAVE REGISTERS

1809	013500	012637	002352	MOV	(SP)+, SAVPC1	
1810	013504	010546		MOV	R5, -(SP)	
1811	013506	010446		MOV	R4, -(SP)	
1812	013510	010346		MOV	R3, -(SP)	
1813	013512	010246		MOV	R2, -(SP)	
1814	013514	010146		MOV	R1, -(SP)	
1815	013516	010046		MOV	R0, -(SP)	
1816	013520	013746	002352	MOV	SAVPC1, -(SP)	
1817	013524	013746	002246	MOV	SAVPC, -(SP)	:PUT PC READY FOR
1818	013530			SETPRI	SAVSTA	
1819	013536	000207		RTS	PC	:RETURN
1820						
1821						
1822						



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 37  
 RESTORE REGISTERS

1824  
 1825  
 1826  
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 1832  
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 1873  
 1874  
 1875 013540  
 1876 013546  
 1877 013554 012637 002246  
 1878 013560 012637 002352  
 1879 013564 012600  
 1880 013566 012601

.SBTTL RESTORE REGISTERS

DESCRIPTION:

RESTORE TO RESTORE THE GENERAL PURPOSE  
 REGISTERS. THE STACK IS LEFT IN THE SAME STATE AS IT  
 WAS WHEN SAVREG WAS CALLED.

CAUTION: REGISTER R0 IS NOT SAVED

CALLING SEQUENCE:

JSR PC,RSTREG

INPUT PARAMETERS:

NONE

IMPLICIT INPUT PARAMETERS:

NONE

OUTPUT PARAMETERS:

R1 THRU R5 RESTORED

IMPLICIT OUTPUT PARAMETERS:

NONE

COMPLETION CODES:

NONE

POSSIBLE ERROR CODES:

NONE

RSTREG: GETPRI SAVSTA  
 SETPRI MAXPRI  
 MOV (SP)+,SAVPC  
 MOV (SP)+,SAVPC1  
 MOV (SP)+,R0  
 MOV (SP)+,R1

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 37-1  
RESTORE REGISTERS

1881	013570	012602		MOV	(SP)+,R2	
1882	013572	012603		MOV	(SP)+,R3	
1883	013574	012604		MOV	(SP)+,R4	
1884	013576	012605		MOV	(SP)+,R5	
1885	013600	013746	002352	MOV	SAVPC1,-(SP)	
1886	013604	013746	002246	MOV	SAVPC,-(SP)	;PUT PC READY FOR
1887	013610			SETPRI	SAVSTA	
1888	013616	000207		RTS	PC	

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 38  
 RESTORE REGISTERS

```

1890 ;CHECK CONTENT OF ONE OF THE 8 REGISTERS
1891
1892 : CALLING SEQUENCE
1893 : JSR R5,CKSELN ; N = REGISTER NUMBER
1894 : .WORD A A=EXPECTED CONTENT OF REGISTER N
1895
1896 ;OUTPUT PARAMETER:
1897 : BRANCH IN PC+2 IF ERROR DETECTED
1898 : BRANCH IN PC IF NO ERROR DETECTED
1899
1900
1901
1902
1903
1904 013620 012537 002272 CKSELO: MOV (R5)+,GOOD ;WRITE GOOD
1905 013624 017737 176624 002316 MOV @KMVCSR,SELO ;READ SEL 0
1906 013632 023737 002316 002272 CMP SELO,GOOD ;CMP ?
1907 013640 001001 BNE 1$
1908 013642 000402 BR 2$
1909 013644 062705 000002 1$: ADD #2,R5
1910 013650 000205 2$: RTS R5
1911
1912
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1914
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1917
1918 013652 005037 002272 CBSELO: CLR GOOD
1919 013656 012537 002272 MOV (R5)+,GOOD
1920 013662 117737 176566 012376 MOVB @KMVCSR,BSELO
1921 013670 123737 012376 002272 CMPB BSELO,GOOD
1922 013676 001001 BNE 1$
1923 013700 000402 BR 2$
1924 013702 062705 000002 1$: ADD #2,R5
1925 013706 000205 2$: RTS R5
    
```



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 39  
 RESTORE REGISTERS

:ROUTINE TO CHECK ALL REGISTER FROM SEL0 TO SEL16

:CALLING SEQUENCE:

```

:      JSR R5,CKALL
:      .WORD A           A = EXPECTED VALUE FOR SEL0
:      .WORD B           B           ..           ..           SEL2
:      .WORD C           C           ..           ..           SEL4
:      .WORD D           D           ..           ..           SEL6
:      .WORD E           E           ..           ..           SEL10
:      .WORD F           F           ..           ..           SEL12
:      .WORD G           G           ..           ..           SEL14
:      .WORD H           H           ..           ..           SEL16
    
```

:OUTPUT PARAMETER:

```

:      BRANCH IN PC+2 IF ERROR
:      BRANCH IN PC IF NO ERROR
    
```

```

1927
1928
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1941
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1943
1944
1945
1946
1947
1948 013710 012537 002274      CKALL: MOV      (R5)+,GOOD0
1949 013714 012537 002300      MOV      (R5)+,GOOD2
1950 013720 012537 002302      MOV      (R5)+,GOOD4
1951 013724 012537 002304      MOV      (R5)+,GOOD6
1952 013730 012537 002306      MOV      (R5)+,GOOD10
1953 013734 012537 002310      MOV      (R5)+,GOOD12
1954 013740 012537 002312      MOV      (R5)+,GOOD14
1955 013744 012537 002314      MOV      (R5)+,GOOD16
1956
1957 013750 017737 176500 002316      MOV      @KMVCSR,SEL0      ;READ SEL0
1958 013756 000240      NOP
1959 013760 017737 176472 002322      MOV      @KMVP02,SEL2      ;READ SEL2
1960 013766 000240      NOP
1961 013770 017737 176464 002324      MOV      @KMVP04,SEL4      ;READ SEL4
1962 013776 000240      NOP
1963 014000 017737 176456 002326      MOV      @KMVP06,SEL6      ;READ SEL6
1964 014006 000240      NOP
1965 014010 017737 176450 002330      MOV      @KMVP10,SEL10     ;READ SEL10
1966 014016 000240      NOP
1967 014020 017737 176442 002332      MOV      @KMVP12,SEL12     ;READ SEL12
1968 014026 000240      NOP
1969 014030 017737 176434 002334      MOV      @KMVP14,SEL14     ;READ SEL14
1970 014036 000240      NOP
1971 014040 017737 176426 002336      MOV      @KMVP16,SEL16     ;READ SEL16
1972
1973 014046 023737 002316 002274      CMP      SEL0,GOOD0
1974 014054 001035      BNE      1$
1975 014056 023737 002322 002300      CMP      SEL2,GOOD2
1976 014064 001031      BNE      1$
1977 014066 023737 002324 002302      CMP      SEL4,GOOD4
1978 014074 001025      BNE      1$
1979 014076 023737 002326 002304      CMP      SEL6,GOOD6
1980 014104 001021      BNE      1$
1981 014106 023737 002330 002306      CMP      SEL10,GOOD10
1982 014114 001015      BNE      1$
1983 014116 023737 002332 002310      CMP      SEL12,GOOD12
    
```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 39-1  
 RESTORE REGISTERS

1984	014124	001011			BNE	1\$
1985	014126	023737	002334	002312	CMP	SEL14,GOOD14
1986	014134	001005			BNE	1\$
1987	014136	023737	002336	002314	CMP	SEL16,GOOD16
1988	014144	001001			BNE	1\$
1989						
1990	014146	000402			BR	2\$
1991	014150	062705	000002	1\$:	ADD	#2,R5
1992	014154	000205		2\$:	RTS	R5

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 40  
 RESTORE REGISTERS

```

1994                                     ;ROUTINE TO CHECK SEL2 TO SEL16
1995
1996
1997
1998
1999
2000 014156 012537 002300          CKREG: MOV      (R5)+,GOOD2
2001 014162 012537 002302          MOV      (R5)+,GOOD4
2002 014166 012537 002304          MOV      (R5)+,GOOD6
2003 014172 012537 002306          MOV      (R5)+,GOOD10
2004 014176 012537 002310          MOV      (R5)+,GOOD12
2005 014202 012537 002312          MOV      (R5)+,GOOD14
2006 014206 012537 002314          MOV      (R5)+,GOOD16
2007
2008
2009 014212 017737 176240 002322    MOV      @KMVP02,SEL2
2010 014220 000240                    NOP
2011 014222 017737 176232 002324    MOV      @KMVP04,SEL4
2012 014230 000240                    NOP
2013 014232 017737 176224 002326    MOV      @KMVP06,SEL6
2014 014240 000240                    NOP
2015 014242 017737 176216 002330    MOV      @KMVP10,SEL10
2016 014250 000240                    NOP
2017 014252 017737 176210 002332    MOV      @KMVP12,SEL12
2018 014260 000240                    NOP
2019 014262 017737 176202 002334    MOV      @KMVP14,SEL14
2020 014270 000240                    NOP
2021 014272 017737 176174 002336    MOV      @KMVP16,SEL16
2022
2023
2024
2025
2026 014300 023737 002322 002300    CMP      SEL2,GOOD2
2027 014306 001031                    BNE     1$
2028 014310 023737 002324 002302    CMP      SEL4,GOOD4
2029 014316 001025                    BNE     1$
2030 014320 023737 002326 002304    CMP      SEL6,GOOD6
2031 014326 001021                    BNE     1$
2032 014330 023737 002330 002306    CMP      SEL10,GOOD10
2033 014336 001015                    BNE     1$
2034 014340 023737 002332 002310    CMP      SEL12,GOOD12
2035 014346 001011                    BNE     1$
2036 014350 023737 002334 002312    CMP      SEL14,GOOD14
2037 014356 001005                    BNE     1$
2038 014360 023737 002336 002314    CMP      SEL16,GOOD16
2039 014366 001001                    BNE     1$
2040 014370 000402                    BR      2$
2041
2042 014372 062705 000002          1$:  ADD      #2,R5
2043 014376 000205                    2$:  RTS

```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 41  
 RESTORE REGISTERS

```

2045          ;ROUTINE TO CLEAR KMV11 MODULE
2046
2047
2048          ;CALLING SEQUENCE:
2049          ;      JSR PC,CLRKMV
2050
2051          ;ROUTINE DESCRIPTION: CLEAR ALL CSR'S REGISTERS AND CHECK IF = 0
2052
2053
2054
2055 014400          CLRKMV:
2056 014400 005077 176050          CLR      @KMVCSR          ;CLEAR REGISTERS
2057 014404 012777 054000 176042  MOV      #MAINTO,@KMVCSR  ;SET MAINTENANCE MODE
2058 014412          WAITA      0
2059
2060
2061
2062 014424 012702 000010          MOV      #10,R2
2063 014430 013701 012454          MOV      KMVCSR,R1          ;LOAD ADDRESS
2064 014434 005021          1$: CLR      (R1)+          ;CLEAR
2065 014436 005302          DEC      R2              ;ALL DONE
2066 014440 001375          BNE     1$              ;NO
2067 014442 004537 013710          JSR     R5,CKALL        ;CHECK ALL REG = 0
2068 014446 000000          .WORD  0
2069 014450 000000          .WORD  0
2070 014452 000000          .WORD  0
2071 014454 000000          .WORD  0
2072 014456 000000          .WORD  0
2073 014460 000000          .WORD  0
2074 014462 000000          .WORD  0
2075 014464 000000          .WORD  0
2076 014466 000404          BR      2$
2077 014470          ERRHRD 1,EM0002,PRALL ;OK BRANCH AT END
2078 014500 000207          2$: RTS      PC          ;CSR'S REGISTERS CAN'T BE CLEARED
2079

```



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 42  
 RESTORE REGISTERS

2081 ;ROUTINE TO SET MAINT MODE 1 AND CHECK DCT11 CLEAR SELO AFTER HAVING DECODED

2082  
 2083  
 2084  
 2085  
 2086  
 2087  
 2088  
 2089  
 2090  
 2091  
 2092  
 2093  
 2094  
 2095  
 2096  
 2097  
 2098  
 2099

;CALLING SEQUENCE:  
 ; JSR PC,MAINM1

;GIVE AN ERROR IF MASTER CLEAR IS NOT CLEAR BY DCT11  
 ;  
 ;MAINT1= MASTER CLEAR=1 + MAINT 1 =0 + MODE = 1 : T11=HOLD

2100	014502	012777	044000	175744	MAINM1: MOV	#MAINT1,@KMVCSR	;LOAD ADDRESS
2101	014510	012737	000000	002266	MOV	#0,DELCT1	
2102	014516	012737	000001	002270	MOV	#1,DELCT2	
2103	014524	004737	012706		JSR	PC,WAIT2	
2104	014530	004537	013620		JSR	R5,CKSELO	;CHECK SELO=0 BUT MODE BIT =1
2105	014534	004000			.WORD	4000	
2106	014536	000404			BR	1\$	;OK BRANCH
2107	014540				ERRHRD	2,EM0001,PRSELO	
2108	014550	000207			1\$: RTS	PC	
2109							
2110							
2111							
2112							
2113							

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 43  
RESTORE REGISTERS

2115  
2116  
2117  
2118  
2119  
2120  
2121  
2122  
2123  
2124  
2125  
2126  
2127  
2128  
2129  
2130  
2131  
2132  
2133

014552 012537 012420  
014556 053777 012420 175670  
014564 012737 000000 002266  
014572 004737 012726  
014576 000205

;ROUTINE TO SET TEST NUMBER ON BSELO

;CALLING SEQUENCE:  
: JSR R5,TSTNUB  
: .WORD A

A=TEST MICRO PROGRAM NUMBER

TSTNUB: MOV (R5)+,NUB  
BIS NUB,@KMVCSR  
MOV #0000,DELCT1  
JSR PC,WAIT1  
RTS R5

;LOAD TEST NUMBER

;WAIT

KMV11 B LINE CNT DIAG. MACRO M120G 06-JAN-83 09:42 PAGE 44  
RESTORE REGISTERS

2135 ;ROUTINE TO CHECK IF KMV11A OR B AND IF LOOP BACK CONNECTOR  
2136 ;ARE PLUGGED OR NOT  
2137  
2138  
2139  
2140  
2141

2142 ;CALLING SEQUENCE:  
2143  
2144 ;JSR PC,CKKMV  
2145  
2146  
2147

2148 ;OUTPUTS: IF LOOP BACK LOOP=1  
2149 IF NO LOOP BACK LOOP=0  
2150  
2151 IF KMV11 A KIND=0  
2152 IF KMV11 B KIND=1  
2153  
2154  
2155  
2156  
2157

2158 ;MICRO DIAG NB 44 DESCRIPTION:  
2159 ;DCT11 LOOK IF KMV11A OR B BY READING BIT 1 OF 8255 CHIP PORT C  
2160 ;IF THIS BIT =0 IT IS KMV11 B MODULE AND DCT11 SET 1 IN BSEL4  
2161 ; 1 A 0  
2162 ;DCT11 LOOK IF LOOP BACK OR NOT BY READING BIT 0 OF 8255 CHIP  
2163 ;IF THIS BIT =0 LOOP BACK CONNECTOR ARE PLUGGED SO DCT11 SET 1  
2164 ;IN BSEL2 IN OTHER CASE BSEL2=0  
2165  
2166 ;NOTE:PORT C ADDRESS=13006  
2167  
2168  
2169  
2170

2171 014600 004737 014400 CKKMV: JSR PC,CLRKMV  
2172 014604 004737 014502 JSR PC,MAINM1 ;SET MAINT MODE  
2173 014610 004537 014552 JSR R5,TSTNUB ;CHECK WHICH KMV11 AND IF LOOP BACK  
2174 014614 000044 .WORD 44  
2175  
2176 014616 004737 013102 JSR PC,TSTERR ;LOOK IF TEST CORRECTLY DONE  
2177 014622 000412 BR 1\$  
2178 014624 000402 BR 2\$  
2179 014626 000401 BR 2\$  
2180 014630 000400 BR 2\$  
2181  
2182  
2183

2184 014632 2\$: ERRHRD 3,EM0004 ;NO KMV11 ANSWER  
2185 014642 004737 012740 JSR PC,CHKMAX ;LOOK IF MAX ERROR  
2186 014646 000207 RTS PC  
2187

2188 014650 017737 175602 012474 1\$: MOV @KMVP02,LOOP ;WRITTE LOOP BIT  
2189 014656 042737 177776 012474 BIC #177776,LOOP  
2190 014664 017737 175570 012404 MOV @KMVP04,KIND ;WRITTE KIND  
2191 014672 042737 177776 012404 BIC #177776,KIND

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 44-1  
RESTORE REGISTERS

2192 014700 000207

RTS PC



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 45  
RESTORE REGISTERS

```

2194
2195           ;ROUTIN TO WRITE OR READ ONE OF THE KMV11 REGISTERS
2196
2197
2198
2199           ;CALLING SEQUENCE:
2200           ;JSR   R5,WRITE
2201           ;.WORD A           A=ADDRESS TO WRITE
2202           ;.WORD B           B=DATA TO WRITE
2203
2204
2205
2206           ;JSR   R5,READ
2207           ;.WORD A           A=ADDRESS TO READ
2208
2209
2210           ;MICRO DIAG NB 47 DESCRIPTION:
2211           ;WRITE: PUT ADDRESS TO WRITE IN SEL2
2212                   PUT DATA TO WRITE IN SEL4
2213                   SET BIT 0 OF SEL6(WRITE BIT)
2214                   SET TEST NB 44
2215                   KMV11 CLEAR BSELO WHEN DONE
2216
2217
2218
2219           ;READ:  PUT ADDRESS TO READ IN SEL2
2220                   CLEAR BIT 0 IN SEL6
2221                   SET TEST 47
2222           ;
2223                   KMV11 READ ADDRESS IN SEL2 AND CLEAR BSELO WHEN DONE
2224
2225
2226
2227 014702 012577 175550           WRITE:  MOV   (R5)+,@KMVP02           ;WRITE ADDRESS
2228 014706 012577 175546           MOV   (R5)+,@KMVP04           ;" DATA
2229 014712 012777 000001 175542   MOV   #1,@KMVP06           ;BIT WRITE
2230
2231 014720 004537 014552           JSR   R5,TSTNUB           ;SEND TEST NB 47
2232 014724 000047
2233
2234 014726 000205           RTS   R5           ;RETURN
2235
2236
2237
2238
2239
2240
2241 014730 012577 175522           READ:  MOV   (R5)+,@KMVP02           ;SET ADDRESS TO READ
2242 014734 005077 175520           CLR   @KMVP04
2243 014740 005077 175516           CLR   @KMVP06
2244
2245 014744 004537 014552           JSR   R5,TSTNUB           ;SEND TEST NB 44
2246 014750 000047
2247
2248
2249 014752 004737 013102           JSR   PC,TSTERR           ;CHECK BSEL 0
2250 014756 000412           BR    1$           ;OK

```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 45-1  
 RESTORE REGISTERS

2251	014760	000402			BR	2\$	
2252	014762	000401			BR	2\$	
2253	014764	000400			BR	2\$	
2254							
2255	014766		2\$:		ERRHRD	4,EM0004	:NO KMV ANSWER
2256	014776	004737	012740		JSR	PC,CHKMAX	:MAX ERROR?
2257	015002	000205			RTS	R5	
2258							
2259	015004	017737	175450	012374	1\$:	MOV	@KMVP04,BAD
2260	015012	000205			RTS	R5	:READ DATA IN BAD
2261							
2262							
2263							

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 46  
RESTORE REGISTERS

```
2265
2266
2267      .MACRO ROMCLK
2268      .LIST      JSR      R5,.ROMCLK      ;CLOCK INSTRUCTION
2269
2270      .NLIST
2271      .ENDM
2272
2273      .MACRO ED$CALL XY
2274      .LIST
2275      ;***** TEST'XY' *****
2276      .NLIST
2277      .ENDM
2278
2279
2280      .MACRO BADHEAD
2281      .RADIX 10
2282      ED$CALL \T$TESTNUM+1
2283      .RADIX 8
2284      .ENDM
2285
2286
2287
2288
2289
```

```

2291          .SBTTL  GLOBAL ERROR REPORT SECTION
2292
2293          ://////////
2294          :/          THE GLOBAL ERROR REPORT SECTION CONTAINS ERROR MESSAGES
2295          :/          THAT ARE USED IN MORE THAN ONE TEST.
2296          ://////////
2297
2298          .NLIST BEX
2299
2300 015014    040    102    125 TIM:   .ASCIZ  / BUS TIMEOUT /
2301
2302 015032    045    116    045 TFM36: .ASCIZ  /%N%AREGISTER ADDRESS ERROR,ADDRESS = %06%A,UNIT = %02/
2303
2304 015120    115    101    123 EM0001: .ASCIZ  /MASTER CLEAR FAIL TO RESET: DCT11 CAN'T CLEAR MASTER CLEAR /
2305
2306 015214    040    113    115 EM0002: .ASCIZ  / KMV11 REGISTERS CAN'T BE CLEARED /
2307
2308 015257    040    104    101 EM0003: .ASCIZ  / DATA COMPARE ERROR ON KMV11 REGISTER (SEL2 TO SEL16)/
2309
2310 015345    040    116    117 EM0004: .ASCIZ  / NO ANSWER FROM KMV11 /
2311
2312 015374    040    124    111 EM0006: .ASCIZ  / TIMEOUT DURING KMV11 MICRO TEST /
2313
2314 015436    111    116    124 EM0007: .ASCIZ  /INTERUPT OCCURED ON KMV11,WHEN ADDRESSING WRONG CSR REGISTER/
2315
2316 015533    113    115    126 EM0010: .ASCIZ  /KMV11 DON'T RECEIVE ANY INTERUPT WHEN QBUS ADDRESS CSR'S /
2317
2318 015625    113    115    126 EM0011: .ASCIZ  /KMV11 REAL LINE TIME CLOCK FAILED TO INTERUPT /
2319
2320 015704    103    110    101 EM0012: .ASCIZ  /CHANEL A  GENERATOR COUNT CAN'T BE READ OR WRITTE CORRECTLY /
2321
2322 016002    103    110    101 EM0013: .ASCIZ  /CHANEL A  GENERATOR OUTPUT ISN'T IN A GOOD STATE/
2323
2324 016063    103    110    101 EM0112: .ASCIZ  /CHANEL B  GENERATOR COUNT CAN'T BE READ OR WRITTE CORRECTLY /
2325
2326 016161    103    110    101 EM0113: .ASCI   /CHANEL B  GENERATOR OUTPUT ISN'T IN A GOOD STATE/
2327
2328 016242    116    117    040 EM0033: .ASCIZ  /NO CHANGE IN BAUD RATE GENERATOR COUNT /
2329
2330 016312    116    117    040 EM0014: .ASCIZ  /NO ACTION ON BAUD RATE GENERATOR OUTPUT /
2331
2332 016363    105    122    122 EM0015: .ASCIZ  /ERROR WHEN TRANSMITTING ON CH A IN INTERNAL LOOP NO INTERUPTS/
2333
2334 016461    105    122    122 EM0016: .ASCIZ  /ERROR WHEN TRANSMITTING FRAMES IN INTERNAL LOOPBACK ON CH A /
2335
2336 016556    105    122    122 EM0115: .ASCIZ  /ERROR WHEN TRANSMITTING ON CH B IN INTERNAL LOOP NO INTERUPTS/
2337
2338 016654    105    122    122 EM0116: .ASCIZ  /ERROR WHEN TRANSMITTING FRAMES IN INTERNAL LOOPBACK ON CH B /
2339
2340 016751    105    122    122 EM0017: .ASCIZ  /ERROR WHEN TRANSMITTING FRAMES IN EXTERNAL LOOP BACK ON CH A/
2341
2342 017046    105    122    122 EM0020: .ASCIZ  /ERROR WHEN TRANSMITTING FRAMES IN EXTERNAL LOGP BACK ON CH B/
2343
2344 017143    122    105    101 EM0023: .ASCIZ  /REAL TIME CLOCK INTERUPT OCCURED TOO EARLY /
2345
2346 017217    111    116    103 EM0024: .ASCIZ  /INCORRECT KMV11 REPLY /
2347

```



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 47-1  
GLOBAL ERROR REPORT SECTION

2348	017246	116	117	040	EM0027: .ASCIZ /NO LOOP BACK CONNECTOR ,TEST NOT EXECUTED/
2349					
2350	017320	104	101	124	EM0030: .ASCIZ /DATA COMPARE ERROR BETWEEN MODEM SIGNAL 108 AND 107 ON CH A /
2351					
2352	017415	104	101	124	EM0130: .ASCIZ /DATA COMPARE ERROR BETWEEN MODEM SIGNAL 108 AND 107 ON CH B /
2353					
2354	017512	115	117	104	EM0032: .ASCIZ /MODEM SIGNAL ERROR ON CHANEL A IN EXTERNAL LOOPBACK MODE/
2355					
2356	017603	115	117	104	EM0034: .ASCIZ /MODEM SIGNAL ERROR ON CHANEL B IN EXTERNAL LOOPBACK MODE/
2357					
2358	017674	120	122	117	EM0035: .ASCIZ /PROM REVISION IS NOT COMPATIBLE /
2359					
2360					
2361					
2362					



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 49  
GLOBAL ERROR REPORT SECTION

```

2404
2405          .EVEN
2406
2407
2408
2409
2410          -----
2411          : MACRO'S NEEDED TO REPORT ERRORS
2412          : -----
2413 021516          BGNMSG  PRSELO          ;REPORT SELO
2414 021516          PRINTB  #MSELO,SELO,GOOD
2415 021546 004737 012740 JSR      PC,CHKMAX
2416 021552          ENDMSG
2417
2418
2419
2420 021554          BGNMSG  PRINT
2421 021554          PRINTB  #MINT,GOOD,BAD
2422 021604 004737 012740 JSR      PC,CHKMAX          ;CHECK IF TOO MANY ERROR
2423 021610          ENDMSG
2424
2425
2426 021612          BGNMSG  PRALL          ;REPORT CONTENT OF ALL CSR'S
2427 021612          PRINTB  #MREG0,SELO,GOOD0
2428 021642          PRINTB  #MREG2,SEL2,GOOD2
2429 021672          PRINTB  #MREG4,SEL4,GOOD4
2430 021722          PRINTB  #MREG6,SEL6,GOOD6
2431 021752          PRINTB  #MREG10,SEL10,GOOD10
2432 022002          PRINTB  #MREG12,SEL12,GOOD12
2433 022032          PRINTB  #MREG14,SEL14,GOOD14
2434 022062          PRINTB  #MREG16,SEL16,GOOD16
2435 022112 004737 012740 JSR      PC,CHKMAX          ;CHECK IF TOO MANY ERROR
2436 022116          ENDMSG
2437
2438
2439
2440
2441
2442
2443 022120          BGNMSG  PRREG          ;REPORT ALL CSR'S BUT SELO
2444 022120          PRINTB  #MREG2,SEL2,GOOD2
2445 022150          PRINTB  #MREG4,SEL4,GOOD4
2446 022200          PRINTB  #MREG6,SEL6,GOOD6
2447 022230          PRINTB  #MREG10,SEL10,GOOD10
2448 022260          PRINTB  #MREG12,SEL12,GOOD12
2449 022310          PRINTB  #MREG14,SEL14,GOOD14
2450 022340          PRINTB  #MREG16,SEL16,GOOD16
2451 022370 004737 012740 JSR      PC,CHKMAX          ;CHECK IF TOO MANY ERROR
2452 022374          ENDMSG
2453
2454
2455
2456
2457
2458
2459
2460 022376          BGNMSG  PBSELO          ;REPORT BSELO

```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 49-1  
GLOBAL ERROR REPORT SECTION

2461	022376			PRINTB	#MBSELO,BSELO,GOOD	
2462	022426	004737	012740	JSR	PC,CHKMAX	;CHECK IF TOO MANY ERROR
2463	022432			ENDMSG		
2464						
2465						
2466						
2467						
2468						
2469						
2470						
2471						
2472	022434			BGNMSG	PINTR	;REPORT INTERUPT
2473	022434			PRINTB	#MINTR,ADDR	
2474	022460	004737	012740	JSR	PC,CHKMAX	;CHECK IF TOO MANY ERROR
2475	022464			ENDMSG		
2476						
2477						
2478						
2479						
2480						
2481	022466			BGNMSG	PVECT	;REPORT VECTOR
2482	022466			PRINTB	#MVECT,VECT,GOOD	
2483	022516	004737	012740	JSR	PC,CHKMAX	;CHECK IF TOO MANY ERROR
2484	022522			ENDMSG		
2485						
2486						
2487						
2488						
2489	022524			BGNMSG	PRT11V	
2490	022524			PRINTB	#MT11V,VECT,GOOD	
2491	022554	004737	012740	JSR	PC,CHKMAX	;CHECK IF TOO MANY ERROR
2492	022560			ENDMSG		
2493						
2494						
2495						
2496						
2497	022562			BGNMSG	PFRAME	;REPORT FRAME ERROR
2498	022562			PRINTB	#MFRAM1,RXDATA,TXDATA	
2499	022612			PRINTB	#MFRAM2,TSPEED,LENGTH	
2500	022642	004737	012740	JSR	PC,CHKMAX	;CHECK IF TOO MANY ERROR
2501	022646			ENDMSG		
2502						
2503						
2504						
2505						
2506						
2507	022650			BGNMSG	PMODEM	;REPORT MODEM SIGNAL ERROR
2508	022650			PRINTB	#MODEM1,GOOD	
2509	022674			PRINTB	#MODEM2,BAD	
2510	022720			PRINTB	#MODEM3,DATA	
2511	022744	004737	012740	JSR	PC,CHKMAX	;CHECK IF TOO MANY ERROR
2512	022750			ENDMSG		
2513						
2514						
2515						
2516						
2517						



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 49-2  
 GLOBAL ERROR REPORT SECTION

```

2518
2519
2520 022752          BGNMSG  PRAMEF
2521 022752          PRINTB  #MRAMEF, TXDATA, RXDATA          ;SHORT REPORT FOR FRAME ERROR
2522 023002          ENDMSG
2523
2524
2525
2526
2527
2528
2529
2530
2531 023004          BGNMSG  PRSTER                      ;REPORT ERROR STATUS ,WORD CNT
2532 023004          PRINTB  #MSTER1, STAERR
2533 023030          PRINTB  #MSTER2, WRDCNT
2534 023054 004737 012740 JSR      PC, CHKMAX          ;CHECK IF TOO MANY ERROR
2535 023060          ENDMSG
2536
2537
2538
2539 023062          BGNMSG  PADFLT                      ;ADDRESS TEST
2540 023062          PRINTB  #TFM36, ADDR, UNIT
2541 023112 004737 012740 JSR      PC, CHKMAX
2542 023116          ENDMSG
2543
2544
2545
2546

```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 50  
REPORT CODING SECTION

2548  
2549  
2550  
2551  
2552  
2553  
2554  
2555  
2556 023120  
2557  
2563  
2564 023120  
2565  
2572  
2573 023124  
2574  
2575

.SBTTL REPORT CODING SECTION

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

BGNRPT

EXIT RPT

ENDRPT

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 51  
INITIALIZE SECTION

```

2577          .SBTTL  INITIALIZE SECTION
2578
2579          :////////////////////////////////////////////////////
2580          :// THE INITIALIZE SECTION CONTAINS THE CODING THAT IS PERFORMED
2581          :// AT THE BEGINNING OF EACH PASS.
2582          :////////////////////////////////////////////////////
2583
2584 023126          BGNINIT
2585
2586
2621
2622          .EVEN
2623
2624          .EVEN
2625
2626
2627
2628          :INITIALIZE SUBROUTINE STACK
2629 023126 012705 012676          MOV      #SSTACK,R5
2630          :STORE BASE LEVEL PROGRAM STACK POINTER
2631 023132 010637 002242          MOV      SP,PSTACK
2632 023136 005737 002252          TST      FTIME
2633 023142 001011                BNE      1$
2634 023144 013737 000004 002254          MOV      @#4,SAVE4
2635 023152 013737 000006 002256          MOV      @#6,SAVE6
2636 023160 012737 000001 002252          MOV      #1,FTIME
2637 023166 013737 002254 000004 1$: MOV      SAVE4,@#4
2638 023174 013737 002256 000006          MOV      SAVE6,@#6
2639
2640 023202          READEF #EF.START          :START COMMAND?
2641 023210          BCOMPLETE          SETUP          :IF YES BRANCH
2642
2643 023212          READEF #EF.CONTINUE          :CONTINUE COMMAND?
2644 023220          BCOMPLETE          END
2645
2646 023222          READEF #EF.NEW          :NEW PASS?
2647 023230          BNCOMPLETE          NEXT          :IF NOT EXIT SETUP
2648
2649 023232 012737 177777 012436 SETUP: MOV      #-1,UUT          :INITIALISE UNIT NUMBER
2650
2651 023240 005237 012436          NEXT:  INC      UUT          :POINT NEXT UNIT
2652 023244 023737 012436 002262          CMP      UUT,L$UIT          :ALL DONE?
2653 023252 001523                BEQ      ABORT          :IF YES END OF PASS
2654
2655 023254 013737 012436 002264          MOV      UUT,UNIT
2656 023262          PRINTF #RUNNING,UNIT
2657
2658
2659 023306          GPHARD UUT,R1          :GET P TABLE
2660 023316          BNCOMPLETE          NEXT          :IF NOT AVAILABLE GET NEXT
2661
2662
2663 023320          GETPRM:
2664
2665 023320 011137 012454          MOV      (R1),KMVCSR          :GET ADDRESS OF KMV11
2666
2667 023324 011137 012456          MOV      (R1),KMVP02          :GET POINTER TO KMV11 SEL02 REG

```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 51-1  
INITIALIZE SECTION

```

2668 023330 062737 000002 012456      ADD      #2,KMVP02      ;GET POINTER TO KMV11 PORT REG - SEL 4
2669                                     ;GET POINTER TO KMV11 PORT REG - SEL 4
2670 023336 011137 012460      MOV      (R1),KMVP04
2671 023342 062737 000004 012460      ADD      #4,KMVP04      ;GET POINTER TO KMV11 PORT REG - SEL 6
2672                                     ;GET POINTER TO KMV11 PORT REG - SEL 6
2673 023350 011137 012462      MOV      (R1),KMVP06
2674 023354 062737 000006 012462      ADD      #6,KMVP06      ;GET POINTER TO KMV11 REG 10
2675                                     ;GET POINTER TO KMV11 REG 10
2676 023362 011137 012464      MOV      (R1),KMVP10
2677 023366 062737 000010 012464      ADD      #10,KMVP10     ;GET POINTER TO KMV11 REG 12
2678                                     ;GET POINTER TO KMV11 REG 12
2679 023374 011137 012466      MOV      (R1),KMVP12
2680 023400 062737 000012 012466      ADD      #12,KMVP12     ;GET POINTER TO KMV11 REG 14
2681                                     ;GET POINTER TO KMV11 REG 14
2682 023406 011137 012470      MOV      (R1),KMVP14
2683 023412 062737 000014 012470      ADD      #14,KMVP14     ;GET POINTER TO KMV11 REG 16
2684                                     ;GET POINTER TO KMV11 REG 16
2685 023420 012137 012472      MOV      (R1)+,KMVP16
2686 023424 062737 000016 012472      ADD      #16,KMVP16     ;GET POINTER TO VECTOR 0
2687                                     ;GET POINTER TO VECTOR 0
2688 023432 011137 012440      MOV      (R1),KMVV00
2689                                     ;GET POINTER TO VECTOR 2
2690 023436 011137 012446      MOV      (R1),KMVV02
2691 023442 062737 000002 012446      ADD      #2,KMVV02     ;GET POINTER TO VECTOR 4
2692                                     ;GET POINTER TO VECTOR 4
2693 023450 011137 012444      MOV      (R1),KMVV04
2694 023454 062737 000004 012444      ADD      #4,KMVV04     ;GET POINTER TO VECTOR 6
2695                                     ;GET POINTER TO VECTOR 6
2696 023462 012137 012450      MOV      (R1)+,KMVV06
2697 023466 062737 000006 012450      ADD      #6,KMVV06     ;GET POINTER TO TX PRIORITY LEVEL
2698                                     ;GET POINTER TO TX PRIORITY LEVEL
2699 023474 012137 012442      MOV      (R1)+,KMVLVL
2700 023500 062737 000006 012452      ADD      #6,KMTLVL
2701                                     ;GET LOOPBACK PARAMETERS:
2702 023506 011137 012474      MOV      (R1),LOOP
2703                                     ;GET LOOPBACK PARAMETERS:
2704 023512 005037 002236      CLR      ERRCNT
2705 023516                                     EXIT      INIT
2706                                     ;CLEAR ERROR COUNT
2707
2708
2709 023522      ABORT:  DOCLN      ;CLEAN UP AND ABORT PASS
2710 023524      EXIT INIT      ;EXIT
2711
2712
2713 023530      END:    ENDINIT
2714
2715
2716      .NLIST  BEX
2717 023532      045    116    045 .LIST  RUNNING:  BEX      .ASCIZ  /%N% RUNNING ON UNIT %D2% PASS TIME=3,5 MINUTES/
2718      .LIST  BEX
2719      .EVEN
2720
2721
2722

```



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 52  
AUTODROP SECTION

```

2724
2725
2726
2727
2728
2729
2730
2731
2732
2733 023614
2734
2741
2742
2743
2744
2745 023614 013701 012454
2746 023620 012705 000007
2747 023624 012737 023656 000004
2748 023632 012737 000340 000006
2749 023640 005711
2750 023642 000240
2751 023644 062701 000002
2752 023650 005305
2753 023652 001372
2754 023654 000405
2755
2756 023656 062706 000004
2757 023662
2758
2759 023670 013737 002254 000004
2760 023676 013737 002256 000006
2761 023704
2762
2763
2764
2765

```

.SBTTL AUTODROP SECTION

```

:++
: THIS CODE IS EXECUTED IMMEDIATELY AFTER THE INITIALIZE CODE IF
: THE "ADR" FLAG WAS SET. THE UNIT(S) UNDER TEST ARE CHECKED TO
: SEE IF THEY WILL RESPOND. THOSE THAT DON'T ARE IMMEDIATELY
: DROPPED FROM TESTING.
:--
.EVEN      BGNAUTO

:DEVICE DOES NOT HAVE A "READY"
MOV      KMVCSR,R1      ;R1 CONTAINS BASE KMV11 ADDRESS
MOV      #7,R5          ;7 REGISTERS TO BE TESTED
MOV      #2$,4          ;SET OUT TIMEOUT TRAP
MOV      #340,6         ;LEVEL 7
1$:      TST      (R1)   ;REFERENCE DEVICE REGISTERS
NOP
ADD      #2,R1          ;NEXT REGISTER
DEC      R5             ;DEC REGISTER COUNT
BNE     1$              ;BR IF NOT LAST REGISTER
BR      3$

2$:      ADD      #4,SP
DODU     LOGDEV

3$:      MOV      SAVE4,4
MOV      SAVE6,6
ENDAUTO

```



```

2808          .SBTTL  DROP UNIT SECTION
2809
2810          :////////////////////////////////////////////////////////////////////
2811          :// THE DROP-UNIT SECTION CONTAINS THE CODING THAT CAUSES A DEVICE
2812          :// TO NO LONGER BE TESTED.
2813          :////////////////////////////////////////////////////////////////////
2814
2815 023712          BGNDU
2816
2817
2818
2819
2820
2821
2822
2823
2824
2825
2826
2827
2828
2829
2830
2831
2832
2833
2834
2835
2836
2837
2838
2839
2840
2841          .EVEN
2842
2843 023712          PRINTF  #DROPD,RO          ;UNIT DROPPED
2844
2845 023734          EXIT    DU
2846
2847
2848
2849
2850
2851 023740          045      116      045  DROPD: .NLIST  BEX
2852          .ASCIZ  /%N% UNIT %D2% DROPPED/
2853          .LIST   BEX
2854          .EVEN
2855 023770          ENDDU
2856
2857
2858
2859
2860

```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 55  
ADD UNIT SECTION

2862  
2863  
2864  
2865  
2866  
2867  
2868  
2869  
2870  
2871  
2880  
2881 023772  
2882 023772  
2883  
2884  
2885  
2886  
2887  
2888  
2889  
2890

.SBTTL ADD UNIT SECTION

:/   
:/ 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.  
:/

BGNAU  
ENDAU



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 56  
HARDWARE TESTS

2892  
2893  
2894  
2895  
2896  
2897 023774  
2898  
2899  
2900  
2907  
2913  
2914  
2915  
2921  
2922  
2923  
2935  
2936  
2937  
2938  
2944

.SBTTL HARDWARE TESTS

:START OF CODE BLOCK WHICH IS USED AS DATA  
ROMMAP:;++  
: TEST TO ...  
:--

: BGNTST

: EXIT TST

: .EVEN  
: ENDTST

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 57  
 HARDWARE TESTS

2946 023774

2947

2948

2949 023774

2950

2951 023774

2952 023774

2953 024000

2954 024004

2955 024012

2956 024020

2957 024022

2958 024024

2959 024030

2960 024034

2961 024036

2962 024040

2963

2964 024042

2965 024046

2966 024052

2967 024060

2968 024070

2969

2970

2971 024074

2972 024102

2973 024110

2974

2975 024114

2976

2977

2978

```

BADHEAD
:***** TEST1 *****
:*VERIFY THAT REFERENCING UNIBUS DEVICE REGISTERS
:*DOES NOT CAUSE A TIME OUT TRAP
BADHEAD
:***** TEST1 *****

BGNTST
MOV      KMVCSR,R1      ;R1 CONTAINS KMV11 ADDRESSES
MOV      #7,R5          ;7 REGISTERS TO BE TESTED
MOV      #2$,4          ;SET OUT TIMEOUT TRAP
MOV      #340,6         ;LEVEL 7
1$:      TST            (R1) ;REFERENCE DEVICE REGISTERS
        NOP
        ESCAPE TST
        ADD      #2,R1    ;NEXT REGISTER
        DEC      R5       ;DEC REGISTER COUNT
        BNE     1$       ;BP IF NOT LAST REGISTER
        BR      3$

2$:      ADD      #4,SP
        MOV      R1,ADDR
        MOV      UUT,UNIT
        ERRHRD  0,TIM,PADFLT
        ESCAPE TST

3$:      MOV      SAVE4,4
        MOV      SAVE6,6
        ESCAPE TST

ENDTST
.EVEN
    
```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 58  
 HARDWARE TESTS

2980 024116

BADHEAD  
 :\*\*\*\*\* TEST2 \*\*\*\*\*  
 :CHECK PROM REVISION TO SEE IF COMPATIBLE WITH DIAGNOSTIC  
 BADHEAD  
 :\*\*\*\*\* TEST2 \*\*\*\*\*

2981  
 2982 024116

2983  
 2984  
 2985  
 2986  
 2987 024116

STARS 1  
 :READ LOCATION 2 OF THE PROM (ADDRESS 160002) WHICH CONTAINS PROM VERSION  
 : NUMBER  
 :CHECK IF DIAGNOSTIC AND PROM ARE COMPATIBLE AND GIVE AN ERROR IF NOT  
 STARS 1

2988  
 2989  
 2990  
 2991 024116  
 2992  
 2993  
 2994  
 2995  
 2996

2997 024116  
 2998 024116 004737 014400  
 2999 024122 004737 014502

BGNTST  
 JSR PC,CLRKMV :CLEAR ALL REGISTERS  
 JSR PC,MAINM1 :SET MAINT MODE

3000  
 3001  
 3002 024126 004537 014730  
 3003 024132 160002

REVPRO: JSR R5,READ :READ LOCATION 160002  
 .WORD 160002

3004  
 3005  
 3006 024134 023737 012430 012374  
 3007 024142 001410

CMP GDREV,BAD :LOOK IF COMPATIBLE  
 BEQ 1\$ :YES

3008  
 3009 024144  
 3010 024154 004737 012740  
 3011 024160

ERRHRD 7,EM0035 :REPORT THE ERROR  
 JSR PC,CHKMAX :CHECK IF TOO MANY ERROR  
 ESCAPE TST

3012 024164  
 3013 024164

1\$:  
 ENDTST

HARDWARE TESTS

3015  
3016  
3017 024166

BADHEAD  
:\*\*\*\*\* TEST3 \*\*\*\*\*  
:REAL TIME CLOCK TEST  
BADHEAD  
:\*\*\*\*\* TEST3 \*\*\*\*\*

3018  
3019 024166

3020  
3021  
3022  
3023  
3024  
3025  
3026 024166

STARS 1  
:TEST DESCRIPTION:  
:THIS TEST CHECK KMV11 REAL TIME CLOCK.  
:THE DCT11 FULLY EXECUTE THIS MICRO TEST AND GIVE A TEST RESULT  
:VIA CSR'S TO THE HOST COMPUTER.( TIMING IS CHECKED BY DCT11)

3027  
3028  
3029  
3030  
3031  
3032  
3033  
3034  
3035  
3036  
3037  
3038  
3039  
3040

:DCT11 ENABLE CLOCK,AND THEN SET UP CLOCK FOR 80 MS PERIODE  
:QBUS WAIT FOR AT LEAST 80 MS AND CHECK IF AN INTERUPT OCCUR  
:ON DCT11 SHIP AT VECTOR 130  
:TURN OF CLOCK, WAIT AGAIN FOR MORE THAN 80 MS AND CHECK THAT NO  
:INTERUPT OCCUR

3041  
3042  
3043  
3044  
3045  
3046  
3047  
3048  
3049  
3050  
3051  
3052  
3053  
3054  
3055  
3056  
3057  
3058  
3059

:ERROR REPORTING:           BSELO=200           IF TIMEOUT DURING TEST  
                              BSELO=100           IF ERROR DURING TEST  
                              BSELO=TEST NUB    IF NO KMV11 ANSWER  
                              BSELO=0           IF TEST IS OK  
:IF ERROR                    SEL6=1           IF NO INTERUPT OCCUR  
                              SEL6=2           IF BAD VECTOR  
                              SEL6=4           IF INTERUPT OCCUR WHEN CLOCK  
  IS NOT ENABLE  
                              SEL6=10          INTERUPT OCCUR TOO EARLY  
  
                              SEL2=EXPECTED VECTOR  
                              SEL4=OBTAINED VECTOR

3060  
3061 024166

: MICRO TEST NB= 27  
STARS 1

3062  
3063  
3064  
3065  
3066  
3067  
3068  
3069 024166

BGNTST



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 59-1  
 HARDWARE TESTS

3070	024166	004737	014400		JSR	PC,CLRKMV	:CLR REG	
3071	024172	004737	014502		JSR	PC,MAINM1	:SET MAINT MODE	
3072	024176	004537	014552	RTCLK:	JSR	R5,TSTNU8		
3073	024202	000027			.WORD	27		
3074								
3075	024204				WAITB	0,2	:WAIT FOR TEST EXECUTION	
3076								
3077								
3078	024224	004737	013102		JSR	PC,TSTERR	:CHECK BSELO	
3079	024230	000520			BR	1\$	:TEST OK	
3080	024232	000423			BR	2\$	:TIMEOUT ERROR	
3081	024234	000432			BR	3\$	:NO KMV ANSWER	
3082								
3083								
3084	024236	022777	000001	166216	CMP	#1,@KMVP06	:ERROR DURING TEST ,SEE WHICH ONE	
3085	024244	001436			BEQ	4\$	:NO INTERRUPT OCCUR	
3086								
3087	024246	022777	000002	166206	CMP	#2,@KMVP06		
3088	024254	001442			BEQ	5\$	:INT ON BAD VECTOR	
3089								
3090	024256	022737	000004	012462	CMP	#4,KMVP06		
3091	024264	001452			BEQ	6\$	:INT OCCUR WHEN CLOCK IS DESABLE	
3092								
3093								
3094								
3095	024266	022737	000010	012462	CMP	#10,KMVP06	:INTERUPT OCCUR TOO EARLY	
3096	024274	001456			BEQ	7\$		
3097								
3098	024276	000137	024452		JMP	10\$	:WRONG KMV11 ANSWER	
3099								
3100								
3101								
3102								
3103	024302				2\$:	ERRHRD	8,EM0006	:TIMEOUT ERROR
3104	024312	004737	012740		JSR	PC,CHKMAX	:CHECK IF TOO MANY ERROR	
3105	024316				ESCAPE	TST		
3106								
3107								
3108								
3109	024322				3\$:	ERRHRD	9,EM0004	:NO KMV11 ANSWER
3110	024332	004737	012740		JSR	PC,CHKMAX	:CHECK IF TOO MANY ERROR	
3111	024336				ESCAPE	TST		
3112								
3113								
3114	024342				4\$:	ERRHRD	10,EM0011	:NO INTERRUPT OCCUR
3115	024352	004737	012740		JSR	PC,CHKMAX	:CHECK IF TOO MANY ERROR	
3116	024356				ESCAPE	TST		
3117								
3118								
3119								
3120	024362	017737	166072	012402	5\$:	MOV	@KMVP04,VECT	:READ BAD VECT
3121	024370	012737	000130	002272	MOV	#130,GOOD		
3122	024376				ERRHRD	11,EM0007,PINTR	:INTERUPT OCCUR AT A BAD VECTOR	
3123	024406				ESCAPE	TST		
3124								
3125								
3126	024412				6\$:	ERRHRD	12,EM0012	:INT OCCUR WHEN CHIP IS DESABLE

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 59-2  
 HARDWARE TESTS

3127	024422	004737	012740		JSR PC,CHKMAX		
3128	024426				ESCAPE TST		:CHECK IF TOO MANY ERROR
3129							
3130							
3131							
3132							
3133	024432			7\$:	ERRHRD 13,EM0023		:INTERUPT OCCUR TOO EARLY
3134	024442	004737	012740		JSR PC,CHKMAX		:CHECK IF TOO MANY ERROR
3135	024446				ESCAPE TST		
3136							
3137							
3138							
3139							
3140							
3141							
3142	024452			10\$:	ERRHRD 14,EM0024		:UNKNWON ANSWER
3143	024462	004737	012740		JSR PC,CHKMAX		:CHECK IF TOO MANY ERROR
3144	024466				ESCAPE TST		
3145							
3146							
3147							
3148							
3149	024472	000240		1\$:	NOP		
3150	024474			ENDTST			
3151							
3152							
3153							









KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 61-1  
HARDWARE TESTS

3285  
3286  
3287 024722  
3288 024732 004737 012740  
3289 024736  
3290  
3291  
3292  
3293 024742  
3294 024742

GENOUT: ERRHRD 19,EM0014  
JSR PC,CHKMAX  
ESCAPE SUB

;NO ACTION ON GENERATOR OUTPUT  
;CHECK IF TOO MANY ERROR

BDROK0:  
ENDSUB



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 62-1  
HARDWARE TESTS

3353

3354

3355 025170

3356 025200 004737 012740

3357 025204

3358

3359

3360

3361 025210

3362 025210

3363 025212

GENO: ERRHRD 24,EM0014  
JSR PC,CHKMAX  
ESCAPE SUB

;NO ACTION ON GENERATOR OUTPUT  
;CHECK IF TOO MANY ERROR

BDROK1:  
ENDSUB  
ENDTST



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 63  
HARDWARE TESTS

3365 025214

3366

3367

3368 025214

3369

3370

3371

3372

3373

3374

3375

3376 025214

3377

3378

3379

3380

3381

3382

3383

3384

3385

3386

3387

3388

3389

3390

3391

3392

3393

3394

3395

3396

3397

3398

3399

3400

3401

3402

3403

3404

3405

3406

3407

3408

3409

3410

3411

3412

3413

3414

3415

3416

3417

3418

3419

## BADHEAD

:\*\*\*\*\* TESTS \*\*\*\*\*

:TRANSMIT DIFFERENT FRAMES (OF 500 WORDS) AT 2,4 KBAUDS SPEED IN INTERNAL

:MODE WITHOUT ANY INTERRUPT ON CHANNEL A

## BADHEAD

:\*\*\*\*\* TESTS \*\*\*\*\*

## STARS 1

:QBUS WRITE DIFFERENT TX TABLE OF 500 WORDS, LOAD IN KMV11 CSR'S

:THE TX AND RX TABLE ADDRESS ,THE TABLE LENGTH AND TRANSFER SPEED

:DCT11 EXECUTE THE TRANSFER IN INTERNAL MODE ON CHA AND WRITE BACK

:IN RX TABLE (TRANSFER FROM QBUS TO KMV11 =DMA)

:QBUS CHECK BSEL0 TO SEE THE STATUS OF THE TEST AND IF TEST DONE CHECK IF

:RX TABLE =TX TABLE

## :PARAMETERS SELECTION:

SEL2= TX TABLE ADDRESS

SEL4= TX TABLE LENGTH

BSEL6= EXTENDED ADDRESS OF TX TABLE

BSEL7= " " RX " "

SEL12= RX TABLE ADDRESS

SEL14= SPEED SELECTION

SEL16= ERROR STATUS

SEL10= RECEIVED BYTE COUNT DIFFERENCE BETWEEN RX AND TX TABLE

&gt;0 IF TX&gt;RX,&lt;0 IF TX&lt;RX

BSEL0= TEST STATUS

## :TEST STATUS DESCRIPTION:

BSEL0= 0 =TEST DONE CHECK RX TABLE

BSEL0= 200 =TIMEOUT ERROR

BSEL0= TSTNB =NO KMV11 ANSWER

BSEL0= 100 =ERROR DURING TEST ,LOOK WHICH ONE BY TESTING BSEL16

## :ERROR STATUS DESCRIPTION:

WHEN BSEL0=100,GIVE CONTAINT OF ERROR STATUS AND WORD COUNT DISCREPANCY

SEL16= BIT14=1 =FCS ERROR

SEL16= BIT13=1 =OVERRUN ERROR

SEL16= BIT8 =1 =ILLEGAL INTERRUPT ERROR

SEL16= BIT7 =1 =RX ABORT ERROR

SEL16= BIT6 =1 =UNDERRUN ERROR

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 63-1  
HARDWARE TESTS

3420  
3421  
3422  
3423  
3424  
3425  
3426  
3427  
3428  
3429  
3430  
3431 025214

: SEL16= BIT5 =1 =BYTE COUNT DISCREPANCY  
: SEL16= BIT4 =1 =DMA IN TIMEOUT ERROR  
: SEL16= BIT3 =1 =DMA OUT TIMEOUT ERROR  
: SEL16= BIT2 =1 =CLOCK PROBLEM (NO BUFFER EMPTY)  
: SEL16= BIT1 =1 =DATA COMPARE ERROR BETWEEN TX AND RX TABLE (USE  
: ONLY DURING SELF TEST)  
: MICRO DIAG TEST DESCRIPTION:  
: TEST 36 =TRANSMIT FRAMES AT 2,4KB SPEED ON CHANNEL A WHITHOUT INTERUPT  
: STARS 1

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 64  
HARDWARE TESTS

```

3433 025214          BGNTST
3434 025214 004737 014400      JSR    PC,CLRKMV      ;CLR REG
3435 025220 005037 002250      CLR    FLAG
3436 025224 004737 014502      JSR    PC,MAINM1     ;SET MAINT MODE
3437 025230 012737 000500 012416  MOV    #500,LENGTH  ;SELECT LENGTH
3438
3439 025236 012737 005473 012414  MOV    #KB2.4,TSPEED ;SELECT SPEED
3440
3441 025244 012703 000001      INTTX: MOV    #1,R3   ;SELECT A PATTERN
3442
3443
3444 025250 005203      TXSTAR: INC    R3     ;NEW ONE
3445 025252 013704 012416      MOV    LENGTH,R4    ;LOAD LENGTH
3446 025256 012702 002370      MOV    #TTABLE,R2   ;TX TABLE ADDRESS
3447 025262 004737 013160      10$:  JSR    PC,GENER  ;WRTE TX TABLE
3448 025266 013722 012400      MOV    DATA,(R2)+
3449 025272 005304      DEC    R4           ;ALL DONE?
3450 025274 001372      BNE    10$
3451
3452
3453
3454 025276 013704 012416      MOV    LENGTH,R4
3455 025302 012702 006370      11$:  MOV    #RTABLE,R2  ;CLEAR RX TABLE
3456 025306 005022      CLR    (R2)+
3457 025310 005304      DEC    R4
3458 025312 001375      BNE    11$
3459
3460
3461
3462
3463 025314 013777 012414 165146  MOV    TSPEED,@KMVP14 ;SEND TX SPEED
3464 025322 012777 002370 165126  MOV    #TTABLE,@KMVP02 ;SEND TX TABLE ADDRESS
3465 025330 013777 012416 165122  MOV    LENGTH,@KMVP04 ;LOAD TX TABLE ADDRESS
3466 025336 012777 006370 165122  MOV    #RTABLE,@KMVP12 ;LOAD RX TABLE ADDRESS
3467 025344 005077 165112      CLR    @KMVP06
3468
3469
3470
3471
3472
3473
3474 025350 004537 014552      JSR    R5,TSTNUB
3475 025354 000036      .WORD 36           ;DO TEST 36= CHA TEST
3476
3477
3478
3479 025356      2$:  WAITB 0,13       ;WAIT FOR TEST EXECUTION
3480
3481
3482 025376 004737 013102      JSR    PC,TSTERR   ;CHECK BSELO
3483
3484 025402 000427      BR    6$           ;TEST OK CHECK RX TABLE
3485 025404 000402      BR    3$           ;TIMEOUT ERROR
3486 025406 000401      BR    3$           ;NO KMV11 ANSWER
3487 025410 000410      BR    4$           ;CHECK SEL16 TO SEE WHICH ONE
3488
3489

```





KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 64-2  
HARDWARE TESTS

3547	025576			7\$:	ERRHRD	27,0,PRAMEF		:SHORT REPORT
3548	025606	005237	002250		INC	FLAG		
3549	025612	062702	000002		ADD	#2,R2		
3550	025616	062705	000002		ADD	#2,R5		:POINT NEXT ADDRESS
3551	025622	022737	000010	002250	CMP	#10,FLAG		:LOOK IF 10 REPORT
3552	025630	001322			BNE	RXCK		
3553								
3554	025632				ESCAPE	TST		
3555								
3556								
3557	025636			RXEND:				
3558								
3559								
3560								
3561	025636			ENDTST				

3563 025640

BADHEAD

3564  
3565  
3566 025640

:\*\*\*\*\* TEST6 \*\*\*\*\*  
:TRANSMIT DIFFERENT FRAMES (OF 500 WORDS) AT 2,4 KBAUDS SPEED IN INTERNAL  
:MODE WHITHOUT ANY INTERUPT ON CHANNEL B  
BADHEAD  
:\*\*\*\*\* TEST6 \*\*\*\*\*

3567  
3568  
3569  
3570  
3571  
3572  
3573  
3574 025640

STARS 1

:QBUS WRITTE DIFFERENT TX TABLE OF 500 WORDS, LOAD IN KMV11 CSR'S  
:THE TX AND RX TABLE ADDRESS ,THE TABLE LENGTH AND TRANSFER SPEED  
:  
:DCT11 EXECUTE THE TRANSFER IN INTERNAL MODE ON CHB AND WRITTE BACK  
:IN RX TABLE (TRANSFER FROM QBUS TO KMV11 =DMA)  
:QBUS CHECK BSEL0 TO SEE THE STATUS OF THE TEST AND IF TEST DONE CHECK IF  
:RX TABLE =TX TABLE

3575  
3576  
3577  
3578  
3579  
3580  
3581  
3582  
3583  
3584  
3585  
3586  
3587  
3588  
3589  
3590  
3591  
3592  
3593  
3594  
3595  
3596  
3597  
3598  
3599

:PARAMETERS SELECTION:

SEL2= TX TABLE ADDRESS  
SEL4= TX TABLE LENGTH  
BSEL6= EXTENDED ADDRESS OF TX TABLE  
BSEL7= RX  
SEL12= RX TABLE ADDRESS  
SEL14= SPEED SELECTION  
SEL16= ERROR STATUS  
SEL10= RECEIVED BYTE COUNT DIFFERENCE BETWEEN RX AND TX TABLE  
>0 IF TX>RX,<0 IF TX<RX  
BSEL0= TEST STATUS

3600  
3601  
3602  
3603  
3604  
3605  
3606  
3607

:TEST STATUS DESCRIPTION:

BSEL0= 0 =TEST DONE CHECK RX TABLE  
BSEL0= 200 =TIMEOUT ERROR  
BSEL0= TSTNB =NO KMV11 ANSWER  
BSEL0= 100 =ERROR DURING TEST ,LOOK WHICH ONE BY TESTING BSEL16

3608  
3609  
3610  
3611  
3612  
3613  
3614  
3615  
3616  
3617

:ERROR STATUS DESCRIPTION:

WHEN BSEL0=100,GIVE CONTAINIT OF ERROR STATUS AND WORD COUNT DISCREPANCY  
SEL16= BIT14=1 =FCS ERROR  
SEL16= BIT13=1 =OVERRUN ERROR  
SEL16= BIT8 =1 =ILLEGAL INTERUPT ERROR  
SEL16= BIT7 =1 =RX ABORT ERROR  
SEL16= BIT6 =1 =UNDERRUN ERROR

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 65-1  
HARDWARE TESTS

3618  
3619  
3620  
3621  
3622  
3623  
3624  
3625  
3626  
3627  
3628  
3629 025640

: SEL16= BIT5 =1 =BYTE COUNT DISCREPANCY  
: SEL16= BIT4 =1 =DMA IN TIMEOUT ERROR  
: SEL16= BIT3 =1 =DMA OUT TIMEOUT ERROR  
: SEL16= BIT2 =1 =CLOCK PROBLEM (NO BUFFER EMPTY)  
: SEL16= BIT1 =1 =DATA COMPARE ERROR BETWEEN TX AND RX TABLE (USE  
: ONLY DURING SELF TEST)  
: MICRO DIAG TEST DESCRIPTION:  
: TEST 37 =TRANSMIT FRAMES AT 2,4KB SPEED ON CHANNEL B WHITHOUT INTERUPT  
: STARS 1

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 66  
HARDWARE TESTS

```

3631 025640          BGNTST
3632 025640 004737 014400      JSR    PC,CLRKMV      ;CLR REG
3633 025644 005037 002250      CLR    FLAG
3634 025650 004737 014502      JSR    PC,MAINM1     ;SET MAINT MODE
3635 025654 012737 000500 012416  MOV    #500,LENGTH   ;SELECT LENGTH
3636
3637 025662 012737 005473 012414  MOV    #KB2.4,TSPEED ;SELECT SPEED
3638
3639 025670 012703 000001          MOV    #1,R3         ;SELECT A PATTERN
3640
3641
3642 025674 005203          BTXSTA: INC    R3      ;NEW ONE
3643 025676 013704 012416      MOV    LENGTH,R4     ;LOAD LENGTH
3644 025702 012702 002370      MOV    #TTABLE,R2    ;TX TABLE ADDRESS
3645 025706 004737 013160 10$:  JSR    PC,GENER      ;WRTE TX TABLE
3646 025712 013722 012400      MOV    DATA,(R2)+
3647 025716 005304          DEC    R4
3648 025720 001372          BNE    10$          ;ALL DONE?
3649
3650
3651
3652 025722 013704 012416          MOV    LENGTH,R4
3653 025726 012702 006370 11$:  MOV    #RTABLE,R2    ;CLEAR RX TABLE
3654 025732 005022          CLR    (R2)+
3655 025734 005304          DEC    R4
3656 025736 001375          BNE    11$
3657
3658
3659
3660
3661 025740 013777 012414 164522  MOV    TSPEED,@KMVP14 ;SEND TX SPEED
3662 025746 012777 002370 164502  MOV    #TTABLE,@KMVP02 ;SEND TX TABLE ADDRESS
3663 025754 013777 012416 164476  MOV    LENGTH,@KMVP04  ;LOAD TX TABLE ADDRESS
3664 025762 012777 006370 164476  MOV    #RTABLE,@KMVP12 ;LOAD RX TABLE ADDRESS
3665 025770 005077 164466          CLR    @KMVP06
3666
3667
3668
3669
3670
3671 025774 004537 014552 1$:  JSR    R5,TSTNUB     ;DO TEST 37= CHB TEST
3672 026000 000037          .WORD 37
3673
3674
3675
3676 026002 2$:  WAITB 0,13         ;WAIT FOR TEST EXECUTION
3677
3678
3679 026022 004737 013102          JSR    PC,TSTERR     ;CHECK BSELO
3680
3681 026026 000427          BR    6$             ;TEST OK CHECK RX TABLE
3682 026030 000402          BR    3$             ;TIMEOUT ERROR
3683 026032 000401          BR    3$             ;NO KMV11 ANSWER
3684 026034 000410          BR    4$             ;CHECK SEL16 TO SEE WHICH ONE
3685
3686
3687 026036 3$:  ERRHRD 25,EM0004   ;NO KMV11 ANSWER

```



HARDWARE TESTS

3688	026046	004737	012740		JSR	PC,CHKMAX			
3689	026052				ESCAPE	TST			;CHECK IF TOO MANY ERROR
3690									
3691									
3692									
3693	026056			4\$:					;ERROR DURING TEST READ ERROR STATUS
3694									;TO CHECK WHICH ONE
3695									
3696	026056	017737	164410	012424	MOV	@KMVP16,STAERR			;READ ERROR STATUS
3697									
3698	026064	017737	164374	012426	MOV	@KMVP10,WRDCNT			;READ WORD COUNT DISCREPANCY
3699									
3700	026072				ERRHRD	26,EM0115,PRSTER			;ERROR WHILE TX,RX FRAMES,GIVE ERROR
3701									;GIVE ERROR STATUS,WORD CNT DISCREPANCY
3702	026102				ESCAPE	TST			
3703									
3704									
3705									
3706									
3707									
3708	026106	012702	002370	6\$:	MOV	#TTABLE,R2			;LOAD TXTABLE ADDRESS
3709	026112	012705	006370		MOV	#RTABLE,R5			;RX TABLE ADDRESS
3710	026116	013704	012416		MOV	LENGTH,R4			;TABLE LENGTH
3711									
3712	026122	022225		BRXCK:	CMP	(R2)+,(R5)+			;CHECK RX AND TX TABLE
3713	026124	001007			BNE	BRXERR			
3714	026126	005304			DEC	R4			;ALL CHECK?
3715	026130	001374			BNE	BRXCK			;NO BRANCH
3716									
3717									
3718									
3719	026132	022703	000005		CMP	#5,R3			;ALL KIND OF PATTERN DONE?
3720	026136	001256			BNE	BTXSTA			;NO TRY WHITH NEW ONE
3721									
3722									
3723									
3724	026140	000137	026262		JMP	BRXEND			
3725									
3726	026144	162705	000002	BRXERR:	SUB	#2,R5			
3727	026150	162702	000002		SUB	#2,R2			
3728									
3729	026154	011237	012410		MOV	(R2),TXDATA			
3730	026160	011537	012412		MOV	(R5),RXDATA			
3731									
3732	026164	005737	002250		TST	FLAG			;LOOK IF 1ST ERROR
3733	026170	001014			BNE	7\$			
3734									
3735	026172				ERRHRD	27,EM0115,PFRAME			;DATA CMP ERROR
3736	026202	005237	002250		INC	FLAG			
3737	026206	062702	000002		ADD	#2,R2			;POINT NEXT ADDRESS
3738	026212	062705	000002		ADD	#2,R5			
3739	026216	000137	025476		JMP	RXCK			
3740									
3741	026222			7\$:	ERRHRD	27,0,PRAMEF			;SHORT REPORT
3742	026232	005237	002250		INC	FLAG			
3743	026236	062702	000002		ADD	#2,R2			
3744	026242	062705	000002		ADD	#2,R5			;POINT NEXT ADDRESS

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 66-2  
HARDWARE TESTS

3745 026246 022737 000010 002250  
3746 026254 001322  
3747  
3748 026256  
3749  
3750  
3751 026262  
3752  
3753  
3754  
3755 026262

CMP #10, FLAG  
BNE BRXCK  
ESCAPE TST

;LOOK IF 10 REPORT

BRXEND:

ENDTST

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 67  
 HARDWARE TESTS

3757  
 3758  
 3759  
 3760 026264

BADHEAD

:\*\*\*\*\* TEST7 \*\*\*\*\*  
 :TRANSMIT DIFFERENT FRAME OF VARIOUS LENGTH (FROM 2BYTES TO 2K BYTES)  
 :AT 56KBAUDS IN INTERNAL MODE ON CHANNEL A (TRANSMISSION WITH INTERRUPT)  
 BADHEAD  
 :\*\*\*\*\* TEST7 \*\*\*\*\*

3761  
 3762  
 3763 026264

3764  
 3765  
 3766  
 3767  
 3768  
 3769  
 3770  
 3771 026264

STARS 1

:QBUS WRITTE DIFFERENT TX TABLE OF VARIOUS LENGTH, LOAD IN KMV11 CSR'S  
 :THE TX AND RX TABLE ADDRESS ,THE TABLE LENGTH AND TRANSFER SPEED

3772  
 3773  
 3774  
 3775  
 3776  
 3777  
 3778  
 3779  
 3780  
 3781  
 3782  
 3783  
 3784  
 3785  
 3786  
 3787  
 3788  
 3789  
 3790  
 3791  
 3792

:DCT11 EXECUTE THE TRANSFER IN INTERNAL MODE ON CHA AND WRITTE BACK  
 :IN RX TABLE  
 :QBUS CHECK BSELO TO SEE THE STATUS OF THE TEST AND IF TEST DONE CHECK IF  
 :RX TABLE =TX TABLE  
 :SPEED=56KBAUDS

:PARAMETERS SELECTION:

SEL2= TX TABLE ADDRESS  
 SEL4= TX TABLE LENGTH  
 BSEL6= EXTENDED ADDRESS OF TX TABLE  
 BSEL7= RX  
 SEL12= RX TABLE ADDRESS  
 SEL14= SPEED SELECTION  
 SEL16= ERROR STATUS  
 BSELO= TEST STATUS

3793  
 3794  
 3795  
 3796  
 3797  
 3798  
 3799

:TEST STATUS DESCRIPTION:

BSELO= 0 =TEST DONE CHECK RX TABLE  
 BSELO= 200 =TIMEOUT ERROR  
 BSELO= TSTNB =NO KMV11 ANSWER  
 BSELO= 100 =ERROR DURING TEST ,LOOK WHICH ONE BY TESTING BSEL16

3800  
 3801  
 3802  
 3803  
 3804  
 3805  
 3806  
 3807  
 3808  
 3809  
 3810  
 3811

:ERROR STATUS DESCRIPTION:

WHEN BSELO=100,GIVE CONTAINT OF ERRGR STATUS AND WORD COUNT DISCREPANCY

SEL16= BIT14=1 =FCS ERROR  
 SEL16= BIT13=1 =OVERRUN ERROR  
 SEL16= BIT8 =1 =ILLEGAL INTERRUPT ERROR

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 67-1  
HARDWARE TESTS

3812  
3813  
3814  
3815  
3816  
3817  
3818  
3819  
3820  
3821  
3822  
3823  
3824  
3825  
3826 026264

: SEL16= BIT7 =1 =RX ABORT ERROR  
: SEL16= BIT6 =1 =UNDERRUN ERROR  
: SEL16= BIT5 =1 =WORD COUNT DISCREPANCY  
: SEL16= BIT4 =1 =DMA IN TIMEOUT ERROP  
: SEL16= BIT3 =1 =DMA OUT TIMEOUT ERROR  
: SEL16= BIT2 =1 =CLOCK PROBLEM (NO BUFFER EMPTY)  
: SEL16= BIT1 =1 =DATA COMPARE ERROR BETWEEN TX AND RX TABLE (USE  
: ONLY DURING SELF TEST)  
: MICRO DIAG TEST DESCRIPTION:  
: TEST 40 =TRANSMIT VARIOUS LENGTH FRAME AT 56 KBAUDS ON CHANNEL A  
: STARS 1



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 68  
 HARDWARE TESTS

```

3828 026264          BGNTST
3829 026264 004737 014400      JSR    PC,CLRKMV      ;CLR REG
3830 026270 004737 014502      JSR    PC,MAINM1     ;SET MAINT MODE
3831 026274 005037 002250      CLR    FLAG
3832
3833
3834 026300 012703 000005          MOV    #5,R3          ;SELECT RANDOM PATTERN
3835 026304 012737 000174 012414  MOV    #KB56,TSPEED  ;SELECT SPEED
3836
3837 026312 012737 000001 012416 TXLIAR: MOV    #1,LENGTH  ;START WITH 2 CHARACTERS
3838
3839 026320 013704 012416          TXLBGN: MOV    LENGTH,R4
3840 026324 012702 002370          MOV    #TTABLE,R2
3841 026330          BREAK
3842 026332 004737 013160 10$:  JSR    PC,GENER      ;WRITE TTABLE
3843 026336 013722 012400          MOV    DATA,(R2)+
3844 026342 005304          DEC    R4
3845 026344 001372          BNE    10$
3846
3847
3848 026346 013704 012416          MOV    LENGTH,R4          ;CLEAR RX TABLE
3849 026352 012702 006370          MOV    #RTABLE,R2
3850 026356 005022 20$:  CLR    (R2)+
3851 026360 005304          DEC    R4
3852 026362 001375          BNE    20$
3853
3854
3855
3856
3857
3858
3859 026364 013777 012414 164076  MOV    TSPEED,@KMVP14  ;SEND TX SPEED
3860 026372 012777 002370 164056  MOV    #TTABLE,@KMVP02 ;  .. TX TABLE ADDRESS
3861 026400 013777 012416 164052  MOV    LENGTH,@KMVP04  ;  .. " " " " LENGTH
3862 026406 012777 006370 164052  MOV    #RTABLE,@KMVP12 ;SEND RX TABLE ADDRESS
3863 026414 005077 164042  CLR    @KMVP06        ;CLR EXTENDED ADDRESS
3864
3865
3866
3867
3868 026420 004537 014552          JSR    R5,TSTNUB
3869 026424 000040          .WORD 40              ;DO TEST 40= CHA TEST
3870
3871
3872
3873 026426          2$:  WAITB 0,2          ;WAIT FOR TEST EXECUTION
3874
3875
3876 026446 004737 013102          JSR    PC,TSTERR      ;CHECK BSELO
3877
3878 026452 000427          BR    6$              ;TEST OK CHECK RX TABLE
3879 026454 000402          BR    3$              ;TIMEOUT ERROR
3880 026456 000401          BR    3$              ;NO KMV11 ANSWER
3881 026460 000410          BR    4$              ;CHECK SEL16 TO SEE WHICH ONE
3882
3883
3884 026462          3$:  ERRHRD 28,EM0004  ;NO KMV11 ANSWER

```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 68-1  
HARDWARE TESTS

3885	026472	004737	012740		JSR	PC,CHKMAX		:CHECK IF TOO MANY ERROR
3886	026476				ESCAPE	TST		
3887								
3888	026502			4\$:				:ERROR DURING TEST READ ERROR STATUS
3889								:TO CHECK WHICH ONE
3890								
3891	026502	017737	163764	012424	MOV	@KMVP16,STAERR		:READ ERROR STATUS
3892								
3893	026510	017737	163750	012426	MOV	@KMVP10,WRDCNT		:READ WORD COUNT DISCREPANCY
3894								
3895	026516				ERRHRD	29,EM0016,PRSTER		:ERROR WHILE TX,RX FRAMES,GIVE ERROR
3896								:GIVE ERROR STATUS,WORD CNT DISCREPANCY
3897	026526				ESCAPE	TST		
3898								
3899								
3900								
3901								
3902	026532	012702	002370	6\$:	MOV	#TTABLE,R2		:LOAD TX TABLE ADDRESS
3903	026536	012705	006370		MOV	#RTABLE,R5		: " RX
3904	026542	013704	012416		MOV	LENGTH,R4		: " TX TABLE LENGTH
3905								
3906								
3907	026546	022522			RXLCK:	CMP	(R5)+,(R2)+	:CMP TX AND RX TABLE
3908	026550	001015				BNE	RXLERR	:BR IF ERROR
3909	026552	005304				DEC	R4	:ALL DONE
3910	026554	001374				BNE	RXLCK	:NO
3911								
3912	026556	062737	000400	012416	ADD	#400,LENGTH		:CHANGE LENGTH
3913	026564	022737	002000	012416	CMP	#2000,LENGTH		:IS IT MAX?
3914	026572	100252			BPL	TXLBGN		:NO DO TEST AGAIN WITH NEW TABLE LENGTH
3915								: " " " " " "
3916								
3917	026574	005303			DEC	R3		:SELECT OTHER PATERNS
3918	026576	001245			BNE	TXLTAR		
3919								
3920	026600	000137	026722		JMP	RXLEND		
3921								
3922								
3923								
3924	026604	162705	000002		RXLERR:	SUB	#2,R5	
3925	026610	162702	000002			SUB	#2,R2	
3926								
3927	026614	011237	012410		MOV	(R2),TXDATA		
3928	026620	011537	012412		MOV	(R5),RXDATA		
3929								
3930	026624	005737	002250		TST	FLAG		:LOOK IF 1ST ERROR
3931	026630	001014			BNE	30\$		
3932								
3933	026632				ERRHRD	30,EM0016,PFRAME		:DATA CMP ERROR
3934	026642	005237	002250		INC	FLAG		
3935	026646	062702	000002		ADD	#2,R2		:POINT NEXT ADDRESS
3936	026652	062705	000002		ADD	#2,R5		
3937	026656	000137	025476		JMP	RXCK		
3938								
3939	026662			30\$:	ERRHRD	30,0,PRAMEF		:SHORT REPORT
3940	026672	005237	002250		INC	FLAG		
3941	026676	062702	000002		ADD	#2,R2		

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HARDWARE TESTS

3942	026702	062705	000002		ADD	#2,R5	:POINT NEXT ADDRESS
3943	026706	022737	000010	002250	CMP	#10,FLAG	:LOOK IF 10 REPORT
3944	026714	001314			BNE	RXLCK	
3945							
3946	026716				ESCAPE	TST	
3947							
3948							
3949							
3950							
3951	026722						
3952	026722						

RXLEND:  
ENDTST

3955  
3956  
3957  
3958 026724

BADHEAD  
:\*\*\*\*\* TEST8 \*\*\*\*\*  
:TRANSMIT DIFFERENT FRAME OF VARIOUS LENGTH (FROM 2BYTES TO 2K BYTES)  
:AT 56KBAUDS IN INTERNAL MODE ON CHANNEL B (TRANSMISSION WITH INTERUPT)  
BADHEAD  
:\*\*\*\*\* TEST8 \*\*\*\*\*

3959  
3960  
3961 026724

3962  
3963  
3964  
3965  
3966  
3967  
3968  
3969 026724

STARS 1  
:QBUS WRITTE DIFFERENT TX TABLE OF VARIOUS LENGTH, LOAD IN KMV11 CSR'S  
:THE TX AND RX TABLE ADDRESS ,THE TABLE LENGTH AND TRANSFER SPEED  
:  
:DCT11 EXECUTE THE TRANSFER IN INTERNAL MODE ON CHA AND CHB AND WRITTE BACK  
:IN RX TABLE  
:QBUS CHECK BSELO TO SEE THE STATUS OF THE TEST AND IF TEST DONE CHECK IF  
:RX TABLE =TX TABLE  
:SPEED=56KBAUDS

3970  
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3989  
3990  
3991  
3992  
3993  
3994  
3995  
3996  
3997  
3998  
3999  
4000  
4001  
4002  
4003  
4004  
4005  
4006  
4007  
4008  
4009

:PARAMETERS SELECTION:  
SEL2= TX TABLE ADDRESS  
SEL4= TX TABLE LENGTH  
BSEL6= EXTENDED ADDRESS OF TX TABLE  
BSEL7= RX  
SEL12= RX TABLE ADDRESS  
SEL14= SPEED SELECTION  
SEL16= ERROR STATUS  
BSELO= TEST STATUS

:TEST STATUS DESCRIPTION:  
BSELO= 0 =TEST DONE CHECK RX TABLE  
BSELO= 200 =TIMEOUT ERROR  
BSELO= TSTNB =NO KMV11 ANSWER  
BSELO= 100 =ERROR DURING TEST ,LOOK WHICH ONE BY TESTING BSEL16

:ERROR STATUS DESCRIPTION:  
WHEN BSELO=100,GIVE CONTAINT OF ERROR STATUS AND WORD COUNT DISCREPANCY  
:  
SEL16= BIT14=1 =FCS ERROR  
SEL16= BIT13=1 =OVERRUN ERROR  
SEL16= BIT8 =1 =ILLEGAL INTERUPT ERROR  
:



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HARDWARE TESTS

4010  
4011  
4012  
4013  
4014  
4015  
4016  
4017  
4018  
4019  
4020  
4021  
4022  
4023  
4024 026724

: SEL16= BIT7 =1 =RX ABORT ERROR  
: SEL16= BIT6 =1 =UNDERRUN ERROR  
: SEL16= BIT5 =1 =WORD COUNT DISCREPANCY  
: SEL16= BIT4 =1 =DMA IN TIMEOUT ERROR  
: SEL16= BIT3 =1 =DMA OUT TIMEOUT ERROR  
: SEL16= BIT2 =1 =CLOCK PROBLEM (NO BUFFER EMPTY)  
: SEL16= BIT1 =1 =DATA COMPARE ERROR BETWEEN TX AND RX TABLE (USE  
: ONLY DURING SELF TEST)  
: MICRO DIAG TEST DESCRIPTION:  
: TEST 41 =TRANSMIT VARIOUS LENGTH FRAME AT 56 KBAUDS ON CHANNEL B  
: STARS 1

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HARDWARE TESTS

```

4026 026724          BGNTST
4027 026724 004737 014400      JSR    PC,CLRKMV      ;CLR REG
4028 026730 004737 014502      JSR    PC,MAINM1     ;SET MAINT MODE
4029 026734 005037 002250      CLR    FLAG
4030
4031
4032 026740 012703 000005          MOV    #5,R3          ;SELECT RANDOM PATTERN
4033 026744 012737 000174 012414  MOV    #KB56,TSPEED  ;SELECT SPEED
4034
4035 026752 012737 000001 012416  BXLTA: MOV    #1,LENGTH ;START WITH 2 CHARACTERS
4036
4037 026760 013704 012416  BXLBGN: MOV    LENGTH,R4
4038 026764 012702 002370      MOV    #TTABLE,R2
4039 026770          BREAK
4040 026772 004737 013160 10$: JSR    PC,GENER      ;WRITE TTABLE
4041 026776 013722 012400      MOV    DATA,(R2)+
4042 027002 005304          DEC    R4
4043 027004 001372          BNE    10$
4044
4045
4046 027006 013704 012416          MOV    LENGTH,R4          ;CLEAR RX TABLE
4047 027012 012702 006370          MOV    #RTABLE,R2
4048 027016 005022 20$: CLR    (R2)+
4049 027020 005304          DEC    R4
4050 027022 001375          BNE    20$
4051
4052
4053
4054
4055
4056
4057 027024 013777 012414 163436  MOV    TSPEED,@KMVP14 ;SEND TX SPEED
4058 027032 012777 002370 163416  MOV    #TTABLE,@KMVP02 ;TX TABLE ADDRESS
4059 027040 013777 012416 163412  MOV    LENGTH,@KMVP04  ;LENGTH
4060 027046 012777 006370 163412  MOV    #RTABLE,@KMVP12 ;SEND RX TABLE ADDRESS
4061 027054 005077 163402          CLR    @KMVP06        ;CLR EXTENDED ADDRESS
4062
4063
4064
4065 027060 004537 014552          JSR    R5,TSTNUB
4066 027064 000041          .WORD 41              ;DO TEST 41= CHB TEST
4067
4068
4069 027066          2$: WAITB 0,2          ;WAIT FOR TEST EXECUTION
4070
4071
4072 027106 004737 013102          JSR    PC,TSTERR      ;CHECK BSELO
4073
4074 027112 000427          BR    6$              ;TEST OK CHECK RX TABLE
4075 027114 000402          BR    3$              ;TIMEOUT ERROR
4076 027116 000401          BR    3$              ;NO KMV11 ANSWER
4077 027120 000410          BR    4$              ;CHECK SEL16 TO SEE WHICH ONE
4078
4079
4080 027122          3$: ERRHRD 28,EM0004 ;NO KMV11 ANSWER
4081 027132 004737 012740      JSR    PC,CHKMAX     ;CHECK IF TOO MANY ERROR
4082 027136          ESCAPE TST

```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 71-1  
 HARDWARE TESTS

4083										
4084	027142				4\$:					:ERROR DURING TEST READ ERROR STATUS
4085										:TO CHECK WHICH ONE
4086										
4087	027142	017737	163324	012424		MOV	@KMVP16,STAERR			:READ ERROR STATUS
4088										
4089	027150	017737	163310	012426		MOV	@KMVP10,WRDCNT			:READ WORD COUNT DISCREPANCY
4090										
4091	027156					ERRHRD	29,EM0116,PRSTER			:ERROR WHILE TX,RX FRAMES,GIVE ERROR
4092										:GIVE ERROR STATUS,WORD CNT DISCREPANCY
4093	027166					ESCAPE	TST			
4094										
4095										
4096										
4097										
4098	027172	012702	002370		6\$:	MOV	#TTABLE,R2			:LOAD TX TABLE ADDRESS
4099	027176	012705	006370			MOV	#RTABLE,R5			: " RX "
4100	027202	013704	012416			MOV	LENGTH,R4			: " TX TABLE LENGTH
4101										
4102										
4103	027206	022522			BXLCK:	CMP	(R5)+,(R2)+			:CMP TX AND RX TABLE
4104	027210	001015				BNE	BXLERR			:BR IF ERROR
4105	027212	005304				DEC	R4			:ALL DONE
4106	027214	001374				BNE	BXLCK			:NO
4107										
4108	027216	062737	000400	012416		ADD	#400,LENGTH			:CHANGE LENGTH
4109	027224	022737	002000	012416		CMP	#2000,LENGTH			:IS IT MAX?
4110	027232	100252				BPL	BXLBGN			:NO DO TEST AGAIN WITH NEW TABLE
4111										LENGTH
4112										
4113	027234	005303				DEC	K3			:SELECT OTHER PATERNS
4114	027236	001245				BNE	BXLTR			
4115										
4116	027240	000137	027362			JMP	BXLEND			
4117										
4118										
4119										
4120	027244	162705	000002		BXLERR:	SUB	#2,R5			
4121	027250	162702	000002			SUB	#2,R2			
4122										
4123	027254	011237	012410			MOV	(R2),TXDATA			
4124	027260	011537	012412			MOV	(R5),RXDATA			
4125										
4126	027264	005737	002250			TST	FLAG			:LOOK IF 1ST ERROR
4127	027270	001014				BNE	30\$			
4128										
4129	027272					ERRHRD	30,EM0116,PFRAME			:DATA CMP ERROR
4130	027302	005237	002250			INC	FLAG			
4131	027306	062702	000002			ADD	#2,R2			:POINT NEXT ADDRESS
4132	027312	062705	000002			ADD	#2,R5			
4133	027316	000137	000000G			JMP	BXCK			
4134										
4135	027322				30\$:	ERRHRD	30,0,PRAMEF			:SHORT REPORT
4136	027332	005237	002250			INC	FLAG			
4137	027336	062702	000002			ADD	#2,R2			
4138	027342	062705	000002			ADD	#2,R5			:POINT NEXT ADDRESS
4139	027346	022737	000010	002250		CMP	#10,FLAG			:LOOK IF 10 REPORT

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HARDWARE TESTS

4140 027354 001314

BNE BXLCK

4141

4142 027356

ESCAPE TST

4143

4144

4145

4146

4147 027362

BXLEND:

4148 027362

ENDTST



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HARDWARE TESTS

4150  
4151 027364

BADHEAD

:\*\*\*\*\* TEST9 \*\*\*\*\*

4152 :TRANSMIT DIFFERENT FRAMES OF VARIOUS LENGTH IN EXTERNAL LOOP BACK  
4153 :MODE ON CHANNEL A

4154 027364

BADHEAD

:\*\*\*\*\* TEST9 \*\*\*\*\*

4155  
4156  
4157  
4158  
4159  
4160  
4161 027364

STARS 1

4162 :  
4163 :AT BEGINNING OF TEST ,CHECK IF LOOP BACK CONNECTORS ARE INSTALLED  
4164 :OR NOT:IF NOT INSTALLED = EXIT TEST AND GIVE ERROR MESSAGE  
4165 :\*\*\*\*\*

4166 :  
4167 :  
4168 :  
4169 :  
4170 :  
4171 :QBUS WRITTE DIFFERENT TX TABLE OF VARIOUS LENGTH, LOAD IN KMV11 CSR'S  
4172 :THE TX AND RX TABLE ADDRESS ,THE TABLE LENGTH AND TRANSFER SPEED (56KB)

4173 :  
4174 :  
4175 :  
4176 :DCT11 EXECUTE THE TRANSFER IN EXTERNAL MODE ON CHA AND WRITTE BACK  
4177 :IN RX TABLE  
4178 :QBUS CHECK BSELO TO SEE THE STATUS OF THE TEST AND IF TEST DONE CHECK IF  
4179 :RX TABLE =TX TABLE

4180 :  
4181 :  
4182 :PARAMETERS SELECTION:  
4183 :SEL2= TX TABLE ADDRESS  
4184 :SEL4= TX TABLE LENGTH  
4185 :BSEL6= EXTENDED ADDRESS OF TX TABLE  
4186 :BSEL7= " " RX " "  
4187 :SEL12= RX TABLE ADDRESS  
4188 :SEL14= SPEED SELECTION  
4189 :SEL16= ERROR STATUS  
4190 :BSELO= TEST STATUS  
4191 :SEL10= RECEIVED BYTE COUNT DIFFERENCE BETWEEN RX AND TX TABLE  
4192 : >0 IF TX>RX,<0 IF TX<RX

4193 :  
4194 :  
4195 :  
4196 :TEST STATUS DESCRIPTION:  
4197 :BSELO= 0 =TEST DONE CHECK RX TABLE  
4198 :BSELO= 200 =TIMEOUT ERROR  
4199 :BSELO= TSTNB =NO KMV11 ANSWER  
4200 :BSELO= 100 =ERROR DURING TEST ,LOOK WHICH ONE BY TESTING BSEL16

4201 :  
4202 :  
4203 :  
4204 :ERROR STATUS DESCRIPTION:

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 HARDWARE TESTS

4205  
 4206  
 4207  
 4208  
 4209  
 4210  
 4211  
 4212  
 4213  
 4214  
 4215  
 4216  
 4217  
 4218  
 4219  
 4220  
 4221  
 4222  
 4223  
 4224  
 4225  
 4226  
 4227  
 4228  
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 4230  
 4231  
 4232  
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 4237  
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 4241  
 4242  
 4243  
 4244  
 4245  
 4246  
 4247 027364

WHEN BSELO=100,GIVE CONTAINIT OF ERROR STATUS AND WORD COUNT DISCREPANCY

SEL16= BIT14=1 =FCS ERROR  
 SEL16= BIT13=1 =OVERRUN ERROR  
 SEL16= BIT8 =1 =ILLEGAL INTERUPT ERROR  
 SEL16= BIT7 =1 =RX ABORT ERROR  
 SEL16= BIT6 =1 =UNDERRUN ERROR  
 SEL16= BIT5 =1 =WORD COUNT DISCREPANCY  
 SEL16= BIT4 =1 =DMA IN TIMEOUT ERROR  
 SEL16= BIT3 =1 =DMA OUT TIMEOUT ERROR  
 SEL16= BIT2 =1 =CLOCK PROBLEM  
 SEL16= BIT1 =1 =DATA COMPARE ERROR BETWEEN TX AND RX TABLE (USE  
 ONLY DURING SELF TEST)

: MICRO DIAG TEST DESCRIPTION:  
 : TEST 42 =TRANSMIT VARIOUS LENGTH FRAME AT 56 KBAUDS SPEED ON CHANNEL A  
 : IN EXTERNAL LOOP BACK MODE

: CAUTION:

: RUN ONLY WITH EXTERNAL LOOP BACK CONNECTOR:

: NOTE:FOR KMV11-B BOTH CONNECTORS MUST BEINSTALLED

: TO BE FULLY TESTED ,KMV11 DIAGNOSTIC MUST BE RUN WITH RS422 AND RS423  
 : EXTERNAL LOOP BACK CONECTOR

: FOR RS422 PLUG LOOP BACK CONNECTOR 2P-E155A-00 AT THE END OF 2P-E14UA-00  
 : MODEM CABLE.

: FOR RS423 PLUG LOOP BACK CONNECTOR H325 AT THE END OF 2P-E14VA-00  
 : MODEM CABLE.

: STARS 1

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HARDWARE TESTS

4249	027364				BGNTST				
4250	027364	004737	014400			JSR	PC,CLRKMV		:CLEAR REGISTERS
4251	027370	004737	014600			JSR	PC,CKKMV		:LOOK IF LOOP BACK CON INSTALLED?
4252	027374	005737	012474			TST	LOOP		:IS LOOP BIT=1?
4253	027400	001412				BEQ	BGNTXA		:YES GO ON TEST
4254	027402					PRINTF	#MLOOP		:NO LOOP BACK PLUGGED .THE MODULE
4255									:WILL NOT BE TESTED IS EXTERNAL LOOP
4256	027422	000137	030060			JMP	RXAEND		
4257									
4258									
4259									
4260	027426	004737	014502		BGNTXA:	JSR	PC,MAINM1		:SET MAINT MODE
4261	027432	005037	002250			CLR	FLAG		
4262									
4263	027436	012703	000005			MOV	#5,R3		:SELECT RANDOM PATTERN
4264	027442	012737	000174	012414		MOV	#KB56,TSPEED		:SELECT SPEED
4265									
4266	027450	012737	000001	012416	TXATAR:	MOV	#1,LENGTH		:1ST TABLE LENGTH(200 WORDS)
4267									
4268	027456	013704	012416		TXABGN:	MOV	LENGTH,R4		
4269	027462	012702	002370			MOV	#TTABLE,R2		
4270	027466					BREAK			
4271	027470	004737	013160		10\$:	JSR	PC,GENER		:WRITE TABLE
4272	027474	013722	012400			MOV	DATA,(R2)+		
4273	027500	005304				DEC	R4		
4274	027502	001372				BNE	10\$		
4275									
4276									
4277									
4278	027504	013704	012416			MOV	LENGTH,R4		:CLEAR RX TABLE
4279	027510	012702	006370		20\$:	MOV	#RTABLE,R2		
4280	027514	005022				CLR	(R2)+		
4281	027516	005304				DEC	R4		
4282	027520	001375				BNE	20\$		
4283									
4284									
4285									
4286									
4287									
4288									
4289									
4290	027522	013777	012414	162740		MOV	TSPEED,@KMVP14		:SEND TX SPEED
4291	027530	012777	002370	162720		MOV	#TTABLE,@KMVP02		:TX TABLE ADDRESS
4292	027536	013777	012416	162714		MOV	LENGTH,@KMVP04		:LENGTH
4293	027544	012777	006370	162714		MOV	#RTABLE,@KMVP12		:SEND RX TABLE ADDRESS
4294	027552	005077	162704			CLR	@KMVP06		:CLR EXTENDED ADDRESS
4295									
4296									
4297									
4298									
4299									
4300	027556	004537	014552		1\$:	JSR	R5,TSTNUB		
4301	027562	000042				.WORD	42		:DO TEST 42= CHB TEST
4302									
4303									
4304									
4305	027564				2\$:	WAITB	0,3		:WAIT FOR TEST EXECUTION



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HARDWARE TESTS

```

4306
4307
4308 027604 004737 013102          JSR      PC,TSTERR          ;CHECK BSELO
4309
4310 027610 000427          BR       6$                ;TEST OK CHECK RX TABLE
4311 027612 000402          BR       3$                ;TIMEOUT ERROR
4312 027614 000401          BR       3$                ;NO KMV11 ANSWER
4313 027616 000410          BR       4$                ;CHECK SEL16 TO SEE WHICH ONE
4314
4315
4316 027620          3$:  ERRHRD  32,EM0004      ;NO KMV11 ANSWER
4317 027630 004737 012740      JSR      PC,CHKMAX        ;TOO MANY ERROR?
4318 027634          ESCAPE  TST
4319
4320
4321 027640          4$:
4322
4323
4324 027640 017737 162626 012424      MOV      @KMVP16,STAERR   ;READ ERROR STATUS
4325
4326 027646 017737 162612 012426      MOV      @KMVP10,WRDCNT   ;READ WORD COUNT DISCREPANCY
4327
4328 027654          ERRHRD  33,EM0017,PRSTER ;ERROR WHILE TX,RX FRAMES,GIVE ERROR
4329
4330 027664          ESCAPE  TST            ;GIVE ERROR STATUS,WORD CNT DISCREPANCY
4331
4332
4333
4334
4335
4336 027670 012702 002370          6$:  MOV      #TTABLE,R2    ;LOAD TABLE PARAMETERS
4337 027674 012705 006370          MOV      #RTABLE,R5
4338 027700 013704 012416          MOV      LENGTH,R4
4339
4340 027704 022225          RXACK:  CMP      (R2)+,(R5)+ ;CHECK TX AND RX TABLE
4341 027706 001015          BNE     RXAERR
4342 027710 005304          DEC     R4
4343 027712 001374          BNE     RXACK
4344
4345 027714 062737 000400 012416      ADD     #400,LENGTH       ;CHANGE LENGTH
4346 027722 022737 002000 012416      CMP     #2000,LENGTH
4347 027730 100252          BPL     TXABGN
4348 027732 005303          DEC     R3
4349 027734 001245          BNE     TXATAR
4350 027736 000137 030060          JMP     RXAEND            ;SELECT NEW PATERN
4351
4352
4353
4354 027742 162705 000002          RXAERR: SUB     #2,R5
4355 027746 162702 000002          SUB     #2,R2
4356
4357 027752 011237 012410          MOV     (R2),TXDATA
4358 027756 011537 012412          MOV     (R5),RXDATA
4359
4360 027762 005737 002250          TST     FLAG
4361 027766 001014          BNE     30$              ;LOOK IF 1ST ERROR
4362

```



HARDWARE TESTS

4363	027770			ERRHRD	34,EM0017,PFRAME		:DATA CMP ERROR
4364	030000	005237	002250	INC	FLAG		
4365	030004	062702	000002	ADD	#2,R2		:POINT NEXT ADDRESS
4366	030010	062705	000002	ADD	#2,R5		
4367	030014	000137	027704	JMP	RXACK		
4368							
4369	030020			30\$: ERRHRD	34,0,PRAMEF		:SHORT REPORT
4370	030030	005237	002250	INC	FLAG		
4371	030034	062702	000002	ADD	#2,R2		
4372	030040	062705	000002	ADD	#2,R5		:POINT NEXT ADDRESS
4373	030044	022737	000010	CMP	#10,FLAG	002250	:LOOK IF 10 REPORT
4374	030052	001314		BNE	RXACK		
4375							
4376	030054			ESCAPE	TST		
4377							
4378							
4379							
4380							
4381							
4382	030060			RXAEND:			
4383	030060			ENDTST			

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HARDWARE TESTS

4385 030062

BADHEAD

4386

:\*\*\*\*\* TEST10 \*\*\*\*\*

4387

:TRANSMIT DIFFERENT FRAMES OF VARIOUS LENGTH IN EXTERNAL LOOP BACK

4388 030062

:MODE ON CHANNEL B

4389

BADHEAD

4390

:\*\*\*\*\* TEST10 \*\*\*\*\*

4391

4392

4393

4394

4395

4396 030062

STARS 1

4397

4398

:AT BEGINNING OF TEST ,CHECK IF LOOP BACK CONNECTORS ARE INSTALLED

4399

:OR NOT:IF NOT INSTALLED = EXIT TEST AND GIVE ERROR MESSAGE

4400

:\*\*\*\*\*

4401

4402

4403

4404

4405

4406

:QBUS WRITTE DIFFERENT TX TABLE OF VARIOUS LENGTH, LOAD IN KMV11 CSR'S  
:THE TX AND RX TABLE ADDRESS ,THE TABLE LENGTH AND TRANSFER SPEED (56KB)

4407

4408

4409

4410

4411

:DCT11 EXECUTE THE TRANSFER IN EXTERNAL MODE ON CHA AND WRITTE BACK

4412

:IN RX TABLE

4413

:QBUS CHECK BSEL0 TO SEE THE STATUS OF THE TEST AND IF TEST DONE CHECK IF

4414

:RX TABLE =TX TABLE

4415

4416

4417

:PARAMETERS SELECTION:

4418

SEL2= TX TABLE ADDRESS

4419

SEL4= TX TABLE LENGTH

4420

BSEL6= EXTENDED ADDRESS OF TX TABLE

4421

BSEL7= " " RX "

4422

SEL12= RX TABLE ADDRESS

4423

SEL14= SPEED SELECTION

4424

SEL16= ERROR STATUS

4425

BSEL0= TEST STATUS

4426

SEL10= RECEIVED BYTE COUNT

DIFFERENCE BETWEEN RX AND TX TABLE  
>0 IF TX>RX,<0 IF TX<RX

4427

4428

4429

4430

4431

:TEST STATUS DESCRIPTION:

4432

BSEL0= 0 =TEST DONE CHECK RX TABLE

4433

BSEL0= 200 =TIMEOUT ERROR

4434

BSEL0= TSTNB =NO KMV11 ANSWER

4435

BSEL0= 100 =ERROR DURING TEST ,LOOK WHICH ONE BY TESTING BSEL16

4436

4437

4438

4439

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 74-1  
HARDWARE TESTS

```

4440 :ERROR STATUS DESCRIPTION:
4441 :
4442 :   WHEN BSEL0=100,GIVE CONTAINIT OF ERROR STATUS AND WORD COUNT DISCREPANCY
4443 :
4444 :
4445 :   SEL16= BIT14=1 =FCS ERROR
4446 :   SEL16= BIT13=1 =OVERRUN ERROR
4447 :   SEL16= BIT8 =1 =ILLEGAL INTERRUPT ERROR
4448 :   SEL16= BIT7 =1 =RX ABORT ERROR
4449 :   SEL16= BIT6 =1 =UNDERRUN ERROR
4450 :   SEL16= BIT5 =1 =WORD COUNT DISCREPANCY
4451 :   SEL16= BIT4 =1 =DMA IN TIMEOUT ERROR
4452 :   SEL16= BIT3 =1 =DMA OUT TIMEOUT ERROR
4453 :   SEL16= BIT1 =1 =DATA COMPARE ERROR BETWEEN TX AND RX TABLE (USE
4454 :                                     ONLY DURING SELF TEST)
4455 :
4456 :
4457 :
4458 :MICRO DIAG TEST DESCRIPTION:
4459 :TEST 43 =TRANSMIT VARIOUS LENGTHFRAME AT 56 KBAUDS SPEED ON CHANNEL B
4460 :          IN EXTERNAL LOOP BACK MODE
4461 :
4462 :
4463 :
4464 :
4465 :CAUTION:
4466 :-----
4467 :RUN ONLY WITH EXTERNAL LOOP BACK CONNECTOR:
4468 :
4469 :
4470 :NOTE:FOR KMV11-B BOTH CONNECTORS MUST BEINSTALLED
4471 :
4472 :TO BE FULLY TESTED ,KMV11 DIAGNOSTIC MUST BE RUN WITH RS422 AND RS423
4473 :EXTERNAL LOOP BACK CONECTOR
4474 :
4475 :
4476 :
4477 :FOR RS422 PLUG LOOP BACK CONNECTOR 2P-E155A-00 AT THE END OF 2P-E14UA-00
4478 :MODEM CABLE.
4479 :
4480 :FOR RS423 PLUG LOOP BACK CONNECTOR H325 AT THE END OF 2P-E14VA-00
4481 :MODEM CABLE.
4482 :CAUTION:
4483 :-----
4484 :RUN ONLY WITH EXTERNAL LOOP BACK CONNECTOR:
4485 :
4486 :
4487 :NOTE:FOR KMV11-B BOTH CONNECTORS MUST BEINSTALLED
4488 :
4489 :TO BE FULLY TESTED ,KMV11 DIAGNOSTIC MUST BE RUN WITH RS422 AND RS423
4490 :EXTERNAL LOOP BACK CONECTOR
4491 :
4492 :
4493 :
4494 :FOR RS422 PLUG LOOP BACK CONNECTOR 2P-E155A-00 AT THE END OF 2P-E14UA-00
4495 :MODEM CABLE.
4496 :

```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 74-2  
HARDWARE TESTS

4497  
4498  
4499  
4500  
4501  
4502  
4503 030062

:FOR RS423 PLUG LOOP BACK CONNECTOR H325 AT THE END OF 2P-E14VA-00  
:MODEM CABLE.  
:  
:  
:  
:  
STARS 1



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 75  
 HARDWARE TESTS

```

4505 030062          BGNTST
4506 030062 004737 014400      JSR    PC,CLRKMV
4507 030066 004737 014600      JSR    PC,CKKMV
4508
4509
4510 030072 005737 012474      TST    LOOP
4511 030076 001412              BEQ    BGNTXD
4512 030100              PRINTF #MLOOP
4513
4514
4515 030120 000137 030552      JMP    RXDEND
4516
4517
4518
4519 030124 004737 014502      BGNTXD: JSR    PC,MAINM1
4520
4521 030130 012703 000005      MOV    #5,R3
4522 030134 012737 000174 012414  MOV    #KB56,TSPEED
4523
4524 030142 012737 000001 012416  TXI AR: MOV    #1,LENGTH
4525
4526 030150 013704 012416      TXDBGN: MOV    LENGTH,R4
4527 030154 012702 002370      MOV    #RTABLE,R2
4528 030160
4529 030162 004737 013160      10$:  JSR    PC,GENER
4530 030166 013722 012400      MOV    DATA,(R2)+
4531 030172 005304              DEC    R4
4532 030174 001372              BNE    10$
4533
4534
4535 030176 013704 012416      MOV    LENGTH,R4
4536 030202 012702 006370      20$:  MOV    #RTABLE,R2
4537 030206 005022              CLR    (R2)+
4538 030210 005304              DEC    R4
4539 030212 001375              BNE    20$
4540
4541
4542
4543
4544
4545 030214 013777 012414 162246  MOV    TSPEED,@KMVP14
4546 030222 012777 002370 162226  MOV    #RTABLE,@KMVP02
4547 030230 013777 012416 162222  MOV    LENGTH,@KMVP04
4548 030236 012777 006370 162222  MOV    #RTABLE,@KMVP12
4549 030244 005077 162212      CLR    @KMVP06
4550
4551
4552
4553
4554
4555 030250 004537 014552      1$:  JSR    R5,TSTNUB
4556 030254 000043              .WORD 43
4557
4558
4559
4560 030256      2$:  WAITB 0,3
4561

```

:LOOK IF LOOP BACK CON INSTALLED?

:IS LOOP BIT=1?  
 :YES GO ON TEST  
 :NO LOOP BACK PLUGGED .THE MODULE  
 :WILL NOT BE TESTED IS EXTERNAL LOOP

:SET MAINT MODE

:SELECT RANDOM PATTERN  
 :SELECT SPEED

:1ST TABLE LENGTH

:WRITE TABLE

:CLEAR RX TABLE

:SEND TX SPEED  
 : .. TX TABLE ADDRESS  
 : .. .. LENGTH  
 :SEND RX TABLE ADDRESS  
 :CLR EXTENDED ADDRESS

:DO TEST 43= CHB TEST

:WAIT FOR TEST EXECUTION

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 75-1  
 HARDWARE TESTS

4562									
4563	030276	004737	013102		JSR	PC,ISTERR			:CHECK BSELO
4564									
4565	030302	000427			BR	6\$			:TEST OK CHECK RX TABLE
4566	030304	000402			BR	3\$			:TIMEOUT ERROR
4567	030306	000401			BR	3\$			:NO KMV11 ANSWER
4568	030310	000410			BR	4\$			:CHECK SEL16 TO SEE WHICH ONE
4569									
4570									
4571	030312			3\$:	ERRHRD	36,EM0004			:NO KMV11 ANSWER
4572	030322	004737	012740		JSR	PC,CHKMAX			:TOO MANY ERROR, DROP IF YES
4573	030326				ESCAPE	TST			
4574									
4575									
4576	030332			4\$:					:ERROR DURING TEST READ ERROR STATUS
4577									:TO CHECK WHICH ONE
4578									
4579	030332	017737	162134	012424	MOV	@KMVP16,STAERR			:READ ERROR STATUS
4580									
4581	030340	017737	162120	012426	MOV	@KMVP10,WRDCNT			:READ WORD COUNT DISCREPANCY
4582									
4583	030346				ERRHRD	37,EM0020,PRSTER			:ERROR WHILE TX,RX FRAMES,GIVE ERROR
4584									:GIVE FRROR STATUS,WORD CNT DISCREPANCY
4585	030356				ESCAPE	TST			
4586									
4587									
4588									
4589									
4590									
4591	030362	012702	002370	6\$:	MOV	#TTABLE,R2			
4592	030366	012705	006370		MOV	#RTABLE,R5			
4593	030372	013704	012416		MOV	LENGTH,R4			
4594	030376	022225		RXDCK:	CMP	(R2)+,(R5)+			
4595	030400	001015			BNE	RXDERR			
4596	030402	005304			DEC	R4			
4597	030404	001374			BNE	RXDCK			
4598									
4599	030406	062737	000400	012416	ADD	#400,LENGTH			
4600	030414	022737	002000	012416	CMP	#2000,LENGTH			
4601	030422	100252			BPL	TXDBGN			
4602									
4603	030424	005303			DEC	R3			
4604	030426	001245			BNE	TXDTAR			
4605	030430	000137	030552		JMP	RXDEND			
4606									
4607									
4608									
4609	030434	162705	000002	RXDERR:	SUB	#2,R5			
4610	030440	162702	000002		SUB	#2,R2			
4611									
4612	030444	011237	012410		MOV	(R2),TXDATA			
4613	030450	011537	012412		MOV	(R5),RXDATA			
4614									
4615	030454	005737	002250		TST	FLAG			:LOOK IF 1ST ERROR
4616	030460	001014			BNE	30\$			
4617									
4618	030462				ERRHRD	38,EM0015,PFRAME			:DATA CMP ERROR

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 75-2  
HARDWARE TESTS

4619	030472	005237	002250		INC	FLAG	
4620	030476	062702	000002		ADD	#2,R2	:POINT NEXT ADDRESS
4621	030502	062705	000002		ADD	#2,R5	
4622	030506	000137	030376		JMP	RXDCK	
4623							
4624	030512			30\$:	ERRHRD	38,0,PRAMEF	:SHORT REPORT
4625	030522	005237	002250		INC	FLAG	
4626	030526	062702	000002		ADD	#2,R2	
4627	030532	062705	000002		ADD	#2,R5	:POINT NEXT ADDRESS
4628	030536	022737	000010	002250	CMP	#10,FLAG	:LOOK IF 10 REPORT
4629	030544	001314			BNE	RXDCK	
4630							
4631	030546				ESCAPE	TST	
4632							
4633							
4634							
4635							
4636							
4637	030552				RXDEND:		
4638	030552				ENDTST		

4640  
4641  
4642 030554

BADHEAD  
:\*\*\*\*\* TEST11 \*\*\*\*\*  
:TEST MODEM SIGNAL CCITT 108 AND CCITT 107 IN EXTERNAL LOOP BACK MODE  
BADHEAD  
:\*\*\*\*\* TEST11 \*\*\*\*\*

4643  
4644 030554

4645  
4646  
4647  
4648  
4649  
4650

4651 030554

STARS 1  
:CCITT 108/2 A IS BIT 7 IN 8255 CHIP ,PORT B = ADDRESS 130012  
:.. B .. 6 .. B .. 130012  
:.. 107 A .. 5 .. A .. 130000  
:.. 107 B .. 3 .. A .. 130000

4652  
4653  
4654  
4655  
4656  
4657  
4658  
4659  
4660

:QBUS WRITTE CCITT 108A AND B ,AND READ BACK CCITT 107A/B

4661  
4662  
4663  
4664  
4665  
4666

:CAUTION:  
:-----  
:RUN ONLY WITH EXTERNAL LOOP BACK CONNECTOR:

4667  
4668  
4669  
4670  
4671  
4672

:NOTE:FOR KMV11-B BOTH CONNECTORS MUST BEINSTALLED  
:TO BE FULLY TESTED ,KMV11 DIAGNOSTIC MUST BE RUN WITH RS422 AND RS423  
:EXTERNAL LOOP BACK CONECTOR

4673  
4674  
4675  
4676  
4677  
4678

:FOR RS422 PLUG LOOP BACK CONNECTOR 2P-E155A-00 AT THE END OF 2P-E14UA-00  
:MODEM CABLE.  
:FOR RS423 PLUG LOOP BACK CONNECTOR H325 AT THE END OF 2P-E14VA-00  
:MODEM CABLE.

4679  
4680  
4681  
4682 030554  
4683

:STARS 1



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 77  
 HARDWARE TESTS

```

4685 030554          BGNTST
4686 030554 004737 014400      JSR      PC,CLRKMV      ;CLEAR KMV11 REGISTERS
4687 030560 004737 014600      JSR      PC,CKKMV      ;LOOK IF KMV11A OR B AND IF LOOP BACK
4688
4689 030564 005737 012474      TST      LOOP          ;LOOK IF LOOP BACK?
4690 030570 001412                BEQ      MOD108        ;YES GO ON
4691 030572                PRINTF   #MLOOP        ;NO LOOP BACK PLUGGED .THE MODULE
4692
4693
4694 030612 000137 031012      JMP      MODEND
4695
4696
4697
4698 030616 004737 014502      MOD108: JSR      PC,MAINM1
4699
4700
4701 030622 012737 000100 030636  MOV      #100,MODWR1+6  ;WRITE TTL 108B
4702
4703
4704
4705 030630 004537 014702      MODWR1: JSR      R5,WRITE  ;WRITE KMV REG ADDRESS 130012
4706 030634 130012                .WORD   130012
4707 030636 000000                .WORD   0              ;DATA TO WRITE
4708
4709 030640                WAITA   0
4710
4711
4712 030652 004537 014730      JSR      R5,READ      ;READ KMV ADDRESS 130000
4713 030656 130000                .WORD   130000
4714
4715
4716 030660 042737 177767 012374  BIC      #177767,BAD   ;MASK BIT BUT CCITT 107A/B
4717 030666 022737 000010 012374  CMP      #10,BAD      ;CMP 108B AND 107B
4718 030674 001036                BNE     MODERB        ;REPORT ERROR IF BAD
4719
4720
4721
4722 030676 012737 000200 030712  MOV      #200,MODWR2+6 ;WRITE TTL 108A
4723
4724
4725
4726 030704 004537 014702      MODWR2: JSR      R5,WRITE  ;WRITE KMV REG ADDRESS 130012
4727 030710 130012                .WORD   130012
4728 030712 000000                .WORD   0              ;DATA TO WRITE
4729
4730 030714                WAITA   0
4731
4732
4733 030726 004537 014730      JSR      R5,READ      ;READ KMV ADDRESS 130000
4734 030732 130000                .WORD   130000
4735
4736
4737 030734 042737 177737 012374  BIC      #177737,BAD   ;MASK BIT BUT CCITT 107A/B
4738 030742 022737 000040 012374  CMP      #40,BAD      ;CMP 108A AND 107A
4739 030750 001420                BEQ     MODEND        ;OK EXIT TEST
4740
4741

```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 77-1  
HARDWARE TESTS

4742  
4743  
4744  
4745  
4746  
4747  
4748  
4749  
4750  
4751  
4752  
4753  
4754  
4755  
4756  
4757  
4758  
4759  
4760  
4761

030752

030762 004737 012740

030766

030772

031002 004737 012740

031006

031012

031012

MODERA: ERRHRD 40,EM0030

JSR PC,CHKMAX  
ESCAPE TST

MODERB: ERRHRD 41,EM0130

JSR PC,CHKMAX  
ESCAPE TST

MODEND:  
ENDTST

:DATA CMP ERROR BETWEEN 107 AND 108  
: ON CHANNEL A  
:DROP IF TOO MANY ERROR

:DATA CMP ERROR BETWEEN 107 AND 108  
: ON CHANNEL B  
:DROP IF TOO MANY ERROR

HARDWARE TESTS

4763  
4764 031014

BADHEAD

:\*\*\*\*\* TEST12 \*\*\*\*\*  
:TEST MODEM SIGNALS ON KV11 B MODULE IN EXTERNAL LOOP BACK ON CHANEL A AND B  
BADHEAD  
:\*\*\*\*\* TEST12 \*\*\*\*\*

4765  
4766 031014

4767  
4768  
4769  
4770  
4771  
4772  
4773 031014

STARS 1

:HOST SET TEST NUMBER 34 OR 35 (CHA OR CHB TEST)  
:DCT11 TEST MODEM SIGNAL 105,106,109 ON CHANEL A(TEST NB34) FIRST AND THEN  
:ON CHANEL B(TEST NB 35) BY SETTING AND CLEARING BIT 105 AND TESTING  
:BIT 106,AND 109

4774  
4775  
4776  
4777  
4778  
4779  
4780  
4781

:IF TEST =OK,DCT11 CLEAR BSELO  
:IF ERROR SET 100 IN BSELO AND REPORT ERROR

4782  
4783  
4784  
4785  
4786  
4787  
4788  
4789

:ERROR REPORT DESCRIPTION:  
:SEL2 INDICATE WHICH MODEM SIGNAL IS TESTED  
:SEL4 INDICATE THE RESULT OF THE TEST  
:SEL10 INDICATE IF IT WAS DURING A CLEAR OR A SET OPERATION  
:SEL 10 BIT 1=0 INDICATE A CLEAR OPERATION ON TESTED MODEM SIGNAL  
                  =1                  SET

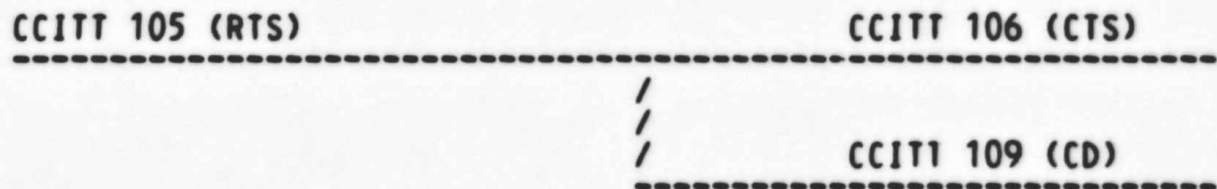
4790  
4791  
4792  
4793

:SEL2 AND SEL4 FORMAT:

/	/	/	/	/	/ 109	/ 106	/	/ 105	/
BIT 7	BIT 6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0		

4794  
4795  
4796  
4797  
4798  
4799

:MODEM SIGNAL LINK:



4800  
4801  
4802  
4803  
4804  
4805  
4806  
4807  
4808  
4809  
4810  
4811  
4812  
4813  
4814  
4815  
4816  
4817

:MICRO TEST DESCRIPTION:  
:TEST 34:MODEM SIGNAL ON CHANEL A  
:TEST 35:MODEM SIGNAL ON CHANEL B

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 78-1  
HARDWARE TESTS

4818  
4819  
4820  
4821  
4822  
4823  
4824  
4825  
4826  
4827  
4828  
4829  
4830  
4831  
4832  
4833  
4834  
4835  
4836  
4837 031014  
4838  
4839

: CAUTION:

:-----  
: RUN ONLY WITH EXTERNAL LOOP BACK CONNECTOR:

: NOTE: FOR KMV11-B BOTH CONNECTORS MUST BE INSTALLED

: TO BE FULLY TESTED, KMV11 DIAGNOSTIC MUST BE RUN WITH RS422 AND RS423  
: EXTERNAL LOOP BACK CONNECTOR

: FOR RS422 PLUG LOOP BACK CONNECTOR 2P-E155A-00 AT THE END OF 2P-E14UA-00  
: MODEM CABLE.

: FOR RS423 PLUG LOOP BACK CONNECTOR H325 AT THE END OF 2P-E14VA-00  
: MODEM CABLE.

: STARS 1



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 79  
 HARDWARE TESTS

```

4841 031014          BGNTST
4842 031014 004737 014400      JSR   PC,CLRKMV      ;CLEAR ALL REGISTERS
4843 031020 004737 014600      JSR   PC,CKKMV      ;TEST IF LOOP BACK CONNECTOR
4844
4845 031024 005737 012474      TST   LOOP
4846 031030 001412              BEQ   1$            ;LOOP BACK PRESENT GO ON
4847
4848 031032          PRINTF  #MLOOP      ;NO LOOP BACK PLUGGED .THE MODULE
4849                          ;WILL NOT BE TESTED IS EXTERNAL LOOP
4850
4851 031052 000137 031012      JMP   MODEND        ;GO TO FOLLOWING TEST
4852
4853
4854 031056          1$:
4855 031056          BGNSUB
4856
4857 031060 004737 014502      JSR   PC,MAINM1     ;SET MAINTENANCE MODE
4858 031064 004537 014552      JSR   R5,TSTNUB
4859 031070 000034              .WORD  34           ;SEND TEST 34(MODEM SIGNAL ON CHA)
4860
4861 031072          WAITB  0,2
4862
4863 031112 004737 013102      JSR   PC,TSTERR     ;CHECK TEST RESULT
4864 031116 000432              BR    3$            ;TEST OK GO ON
4865 031120 000402              BR    4$            ;TIMEOUT
4866 031122 000401              BR    4$            ;NO TEST ANSWER
4867 031124 000410              BR    5$            ;ERROR DURING TEST ,LOOK WHICH ONE
4868
4869
4870
4871 031126          4$:
4872 031136 004737 012740      ERRHRD 42,EM0004    ;NO ANSWER
4873 031142          JSR   PC,CHKMAX      ;DROP IF TOO MANY ERROR
4874          ESCAPE SUB
4875 031146 017737 161304 002272 5$:
4876 031154 017737 161300 012374      MOV   @KMVP02,GOOD  ;READ WHICH SIGNAL WAS TESTED
4877 031162 017737 161276 012400      MOV   @KMVP04,BAD   ;      IS THE RESULT OF TEST
4878          MOV   @KMVP10,DATA      ;READ SIGNAL VALUE
4879 031170          ERRHRD 43,EM0032,PMODEM  ;REPORT ERROR
4880 031200          ESCAPE SUB
4881
4882 031204          3$:
4883 031204          ENDSUB
4884
4885
4886 031206          BGNSUB
4887
4888 031210 004737 014502      JSR   PC,MAINM1     ;SET MAINTENANCE MODE
4889 031214 004537 014552      JSR   R5,TSTNUB
4890 031220 000035              .WORD  35           ;SEND TEST 35(MODEM SIGNAL ON CHB)
4891
4892 031222          WAITB  0,2
4893
4894 031242 004737 013102      JSR   PC,TSTERR     ;CHECK TEST RESULT
4895 031246 000432              BR    3$            ;TEST OK GO ON
4896 031250 000402              BR    4$            ;TIMEOUT
4897 031252 000401              BR    4$            ;NO TEST ANSWER

```

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 79-1  
 HARDWARE TESTS

```

4898 031254 000410          BR      5$          ;ERROR DURING TEST ,LOOK WHICH ONE
4899
4900
4901
4902 031256          4$:  ERRHRD  44,EM0004          ;NO ANSWER
4903 031266 004737 012740  JSR      PC,CHKMAX          ;DROP IF TOO MANY ERROR
4904 031272          ESCAPE SUB
4905
4906 031276 017737 161154 002272 5$:  MOV      @KMVP02,GOOD          ;READ WHICH SIGNAL WAS TESTED
4907 031304 017737 161150 012374  MOV      @KMVP04,BAD          ;      "      " IS THE RESULT OF TEST
4908 031312 017737 161146 012400  MOV      @KMVP10,DATA        ;READ SIGAL VALUE
4909
4910 031320          ERRHRD  45,EM0034,PMODEM          ;REPORT ERROR
4911 031330          ESCAPE  SUB
4912
4913 031334          3$:
4914 031334          ENDSUB
4915
4916
4917 031336          ENDTST

```

4919  
4920  
4921  
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4924  
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4933  
4934  
4935  
4936  
4937  
4938 031340  
4939  
4940 031342  
4941 031352  
4942 031362  
4943 031374  
4944  
4951  
4952  
4953 031374  
031377  
031402  
031405  
031410  
031413  
031416  
031421  
031424  
4954 031426  
031431  
031434  
031437  
031442  
031445  
031450  
031453  
031456  
031461  
4955 031462  
031465  
031470  
031473  
031476  
031501  
031504  
031507  
031512  
031515

.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.

BGNHRD

GPRMA ADDRES,0,0,60000,177776,YES  
GPRMA VECTOR,2,0,0,674,YES  
GPRMD PRIRTY,4,0,7000,4,7,YES  
ENDHRD

ADDRESS: .ASCIZ /MICRO-CPU CSR ADDRESS : /

VECTOR: .ASCIZ /MICRO-CPU VECTOR ADDRESS : /

PRIRTY: .ASCIZ /MICRO-CPU PRIORITY LEVEL : /

115 111 103  
122 117 055  
103 120 125  
040 040 103  
123 122 040  
101 104 104  
122 105 123  
123 040 072  
040 000  
115 111 103  
122 117 055  
103 120 125  
040 126 105  
103 124 117  
122 040 101  
104 104 122  
105 123 123  
040 072 040  
000  
115 111 103  
122 117 055  
103 120 125  
040 120 122  
111 117 122  
111 124 131  
040 114 105  
126 105 114  
040 072 040  
000

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 80-1  
HARDWARE PARAMETER CODING SECTION

4956  
4957  
4958  
4959  
4960  
4961  
4962  
4963

.EVEN





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SOFTWARE PARAMETER CODING SECTION

5001  
5002 031520  
5003 031520  
5004  
5011  
5012 031640  
031644  
5013 031644  
5014  
5015

SPATCH::  
.BLKW 50

LSLAST::  
LASTAD  
ENDMOD

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SOFTWARE PARAMETER CODING SECTION

5017				
5018				
5031				
5032	031644		BGNSE:UP	1
5033	031644		BGNPTAB	
5034	031650	177000	.WORD	177000
5035	031652	000300	.WORD	300
5036	031654	004000	.WORD	4000
5037	031656	000001	.WORD	1
5038	031660		ENDPTAB	
5039	031660		ENDSETUP	
5040				
5041				
5042				
5043				
5044				
5045	000001		.END	

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SYMBOL TABLE

ABORT	023522	CKSELO	013620	DATA1 =	052525	G	FSEND =	000041	GSRADA=	000140	
ADDR	002362	CLRKMV	014400	DATA2 =	125252	G	F\$HARD=	000004	GSRADB=	000000	
ADDRES	031374	COUNT	002356	DELCT1	002266		F\$HW =	000013	GSRADD=	000040	
ADR =	000020	C\$AU =	000052	DELCT2	002270		F\$INIT=	000006	GSRADL=	000120	
ASSEMB=	000010	C\$AUTO=	000061	DFPTBL	002164	G	F\$JMP =	000050	GSRADO=	000020	
BAD	012374	C\$BRK =	000022	DIAGMC=	000000		F\$MOD =	000000	G\$XFER=	000004	
BDDAT	002366	C\$BSEG=	000004	DROPD	023740		F\$MSG =	000011	G\$YES =	000010	
BDRGEN	024516	C\$BSUB=	000002	EF.CON=	000036	G	F\$PROT=	000021	HELP =	000000	
BDROK0	024742	C\$CEFG=	000045	EF.NEW=	000035	G	F\$PWR =	000017	HOE =	100000	G
BDROK1	025210	C\$CLCK=	000062	EF.PWR=	000034	G	F\$RPT =	000012	IBE =	010000	G
BGNTXA	027426	C\$CLEA=	000012	EF.RES=	000037	G	F\$SEG =	000003	IDU =	000040	G
BGNTXD	030124	C\$CLOS=	000035	EF.STA=	000040	G	F\$SOFT=	000005	IER =	020000	G
BIT0 =	000001	C\$CLP1=	000006	EM0001	015120		F\$SRV =	000010	INIFLG	012432	
BIT00 =	000001	C\$CVEC=	000036	EM0002	015214		F\$SUB =	000002	INTFLG	012372	
BIT01 =	000002	C\$DCLN=	000044	EM0003	015257		F\$SW =	000014	INTTX	025244	
BIT02 =	000004	C\$DODU=	000051	EM0004	015345		F\$TEST=	000001	ISR =	000100	G
BIT03 =	000010	C\$DRPT=	000024	EM0006	015374		GDDAT	002364	IXE =	004000	G
BIT04 =	000020	C\$DU =	000053	EM0007	015436		GDREV	012430	ISAU =	000041	
BIT05 =	000040	C\$EDIT=	000003	EM0010	015533		GENER	013160	ISAUTO=	000041	
BIT06 =	000100	C\$ERDF=	000055	EM0011	015625		GENER1	013302	ISCLN =	000041	
BIT07 =	000200	C\$ERHR=	000056	EM0012	015704		GENEX	013440	ISDU =	000041	
BIT08 =	000400	C\$ERRO=	000060	EM0013	016002		GENINC	013432	ISHRD =	000041	
BIT09 =	001000	C\$ERSF=	000054	EM0014	016312		GENISH	013310	ISINIT=	000041	
BIT1 =	000002	C\$ERSO=	000057	EM0015	016363		GENO	025170	ISMOD =	000041	
BIT10 =	002000	C\$ESCA=	000010	EM0016	016461		GENOUT	024722	ISMSG =	000041	
BIT11 =	004000	C\$ESEG=	000005	EM0017	016751		GENRAN	013312	ISPROT=	000040	
BIT12 =	010000	C\$ESUB=	000003	EM0020	017046		GENROT	013266	ISPTAB=	000041	
BIT13 =	020000	C\$ETST=	000001	EM0023	017143		GENRO	013254	ISPWR =	000041	
BIT14 =	040000	C\$EXIT=	000032	EM0024	017217		GENR1	013244	ISRPT =	000041	
BIT15 =	100000	C\$GETB=	000026	EM0027	017246		GENSEL	013176	ISSEG =	000041	
BIT2 =	000004	C\$GETW=	000027	EM0030	017320		GENO	013216	ISSETU=	000041	
BIT3 =	000010	C\$GMAN=	000043	EM0032	017512		GEN1	013222	ISSFT =	000041	
BIT4 =	000020	C\$GPHR=	000042	EM0033	016242		GEN25	013236	ISSRV =	000041	
BIT5 =	000040	C\$GPLO=	000030	EM0034	017603		GEN52	013230	ISSUB =	000041	
BIT6 =	000100	C\$GPRI=	000040	EM0035	017674		GETPRM	023320	ISTST =	000041	
BIT7 =	000200	C\$INIT=	000011	EM0112	016063		GOOD	002272	JSJMP =	000167	
BIT8 =	000400	C\$INLP=	000020	EM0113	016161		GOOD0	002274	KB1.2 =	013224	G
BIT9 =	001000	C\$MANI=	000050	EM0115	016556		GOOD1	002276	KB2.4 =	005473	G
BOE =	000400	C\$MEM =	000031	EM0116	016654		GOOD10	002306	KB56 =	000174	G
BRXCK	026122	C\$MSG =	000023	EM0130	017415		GOOD12	002310	KB64 =	000154	G
BRXEND	026262	C\$OPEN=	000034	END	023530		GOOD14	002312	KB68 =	000146	G
BRXERR	026144	C\$PNTB=	000014	ERRBLK	002230	G	GOOD16	002314	KB70 =	000143	G
BSELO	012376	C\$PNTF=	000017	ERRCNT	002236		GOOD2	002300	KB72 =	000141	G
BSEL1	002340	C\$PNTS=	000016	ERRMSG	002226	G	GOOD4	002302	KIND	012404	
BTXSTA	025674	C\$PNTX=	000015	ERRNBR	002224	G	GOOD6	002304	KMTLVL	012452	
BXCK =	*****	C\$QIO =	000377	ERRTYP	002222	G	G\$CNTO=	000200	KMVCSR	012454	
BXLBGN	026760	C\$RDBU=	000007	EVL =	000004	G	G\$DELM=	000372	KMVLVL	012442	
BXLCK	027206	C\$REFG=	000047	EXADDR	012370		G\$DISP=	000003	KMVP02	012456	
BXLEND	027362	C\$RESE=	000033	E\$END =	002100		G\$EXCP=	000400	KMVP04	012460	
BXLERR	027244	C\$REVI=	000003	E\$LOAD=	000035		G\$HILI=	000002	KMVP06	012462	
BXLTR	026752	C\$RFLA=	000021	FLAG	002250		G\$LOLI=	000001	KMVP10	012464	
CBSELO	013652	C\$RPT =	000025	FTIME	002252		G\$NO =	000000	KMVP12	012466	
CHANEL	012406	C\$SEFG=	000046	F\$AU =	000015		G\$OFFS=	000400	KMVP14	012470	
CHKMAX	012740	C\$SPRI=	000041	F\$AUTO=	000020		G\$OFFSI=	000376	KMVP16	012472	
CKALL	013710	C\$SVEC=	000037	F\$BGN =	000040		G\$PRMA=	000001	KMVV00	012440	
CKKMV	014600	C\$TPRI=	000013	F\$CLEA=	000007		G\$PRMD=	000002	KMVV02	012446	
CKREG	014156	DATA	012400	F\$DU =	000016		G\$PRML=	000000	KMVV04	012444	



KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 83-2  
SYMBOL TABLE

KMVV06	012450	LSSPTP	002024	G	MINTR	020620	PRREG	022120	G	SSTACK	012676
KMV11B	002000	LSSTA	002030	G	MLOOP	017736	PRSELO	021516	G	STAERR	012424
LENGTH	012416	LSSW	002260		MODEM1	021300	PRSTER	023004	G	SVCGBL=	000000
LOCK	002232	LSTEST	002114	G	MODEM2	021344	PRT11V	022524	G	SVCINS=	177777
LOE =	040000	LSTIML	002014	G	MODEM3	021403	PSTACK	002242		SVCSUB=	177777
LOGDEV	002240	LSUIT	002262		MODEND	031012	PVECT	022466	G	SVCTAG=	177777
LOKFLG	012434	LSUNIT	002012	G	MODERA	030752	QV.FLG	012435		SVCTST=	177777
LOOP	012474	L10001	002174		MODERB	030772	RANCLC	013412		SLSYM=	010000
LOT =	000010	L10002	021552		MODWR1	030630	RANDN	002350		TFM36	015032
LSACP	002110	L10003	021610		MODWR2	030704	RANEX	013430		TIM	015014
LSAPT	002036	L10004	022116		MOD108	030616	RANGEN	013332		TSPEED	012414
LSAU	023772	L10005	022374		MAMEF	021446	RANMTA	002346		TSTERR	013102
LSAUT	002070	L10006	022432		MREG0	020062	RANSEC	013416		TSTNUB	014552
LSAUTO	023614	L10007	022464		MREG10	020302	RANSEL	002344		TTABLE	002370
LSACP	002106	L10010	022522		MREG12	020346	RANST	002342		TXABGN	027456
LSCLEA	023706	L10011	022560		MREG14	020412	RAN1	013344		TXATAR	027450
LSCO	002032	L10012	022646		MREG16	020456	RAN2	013362		TXDATA	012410
LSDEPO	002011	L10013	022750		MREG2	020126	RAN4	013420		TXDBGN	030150
LSDESC	002174	L10014	023002		MREG4	020172	READ	014730		TXDTAR	030142
LSDESP	002076	L10015	023060		MREG6	020236	REGADR	012476		TXLBGN	026320
LSDEVP	002060	L10016	023116		MSELO	020014	REVPRO	024126		TXLTAR	026312
LSDISP	002132	L10017	023124		MSTER1	021203	ROMMAP	023774		TXSTAR	025250
LSDLY	002116	L10020	023530		MSTER2	021235	RSTREG	013540		TSARGC=	000001
LSDTP	002040	L10021	023704		MT11V	020760	RTABLE	006370		TSOCODE=	002032
LSDTYP	002034	L10022	023710		MVECT	020704	RTCLK	024176		TSERRN=	000055
LSDU	023712	L10023	023770		NERRS	013032	RUNNIN	023532		TSEXCP=	000000
LSDUT	002072	L10024	023772		NEXT	023240	RXACK	027704		TSFLAG=	000040
LSDVTY	012676	L10025	024114		NUB	012420	RXAEND	030060		TSFREE=	031660
LSEF	002052	L10026	024164		NUMBER	002360	RXAERR	027742		TSGMAN=	000000
LSEVI	002044	L10027	024474		OSAPTS=	000000	RXCCK	025476		TSHILI=	000007
LSERRT	002222	L10030	025212		OSAU =	000000	RXCNT	012422		TSLAST=	000001
LSETP	002102	L10031	024742		OSBGNR=	000000	RXDATA	012412		TSLOLI=	000004
LSEXP1	002046	L10032	025210		OSBGNS=	000000	RXDCK	030376		TSLSYM=	010000
LSEXP4	002064	L10033	025636		OSDU =	000001	RXDEND	030552		TSLTNO=	000014
LSEXP5	002066	L10034	026262		OSERRT=	000000	RXDERR	030434		TSNEST=	177777
LSHARD	031342	L10035	026722		OSGNSW=	000001	RXEND	025636		TSNS0 =	000000
LSHIME	002120	L10036	027362		OSPOIN=	000001	RXERR	025520		TSNS1 =	000005
LSHPCP	002016	L10037	030060		OSSETU=	000001	RXLCK	026546		TSNS2 =	000002
LSHPTP	002022	L10040	030552		PADFLT	023062	RXLEND	026722		TSPCNT=	000000
LSHW	002164	L10041	031012		PBSELO	022376	RXLERR	026604		TSPTAB=	010050
LSICP	002104	L10042	031336		PFRAME	022562	SAVE4	002254		TSPTHV=	000001
LSINIT	023126	L10043	031204		PINTR	022434	SAVE6	002256		TSPTNU=	000001
LSLADP	002026	L10044	031334		PMODEM	022650	SAVPC	002246		TSSAVL=	177777
LSLAST	031644	L10045	031374		PNT =	001000	SAVPC1	002352		TSSEGL=	177777
LSLOAD	002100	L10046	031520		PRALL	021612	SAVREG	013460		TSSIZE=	000006
LSLUN	002074	L10047	031650		PRAMEF	022752	SAVSP	002244		TSSUBN=	000002
LSMREV	002050	L10051	031660		PRI =	002000	SAVSTA	002354		TSTAGL=	177777
LSNAME	002000	MAINM1	014502		PRINT	021554	SELO	002316		TSTAGN=	010052
LSPRIO	002042	MAINT0=	054000	G	PRIRTY	031462	SEL1	002320		TSTEMP=	000000
LSPROT	002122	MAINT1=	044000	G	PRI00 =	000000	SEL10	002330		TSTEST=	000014
LSPRT	002112	MAXERR	002234		PRI01 =	000040	SEL12	002332		TSTSTM=	177777
LSREPP	002062	MAXPRI=	000340	G	PRI02 =	000100	SEL14	002334		TSTSTS=	000001
LSREV	002010	MBSELO	020556		PRI03 =	000140	SEL16	002336		TSSAU =	010024
LSRPT	023120	MCLR =	040000	G	PRI04 =	000200	SEL2	002322		TSSAUT=	010021
LSOFT	031520	MFRAM1	021042		PRI05 =	000240	SEL4	002324		TSSCLE=	010022
LSSPC	002056	MFRAM2	021120		PRI06 =	000300	SEL6	002326		TSSDAT=	010051
LSSPCP	002020	MINT	020522		PRI07 =	000340	SETUP	023232		TSSDU =	010023

KMV11 B LINE CNT DIAG. MACRO M1200 06-JAN-83 09:42 PAGE 83-3

SYMBOL TABLE

TSSHAR= 010045	TSSSUB= 010044	T3	024166 G	UAM = 000200 G	WRITE 014702
TSSHW = 010001	TSSTES= 010042	T4	024476 G	UNIT 002264	XSALWA= 000000
TSSINI= 010020	T1 023774 G	T4.1	024476	UUT 012436	XSFALS= 000040
TSSMSG= 010016	T10 030062 G	T4.2	024744	VECT 012402	X\$OFFS= 000400
TSSPC = 000001	T11 030554 G	T5	025214 G	VECTOR 031426	X\$TRUE= 000020
TSSPRO= 010000	T12 031014 G	T6	025640 G	WAIT1 012726	\$LSTIN= 000000
TSSPTA= 010050	T12.1 031056	T7	026264 G	WAIT2 012706	\$LSTTA= 000000
TSSRPT= 010017	T12.2 031206	T8	026724 G	WRDCNT 012426	\$PATCH 031520 G
TSS\$OF= 010046	T2 024116 G	T9	027364 G		

. ABS. 031650 000  
 C00000 001

ERRORS DETECTED: 0

VIRTUAL MEMORY USED: 29096 WORDS ( 114 PAGES)

DYNAMIC MEMORY: 21924 WORDS ( 84 PAGES)

ELAPSED TIME: 00:26:08

VKMEAO.BIN,VKMEAO=[64,3]LIBA.MLB/ML,[64,5]VKMEAO