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.TITLE CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST

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IDENTIFICATION

PRODUCT CODE: AC-F591C-MC
PRODUCT NAME: CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
PRODUCT DATE: MARCH 82
MAINTAINER: MERRIMACK DIAGNOSTIC ENGINEERING
AUTHOR: BRUCE LUHRS - BRUCE RIBOLINI

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REVISION HISTORY:

| <u>REV</u> | <u>DATE</u> | <u>AUTHOR</u> | <u>REASON</u> |
|------------|-------------|-------------------------------|---|
| A | 23-APR-80 | BRUCE LUHRS BRUCE RIBOLINI | ORIGINAL ISSUE, DCLT FOR THE DMC OR DMR-11 |
| B | 15-JUL-81 | ERNIE COOPER | ADD 'MODEM/NO MODEM' COMMAND ADD 'SET EXPECT=TRANSMIT' COMMAND ADD 'EXIT' COMMAND ADD 'RPT >' COMMAND ADD PASSWORD AND ID ON DOWNLINE LOAD ADD TX / EXPECT MESSAGE TOTAL CHECK UPDATE DOCUMENTATION |
| C | JUNE 82 | ERNIE COOPER | ADD ^C ABORT FEATURE TO EVENT LOG ADD FIX FOR AID REPORT #DD 334 (DCLT HANGS WITHOUT CLOCK) ADD CODE TO CLEAR BITS 14 AND 15 IN SEL6 IF DMC. |

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1.0 GENERAL INFORMATION

1.1 PROGRAM ABSTRACT

THIS DCLT (DATA COMMUNICATION LINK TEST) PROGRAM IS MEANT TO PROVIDE FIELD SERVICE WITH A TOOL TO MAINTAIN DMR/DMC-11 TO DMR/DMC-11 AND OTHER (POINT TO POINT) DDCMP SUPPORTED COMMUNICATION LINKS. THIS DCLT PROGRAM WILL PROVIDE THE COVERAGE NECESSARY TO DETECT FAILURES TO THE COMPUTER EQUIPMENT, THE COMMUNICATION LINK, OR THE MODEM.

THIS DIAGNOSTIC HAS BEEN WRITTEN FOR USE WITH THE DIAGNOSTIC RUNTIME SERVICES SOFTWARE (SUPERVISOR). THESE SERVICES PROVIDE THE INTERFACE TO THE OPERATOR AND TO THE SOFTWARE ENVIRONMENT. THIS PROGRAM CAN BE USED WITH XXDP+, ACT, APT, SLIDE AND PAPER TAPE. FOR A COMPLETE DESCRIPTION OF THE RUNTIME SERVICES, REFER TO THE XXDP+ USER'S MANUAL (CHQUS?.SEQ WHERE ? IS REV. LEVEL OF THE MANUAL). THERE IS A BRIEF DESCRIPTION OF THE RUNTIME SERVICES IN SECTION 2 OF THIS DOCUMENT.

1.2 SYSTEM REQUIREMENTS

IN ORDER TO RUN THE DMR/DMC-11 DCLT PROGRAM, THE FOLLOWING MINIMUM HARDWARE IS REQUIRED:

- A PDP-11 CPU
- MINIMUM OF 24K WORDS OF MEMORY
- A WORKING, LINE OR REAL-TIME CLOCK
- A CONSOLE TERMINAL
- ANY XXDP+ SUPPORTED LOAD MEDIA
- ONE OF THESE DMR-11 OR DMC-11 CONFIGURATIONS:
 - DMC11-AL - LOCAL MICROPROCESSOR
 - DMC11-AR - REMOTE MICROPROCESSOR
 - DMC11-DA - E.I.A. LINE UNIT
 - DMC11-FA - CCITT V.35 LINE UNIT
 - DMC11-MA - 1M BPS LINE UNIT
 - DMC11-MD - 56K BPS LINE UNIT

 - DMR11-AA - E.I.A. (RS 232/423)
 - DMR11-AB - CCITT V.35
 - DMR11-AC - LOCAL
 - DMR11-AE - E.I.A. (RS 422)

IF DOWN-LINE-LOADING A DMC-11 SATELLITE, THE SATELLITE END REQUIRES:
 M9301-YJ/M9312 - BOOTSTRAP MODULE

1.3 RELATED DOCUMENTS AND STANDARDS

- XXDP+ USER'S MANUAL (CHQUS?.SEQ WHERE ? IS THE REV. LEVEL OF

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THE MANUAL - 'C' IS THE CURRENT REV.).

1.4 DIAGNOSTIC HIERARCHY PREREQUISITES

THE GOAL OF THE DATA COMM. LINK TEST PROGRAM IS TO TEST THE COMMUNICATION LINK AND THEREFORE ASSUMES THAT THE CPU'S, CLOCKS, AND DMR OR DMC-11'S AT EACH END OF THE LINK HAVE ALREADY BEEN TESTED.

IF NO LINE OR REAL-TIME CLOCK IS FOUND, THE PROGRAM WILL CONTINUE BUT ANY OF THE PROGRAM THAT TIMES THE DEVICE WILL HANG IF THE DEVICE TIMES OUT. ALSO, THE EVENT LOG WILL CONTAIN A ZERO EVENT TIME FOR ALL EVENTS LOGGED.

IT IS NOT THE INTENTION OF A DATA COMM. LINK TEST PROGRAM TO TEST THE DMR OR DMC-11, BUT TO TEST THE COMMUNICATION LINK TO WHICH THEY ARE CONNECTED.

SOME OF THE DIAGNOSTICS THAT COULD BE RUN IF THE DMC-11 OR DMR-11 LOOKS BAD:

DMR: CZDMIXX DMR-11 FCTNL DIAG
 CZDMPXX M8207 STATIC DIAG #1
 CZDMQXX M8207 STATIC DIAG #2
 CZDMRXX M8203 STATIC DIAG #1
 CZDMSXX M8203 STATIC DIAG #2

DMC: CZDMCXX BSC W/R MICRO-PROC TST
 CZDMEXX DDCMP MDLN UNIT TST
 CZDMGXX DMC-11 CROM + JMUP TEST
 MD-11-DZDMHXX DMC-11 FREE RUNNING TEST

XX = LATEST REVISION

1.5 ASSUMPTIONS - RESTRICTIONS

IT IS ASSUMED THAT THE COMMUNICATIONS DEVICE (DMC OR DMR-11) HAS BEEN TESTED USING THE PREREQUISITE DIAGNOSTICS. THE OPERATOR SHOULD HAVE READ THE USER DOCUMENTATION PORTION OF THE LISTING TO FAMILIARIZE HIMSELF WITH THE COMMANDS AND CAPABILITIES AVAILABLE UNDER THE DIAGNOSTIC SUPERVISOR AND DCLT.

BECAUSE THE DMC-11 AND DMR-11 SUPPORT DDCMP OPERATION IN THE FIRMWARE, THE PDP-11 D.C.L.T. PROGRAM IS UNABLE TO CONTROL OR KNOW EXACTLY WHAT IS BEING TRANSMITTED AT ANY GIVEN TIME. ALL DATA MESSAGES ARE ENCLOSED IN A DDCMP ENVELOPE AND THERE MAY ALSO BE CONTROL MESSAGES (AKS, NAKS,.....) BEING TRANSMITTED. BECAUSE OF THIS PLEASE BEWARE IF IF YOU ARE SCOPING DATA.

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2.0 OPERATING INSTRUCTIONS

THIS SECTION CONTAINS A BRIEF DESCRIPTION OF THE RUNTIME SERVICES. FOR DETAILED INFORMATION, REFER TO THE XXDP+ USER'S MANUAL (CHOUS).

2.1 COMMANDS

THERE ARE ELEVEN LEGAL COMMANDS FOR THE DIAGNOSTIC RUNTIME SERVICES (SUPERVISOR). THIS SECTION LISTS THE COMMANDS AND GIVES A VERY BRIEF DESCRIPTION OF THEM. THE XXDP+ USER'S MANUAL HAS MORE DETAILS.

| COMMAND | EFFECT |
|----------|---|
| START | START THE DIAGNOSTIC FROM AN INITIAL STATE |
| RESTART | START THE DIAGNOSTIC WITHOUT INITIALIZING |
| CONTINUE | CONTINUE AT TEST THAT WAS INTERRUPTED (AFTER ^C) |
| PROCEED | CONTINUE FROM AN ERROR HALT |
| EXIT | RETURN TO XXDP+ MONITOR (XXDP+ OPERATION ONLY!) |
| ADD | ACTIVATE A UNIT FOR TESTING (ALL UNITS ARE CONSIDERED TO BE ACTIVE AT START TIME) |
| DROP | DEACTIVATE A UNIT |
| PRINT | PRINT STATISTICAL INFORMATION (IF IMPLEMENTED BY THE DIAGNOSTIC - SECTION 4.0) |
| DISPLAY | TYPE A LIST OF ALL DEVICE INFORMATION |
| FLAGS | TYPE THE STATE OF ALL FLAGS (SEE SECTION 2.3) |
| ZFLAGS | CLEAR ALL FLAGS (SEE SECTION 2.3) |

A COMMAND CAN BE RECOGNIZED BY THE FIRST THREE CHARACTERS. SO YOU MAY, FOR EXAMPLE, TYPE 'STA' INSTEAD OF 'START'.

2.2 SWITCHES

THERE ARE SEVERAL SWITCHES WHICH ARE USED TO MODIFY SUPERVISOR OPERATION. THESE SWITCHES ARE APPENDED TO THE LEGAL COMMANDS. ALL OF THE LEGAL SWITCHES ARE TABULATED BELOW WITH A BRIEF DESCRIPTION OF EACH. IN THE DESCRIPTIONS BELOW, A DECIMAL NUMBER IS DESIGNATED BY 'DDDDD'.

| SWITCH | EFFECT |
|-------------|--|
| /TESTS:LIST | EXECUTE ONLY THOSE TESTS SPECIFIED IN THE LIST. LIST IS A STRING OF TEST NUMBERS, FOR EXAMPLE - /TESTS:1:5:7-10. THIS LIST WILL CAUSE TESTS 1,5,7,8,9,10 TO BE RUN. ALL OTHER TESTS WILL NOT BE RUN. |
| /PASS:DDDDD | EXECUTE DDDDD PASSES (DDDDD = 1 TO 64000) |
| /FLAGS:FLGS | SET SPECIFIED FLAGS. FLAGS ARE DESCRIBED IN SECTION 2.3. |
| /EOP:DDDDD | REPORT END OF PASS MESSAGE AFTER EVERY DDDDD PASSES ONLY. (DDDDD = 1 TO 64000) |
| /UNITS:LIST | TEST/ADD/DROP ONLY THOSE UNITS SPECIFIED IN THE LIST. LIST EXAMPLE - /UNITS:0:5:10-12 USE UNITS 0,5,10,11,12 (UNIT NUMBERS = 0-63) |

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EXAMPLE OF SWITCH USAGE:

START/TESTS:1-5/PASS:1000/EOP:100

THE EFFECT OF THIS COMMAND WILL BE: 1) TESTS 1 THROUGH 5 WILL BE EXECUTED, 2) ALL UNITS WILL TESTED 1000 TIMES AND 3) THE END OF PASS MESSAGES WILL BE PRINTED AFTER EACH 100 PASSES ONLY. A SWITCH CAN BE RECOGNIZED BY THE FIRST THREE CHARACTERS. YOU MAY, FOR EXAMPLE, TYPE "/TES:1-5" INSTEAD OF "/TESTS:1-5".

BELOW IS A TABLE THAT SPECIFIES WHICH SWITCHES CAN BE USED BY EACH COMMAND.

| | TESTS | PASS | FLAGS | EOP | UNITS |
|----------|-------|------|-------|-----|-------|
| START | X | X | X | X | X |
| RESTART | X | X | X | X | X |
| CONTINUE | | X | X | X | |
| PROCEED | | | X | | |
| DROP | | | | | X |
| ADD | | | | | X |
| PRINT | | | | | |
| DISPLAY | | | | | X |
| FLAGS | | | | | |
| ZFLAGS | | | | | |
| EXIT | | | | | |

2.3 FLAGS

FLAGS ARE USED TO SET UP CERTAIN OPERATIONAL PARAMETERS SUCH AS LOOPING ON ERROR. ALL FLAGS ARE CLEARED AT STARTUP AND REMAIN CLEARED UNTIL EXPLICITLY SET USING THE FLAGS SWITCH. FLAGS ARE ALSO CLEARED AFTER A START COMMAND UNLESS SET USING THE FLAG SWITCH. THE ZFLAGS COMMAND MAY ALSO BE USED TO CLEAR ALL FLAGS. WITH THE EXCEPTION OF THE START AND ZFLAGS COMMANDS, NO COMMANDS AFFECT THE STATE OF THE FLAGS; THEY REMAIN SET OR CLEARED AS SPECIFIED BY THE LAST FLAG SWITCH.

| FLAG | EFFECT |
|------|---|
| HOE | HALT ON ERROR - CONTROL IS RETURNED TO RUNTIME SERVICES COMMAND MODE |
| LOE | LOOP ON ERROR |
| IER* | INHIBIT ALL ERROR REPORTS |
| IBE* | INHIBIT ALL ERROR REPORTS EXCEPT FIRST LEVEL (FIRST LEVEL CONTAINS ERROR TYPE, NUMBER, PC, TEST AND UNIT) |
| IXE* | INHIBIT EXTENDED ERROR REPORTS (THOSE CALLED BY PRINTX MACRO'S) |
| PRI | DIRECT MESSAGES TO LINE PRINTER |
| PNT | PRINT TEST NUMBER AS TEST EXECUTES |
| BOE | 'BELL' ON ERROR |
| UAM | UNATTENDED MODE (NO MANUAL INTERVENTION) |
| ISR | INHIBIT STATISTICAL REPORTS (DOES NOT APPLY TO DIAGNOSTICS WHICH DO NOT SUPPORT |

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| | |
|-----|--|
| IDR | STATISTICAL REPORTING) |
| ADR | INHIBIT PROGRAM DROPPING OF UNITS |
| LOT | EXECUTE AUTODROP CODE |
| EVL | LOOP ON TEST |
| | EXECUTE EVALUATION (ON DIAGNOSTICS WHICH |
| | HAVE EVALUATION SUPPORT) |

*ERROR MESSAGES ARE DESCRIBED IN SECTION 3.1

SEE THE XXDP+ USER'S MANUAL FOR MORE DETAILS ON FLAGS. YOU MAY SPECIFY MORE THAN ONE FLAG WITH THE FLAG SWITCH. FOR EXAMPLE, TO CAUSE THE PROGRAM TO LOOP ON ERROR, INHIBIT ERROR REPORTS AND TYPE A 'BELL' ON ERROR, YOU MAY USE THE FOLLOWING STRING:

/FLAGS:LOE:IER:BOE

2.4 HARDWARE QUESTIONS

WHEN A DIAGNOSTIC IS STARTED, THE RUNTIME SERVICES WILL PROMPT THE USER FOR HARDWARE INFORMATION BY TYPING "CHANGE HW (L) ?" YOU MUST ANSWER "Y" AFTER A START COMMAND UNLESS THE HARDWARE INFORMATION HAS BEEN 'PRELOADED' USING THE SETUP UTILITY (SEE CHAPTER 6 OF THE XXDP+ USER'S MANUAL). WHEN YOU ANSWER THIS QUESTION WITH A "Y", THE RUNTIME SERVICES WILL ASK FOR THE NUMBER OF UNITS (IN DECIMAL).

THE DMR/DMC-11 DATA COMM. LINK TEST PROGRAM WILL NOT USE MORE THAN ONE UNIT. FOR THE DMC/DMR-11, THE HARDWARE INFORMATION REQUESTED WILL BE:

UNITS (D) ? 1<CR>

UNIT 0

FULL DUPLEX OPERATION : (L) Y ?

DMR,DMC-11 CSR ADDRESS : (0) 160170 ?

INTERRUPT VECTOR ADDRESS: (0) 300 ?

INTERRUPT PRIORITY : (0) 5 ?

DEVICE OPTION TYPE : (0=DMC, 5=DMR-DMC MODE ,7=DMR) (0) 0 ?

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2.5 DATA COMM. LINK TEST COMMANDS

THE 'DCLT>' COMMAND LEVEL FOLLOWS THE ANSWERING OF THE HARDWARE P-TABLE QUESTIONS. THESE COMMANDS CAN BE TYPED WHEN THE 'DCLT> (A) ?' PROMPT IS PRINTED.

MESSAGE COMMANDS AVAILABLE:

YOU ONLY HAVE TO TYPE ENOUGH CHARACTERS TO UNIQUELY SPECIFY A COMMAND.

THE COMMAND LINE IS INTERPRETED FROM LEFT TO RIGHT. THEREFORE, IF A QUALIFIER ON THE COMMAND LINE IS RELATED OR EFFECTS A QUALIFIER TO THE LEFT ON THE COMMAND LINE, THE QUALIFIER FARTHEREST TO THE RIGHT TAKES PRECEDENCE SINCE IT IS INTERPRETED LAST. (I.E. IF /CHECK..... .../NOCHECK APPEAR ON THE SAME LINE, NOCHECK WILL BE INDICATED IN THE PARAMETERS WORD.)

REFER TO SECTION 6.0 FOR A DESCRIPTION OF THE DIFFERENT MODES OF OPERATION AND THE TYPES OF MESSAGES AVAILABLE.

2.5.1 MESSAGE COMMANDS

| COMMAND | DESCRIPTION |
|-------------------------|---|
| CLEAR EXPECTLIST | ZEROES THE EXPECTLIST (OOO'S) AND THEN PUTS DEFAULT ITEP MSG IN SO NOT REALLY EMPTY |
| CLEAR TRANSMITLIST | ZEROES TRANSMITLIST (OOO'S) AND THEN PUTS DEFAULT ITEP MSG IN SO NOT REALLY EMPTY |
| SET EXPECTMSG=TYPE/QUAL | DEFINE A MESSAGE TO BE PUT ON THE EXPECTED LIST |

WHERE: "TYPE" IS:
 =ONES
 =ZEROS
 =1ALT
 =OALT
 =ITEP
 =CCITT
 =ALPHA
 ='A-Z,0-9,SPACES OR TABS IN QUOTES'

WHERE THE OPTIONAL "QUAL" IS:

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/SIZE=NNN MAKE THE MESSAGE 'NNN' BYTES
LONG. (DEFAULT VALUE IS
SIZE OF MESSAGE SPEC'D BY
OPERATOR OR DEFAULTS.)
/COPY=NN COPY THIS MESSAGE INTO THE
BUFFER 'NN' TIMES (DEFAULT
IS 0 = PUT THE MESSAGE IN
ONLY ONCE)

NOTE: SET'S ADD MESSAGES TO THE LIST IN THE ORDER THEY'RE
DEFINED. 'NNN' IS A DECIMAL NUMBER. THE FIRST SET
OVERWRITES THE DEFAULT ITEP MESSAGE PLACED THERE BY
INITIALIZATION OR A "CLEAR" COMMAND.

SEE SECTION 6.2 FOR A DESCRIPTION OF THE PRE-DEFINED
MESSAGES THAT ARE AVAILABLE. (ZEROS,ONES ...)

SET EXPECTLIST=TRANSMITLIST MAKES A COPY OF THE TRANSMIT
LIST IN THE EXPECT LIST.
SET TRANSMITMSG=TYPE/QUAL DEFINE A MESSAGE TO BE PUT ON
THE TRANSMIT LIST
(SEE DESCRIPT FOR SET EXP)
SHOW EXPECTLIST LISTS THE MESSAGE SIZE AND TYPE
FOR THE MESSAGES IN THE
EXPECT LIST
SHOW TRANSMITLIST LISTS THE MESSAGE SIZE AND TYPE
FOR THE MESSAGES IN THE
TRANSMIT LIST

2.5.2 STATISTICAL COMMANDS

| COMMAND | DESCRIPTION |
|----------------------|--|
| PRINT | TAKES THE OPERATOR TO THE REPORT LEVEL. FROM HERE YOU CAN EXAMINE THE EVENT LOG OR BASE TABLE. |
| DUMP SSSSSS-EEEEEE/B | PRINTS THE CONTENTS OF THE MEMORY LOCATIONS BETWEEN OCTAL ADDRESSES 'SSSSSS' AND 'EEEEEE' WHERE 'SSSSSS' IS THE START ADDRESS AND '-EEEEEE' IS THE END ADDRESS. IF '-EEEEEE' IS NOT SPECIFIED THEN THE CONTENTS OF 'SSSSSS' IS PRINTED IN WORD FORMAT. |

WHERE '/B' IS OPTIONAL:
DEFAULT IS PRINT WORDS
'/B' CAUSES PRINT BYTES

NOTE: THE DUMP COMMAND IS USEFUL FOR EXAMINING
MESSAGE DATA. STARTING ADDRESSES CAN
BE FOUND BY LOOKING IN THE EVENT LOG.

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2.5.3 RUN COMMAND

| COMMAND | DESCRIPTION |
|---|---|
| RUN MODE=MTYPE/QUAL | STARTS DCLT EXECUTING IN THE MODE SPECIFIED |
| <p>NOTE: MODE=ACTIVE IS NOT DEFAULT, A MODE=MTYPE MUST BE TYPED ----- EACH TIME A RUN IS TYPED</p> <p>WHERE THE 'MTYPE' IS ANY ONE OF THE FOLLOWING:</p> <p>=ACTIVE (FORCES /NOECHO ,NO LOOPING) =PASSIVE (FORCES NO LOOPING) =RECEIVE (FORCES /NOECHO ,NO LOOPING) =LISTEN (FORCES /NOECHO ,NO LOOPING, /NOCHECK) =TRANSMIT (FORCES /NOECHO ,NO LOOPING, /NOCHECK) =TALK (FORCES /NOECHO ,NO LOOPING, /NOCHECK) =DOWNLINELOAD (FORCES /NOECHO ,NO LOOPING, /NOCHECK,</p> <p>(FORCING NO LOOPING MEANS IT MUST BE SPECIFIED AS A QUALIFIER ANY TIME ITS DESIRED, THERE IS NO DEFAULT)</p> <p>AND OPTIONAL 'QUAL' IS ANY COMBINATION OF THE FOLLOWING:</p> <p>/CHECK/NOCHECK ENABLES/DISABLES CHECKING OF RECEIVED DATA AGAINST THE EXPECTED DATA</p> <p>NOTE: IF BOTH NODES IN ACTIVE AND '/NOCHECK' IS USED, ----- END-OF-PASS IS DEFINED AS RECEIVING 1 MESSAGE AND COMPLETING THE TRANSMIT LIST. WITH NO DATA CHECKING, THERE IS NO WAY FOR DCLT TO KNOW HOW MANY MESSAGES IT SHOULD EXPECT TO RECEIVE.</p> <p>/STATUS/NOSTATUS ENABLES/DISABLES PRINTING OF PROGRAM STATUS MESSAGES TO THE OPERATOR</p> <p>/ECHO/NOECHO ENABLES/DISABLES THE RETRANSMISSION OF THE DATA RECEIVED IN PASSIVE MODE. (IGNORED IN MODES OTHER THAN PASSIVE)</p> <p>/MODEM/NOMODEM ENABLES/DISABLES THE REPORTING OF MODEM STATUS INTERRUPT CHANGES. NOTE: THIS SWITCH CAUSES NO ACTION IN THIS DCLT PROGRAM BUT IT IS INCLUDED BECAUSE IT IS USED IN OTHER DCLT PROGRAMS.</p> <p>/LOOP=LTYPE SPECIFIES WHICH, IF ANY, TYPE OF MAINTENANCE LOOPBACK IS BEING USED. (IGNORED IN MODES OTHER THAN ACTIVE) MUST BE SPECIFIED EACH TIME ELSE NO LOOP IS USED.</p> | |

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'LTYPE' IS:
=INTERNALTTL
=CABLE
=LOCALMODEM (DMR IN DMR MODE AND RS449 MODEMS ONLY.
CAUSES A 'WRITE MODEM' TO BE DONE TO SET UP
LOCAL-LOOPBACK (MAINT1) . ALSO CALLED
ANALOG-LOOPBACK.

=REMOTEMODEM (DMR IN DMR MODE AND RS449 MODEMS ONLY.
CAUSES A 'WRITE MODEM' TO BE DONE TO SET UP
REMOTE-LOOPBACK (MAINT2) . ALSO CALLED
DIGITAL-LOOPBACK.

/PASS=NN SPECIFIES NUMBER OF ITERATIONS TO MAKE BEFORE
END-OF-PASS. DEFAULT VALUE OF 1
WILL BE USED ON ANY RUN THAT A /PASS=N
IS NOT ADDED TO THE 'RUN ...' COMMAND.
IF A '-1' IS TYPED, THEN THE PROGRAM
RUN UNTIL A ^C IS TYPED.

NOTE: SEE SECTION 6.1 FOR A DESCRIPTION
----- OF THE 'RUN MODES' AND 'LOOP MODES'

2.5.4 DEFAULTS -----

IF NO 'SET'S' THEN THE DEFAULT IS SAME AS IF TYPED:

SET TRANSMITMSG=ITEP/SIZE=58/COPY=0
SET EXPECTMSG=ITEP/SIZE=58/COPY=0

THE DEFAULT COPY AND SIZE FOR EACH OF THE MESSAGE TYPES:

ONES - /SIZE=64/COPY=0
ZEROS - /SIZE=64/COPY=0
OALT - /SIZE=64/COPY=0
1ALT - /SIZE=64/COPY=0
CCITT - /SIZE=64/COPY=0
ALPHA - /SIZE=65/COPY=0
ITEP - /SIZE=58/COPY=0
OPER. SPEC'D - /SIZE=LENGTH-OF-TEXT-TYPED-BETWEEN-QUOTES/COPY=0

FOR THE RUN COMMAND THE DEFAULTS ARE:

RUN MODE=ACTIVE/NOSTATUS/CHECK/NOECHO/PASS=1

NOTE: MODE=ACTIVE IS NOT DEFAULT, A MODE=MTYPE MUST BE TYPED
----- EACH TIME A RUN IS TYPED

IF THE DCLT PROGRAM IS RUN IN UNATTENDED MODE (UAM FLAG=1 OR CHAINED),
THE DEFAULTS ARE AS IF THESE SETUP AND RUN COMMANDS WERE TYPED:

SET TRANS=ITEP
SET EXPECT=ITEP
RUN MODE=ACTIVE/LOOP=INTERNAL/NOSTAT/CHECK/PASS-1

OTHER NOTES:

^C ALWAYS RETURNS YOU TO 'DR>' (THE SUPERVISOR)
<CR> IS SEEN AS A COMMAND TERMINATOR
'RUBOUT' DELETE LAST CHAR. TYPED IN COMMAND STRING

2.5.5 PRINT

THE PRINT COMMAND TAKES YOU A LEVEL BELOW DCLT> CALLED REPORT.
THE COMMANDS AVAILABLE IN RPT> ARE ...

| <u>COMMAND</u> | <u>DESCRIPTION</u> |
|-----------------|---|
| HELP OR ? | PRINT HELP INFORMATION FOR RPT> |
| LOG | PRINTS THE DCLT EVENT LOG. |
| BASE/FULL | PRINTS ENTIRE BASE TABLE. |
| BASE/ERROR | PRINTS ONLY ERROR COUNTERS IN BASE TABLE. |
| BASE/OFFSET=NNN | PRINTS SINGLE LOCATION IN BASE TABLE AS SPECIFIED BY OFFSET. |
| EXIT | RETURNS YOU TO THE LEVEL THAT YOU ENTERED FROM. (DCLT> OR DR>) |

2.5.6 MISC COMMANDS

| <u>COMMAND</u> | <u>DESCRIPTION</u> |
|----------------|---|
| EXIT | FROM THE DCLT> LEVEL RETURNS YOU TO DR>. |
| HELP OR ? | PRINTS HELP INFORMATION. |

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2.6 QUICK START-UP PROCEDURE (XXDP+)

TO START-UP THIS PROGRAM:

1. BOOT XXDP+
2. GIVE THE DATE AND ANSWER THE LSI AND 50HZ (IF THERE IS A CLOCK) QUESTIONS
3. TYPE 'R NAME', WHERE NAME IS THE NAME OF THE BIN OR BIC FILE FOR THIS PROGRAM
4. TYPE 'START'
5. ANSWER THE 'CHANGE HW' QUESTION WITH 'Y'
6. ANSWER ALL THE HARDWARE QUESTIONS. THE NUMBER OF UNITS THAT CAN DCLT CAN USE IS ALWAYS '1'.

WHEN YOU FOLLOW THIS PROCEDURE YOU WILL BE USING ONLY THE DEFAULTS FOR FLAGS. THESE DEFAULTS ARE DESCRIBED IN SECTION 2.3.

7. AFTER THE 'DCLT> (A) ?' PROMPT, TYPE
'RUN MOD=ACTIVE<CR>'

WHEN YOU FOLLOW THIS PROCEDURE YOU WILL BE USING THE DEFAULT TRANSMIT AND EXPECTED MESSAGES. THE DEFAULT PASS COUNT AND 'RUN' QUALIFIERS ARE ALSO BEING USED. THESE DEFAULTS ARE DESCRIBED IN SECTION 2.5.3.

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3.0 ERROR INFORMATION

3.1 TYPES OF ERROR MESSAGES

THERE ARE THREE LEVELS OF ERROR MESSAGES THAT MAY BE ISSUED BY A DIAGNOSTIC: GENERAL, BASIC AND EXTENDED. GENERAL ERROR MESSAGES ARE ALWAYS PRINTED UNLESS THE 'IER' FLAG IS SET (SECTION 2.3). THE GENERAL ERROR MESSAGE IS OF THE FORM:

```
NAME TYPE NUMBER ON UNIT NUMBER TST NUMBER PC:XXXXXX
ERROR MESSAGE
```

WHERE: NAME = DIAGNOSTIC NAME
TYPE - ERROR TYPE (SYS FATAL, DEV FATAL, HARD OR SOFT)
NUMBER = ERROR NUMBER
UNIT NUMBER = 0 - N (N IS LAST UNIT IN PTABLE)
TST NUMBER = TEST AND SUBTEST WHERE ERROR OCCURRED
PC:XXXXXX = ADDRESS OF ERROR MESSAGE CALL

BASIC ERROR MESSAGES ARE MESSAGES THAT CONTAIN SOME ADDITIONAL INFORMATION ABOUT THE ERROR. THESE ARE ALWAYS PRINTED UNLESS THE 'IER' OR 'IBE' FLAGS ARE SET (SECTION 2.3). THESE MESSAGES ARE PRINTED AFTER THE ASSOCIATED GENERAL MESSAGE.

EXTENDED ERROR MESSAGES CONTAIN SUPPLEMENTARY ERROR INFORMATION SUCH AS REGISTER CONTENTS OR GOOD/BAD DATA. THESE ARE ALWAYS PRINTED UNLESS THE 'IER', 'IBE' OR 'IXE' FLAGS ARE SET (SECTION 2.3). THESE MESSAGES ARE PRINTED AFTER THE ASSOCIATED GENERAL ERROR MESSAGE AND ANY ASSOCIATED BASIC ERROR MESSAGES.

3.2 SPECIFIC ERROR MESSAGES

3.2.1 COMMAND LINE INTERPRETER ERRORS:

| ERROR MESSAGE: | MEANING |
|----------------------|--|
| ----- | ----- |
| ?ILL CMD-BAD SYNTAX? | A COMMAND WITH AN ILLEGAL CHAR WAS TYPED - RETYPE THE COMMAND. THE VALID COMMANDS AND THEIR SYNTAX ARE SHOWN IN SECTION 2.5. |
| ?INCMPLTE CMD? | A REQUIRED PART OF A COMMAND WAS LEFT OUT. |
| ?NUM TOO BIG? | THE VALUE OF A NUMERIC STRING IN THE COMMAND LINE WAS LARGER THAN 65535 OR 177777 OCTAL. (> 16 BITS). |
| ?BAD RADIX? | A '8' OR '9' WAS TYPED WHEN AN OCTAL STRING WAS EXPECTED. PROBABLY OCCURRED WHEN TYPING A 'DUMP' COMMAND WHERE OCTAL ADDRESSES ARE EXPECTED. |

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? 'LOOP' VALID ONLY IN ACTIVE? THE '/LOOP=..' SWITCH WAS TYPED IN A RUN COMMAND BUT THE MODE WAS NOT SET TO ACTIVE. MAINTENANCE LOOP IS ONLY POSSIBLE IF THE MODE OF OPERATION IS ACTIVE.

? 'ECHO' VALID ONLY IN PASSIVE? THE '/ECHO' SWITCH WAS TYPED IN A RUN COMMAND BUT THE MODE WAS NOT SET TO PASSIVE. ECHOING OF RECEIVED DATA IS ONLY POSSIBLE IF THE MODE OF OPERATION IS PASSIVE.

? ILL CHR- 'A-Z,0-9,SP,TAB' ONLY? A CHARACTER TYPED WITHIN QUOTES WHEN TRYING TO DEFINE THE CONTENTS OF A TRANSMIT OR EXPECT MESSAGE WAS NOT A 'A-Z,0-9,SPACE OR TAB'. RETYPE THE COMMAND WITH ONLY THESE CHARACTERS BETWEEN QUOTES.

? 'SIZE=0' NOT VALID? A MESSAGE ZERO BYTES LONG CAN NOT BE BUILT. RETYPE THE COMMAND WITH A '/SIZE=NNN'. IF NO '/SIZE=' IS TYPED A DEFAULT SIZE WILL BE USED.

? TRANSMIT AND EXPECT LIST MUST BE IDENTICAL FOR LOOP?

IF RUN COMMAND WITH '/LOOP/CH' IS TYPED TRANSMIT AND EXPECT LISTS MUST BE EQUAL. IF THEY ARE NOT THIS ERROR WILL BE DISPLAYED. USE 'SE E=T' COMMAND.

3.2.2 DCLT ERROR MESSAGES:

BAD CLOCK - PROGRAM WILL HANG ON 'TIMEOUT'!!
THIS MEANS THAT EITHER NO CLOCK WAS ON THE SYSTEM OR THE ONE THAT WAS FOUND DID NOT INTERRUPT WHEN ASKED TO DO A 'TICK'.
THE PROGRAM WILL STILL RUN, BUT ANY OF THE PROGRAM THAT TIMES THE DEVICE WILL HANG IF THE DEVICE TIMES OUT. ALSO, THE EVENT LOG WILL CONTAIN A ZERO EVENT TIME FOR ALL EVENTS LOGGED.

MAX. CHAR. MSG COUNT EXCEEDED - MSG. NOT BUILT !!

THIS MEANS THAT THE TRANSMIT OR EXPECT BUFFER IS FULL. NO MORE MESSAGES CAN BE ADDED TO THAT BUFFER.

BUFFER FULL - MSG. NOT BUILT !!

THIS MEANS THAT THE LAST MESSAGE YOU

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TRIED TO ADD TO EITHER THE TRANSMIT OR EXPECT BUFFER CAUSED THE TOTAL NUMBER OF MESSAGES TO BE EXCEEDED. NO MORE MESSAGES CAN BE ADDED TO THAT BUFFER. THE LIMIT IS DETERMINED BY THE SIZE OF THE MESSAGE POINTER TABLE.

CHAR. COUNT EXCEEDS BUFF LIMIT - MSG TRUNCATED

THIS MEANS THAT THE LAST MESSAGE YOU TRIED TO ADD TO THE TRANSMIT OR EXPECT BUFFER CAUSED THE TOTAL CHAR. COUNT FOR THAT BUFFER TO EXCEED THE LIMIT. THE MESSAGE WAS TRUNCATED TO COMPLETELY FILL THE BUFFER. NO MORE MESSAGES CAN BE ADDED TO THAT BUFFER.

3.2.3 DEVICE ERROR MESSAGES

DATA COMPARISON DATA ERROR
 BYTE # IN MSG=XXX EXPTD=YYY

RECV=ZZZ

XXX= OFFSET OF THAT BYTE FROM THE START OF THE COMPARE OR EXPECT MESSAGE.
 YYY= THE CONTENTS OF THAT BYTE IN THE EXPECTED MESSAGE
 ZZZ= THE CONTENTS OF THAT BYTE IN THE RECEIVED MESSAGE

UP TO FIVE OF THESE ERRORS WILL BE PRINTED PER MESSAGE COMPARED. ONLY THE FIRST FIVE MISMATCHES WILL BE INDIVIDUALLY REPORTED, BUT TOTAL NUMBER OF MISMATCHES IS REPORTED BY ANOTHER ERROR.

PRINTING THE EVENT LOG AND USING THE DCLT 'DUMP' COMMAND WILL ALLOW YOU TO FIND THE ADDRESS OF THE MESSAGE AND EXAMINE IT.

DATA COMPARISON DATA ERROR
 TOTAL MISMATCHES IN MSG = NNN

THIS MEANS THAT WHEN THE MESSAGE RECEIVED WAS COMPARED AGAINST THE MESSAGE THAT WAS EXPECTED, SOME OF THE CHARS. WERE NOT THE SAME.

DATA COMPARISON LENGTH ERROR
 COMPARE COUNT= XXX RECEIVE COUNT= ZZZ

XXX= NUMBER OF BYTES IN THE COMPARE MESSAGE
 ZZZ= NUMBER OF BYTES IN THE RECEIVED MESSAGE

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THIS MEANS THAT THE MESSAGE RECEIVED
 WAS A DIFFENT LENGTH THEN THE MESSAGE
 THAT WAS EXPECTED.

 * NOTE * - IN THE FOLLOWING ERROR DESCRIPTIONS XXXXX
 ***** REFERS TO THE OCTAL CONTENTS OF THE DEVICE REGISTERS
 SPECIFIED.

TIME OUT WAITING FOR RDI TO CLEAR

SELO SEL2
 XXXXXX XXXXXX

THIS MEANS THAT A SOFTWARE TIMER EXPIRED BEFORE
 THE DEVICE CLEARED RDI IN RESPONSE TO THE DROPPING
 OF RQI.

NOTE: PROGRAM RESETS TIMER AND WAITS AGAIN
 SO AN EFFECTIVE LOOP ON ERROR IS SETUP.

TIME OUT WAITING FOR RDI TO SET

SELO SEL2
 XXXXXX XXXXXX

THIS MEANS THAT A SOFTWARE TIMER EXPIRED BEFORE
 THE DEVICE CAUSED AN INTERRUPT IN RESPONSE TO THE
 PROGRAM SETTING RQI.

NOTE: PROGRAM RESETS TIMER AND WAITS AGAIN
 SO AN EFFECTIVE LOOP ON ERROR IS SETUP.

TIME OUT WAITING FOR RUN TO SET

SELO SEL2
 XXXXXX XXXXXX

THIS MEANS THAT A SOFTWARE TIMER EXPIRED BEFORE
 THE DEVICE SET THE RUN BIT IN RESPONSE TO THE
 PROGRAM SETTING MASTER CLEAR.

NOTE: PROGRAM RESETS TIMER AND ISSUES ANOTHER
 MASTER CLEAR AND WAITS AGAIN SO AN EFFECTIVE
 LOOP ON ERROR IS SETUP.

THIS ERROR COULD INDICATE WRONG ADDRESS FOR
 DMR/DMC-11 WAS GIVEN IN HARDWARE P TABLE.

TIME OUT WAITING FOR OUTPUT INTERRUPT

SELO SEL2
 XXXXXX XXXXXX

THIS MEANS THAT A SOFTWARE TIMER EXPIRED BEFORE
 THE DEVICE SET OUTPUT INTERRUPT IN RESPONSE TO
 PROGRAM REQUESTING DEVICE TO TRANSMIT OR RECEIVE.

NOTE: PROGRAM RESETS TIMER AND WAITS AGAIN SO AN
 EFFECTIVE LOOP ON ERROR IS SET UP.
 THIS ERROR WILL OCCUR WHEN ONE NODE IS STARTED

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IN RX OR TX MODE AND THE OTHER IS STILL BEING
 SET UP. IGNORE THIS ERROR IF PROGRAM CONTINUES
 WITHOUT FURTHER ERRORS.

INPUT INTERRUPT WHEN EXPECTING OUTPUT

SEL0 SEL2
 XXXXXX XXXXXX

THIS WILL HAPPEN IF THE DEVICE IS BAD. IT MEANS
 THAT AFTER THE PROGRAM HAS ISSUED ALL INPUT REQUESTS
 TO THE DEVICE, THE DEVICE ISSUES AN INPUT INTERRUPT

ILLEGAL OUTPUT INTERRUPT

SEL2 SEL6
 XXXXXX XXXXXX

THIS HAPPENS WHEN THE DEVICE ISSUES AN OUTPUT INTERRUPT
 WITHOUT SETTING 'RDO'. IF THIS HAPPENS THE DEVICE IS BAD.

CONTROL OUT INSTEAD OF BA-CC OUT

SEL2 SEL6
 XXXXXX XXXXXX MMMMMMM

WHERE 'MMMMMM' IS ONE OF THE FOLLOWING MESSAGES
 THAT RESULT FROM INTERPRETING THE REGISTER CONTENTS
 FOR YOU:

PROCEDURE ERROR/HALT
 NON EXIST MEM
 DDCMP START REC
 DISCONNECT
 LOST DATA
 DDCMP MAINT REC
 OVERRUN
 TIME OUT
 DATA CHECK
 RUN SET ILLEGALLY (DMR IN DMR-MODE ONLY)
 CD GLITCHED (DMR IN DMR-MODE ONLY)
 RX IDLE (DMR IN DMR-MODE ONLY)
 CTS FAILED (DMR IN DMR-MODE ONLY)

THIS ERROR OCCURS WHEN THE DEVICE SETS CONTROL OUT
 TO INDICATE ERROR CONTIDION. THE PROGRAM EXPECTS A
 BACC OUT.

TX BUFF COMPLETED AND SHOULD BE RX

SEL4 SEL6
 XXXXXX XXXXXX

THIS ERROR OCCURS WHEN THE THE DEVICE HAS
 A BACC OUT WITH TX COMPLETED AND THE PROGRAM
 WAS EXPECTING A RX COMPLETED.

RX BUFF COMPLETED AND SHOULD BE TX

SEL4 SEL6
 XXXXXX XXXXXX

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THIS ERROR OCCURS WHEN THE THE DEVICE HAS
A BACC OUT WITH RX COMPLETED AND THE PROGRAM
WAS EXPECTING A TX COMPLETED.

WHERE 'XXXXX' IS THE OCTAL CONTENTS OF THAT
DEVICE REGISTER.

DOWN LINE LOAD ABORTED

THIS ERROR CAN ONLY OCCUR IN A NODE THAT
IS A DLL 'HOST' WHEN IT HAPPENS IT ALSO
PRINTS ONE OF THE FOLLOWING QUALIFERS:

TX NOT COMPLETE

HOST DEVICE DID NOT GIVE BACC OUT TX
THIS SHOULD NOT HAPPEN BECAUSE DEVICE
DOES NOT NEED AN ACK FOR MAINT MESGS.

RX NOT COMPLETE

HOST DEVICE DID NOT GIVE BACC OUT RX
THIS CAN HAPPEN IF SATELLITE DOES NOT
SEND THE SEC BOOT REQUEST MESSAGE.

SEC REQ WORD1

HOST RECEIVED A MESSAGE FROM SATELLITE
BUT MESSAGE WAS NOT 1ST WORD OF SEC BOOT REQ.

SEC REQ WORD2

HOST RECEIVED A MESSAGE FROM SATELLITE
BUT MESSAGE WAS NOT 2ND WORD OF SEC BOOT REQ.

CALLED FROM PC. XXXXXX

THIS MESSAGE OCCURS WITH OTHER ERROR MESSAGES
TO INDICATE PC OF CALLING ROUTINE.

4.0 PERFORMANCE AND PROGRESS REPORTS

DCLT USES IT'S OWN METHOD FOR DETERMINING AN 'END OF PASS' WHICH IS CALLED A 'DCLT END OF PASS'. THE NUMBER OF 'DCLT PASSES' TO BE RUN IS SPECIFIED BY THE '/PASS=XXX' SWITCH ON THE DCLT RUN COMMAND. THE TOTAL NUMBER OF 'DCLT ERRORS' IS REPORTED WHEN 'X' NUMBER OF DCLT PASSES ARE COMPLETED.

4.1 PRINTING OF EVENT LOG

SIGNIFICANT EVENTS OR CHECK-POINTS WILL BE LOGGED IN A 'CIRCULAR QUEUE' STORAGE AREA CALLED THE EVENT LOG. THE LAST 'N' EVENTS ARE KEPT LOGGED AND CAN BE LISTED ON THE OPERATORS CONSOLE BY GIVING A 'PRINT' COMMAND AT THE 'DR>' (DIAGNOSTIC SUPERVISOR) OR 'DCLT>' (DCLT) LEVEL. THIS WILL TAKE YOU TO THE RPT> LEVEL. NOW GIVE THE 'LOG' COMMAND. THE EVENTS ARE PRINTED IN A 'LAST-IN FIRST-OUT' ORDER.

EVENT TIME IS TYPED OUT AS MMM:SS:TT (LIKE 254:36:07) WHERE MMM,SS,TT REPRESENT THE NUMBER OF MINUTES, SECONDS, CLOCK TICKS SINCE THE LAST START OR RESTART. IT SHOULD BE NOTED THAT THE TIMES ARE RELATIVE SINCE WHILE THE PROCESSOR IS RUNNING AT PRIORITY 7 THE CLOCK CAN'T INTERRUPT TO KEEP TIME. THIS IS THE CASE WHILE THE PROGRAM IS FETCHING DCLT COMMANDS FROM THE OPERATOR. IT SHOULD ALSO BE NOTED THAT THERE ARE ONLY 8 BITS AVAILABLE TO STORE RELATIVE MINUTES SO 'TIME' WILL WRAP TO 000:00:00 AFTER 256:59:59.

A START OR RESTART COMMAND AT THE 'DR>' LEVEL INITIALIZES THE EVENT LOG. THEREFORE IT IS WISE TO DO A 'PRINT' AT THE 'DR>' LEVEL BEFORE GIVING A 'START' OR 'RESTART'.

THE TYPES OF EVENTS KEPT IN THE EVENT LOG ARE:

TRANSMIT MESSAGE QUEUED:

EVENT TIME, ADDRESS OF 1ST BYTE OF MESSAGE,
TOTAL NO. OF BYTES, MODEM STATUS AT THAT TIME.

TRANSMIT MESSAGE COMPLETED:

EVENT TIME, ADDRESS OF 1ST BYTE OF MESSAGE,
TOTAL NO. OF BYTES, MODEM STATUS AT THAT TIME.

RECEIVE SPACE QUEUED:

EVENT TIME, ADDRESS OF 1ST BYTE OF MESSAGE,
TOTAL NO. OF BYTES, MODEM STATUS AT THAT TIME.

RECEIVE MESSAGE COMPLETED:

EVENT TIME, ADDRESS OF 1ST BYTE OF MESSAGE,
TOTAL NO. OF BYTES, MODEM STATUS AT THAT TIME.

DATA COMPARISON STARTED:

EVENT TIME, ADDRESS OF 1ST BYTE OF RECEIVED MSG.,
TOTAL NO. OF BYTES IN RCV. MSG., TOTAL NO. OF BYTES
IN EXPECT MSG.

DATA COMPARISON DATA ERROR:

EVENT TIME, ADDRESS OF 1ST BYTE OF RECEIVED MSG.,
TOTAL NO. OF BYTES IN RCV. MSG., TOTAL NO. OF

COMPARISON FAILURES
 DATA COMPARISON LENGTH ERROR:
 EVENT TIME, ADDRESS OF 1ST BYTE OF RECEIVED MSG.,
 TOTAL NO. OF BYTES IN RCV. MSG., TOTAL NO. OF BYTES
 IN EXPECT MSG.
 DEVICE INIT AND SETUP:
 EVENT TIME, MODE OF OPERATION, TYPE OF MAINTENANCE
 LOOP, 'DCLT' PASS COUNT, 'RUN' PARAMETERS
 DEVICE ERROR:
 EVENT TIME, DEVICE ERROR MESSAGE, CONTENTS OF TWO
 REGISTERS RELATING TO THE ERROR.
 END OF PASS:
 ^C ABORT:
 EVENT TIME, 'DCLT' PASS COUNT, 'DCLT' ERROR COUNT,
 NO. OF 'NOBUFF'S'(NO. OF CONTROL-OUTS WITH THE
 NO-BUFFER SET SINCE THE LAST 'DCLT RUN' COMMAND.)

NOTE: IF THE NODES ON THE LINK ARE SIMILAR WITH
 RESPECT TO CONSOLE SPEED AND SETUP, THE
 NUMBER OF 'NOBUFFS' SHOULD BE NEAR ZERO.

4.2 OPERATOR STATUS MESSAGES

THE '/STATUS, /NOSTATUS' QUALIFIERS FOR THE DCLT 'RUN' COMMAND
 ENABLES/DISABLES THE PRINTING OF PROGRAM STATUS MESSAGES TO THE
 OPERATOR. THESE MESSAGES ARE INTENDED TO TELL THE OPERATOR WHAT
 THE DCLT PROGRAM IS CURRENTLY DOING. BELOW ARE THE MESSAGES THAT
 MIGHT BE PRINTED AND THEIR MEANING:

| MESSAGE | MEANING |
|---------|---|
| TXQ | DEVICE IS ABOUT START TRANSMITTING A MESSAGE |
| TXC | TRANSMISSION OF MESSAGE COMPLETED |
| RXQ | DEVICE HAS QUEUED SPACE TO RECEIVE/ COMPLETED RECEIVE |
| ERR | DEVICE ERROR HAS OCCURRED |
| INI | DEVICE ABOUT TO BE INITIALIZED |
| MSC | ABNORMAL MODEM STATUS CHANGE |
| CMP | ABOUT TO DO DATA CHECKING OF RECVD VS. EXPTD DATA |
| CML | LENGTH ERROR OCCURRED DURING DATA COMPARISON |
| CMD | DATA ERROR OCCURRED DURING DATA COMPARISON |
| EOP | END OF PASS |

4.3 PRINTING OF DMR/DMC-11 BASE TABLE

AT THE 'DCLT>' OR 'DR>' LEVEL, GIVE THE PRINT COMMAND. THIS WILL
 TAKE YOU TO THE 'RPT>' LEVEL. YOU NOW HAVE THE OPTION OF PRINTING
 ONLY ERROR LOCATIONS, ENTIRE BASE TABLE OR A SINGLE LOCATION.
 YOU ONLY HAVE TO INPUT ENOUGH OF THE COMMAND TO MAKE IT UNIQUE.
 THE ENTIRE BASE TABLE IN LOCAL PDP11 MEMORY IS UPDATED BY THE DMC
 OR DMR, WHENEVER A FATAL ERROR OCCURS. THE ERROR COUNTER LOCATIONS
 OF THE BASE TABLE ARE UPDATED EVERY SECOND BY THE DMC OR DMR IN
 DMC MODE. IF THE DMR IS IN DMR MODE, THE ENTIRE BASE TABLE WILL BE
 UPDATED AT 'END OF DCLT PASS'.

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4.3.1 PRINTING ERROR LOCATIONS

TO PRINT ERROR COUNTER LOCATIONS, INPUT 'BASE/ERROR'. FOR A DMC LOCATIONS BASE+3..BASE+12 WILL BE DISPLAYED. IF A DMR, LOCATIONS BASE+3..BASE+41 WILL BE DISPLAYED. THE BASE ADDRESS IN THIS PROGRAM IS ALWAYS 17370.

EXAMPLE - DEVICE IS DMC

RPT> (A) ? B/E

| LOCATION | CONTENTS | DESCRIPTION |
|----------|----------|---------------------------|
| 17373 | 004 | NAKS-MSG NO BUFFERS CUMUL |
| . | . | . |
| 17402 | 007 | REPS RECD CUMUL |

4.3.2 PRINTING ENTIRE BASE TABLE

TO PRINT THE ENTIRE BASE TABLE, INPUT 'BASE/FULL'. IF A DMC 256 BYTES WILL BE DISPLAYED. IF A DMR, 128 BYTES WILL BE DISPLAYED. IN ORDER TO SAVE PROGRAM SPACE IN MEMORY, NOT ALL LOCATIONS WILL HAVE A DESCRIPTIVE MESSAGE. WHEN IN DOUBT SEE THE DMC OR DMR TECHNICAL MANUALS FOR A FULL DESCRIPTION.

EXAMPLE - DEVICE IS DMR IN DMC MODE;

RPT> (A) ? BASE/FULL

| LOCATION | CONTENTS | DESCRIPTION |
|----------|----------|------------------------------------|
| 17370 | 000 | BASE TABLE UPDATE INDEX POINTER |
| 17371 | 000 | BASE TABLE UPDATE LIMIT |
| 17372 | 000 | BEGINNING OF BASE TABLE DATA |
| 17373 | 000 | NAKS RCVD..BUFFER TEMP UNAVAILABLE |
| . | . | |
| 17567 | . | SEE DMR MANUAL FOR DESCRIPTION |

4.3.3 PRINTING SINGLE LOCATION

TO EXAMINE A SINGLE LOCATION, INPUT 'BASE/OFFSET=NNN'. FOR A DMC NNN IS A OCTAL NUMBER BETWEEN 0-377. FOR A DMR, NNN IS A OCTAL NUMBER BETWEEN 0-177. IF THE OFFSET VALUE IS NOT WITHIN THIS RANGE AN ERROR MESSAGE WILL BE PRINTED.

EXAMPLE - DEVICE IS DMR

RPT> (A) ? B/O=27

| LOCATION | CONTENTS | DESCRIPTION |
|----------|----------|--------------------------|
| 17417 | 006 | STREAMING TIME OUT COUNT |

RPT> (A) ?

5.0 DEVICE INFORMATION TABLES

THIS IS THE DEFAULT HARDWARE P-TABLE. THE VALUES AND SIZE ARE USED AS A 'TEMPLATE' FOR CREATING ACTUAL P-TABLE ENTRIES AND THE DEFAULT VALUES PROVIDED FOR THE OPERATOR. SEE SECTION 2.4 FOR AN EXAMPLE OF THE HARDWARE QUESTIONS.

THE NUMBERS IN BRACKETS (I.E. [10]) INDICATES THE OFFSET OF THE WORD INTO THE HARDWARE P-TABLE. THE OFFSETS MUST MATCH THE P-TABLE OFFSETS USED IN THE HARDWARE PARAMETER CODING SECTION WHERE THE "GET PARAMETER" CALLS ARE USED TO FILL THE P-TABLE.

| | | |
|-------|--------|--|
| .WORD | 1 | :[0] FULL OR HALF DUPLEX FLAG (BIT0=1 IF FULL) |
| .WORD | 160170 | :[2] CSR ADDRESS |
| .WORD | 300 | :[4] INTERRUPT VECTOR |
| .WORD | 240 | :[6] INTERRUPT PRIORITY (5) |
| .WORD | 0 | :[10] SPARE |
| .WORD | 0 | :[12] OPTION TYPE(0=DMC,5=DMR-DMC MODE,7=DMR) |

6.0 MODE AND MESSAGE DESCRIPTIONS

6.1 MODE DESCRIPTIONS

BECAUSE THE DMC-11 AND DMR-11 SUPPORT DDCMP OPERATION IN THE FIRMWARE, THE PDP11 DCLT PROGRAM IS UNABLE TO CONTROL OR KNOW EXACTLY WHAT IS BEING TRANSMITTED OR RECEIVED AT ANY GIVEN TIME. ALL DATA MESSAGES ARE ENCLOSED IN A DDCMP ENVELOPE AND THEREFORE CONTROL MESSAGES (ACKS,NAKS...) ARE ALSO BEING TRANSMITTED AND RECEIVED.

6.1.1 TRANSMIT MODE

A LIST OF MESSAGES IS TRANSMITTED WITHOUT EXPECTING ANY DATA TO BE RECEIVED.

6.1.2 RECEIVE MODE

SPACE IS QUEUED FOR THE DEVICE TO RECEIVE MESSAGES. AFTER RECEIVING AN 'EXPECTED' NUMBER OF MESSAGES, THE DATA RECEIVED CAN BE COMPARED AGAINST A LIST OF 'EXPECT TO RECEIVE' MESSAGES IF DATA-CHECKING IS ENABLED.

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6.1.3 PASSIVE MODE

EVERY TIME A MESSAGE IS RECEIVED, A MESSAGE IS TRANSMITTED.
DATA CHECKING CAN BE DONE ON THE RECEIVED DATA.THE "/ECHO, /NOECHO"
ENABLES/DISABLES THE RETRANSMISSION OF THE DATA RECEIVED.

6.1.4 ACTIVE MODE

A LIST OF MESSAGES IS TRANSMITTED AND MESSAGES ARE RECEIVED.
AFTER RECEIVING AN "EXPECTED" NUMBER OF MESSAGES, THE DATA RECEIVED
CAN BE COMPARED AGAINST A LIST OF "EXPECT TO RECEIVE" MESSAGES
IF DATA-CHECKING IS ENABLED.

NOTE: IF BOTH ENDS OF THE LINK ARE IN ACTIVE MODE, THEN THE
LINK MUST BE A FULL DUPLEX LINK!

6.1.5 DOWN-LINE-LOAD

THE "HOST" OR ORIGINATING STATION REQUESTS THE "SATELLITE" OR
BOOT STATION TO ENTER MOP MODE. THE SATELLITE THEN SENDS A
"SECONDARY BOOT REQUEST MESSAGE". THE "HOST" THEN CHECKS THE
RECEIVED MESSAGE TO SEE THAT IT IS A "SECONDARY BOOT REQUEST".
THEN THE HOST SENDS A "MEMORY LOAD WITH TRANSFER ADDRESS"
THAT CONTAINS IMAGE DATA TO BE LOADED BY THE SATELLITE'S
M9301-YJ/M9312 STARTING AT LOC. 0. THIS IMAGE DATA WILL CONTAIN A
CODE THAT PRINTS A MESSAGE SAYING DOWN-LINE-LOAD WAS SUCCESSFUL.
THE BOOTING PROCESS OVERWRITES PART OF THE "VECTOR" AREA SO THE DCLT
PROGRAM MUST BE RELOADED IN THE "SATELLITE" SYSTEM.

THE SATELLITE WILL ENTER MOP MODE ONLY IF THE PASSWORD WORD
SUPPLIED BY THE USER MATCHES THAT SET IN ITS PASSWORD SWITCH PACK.
INCLUDED IN THE "SECONDARY BOOT MESSAGE", IS THE DEVICE TYPE CODE
THAT IS DECIPHERED AND INCLUDED IN AN IDENTIFICATION MESSAGE.

EXAMPLE DOWNLINE LOAD:

```
DCLT>R M=D
SATELLITE PASSWORD = NNN ;NNN = OCTAL # BETWEEN 0-376
SECONDARY BOOT REQ FROM XXX DEVICE TYPE = YY
```

| YY | XXX |
|----|-----|
| -- | --- |
| 0 | DP |
| 2 | DU |
| 4 | DL |
| 6 | DQ |
| 8 | DA |
| 10 | DUP |
| 12 | DMC |
| 14 | DN |
| 16 | DLV |
| 18 | DMP |
| 20 | DTE |

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| | |
|----|-----|
| 22 | DV |
| 24 | DZ |
| 28 | KDP |
| 30 | KDZ |
| 32 | KL |
| 34 | DMV |

6.1.6 TALK MODE

THE "TALK" END OF THE LINK TRANSMITS OPERATOR-TYPED MESSAGES UNTIL A "EXIT" MESSAGE IS TYPED. AT THAT POINT, THE NODE GOES INTO "LISTEN" MODE. AN "EXIT MESSAGE" IS A MESSAGE WHOSE FIRST FOUR CHARACTERS ARE "EXIT". SINCE ONLY THE FIRST FOUR CHARACTERS NEED TO BE "EXIT", MORE CHARACTERS CAN BE ADDED SO THAT A MESSAGE MAY BE SENT AND THE MODE SWITCHED ALL AT ONCE. FOR EXAMPLE:

TLK> EXIT ALL OF THIS LINE IS SENT THEN MODE SWITCHED

6.1.7 LISTEN MODE

THE "LISTEN" END OF THE LINK PRINTS ALL OF THE MESSAGES RECEIVED BY THE DEVICE ON THE OPERATOR'S CONSOLE. IF THE MESSAGE RECEIVED IS AN "EXIT" MESSAGE, THEN THE NODE ENTERS "TALK" MODE. AN "EXIT MESSAGE" IS A MESSAGE WHOSE FIRST FOUR CHARACTERS ARE "EXIT".

6.1.8 MAINTENANCE "LOOP" MODES

REMEMBER THAT THE WHENEVER A "RUN" COMMAND IS TYPED, THE DEFAULT IS NO LOOPBACK AND THAT A LOOP MODE MUST BE SPECIFIED BY A "/LOOP=.." IF A LOOP MODE IS DESIRED.
 LOOP MODES ARE ONLY VALID IF THE MODE TO RUN IS ACTIVE !

| | |
|--------------|---|
| INTERNAL TTL | THE "LU LOOP" BIT IS SET SO THAT THE UNIT'S SERIAL LINE OUT IS LOOPED BACK TO THE SERIAL LINE IN AT THE TTL LEVEL BEFORE LEVEL CONVERSION. |
| CABLE | NOT USED BY DMR OR DMC-11 CODE. |
| LOCAL MODEM | FOR DMR-11 IN DMR MODE AND RS449 MODEMS ONLY. CAUSES A "WRITE MODEM" TO BE DONE TO SET UP LOCAL-LOOPBACK (MAINT1). ALSO CALLED ANALOG-LOOPBACK. |
| REMOTE MODEM | FOR DMR-11 IN DMR MODE AND RS449 MODEMS ONLY. CAUSES A "WRITE MODEM" TO BE DONE TO SET UP REMOTE-LOOPBACK (MAINT2). ALSO CALLED |

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DIGITAL-LOOPBACK.

THE FOLLOWING TABLE SUMMARIZES THE MODES THAT CAN BE RUN TOGETHER WHEN THE DCLT PROGRAM IS RUNNING ON TWO PROCESSORS (ONE AT EACH END OF THE LINK):

| STATION A 'HOST' NODE | "/LOOP" ALLOWED? | STATION B 'REMOTE' NODE | DUPLEX |
|--------------------------|------------------|----------------------------|--------------|
| TALK | NO | LISTEN*, RECEIVE | HALF OR FULL |
| LISTEN | NO | TALK*, TRANSMIT | HALF OR FULL |
| TRANSMIT | NO | RECEIVE*, LISTEN | HALF OR FULL |
| RECEIVE | NO | TRANSMIT*, TALK | HALF OR FULL |
| PASSIVE | NO | ACTIVE* | HALF OR FULL |
| ACTIVE | YES | ACTIVE* | FULL |
| | | PASSIVE* | HALF OR FULL |
| DOWNLINELOAD | NO | PASSIVE | HALF FORCED |

*= MOST LIKELY TO BE IN THAT MODE

6.2 MESSAGE DESCRIPTIONS

| NAME | DESCRIPTION |
|-----------------------|--|
| ZERES | MESSAGE OF ALL 0'S (00000000,00000000,00000000,...) |
| ONES | MESSAGE OF ALL 1'S (11111111,11111111,11111111,...) |
| 1ALT | MESSAGE OF ALTERNATING 1'S (10101010,10101010,....) |
| OALT | MESSAGE OF ALTERNATING 0'S (01010101,01010101,....) |
| CCITT | "CCITT" 512-BIT (VS. 511 BITS) TEST PATTERN |
| ITEP | "INTERPROCESSOR TEST PROGRAM'S (ITEP)" MESSAGE 1(DP1:) (<177><177>/\$A THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG.<15><12><001><177><177><177><177>) |
| ALPHA | ALPHA-NUMERICS (OR FUTURE COMM TURNAROUND MSG) (#\$!' (AMPERSAND)'()*+,-.0123456789:;<=>?@ABCDEFGHIJK LMNOPQRSTUVWXYZ/[\\]^_`) |
| 'A-Z,0-9,SPACES,TABS' | THESE ARE THAT THE CHARACTERS THAT CAN BE TYPED BETWEEN QUOTATION MARKS ('..') TO SPECIFY A UNIQUE MESSAGE. (CALLED AN OPERATOR SPECIFIED MESSAGE.) |

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7.0 OTHER INFORMATION

7.1 INTERFACING TO AN "ITEP" NODE

WHEN DCLT IS USED TO INTERFACE TO AN ITEP NODE.
THE TABLE BELOW APPLIES:

| ITEP NODE | DCLT NODE |
|---------------|-------------------|
| ONE-WAY-OUT | RECEIVE OR LISTEN |
| ONE-WAY-IN | TRANSMIT OR TALK |
| INTERNAL LOOP | ACTIVE |
| EXTERNAL LOOP | ACTIVE OR PASSIVE |

NOTE: WHEN INTERFACING TO ITEP IF THE RX BUFFER ON THE
ITEP SIDE IS ONLY 10 BYTES LARGER THAN THE TX BUFFER YOU
HAVE SELECIED, SO BE SURE TO SET THE TX BUFFER ON THE DCLT
NGDE ACCORDINGLY.

WHEN ITEP IS IN A MODE THAT IT IS EXPECTING TO BE TRANSMITTED
TO, A SOFT ERROR 'BASE TABLE ERR COUNTS NON-ZERO' WILL OCCUR.
THIS IS DUE TO THE SPEED DIFFERENCES IN THE SOFTWARE.

WHEN DCLT IS IN LISTEN MODE THE RX BUFFER IS ONLY
82 BYTES LONG THEREFORE DO NOT SEND THE DCLT NODE
ITEP MSG. 3 FROM THE ITEP NODE OR A "LOST DATA" ERROR WILL
OCCUR

BE SURE ITEP NODE HAS INCORPERATED PATCH FROM DEPO# MD-11-DZDMO-A1

ITEP NODE SHOULD ALWAYS BE RUN WITH SW 4 = TO 0

7.2 TROUBLESHOOTING HINTS

LISTED BELOW ARE SOME SETUPS THAT COULD BE USED FOR ISOLATING FAULTS.
THESE ARE BY NO MEANS THE ONLY WAYS DCLT CAN BE USED !!!!!!!
DCLT IS MEANT TO BE A VERY FLEXIBLE TOOL: THIS SECTION IS MEANT TO
GIVE SOMEONE NOT TOO FAMILIAR WITH DCLT A PLACE TO START.

REMEMBER THAT THE PRINTING OF STATUS MESSAGES AND PRINTING OF THE
EVENT LOG CAN PROVIDE A LOT OF INFORMATION ABOUT THE SEQUENCE OF
EVENTS AND HOW THE DEVICE AND LINK ARE BEHAVING.

NOTE: IF BOTH NODES IN ACTIVE AND "/NOCHECK" IS USED,
----- END-OF-PASS IS DEFINED AS RECEIVING 1 MESSAGE
AND COMPLETING THE TRANSMIT LIST. WITH NO DATA
CHECKING, THERE IS NO WAY FOR DCLT TO KNOW HOW
MANY MESSAGES IT SHOULD EXPECT TO RECEIVE.

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7.2.1 INTERNAL LOOP AT EACH NODE

RUN EACH END OF THE LINK IN ACTIVE MODE WITH LOOP=INTERNAL.
TRANSMIT TWO OR THREE MESSAGES WITH NO DATA CHECKING.
STATUS PRINTING COULD BE TURNED OFF IF ON, BUT SEEING THE SEQUENCE
OF EVENTS MIGHT BE INFORMATIVE.

A POSSIBLE COMMAND SEQUENCE IS:

```
C E
C T
SE T=ONES/S=20/C=2
R M=A/LO=I/NOCH/STAT
```

WHAT THE ABOVE COMMAND SEQUENCE MEANS:

THE 'C E' AND THE 'C T' INITIALIZES THE 'EXPECT'
LIST AND THE 'TRANSMIT LIST'. THE 'SE T=ONES/S=20/C=2'
SETS THE TRANSMIT LIST TO CONTAIN 3 MESSAGES. THE MESSAGES
CONTAIN DATA OF ALL ONES AND EACH ONE IS 20 BYTES IN LENGTH.
THE 'R M=A/LO=I/NOCH/STAT' SETS THE MODE TO RUN IN TO BE
ACTIVE AND LOOP TYPE TO BE INTERNAL TTL. THE PROGRAM WILL
NOT BE CHECKING DATA SO THERE WAS NO NEED TO SET UP AN
EXPECT LIST. THE PROGRAM WILL BE PRINTING STATUS MESSAGES.

WHAT YOU SHOULD SEE AFTER ENTERING THE RUN COMMAND
IF THINGS ARE RUNNING CORRECTLY :

```
INI RXQ TXQ RXQ TXC TXQ RXQ TXC
TXQ RXQ TXC EOP
MODE=ACTIVE/LOOP=INTERNAL/PASS=0000
/STATUS/NOCHECK/NOECHO/NOMODEM
DCLT> (A) ?
```

THIS GIVES YOU A IDEA IF THE COMM. DEVICE CAN EVEN TRANSMIT AND
RECEIVE. ANY ERRORS REPORTED WILL PROBABLY BE DUE TO INCORRECT
DEVICE ADDRESSES BEING USED OR A FAULTY DEVICE. CHECK ADDRESSES
WITH 'DISPLAY' AND RUN THE PREREQUISITE DIAGNOSTICS FOR THE COMM.
DEVICE.

NOW TRY RUNNING EACH NODE THE SAME WAY WITH DATA CHECKING ENABLED.
A POSSIBLE COMMAND SEQUENCE IS:

```
SE E=T
R M=A/LO=I/CH/PAS=3
```

WHAT THIS SEQUENCE MEANS:

THIS SEQUENCE IS SIMILAR TO THE ONE ABOVE . THE 'SE E=T'
MAKES A COPY OF THE TRANSMIT LIST IN THE EXPECT LIST.
THE EXPECT LIST NOW CONTAINS 3 MESSAGES. THE MESSAGES WILL
HAVE ALL ONES FOR DATA AND BE 20 BYTES EACH IN LENGTH.

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THE RUN COMMAND IS THE SAME WITH THE ADDITION OF TWO SWITCHES '/CH/PAS=3'. THE 'CH' SWITCH TELLS THE PROGRAM TO CHECK THE RECEIVED DATA AGAINST THE 'EXPECTED LIST'. THE 'PAS=3' SWITCH TELLS THE PROGRAM TO RUN 3 PASSES BEFORE RETURNING TO THE DCLT> PROMPT.

WHAT YOU SHOULD SEE AFTER ENTERING THE RUN COMMAND IF THINGS ARE RUNNING CORRECTLY :

```
INI RXQ TXQ RXQ TXC TXQ RXQ TXC
TXQ TXC CMP CMP CMP EOP RXQ TXQ
RXQ TXC TXQ RXQ TXC TXQ TXC CMP
CMP CMP EOP RXQ TXQ RXQ TXC TXQ
RXQ TXC TXQ TXC CMP CMP CMP EOP
MODE=ACTIVE/LOOP=INTERNAL/PASS=00000
/STATUS/CHECK/NOECHO/NOMODEM
```

IF A CABLE TURNAROUND CONNECTOR IS AVAILABLE, PUT IT ON THE END OF THE CABLE JUST BEFORE THE MODEM AND RUN IN ACTIVE MODE WITH NO LOOP. POSSIBLE COMMAND SEQUENCE IS:

R M=A/CH/PAS=3

WHAT THIS SEQUENCE MEANS:

THIS SEQUENCE HAS THE '/LO=1' REMOVED. THIS INFORMS THE DEVICE TO ACT AS IF IT WAS RECEIVING FROM ANOTHER NODE.

WHAT YOU SHOULD SEE AFTER ENTERING THE RUN COMMAND IF THINGS ARE RUNNING CORRECTLY :

```
INI RXQ TXQ TXC RXQ TXQ TXC RXQ
TXQ TXC CMP CMP CMP EOP RXQ TXQ
TXC RXQ TXQ TXC RXQ TXQ TXC CMP
CMP CMP EOP RXQ TXQ TXC RXQ TXQ
TXC RXQ TXQ TXC CMP CMP CMP EOP
MODE=ACTIVE/PASS=00000
/STATUS/CHECK/NOECHO/NOMODEM
```

DCLT> (A) ?

7.2.2 TRANSMIT ON ONE NODE RECEIVE ON THE OTHER

NOW TRY TRANSMITTING FROM ONE END AND RECEIVING ON THE OTHER. MAYBE WITH NO DATA CHECKING AT FIRST TO ESTABLISH IF THE LINK IS WORKING. POSSIBLE COMMAND SEQUENCES ARE:

```
NODE A
-----
C E
C T
SE T=1ALT/S=250
```

```
NODE B
-----
C E
C T
R M=R/NOCH/PAS=3
```

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R M=TR/PAS=3

WHAT THIS SEQUENCE MEANS:

THE 'C E ' AND 'C T' INITIALIZE BOTH THE TRANSMIT AND EXPECT LISTS. THE 'SE T=1ALT/S=250' SETS THE TRANSMIT LIST ON NODE A TO BE 1 MESSAGE WITH A LENGTH OF 250 BYTES AND DATA OF ALTERNATING ONES AND ZEROS. THE 'R M=TR/PAS=3' SETS THE RUN MODE OF NODE A TO BE TRANSMIT AND THE PASS COUNT IS SET TO 3. THE 'R M=R/NOCH/PAS=3' SETS THE RUN MODE OF NODE B TO BE RECEIVE, NO DATA CHECKING IS TO BE DONE, AND THE PASS COUNT IS SET TO THREE.

WHAT YOU SHOULD SEE AFTER ENTERING THE RUN COMMAND IF THINGS ARE RUNNING CORRECTLY :

FOR NODE A:

```
INI TXQ TXC EOP TXQ TXC EOP TXQ
TXC EOP
MODE=TRANSMIT/PASS=00000
/STATUS/NOCHECK/NOECHO/NOMODEM
DCLT> (A) ?
```

FOR NODE B:

```
INI RXQ EOP RXQ EOP RXQ EOP
MODE=RECEIVE/PASS=00000
/STATUS/NOCHECK/NOECHO/NOMODEM
DCLT> (A) ?
```

NOW TRY DOING DATA CHECKING ON THE MESSAGE(S) BEING TRANSMITTED. POSSIBLE COMMAND SEQUENCES ARE:

```
R M=TR/PAS=3
SE E=1ALT/S=250
R M=R/CH/PAS=3
```

WHAT THIS SEQUENCE MEANS:

THE 'SE E=1ALT/S=250' LINE MUST BE ADDED HERE TO SET UP THE 'EXPECT LIST' ON THE RECEIVE NODE SO IT WILL KNOW WHAT TO COMPARE AGAINST. THE CHANGE IN THE RUN COMMAND IS FROM 'NOCH' TO 'CH'. THE 'CH' ENABLES DATA CHECKING.

WHAT YOU SHOULD SEE AFTER ENTERING THE RUN COMMAND IF THINGS ARE RUNNING CORRECTLY:

NODE A: IS THE SAME AS ABOVE.

NODE B:

```
INI RXQ CMP EOP RXQ CMP EOP RXQ CMP EOP
MODE=RECEIVE/PASS=00000
/STATUS/CHECK/NOECHO/NOMODEM
DCLT> (A)?
```


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NOW RUN THRU THE SEQUENCE AGAIN WITH NODE A RECEIVING
AND NODE B TRANSMITTING TO CHECK OUT THE OPPOSITE
DIRECTION OF DATA FLOW.

7.2.3 ON. NODE ACTIVE THE OTHER NODE PASSIVE

NOW TRY RUNNING ONE NODE IN ACTIVE MODE WHILE THE OTHER
END RUNS IN PASSIVE. DATA CHECKING SHOULD BE TURNED OFF
IF THE MESSAGE LISTS ARE NOT THE SAME.
POSSIBLE COMMAND SEQUENCES ARE:

| NODE A | NODE B |
|---------------------|--------------------|
| ----- | ----- |
| C E | C E |
| C T | C T |
| SE T=CCITT/S=10/C=2 | SE T=1ALT/S=20/C=2 |
| R M=ACT/NOCH/PAS=3 | R M=P/NOCH/PAS=3 |

WHAT THIS SEQUENCE MEANS:

THE EXECUTION OF THIS SEQUENCE CAUSES THE FOLLOWING
THINGS TO HAPPEN ON NODE A. THE TRANSMIT AND EXPECT
LISTS ARE INITIALIZED THEN THE TRANSMIT LIST IS SET
TO 3 MESSAGES OF 10 BYTES EACH. THE DATA USED IN THE
TRANSMIT MESSAGES IS THE CCITT PATTERN. THEN NODE A
IS RUN IN ACTIVE MODE WITH DATA CHECKING DISABLED AND
THE PASS COUNT SET TO THREE. NOTE STATUS WOULD STILL BE
PRINTED IF THE PREVIOUS SEQUENCES HAD BEEN RUN.
IF YOU ARE RUNNING FROM LOAD TIME YOU WOULD HAVE
TO ADD A '/STA TO THE RUN COMMAND LINE.

NODE B: THE TRANSMIT AND EXPECT LISTS ARE INTIALIZED
THEN THE TRANSMIT LIST IS SET TO 3 MESSAGES OF
20 BYTES EACH. THE DATA FOR EACH MESSAGE IS ALTERNATING
1'S AND 0'S. THE NODE IS THEN RUN IN PASSIVE MODE WITH
DATA CHECKING DISABLED AND THE PASS COUNT SET TO 5.

WHAT YOU SHOULD SEE AFTER ENTERING THE RUN COMMAND
IF THINGS ARE RUNNING CORRECTLY :

FOR NODE A:

```
INI RXQ TXQ TXC TXQ RXQ TXC TXQ
RXQ TXC EOP RXQ TXQ RXC TXC TXQ
RXQ TXC TXQ RXQ TXC EOP RXQ TXQ
RXQ TXC TXQ RXQ TXC TXQ RXQ TXC
EOP
MODE=ACTIVE/PASS=00000
/STATUS/NOCHECK/NOECHO/NODEM
DCLT> (A) ?
```

FOR NODE B:

```
INI RXQ TXQ TXC RXQ TXQ TXC RXQ
TXQ TXC EOP RXQ TXQ TXC RXQ TXQ
TXC EOP RXQ TXQ TXC RXQ TXQ TXC
```

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```

RXQ TXQ TXC EOP
MODE=PASSIVE/PASS=00000
/STATUS/NOCHECK/NOECHO/NOMODEM
DCLT> (A) ?

```

NOW USE DATA CHECKING WITH THE 'EXPECT MESSAGE LISTS' SET UP APPROPRIATELY. ANOTHER VARIATION IS TO HAVE LARGE SIZE MESSAGES ON ONE SIDE WITH SMALL MESSAGES ON THE OTHER.

THEN REVERSE THE SETUP SO THAT THE NODE RUNNING IN ACTIVE IS RUNNING IN PASSIVE AND VICE VERSA.

7.2.4 BOTH NODES ACTIVE

NOW BOTH NODES CAN BE RUN IN ACTIVE WITH DATA CHECKING ON. STATUS PRINTING COULD BE TURNED OFF IF YOU'RE NOT INTERESTED IN THEM.

| NODE A | NODE B |
|---------------------|---------------------|
| ----- | ----- |
| C E | C E |
| C T | C T |
| SE T=OALT/S=10 | SE E=OALT/S=10 |
| SE T=CCITT/S=20 | SE E=CCITT/S=20 |
| SE T=ALPHA/S=30 | SE E=ALPHA/S=30 |
| SE E=ZERO/S=11 | SE T=ZERO/S=11 |
| SE E=ONES/S=21 | SE T=ONES/S=21 |
| SE E=ITEP/S=31 | SE T=ITEP/S=31 |
| R M=A/CH/NOST/PAS=3 | R M=A/CH/NOST/PAS=3 |

WHAT THIS SEQUENCE MEANS:

NODE A SETS UP IS TRANSMIT LIST TO BE 3 MESSAGES. MESSAGE 1 IS 10 BYTES LONG AND CONTAINS DATA OF ALTERNATING 0'S AND 1'S. MESSAGE 2 IS 20 BYTES LONG AND CONTAINS DATA OF THE CCITT PATTERN. MESSAGE THREE IS 30 BYTES LONG AND CONTAINS ALPHANUMERICS FOR DATA. THE EXPECT LIST ALSO CONTAINS 3 MESSAGES. MESSAGE 1 IS 11 BYTES LONG AND CONTAINS 0'S FOR DATA. MESSAGE TWO IS 21 BYTES LONG AND CONTAINS 1'S FOR DATA. MESSAGE 3 IS 31 BYTES LONG AND CONTAINS THE ITEP DATA. NODE B HAS THE SAME MESSAGES EXCEPT THAT THE TRANSMIT MESSAGE LIST IS THE EXPECT MESSAGE LIST AND VICE VERSA. BOTH NODES ARE RUN IN THE ACTIVE MODE WITH DATA CHECKING AND PASS COUNT EQUAL TO THREE.

WHAT YOU SHOULD SEE AFTER ENTERING THE RUN COMMAND IF THINGS ARE RUNNING CORRECTLY :
ON BOTH NODES A AND B:

```

MODE=ACTIVE/PASS=00000
/NOSTATUS/CHECK/NOECHO/NOMODEM

```

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DCLT> (A) ?

A VARIATION THAT CAN BE USED IS FOR ONE END TO SEND A LOT OF SMALL MESSAGES AND THE OTHER TO SEND A FEW LARGE MESSAGES. THE 'END-OF-PASS' POINT WILL BE OUT OF SYNC BUT THIS IS NOT A PROBLEM.

7.2.5 TALK AND LISTEN MODES FOR COMMUNICATING

TALK AND LISTEN MODES ARE USEFUL IF THE OPERATORS WISH TO COMMUNICATE WITH EACH OTHER. JUST SETUP A TIME THAT EACH WILL GO TO THEIR MODE, TALK OR LISTEN, AND SEND MESSAGES OVER THE LINK. POSSIBLE COMMAND SEQUENCES ARE.

R M=LIS/NOST
 LIS>

R M=TA/NOST
 TLK>

7.3 EXAMPLES OF COMMANDS

 THIS SECTION WILL SHOW A SAMPLING OF COMMANDS AND EXACTLY WHAT TO EXPECT FROM THEM.

7.3.1 EXAMPLES OF MESSAGES COMMANDS

THE CLEAR COMMANDS .

C E
 C T

THIS WILL INITIALIZE THE TRANSMIT AND EXPECT LIST TO 1 MESSAGE OF 58 BYTES. THE DATA OF THE MESSAGE WILL BE THE ITEP MESSAGE.

IF THESE COMMANDS ARE FOLLOWED BY A SHOW COMMAND

SH E
 SUCH AS THE SHOW EXPECT LIST. WHAT YOU WOULD SEE IS
 MSG: TYPE=ITEP/SIZE=58
 MODE=ACTIVE/PASS=00001
 /NOSTATUS/CHECK/NOECHO/NOMODEM

DCLT> (A) ?

NOW IF YOU DID A SET EXPECT LIST COMMAND SUCH AS:

SE E=A/S=35/C=3

AND FOLLOWED IT WITH A SHOW EXPECT LIST COMMAND

SH E
 WHAT YOU WOULD SEE IS

MSG: TYPE=ALPHA/SIZE=35
 MSG: TYPE=ALPHA/SIZE=35
 MSG: TYPE=ALPHA/SIZE=35
 MSG: TYPE=ALPHA/SIZE=35
 MODE=ACTIVE/PASS=00001
 /NOSTATUS/CHECK/NOECHO/NOMODEM

DCLT> (A) ?

7.3.2 EXAMPLES STATISTICAL COMMANDS

IF YOU TYPE A HELP COMMAND

HELP

WHAT YOU WILL SEE IS

DCLT CMDS:

CLEAR OR SHOW EXPECTLIST OR TRANSMITLIST

PRINT

EXIT

DUMP START-END/B

SET EXPECTMSG OR TRANSMITMSG=TYPE/SIZE=N OR /COPY=N

SET EXPECT=TRANSMIT

TYPE=ONES,ZEROES,,ALT,OALT,ITEP,CCITT,ALPHA

OR 'OPR SPCD=A-Z,SP,TAB,0-9 IN QUOTES'

RUN MODE=MTYP/LOOP=LTP/CHECK,STATUS,ECHO,MODEM,PASS=N

MTYP=TRAN,REC,ACT,PAS,TAL,LIS,DOWN

LTP=INT,CAB,LOC,REM/

DCLT> (A) ?

THE SAME WILL HAPPEN IF YOU USE THE ?

THE DUMP COMMAND WORKS LIKE THIS

DUM 41260-41300

THIS WILL DUMP THE DATA FROM ADDRESSES 41260 TO

41300 IN THE FOLLOWING MANNER

41260 104423 000167 177772 021122 012112 006312 006312 006312

41300 006312

IF YOU HAD USED THE /B SWITCH

DUM 41260-41300/B

WHAT YOU WOULD SEE IS

41260 023 211 167 000 372 377 122 024

41270 112 024 312 014 312 014 312 014

41300 312

7.3.3 EXAMPLES RUN COMMANDS

YOU CAN FIND SEVERAL EXAMPLES OF THE RUN COMMAND IN THE
TROUBLE SHOOTING HINTS SECTION BUT HERE ARE SOME OTHERS.

IF YOU WERE TO EXECUTE THE RUN COMMAND

R M=TR/NOST/CH/PAS=4

WHAT WOULD HAPPEN IS AFTER 4 PASSES THE PROGRAM WOULD RETURN
TO THE DCLT PROMPT AND PRINT

MODE=TRANSMIT/PASS=00000

/NOSTATUS/CHECK/NOECHO/NOMODEM

DCLT> (A) ?

IF YOU WERE TO EXECUTE THE RUN COMMAND

C E

C T

R M=A/LO=I/ST/CH/PAS=3

WHAT YOU WOULD SEE (IF USING DEFAULT TRANSMIT AND EXPECT

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MODEM STATUS: CTS DSR DCD RTS RI SQD TM
 0 1 0 0 1 1 1

THIS GOES ON FOR 45 EVENTS IF THE MODE
 PREVIOUSLY EXECUTED HAD THAT MANY
 YOU EXIT FROM EVENT LOG PRINTING BY
 TYPING A CONTROL C.

7.3.5 EXAMPLE EXIT COMMAND

THE EXIT COMMAND WORKS LIKE THIS. IF YOU
 ENTERED THE REPORT LEVEL FROM THE SUPERVISOR
 (DR>) THEN TYPING

EXIT

WILL RETURN YOU TO THE SUPERVISOR.

DR>

IF YOU ENTERED REPORT FROM THE DCLT LEVEL
 THEN TYPING

EXIT

WILL RETURN YOU TO THE DCLT LEVEL.

DCLT>

7.4 THINGS TO WATCH OUT FOR

IF YOU ARE RUNNING DCLT ON SYSTEMS THAT HAVE CONSOLES
 WITH DIFFERENT SPEEDS YOU WILL BE UNABLE TO USE THE
 PRINT STATUS FEATURE IN CERTAIN MODES. THE RULE IS
 IF IT DOESNT WORK WITH STATUS PRINTING RUN THE MODE
 WITH NOSTATUS.

IF YOU ARE USING PASSIVE MODE WITH THE ECHO SWITCH
 THEN YOU WILL PROBABLY HAVE TO RE-ENTER THE TRANSMIT
 LIST ON THE SIDE WITH THE ECHO SWITCH. THE REASON IS
 THAT THE TRANSMIT LIST GETS OVER WRITTEN WITH THE
 RECEIVE LIST WHEN USING THE ECHO SWITCH.

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| | | |
|------|--------|--------|
| 1994 | | |
| 1995 | | |
| 1996 | | |
| 1997 | 002000 | |
| 1998 | | |
| 1999 | | |
| 2000 | | |
| 2001 | | |
| 2002 | | |
| 2003 | | |
| 2004 | | |
| 2005 | | |
| 2006 | | |
| 2007 | | |
| 2008 | 002000 | |
| 2009 | | |
| 2010 | | |
| 2011 | | |
| 2012 | 002000 | |
| 2013 | 002000 | |
| 2014 | 002000 | 103 |
| 2015 | 002001 | 132 |
| 2016 | 002002 | 103 |
| 2017 | 002003 | 114 |
| 2018 | 002004 | 113 |
| 2019 | 002005 | 000 |
| 2020 | 002006 | 000 |
| 2021 | 002007 | 000 |
| 2022 | 002010 | |
| 2023 | 002010 | 103 |
| 2024 | 002011 | |
| 2025 | 002011 | 060 |
| 2026 | 002012 | |
| 2027 | 002012 | 000000 |
| 2028 | 002014 | |
| 2029 | 002014 | 003410 |
| 2030 | 002016 | |
| 2031 | 002016 | 046140 |
| 2032 | 002020 | |
| 2033 | 002020 | 000000 |
| 2034 | 002022 | |
| 2035 | 002022 | 002130 |
| 2036 | 002024 | |
| 2037 | 002024 | 000000 |
| 2038 | 002026 | |
| 2039 | 002026 | 046522 |
| 2040 | 002030 | |
| 2041 | 002030 | 000000 |
| 2042 | 002032 | |
| 2043 | 002032 | 000000 |
| 2044 | 002034 | |
| 2045 | 002034 | 000000 |
| 2046 | 002036 | |
| 2047 | 002036 | 000000 |
| 2048 | 002040 | |
| 2049 | 002040 | 002124 |

.SBTTL PROGRAM HEADER

BGNMOD

```

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

```

POINTER BGNRPT,BGNAU,BGNDU

HEADER CZCLK,C,0,1800.,0,#PRI07

```

LSNAME::
        .ASCII /C/
        .ASCII /Z/
        .ASCII /C/
        .ASCII /L/
        .ASCII /K/
        .BYTE 0
        .BYTE 0
        .BYTE 0
LSREV::
        .ASCII /C/
LSDEPO::
        .ASCII /O/
LSUNIT::
        .WORD 0
LSTIML::
        .WORD 1800.
LSHPCP::
        .WORD LSHARD
LSSPCP::
        .WORD 0
LSHPTP::
        .WORD LSHW
LSSPTP::
        .WORD 0
LSLADP::
        .WORD L$LAST
LSSIA::
        .WORD 0
LSCO::
        .WORD 0
LSDTYP::
        .WORD 0
LSAPT::
        .WORD 0
LSDTP::
        .WORD L$DISPATCH

```

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| | | |
|------|--------|--------|
| 2050 | 002042 | |
| 2051 | 002042 | 000340 |
| 2052 | 002044 | |
| 2053 | 002044 | 000000 |
| 2054 | 002046 | |
| 2055 | 002046 | 000000 |
| 2056 | 002050 | |
| 2057 | 002050 | 003 |
| 2058 | 002051 | 003 |
| 2059 | 002052 | |
| 2060 | 002052 | 000000 |
| 2061 | 002054 | 000000 |
| 2062 | 002056 | |
| 2063 | 002056 | 000000 |
| 2064 | 002060 | |
| 2065 | 002060 | 012414 |
| 2066 | 002062 | |
| 2067 | 002062 | 033732 |
| 2068 | 002064 | |
| 2069 | 002064 | 000000 |
| 2070 | 002066 | |
| 2071 | 002066 | 000000 |
| 2072 | 002070 | |
| 2073 | 002070 | 034746 |
| 2074 | 002072 | |
| 2075 | 002072 | 034740 |
| 2076 | 002074 | |
| 2077 | 002074 | 000000 |
| 2078 | 002076 | |
| 2079 | 002076 | 012430 |
| 2080 | 002100 | |
| 2081 | 002100 | 104035 |
| 2082 | 002102 | |
| 2083 | 002102 | 000000 |
| 2084 | 002104 | |
| 2085 | 002104 | 033746 |
| 2086 | 002106 | |
| 2087 | 002106 | 034650 |
| 2088 | 002110 | |
| 2089 | 002110 | 034646 |
| 2090 | 002112 | |
| 2091 | 002112 | 033740 |
| 2092 | 002114 | |
| 2093 | 002114 | 000000 |
| 2094 | 002116 | |
| 2095 | 002116 | 000000 |
| 2096 | 002120 | |
| 2097 | 002120 | 000000 |
| 2098 | | |
| 2099 | | |

| | | |
|-----------|-------|-------------|
| L\$PRIO:: | .WORD | #PRI07 |
| L\$ENVI:: | .WORD | 0 |
| L\$EXP1:: | .WORD | 0 |
| L\$MREV:: | .BYTE | C\$REVISION |
| | .BYTE | C\$EDIT |
| L\$EF:: | .WORD | 0 |
| | .WORD | 0 |
| L\$SPC:: | .WORD | 0 |
| L\$DEVP:: | .WORD | L\$DVTYP |
| L\$REPP:: | .WORD | L\$RPT |
| L\$EXP4:: | .WORD | 0 |
| L\$EXP5:: | .WORD | 0 |
| L\$AUT:: | .WORD | L\$AU |
| L\$DUT:: | .WORD | L\$DU |
| L\$LUN:: | .WORD | 0 |
| L\$DESP:: | .WORD | L\$DESC |
| L\$LOAD:: | EMT | E\$LOAD |
| L\$ETP:: | .WORD | 0 |
| L\$ICP:: | .WORD | L\$INIT |
| L\$CCP:: | .WORD | L\$CLEAN |
| L\$ACP:: | .WORD | L\$AUTO |
| L\$PRT:: | .WORD | L\$PROT |
| L\$TEST:: | .WORD | 0 |
| L\$DLY:: | .WORD | 0 |
| L\$HIME:: | .WORD | 0 |

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DISPATCH TABLE

.SBTTL DISPATCH TABLE

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

2100
2101
2102
2103
2104
2105
2106
2107 002122
2108 002122 000001
2109 002124
2110 002124 034754
2111

DISPATCH 1

.WORD 1
LSDISPATCH::
.WORD T1

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DEFAULT HARDWARE P-TABLE

.SBTTL DEFAULT HARDWARE P-TABLE

;++
: THE DEFAULT HARDWARE P-TABLE CONTAINS DEFAULT VALUES OF
: THE TEST-DEVICE PARAMETERS. THE STRUCTURE OF THIS TABLE
: IS IDENTICAL TO THE STRUCTURE OF THE HARDWARE P-TABLES,
: AND IS USED AS A 'TEMPLATE' FOR BUILDING THE P-TABLES.
:--

2112
2113
2114
2115
2116
2117
2118
2119
2120
2121 002126
2122 002126 000010
2123 002130
2124 002130
2125
2126
2127
2128
2129
2130
2131
2132 002130 000001
2133
2134
2135
2136
2137
2138
2139
2140 002132 160170
2141 002134 000300
2142 002136 000240
2143 002140 000000
2144
2145 002142 000000
2146
2147 002144 000004
2148
2149 002146 000000
2150
2151
2152 002150
2153 002150

BGNHW DFPTBL

.WORD L10000-L\$HW/2

L\$HW::
DFPTBL::

:INDEPENDENT SECTION
: THE NUMBERS IN BRACKETS ARE THE OFFSET VALUES USED IN THE PARAMETER
: CODING SECTION.

.WORD 1 ;[0] FULL OR HALF DUPLEX FLAG (BIT0=1 IF FULL)

:DEVICE DEPENDENT SECTION
: ADDING OR REMOVING WORDS FROM THIS TABLE EFFECTS THE 'GET' CALLS IN
: THE HARDWARE PARAMETER CODING SECTION BY CHANGING 'OFFSETS'

.WORD 160170 ;[2] CSR ADDRESS
.WORD 300 ;[4] INTERRUPT VECTOR
.WORD 240 ;[6] INTERRUPT PRIORITY (5)
.WORD 0 ;[10] DEVICE PARAMETERS WORD
: (ENABLE CRC, STRIP SYNC, COMPATIBLE MODE...)
.WORD 0 ;[12] DEVICE OPTION TYPE(0=DMC,5=DMR-DMC MODE,
: 7=DMR.
.WORD 4 ;[14] BAUD RATE (0=2.4K, 1=4.8K, 2=9.6K, 3= 19.2K,
: 4=56K, 5=250K, 6=500K, 7=1 MEGA-BAUD)
.WORD 0 ;[16] LINE INTERFACE (422, V.35, INT, EIA...)

ENDHW

L10000:

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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 DEFAULT HARDWARE P-TABLE

2154
 2155
 2156
 2157
 2158
 2159
 2160
 2161
 2162
 2163
 2164
 2165
 2166
 2167
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 2169
 2170
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 2198
 2199
 2200
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 2202
 2203
 2204
 2205
 2206
 2207
 2208
 2209

002150

.SBTTL GLOBAL EQUATES SECTION

```

;+
; THE GLOBAL EQUATES SECTION CONTAINS PROGRAM EQUATES THAT
; ARE USED IN MORE THAN ONE TEST.
;--

```

EQUALS

```

;
; BIT DEFINITIONS
;

```

```

BIT15== 100000
BIT14== 40000
BIT13== 20000
BIT12== 10000
BIT11== 4000
BIT10== 2000
BIT09== 1000
BIT08== 400
BIT07== 200
BIT06== 100
BIT05== 40
BIT04== 20
BIT03== 10
BIT02== 4
BIT01== 2
BIT00== 1

```

```

;
BIT9== BIT09
BIT8== BIT08
BIT7== BIT07
BIT6== BIT06
BIT5== BIT05
BIT4== BIT04
BIT3== BIT03
BIT2== BIT02
BIT1== BIT01
BIT0== BIT00
;

```

```

; EVENT FLAG DEFINITIONS
;

```

```

EF32:EF17 RESERVED FOR SUPERVISOR TO PROGRAM COMMUNICATION
;

```

```

EF.START== 32. ; START COMMAND WAS ISSUED
EF.RESTART== 31. ; RESTART COMMAND WAS ISSUED
EF.CONTINUE== 30. ; CONTINUE COMMAND WAS ISSUED
EF.NEW== 29. ; A NEW PASS HAS BEEN STARTED
EF.PWR== 28. ; A POWER-FAIL/POWER-UP OCCURRED
;

```

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GLOBAL EQUATES SECTION

```

2210
2211          ; PRIORITY LEVEL DEFINITIONS
2212          ;
2213          000340      PRI07== 340
2214          000300      PRI06== 300
2215          000240      PRI05== 240
2216          000200      PRI04== 200
2217          000140      PRI03== 140
2218          000100      PRI02== 100
2219          000040      PRI01== 40
2220          000000      PRI00== 0
2221          ;
2222          ; OPERATOR FLAG BITS
2223          ;
2224          000004      EVL==      4
2225          000010      LOT==     10
2226          000020      ADR==     20
2227          000040      IDU==     40
2228          000100      ISR==    100
2229          000200      UAM==    200
2230          000400      BOE==    400
2231          001000      PNT==   1000
2232          002000      PRI==   2000
2233          004000      IXE==   4000
2234          010000      IBE==  10000
2235          020000      IER==  20000
2236          040000      LOE==  40000
2237          100000      HOE== 100000
2238

```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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GLOBAL EQUATES SECTION

```

2239 ;***** INDEPENDENT EQUATES
2240
2241 001000 BUFLIM=512. ;MAX BUFFER SIZE IN BYTES
2242 ; APPLIES TO TX,RX AND CMP BUFFS
2243 000017 MSGLIM=15. ;MAX NO. OF MESSAGES PER BUFFER
2244 ; (FOR EACH INCREMENT (+1) TO MSGLIM,
2245 ; ADD 6 WORDS TO THE POINTER TABLE
2246 ; (PTRTAB:) SINCE THIS MEANS 2 MORE
2247 ; 'POINTER' WORDS PER BUFFER.
2248
2249 ;MODE OF OPERATION EQUATES
2250 000000 REC=0 ;RECEIVE MODE
2251 000001 TRA=1 ;TRANSMIT MODE
2252 000002 PAS=2 ;PASSIVE MODE
2253 000003 ACT=3 ;ACTIVE MODE
2254 000004 DOW=4 ;DOWN-LINE-LOAD MODE
2255 000005 TAL=5 ;TALK MODE
2256 000006 LIS=6 ;LISTEN MODE
2257
2258 ;MAINT LOOP TYPE EQUATES
2259 000000 NONE= 0 ;NO LOOP
2260 000001 TTL= 1 ;INTERNAL TTL
2261 000002 CABLE= 2 ;CABLE LOOP
2262 000003 MODLOC= 3 ;MODMEM LOCAL
2263 000004 MODREM= 4 ;MODEM REMOTE
2264 000005 MOP= 5 ;MOP
2265
2266 ;CLOCK ENABLE VALUES TO BE LOADED IN CLK'S CSR
2267 000100 LCLKEN= 100 ;L-CLOCK CSR VALUE TO ENABLE THE CLOCK
2268 000111 PCLKEN= 111 ;P-CLOCK CSR VALUE TO ENABLE THE CLOCK
2269 001600 PCLKCT= 1600 ;P-CLOCK COUNT SET REGISTER FOR COUNTER
2270
2271 ;PARAM WORD EQUATES
2272
2273 000001 STATB= BIT0 ;OPERATOR AWAKE ASKED FOR
2274 000002 DATCKB= BIT1 ;DATA CHECK BIT
2275 000004 ECHOB= BIT2 ;ECHK BIT
2276 000010 MOCHK= BIT3 ;MODEM CHECK/NG CHECK ADDED BY EC
2277 000020 CRCB= BIT4 ;CRC CALCUALTE ASKED FOR
2278 000040 PROTOB= BIT5 ;PROTOCOL PROCESSING ASKED FOR
2279
2280 ;OPTION TYPE EQUATES
2281
2282 000000 DMC= 0 ;DMC
2283 000004 DMRC6= 4 ;8206 DMR IN DMC MODE
2284 000005 DMRC7= 5 ;8207 DMR IN DMC MODE
2285 000006 DMR6= 6 ;8206 DMR IN DMR MODE
2286 000007 DMR7= 7 ;8207 DMR IN DMR MODE
2287
2288 ;EVENT LOG MESSAGE TYPES (USED TO LOCATE EVENT DESCRIPTION IN EVENT TABLE
2289 ; AND DISPATCHING TO SEPERATE SECTIONS OF THE EVENT REPORTING SECTION)
2290 000000 TXQ= 0 ;TRANSMIT MESSAGE QUEUED
2291 000002 TXC= 2 ;TRANSMIT COMPLETE
2292 000004 RXQ= 4 ;RECEIVE BUFFER QUEUED
2293 000006 RXC= 6 ;RECEIVE COMPLETE
2294 000010 DER= 10 ;DEVICE INFORMATION

```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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GLOBAL EQUATES SECTION

```

2295      000012      DVI=      12      ;DEVICE ABOUT TO INIT
2296      000014      DCK=      14      ;DATA COMPARISON RESULTS
2297
2298      000020      DLE=      20      ;DATA COMPARISON LENGH ERROR
2299      000022      DDE=      22      ;DATA COMPARISON DATA ERROR
2300      000024      EOP=      24      ;END OF PASS
2301      000026      ABO=      26      ;^C ABORT
2302
2303      ;;;;EQUATES FOR FLAG WORD;;;;;
2304
2305      000001      ININT= 1      ;INPUT INT. REC.
2306      000002      OTINT= 2      ;OUTPUT INT REC
2307      000004      QRX= 4      ;RX QUED /COMPL
2308      000010      QTX= 10     ;TX QUED/COMPL
2309      000020      CTX= 20     ;TX COMPL AND IN TXSEL4 AND TSEL6
2310      000040      CRX= 40     ;RX COMPL AND IN TSEL4 AND TSEL6
2311      000100      ERX= 100    ;EXPECT TO GET A RX COMPLETED
2312      000200      ETX= 200    ;EXPECT TO GET A TX COMPLETE )
2313      000400      DLLGA= 400   ;DOWN LINE LOAD GO AHEAD BIT
2314      0C1000      DMRRUN= 1000 ;DMR RUN MODE EXPECTED
2315      002000      BTUP= 2000   ;BASE TABLE UPDATE REQUESTED
2316
2317      ; SPECIAL CLI CODES FOR "CHAR" ARGUMENT IN CLI CALLS
2318      ; (COMMAND LINE INTERPRETER DEFINITIONS)
2319      000000      CLIERR= 0
2320      000001      CLIEXI= 1
2321      000002      CLIBR= 2
2322      000003      CLIBIF= 3
2323      000004      CLISPA= 4
2324      000005      CLINUM= 5
2325      000006      CLIALP= 6
2326      000007      CLIALN= 7
2327      000010      CLIOCT= 8.
2328      000011      CLIDEC= 9.
2329      000012      CLISTR= 10.
2330
2331      ; DEFS FOR COMMAND LINE INTERPRETATION ACTION VALUES
2332      000000      NULL=0
2333      000001      CLEAR=1
2334      000002      SHOW=2
2335      000003      CHECK=3
2336      000004      RUN=4
2337      000005      HLP=5
2338      000006      CSHEXP=6
2339      000007      CSHTRN=7
2340      000010      SETEXP=10
2341      000011      SETTRN=11
2342      000012      SIZE=12
2343      000013      QCOPY=13
2344      000014      NUM=14
2345      000015      OPRMSG=15
2346      000016      STATUS=16
2347      000017      FNDQ0=17
2348      000020      CMSG0=20
2349      000021      CMSG1=21
2350      000022      CMSG2=22
    
```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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GLOBAL EQUATES SECTION

2351 000023
2352 000024
2353 000025
2354 000026
2355 000027
2356 000030
2357 000031
2358 000032
2359 000033
2360 000034
2361 000035
2362 000036
2363 000037
2364 000040
2365 000041
2366 000042
2367 000043
2368 000044
2369 000045
2370 000046
2371 000047
2372 000050
2373 000051
2374 000052
2375 000053
2376 000054
2377 000055
2378 000056
2379 000057
2380 000060
2381
2382 000001
2383 000002
2384 000003
2385 000004
2386 000005
2387 000006
2388 000007
2389
2390
2391
2392
2393
2394
2395 000004
2396 000010
2397 000001
2398 000040
2399 000200
2400 040000
2401 001000
2402
2403
2404
2405
2406 000040

CMSG3=23
CMSG4=24
CMSG5=25
CMSG6=26
ATVMOD=27
PASM0D=30
RECM0D=31
LISM0D=32
DLLM0D=33
TRAM0D=34
TALM0D=35
NO=36
ECHO=37
CRC=40
PROTO=41
PASC=42
MOP=43
TTLLOP=44
CBLLOP=45
LMDLOP=46
RMDLOP=47
NOTNUF=50
BADCHR=51
DMPS=52
DMPE=53
DMPQ=54
PRNT=55
MOSC=56
EXIT=57
SETET=60
:FOLLOWING EQUATES USED IN REPORT CLI
RPHLP=1
RPEXT=2
RPLOG=3
RPSWE=4
RPSWF=5
RPSWO=6
RNOTNF=7

:MODEM/NOMODEM REV B BY EC
:EXIT COMMAND REV B BY EC
:S E=T COMMAND REV B BY EC
:REV B BY EC
:HELP COMMAND
:EXIT COMMAND
:PRINT EVENT LOG COMMAND
:BASE/ERROR COMMAND
:BASE/FULL COMMAND
:BASE/OFFSET
:MORE COMMAND NEEDED

:***** DEVICE DEPENDENT EQUATES
: MODEM SIGNAL BIT DEFINITIONS
: IF SIGNAL AVAILABLE IN DEVICE, EQUATE NAME TO BIT POSITION,
: ELSE EQUATE IT TO = 0

CTS= BIT2 :CLEAR TO SEND (CIRCUIT CB)
DSR= BIT3 :DATA SET READY (CIRCUIT CC)
DCD= BIT0 :DATA CARRIER DETECT (CIRCUIT CF)
RTS= BIT5 :REQUEST TO SEND (CIRCUIT CA)
RI= BIT7 :RING INDICATOR (CIRCUIT CE)
SQD= BIT14 :SIGNAL QUALITY DETECT (CIRCUIT CG)
TM= BIT9 :MODEM IN TEST MODE (RS 449 ONLY CIRCUIT TM)

: DEVICE SIGNALS
RQI= BIT5 :REQUEST IN

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MACY11 30A(1052) GLOBAL EQUATES SECTION

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2407 000200
2408 000200
2409 000001
2410 040000
2411 004000
2412 000400
2413 002000
2414 000004
2415 000100
2416

RDI= BIT7
RDO= BIT7
BACC= BIT0
MCLR= BIT14
LULOOP= BIT11
MAINTB= BIT8
HALFDB= BIT10
RXBIT= BIT2
IEO= BIT6

;READY IN
;BUFFER ADDR. CHAR COUNT
;MASTER CLEAR
;LINE UNIT LOOP(TTL)
;MAINT MODE BIT
;HALF DUPLEX BIT
;RX BIT
;ENABLE OUTPUT INTERRUPT BIT

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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GLOBAL DATA SECTION

```

2417 .SBTTL GLOBAL DATA SECTION
2418 .SBTTL DEFAULT MESSAGE DEFINITIONS AND TABLES
2419
2420 :++
2421 : THE GLOBAL DATA SECTION CONTAINS DATA THAT ARE USED
2422 : IN MORE THAN ONE TEST.
2423 :--
2424
2425 ;MESSAGE BYTE COUNT TABLE
2426
2427 DMSGCT:
2428 MSG0C: .WORD EMSG0-MSG0 ;BYTE COUNT OF MESSAGE #0
2429 MSG1C: .WORD EMSG1-MSG1 ;BYTE COUNT OF MESSAGE #1
2430 MSG2C: .WORD EMSG2-MSG2 ;BYTE COUNT OF MESSAGE #2
2431 MSG3C: .WORD EMSG3-MSG3 ;BYTE COUNT OF MESSAGE #3
2432 MSG4C: .WORD EMSG4-MSG4 ;BYTE COUNT OF MESSAGE #4
2433 MSG5C: .WORD EMSG5-MSG5 ;BYTE COUNT OF MESSAGE #5
2434 MSG6C: .WORD EMSG6-MSG6 ;BYTE COUNT OF MESSAGE #6
2435 OPCNT: .WORD 0 ;BYTE COUNT FOR OPERATOR SPEC'D MSG.
2436 MSG8C: .WORD EMSG8-MSG8 ;BYTE COUNT OF RECEIVE BUFFER FILL PATTERN
2437 DLLM1C: .WORD DLLM1E-DLLM1 ;DLL MSG 1 COUNT
2438 DLLM2C: .WORD DLLM2E-DLLM2 ;DLL MSG 2 COUNT
2439
2440 ;MESSAGE ADDRESS TABLE
2441
2442 DMSGAD:
2443 MSG0 ;ADDRESS OF MESSAGE #0
2444 MSG1 ;ADDRESS OF MESSAGE #1
2445 MSG2 ;ADDRESS OF MESSAGE #2
2446 MSG3 ;ADDRESS OF MESSAGE #3
2447 MSG4 ;ADDRESS OF MESSAGE #4
2448 MSG5 ;ADDRESS OF MESSAGE #5
2449 MSG6 ;ADDRESS OF MESSAGE #6
2450 OPBUF ;ADDRESS OF OPERATOR SPEC'D MSG.
2451 MSG8 ;ADDRESS OF RECEIVE BUFFER FILL PATTERN
2452
2453 MSG0: .BYTE 000 ;MESSAGE OF ALL 0'S
2454 EMSG0:
2455 MSG1: .BYTE 377 ;MESSAGE OF ALL 1'S
2456 EMSG1:
2457 MSG2: .BYTE 252 ;MESSAGE OF ALTERNATING 1'S
2458 EMSG2:
2459 MSG3: .BYTE 125 ;MESSAGE OF ALTERNATING 0'S
2460 EMSG3:
2461 MSG4: ;'CCITT' 512-BIT (VS. 511 BITS) TEST PATTERN
2462 002224 177603 157427 031011 .WORD 177603,157427,031011,047321,163715,105221,143325,142304
2463 002232 047321 163715 105221
2464 002240 143325 142304
2465 002244 040041 014116 052606 .WORD 040041,014116,052606,172334,105025,123754,111337,111523
2466 002252 172334 105025 123754
2467 002260 111337 111523
2468 002264 030030 145064 137642 .WORD 030030,145064,137642,143531,063617,135075,066730,026575
2469 002272 143531 063617 135075
2470 002300 066730 026575
2471 002304 052012 053627 070071 .WORD 052012,053627,070071,151172,165044,031605,166632,016741
2472 002312 151172 165044 031605

```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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DEFAULT MESSAGE DEFINITIONS AND TABLES

| | | | | |
|------|--------|--------|--------|---|
| 2473 | 002320 | 166632 | 016741 | |
| 2474 | 002324 | | | MSG4: |
| 2475 | 002324 | | | MSG5: ;'INTERPROCESSOR TEST PROGRAM'S (ITEP)'' MESSAGE |
| 2476 | | | | ; #1, (DP1:) |
| 2477 | 002324 | 077577 | 040444 | 052040 |
| 2478 | 002332 | 042510 | 050440 | 044525 |
| 2479 | 002340 | 045503 | 041040 | 047522 |
| 2480 | 002346 | 047127 | 043040 | 054117 |
| 2481 | 002354 | 045040 | 046525 | 042520 |
| 2482 | 002362 | 020104 | 053117 | 051105 |
| 2483 | 002370 | 052040 | 042510 | 046040 |
| 2484 | 002376 | 055101 | 020131 | 047504 |
| 2485 | 002404 | 027107 | | |
| 2486 | 002406 | 005015 | 077401 | 077577 |
| 2487 | 002414 | 000177 | | |
| 2488 | 002416 | | | MSG5: |
| 2489 | 002416 | | | MSG6: ;ALPHA-NUMERICS (OR FUTURE COMM TURNAROUND MSG) |
| 2490 | 002416 | 022043 | 021041 | 023040 |
| 2491 | 002424 | 024047 | 025051 | 026053 |
| 2492 | 002432 | 027055 | 030460 | 031462 |
| 2493 | 002440 | 032464 | 033466 | 034470 |
| 2494 | 002446 | 035472 | 036474 | 037476 |
| 2495 | 002454 | 040500 | 041502 | 042504 |
| 2496 | 002462 | 043506 | 044510 | 045512 |
| 2497 | 002470 | 046514 | 047516 | 050520 |
| 2498 | 002476 | 051522 | 052524 | 053526 |
| 2499 | 002504 | 054530 | 132 | |
| 2500 | 002507 | 057 | 056133 | 057135 |
| 2501 | 002514 | 022537 | 000 | |
| 2502 | 002517 | | | .ASCIIZ ?/[\] ^ _ % ? |
| 2503 | | 002520 | | MSG6: |
| 2504 | | | | .EVEN |
| 2505 | | | | ; ***** |
| 2506 | | | | ;THESE THREE STORAGE AREAS MUST NOT BE SEPERATED !!!! |
| 2507 | | | | ; ***** |
| 2508 | 002520 | 047045 | 040445 | OPBFPT: .ASCII /%N%/ |
| 2509 | 002524 | 000122 | | OPBUF: .BLKB 82. ;BUFFER FOR OPERATOR SPEC'D MESSAGES |
| 2510 | 002646 | | | OPEND: |
| 2511 | | | | ; THE ABOVE THREE LINES MUST BE KEPT TOGETHER |
| 2512 | | | | ; ***** |
| 2513 | | | | ; ***** |
| 2514 | | | | ; ***** |
| 2515 | 002646 | 033 | | MSG8: .BYTE 33 ;RECEIVE BUFFER FILL PATTERN |
| 2516 | 002647 | | | MSG8: |
| 2517 | | | | ; DOWN-LINE-LOAD MESSAGE DEFINITIONS |
| 2518 | | | | ;;;ENTER MOP MODE MESSAGE FORMAT |
| 2519 | | | | ;;;THE NODE WILL ENTER MAINTENANCE MODE ONLY IF THE PASSWORD MATCHES. |
| 2520 | | | | ;;;ENTER MOP MODE MESSAGE FORMAT |
| 2521 | 002647 | 006 | | DLLM1: .BYTE 6 ;BINARY CODE FOR MAINTENANCE MODE |
| 2522 | 002650 | 000 | | PASS1: .BYTE 0 ;PASSWORD BYTE #1 LEGAL VALUE 0 - 255 |
| 2523 | 002651 | 000 | | PASS2: .BYTE 0 ;VALUE IN BYTE 1 IS DUPLICATED HERE |
| 2524 | 002652 | 000 | | PASS3: .BYTE 0 ;AND HERE |
| 2525 | 002653 | 000 | | PASS4: .BYTE 0 ;AND HERE |
| 2526 | 002654 | | | DLLM1E: ;END ENTER MOP MODE MESSAGE FORMAT |
| 2527 | | | | ;;;MEMORY LOAD WITH TRANSFER ADDRESS MESSAGE FORMAT |
| 2528 | 002654 | 000 | | DLLM2: .BYTE 0 ;CODF |

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```

2529 002655 000 .BYTE 0 ;LOAD NUMBER
2530 002656 006 .BYTE 6 ;LOAD ADDRESS LSB
2531 002657 000 .BYTE 0
2532 002660 000 .BYTE 0
2533 002661 000 .BYTE 0 ;LOAD ADDRESS
2534
2535 ;IMAGE DATA
2536
2537 002662 005037 00C006 CLR @#6
2538 002666 012706 001000 MOV #1000,SP
2539 002672 012701 177560 MOV #177560,R1 ;SET UP TTY
2540 002676 010700 MOV PC,R0 ;MAKE ADDR.PIC
2541 002700 062700 000034 ADD #<MSG-.>,R0 ;ADDRESS MSG.
2542 002704 105761 00C004 1$: TSTB 4(R1) ;TTY READY?
2543 002710 100375 BPL 1$ ;WAIT TIL YES
2544 002712 112061 000006 MOVB (R0)+,6(R1) ;TYPE A CHAR
2545 002716 001372 BNE 1$ ;KEEP GOING
2546 002720 012737 000026 000024 MOV #26,@#24 ;SET UP POWER FAIL
2547 002726 005037 000026 CLR @#26 ;MAKE SURE T BIT CLAEF
2548 002732 000777 BR ;JUMP ON YOURSELF
2549 002734 006412 047502 052117 MSG: .ASCII <12><15>/BOOT MESSAGE WAS RECEIVED SUCCESSFULLY -END OF TEST!//
2550 002742 046440 051505 040523
2551 002750 042507 053440 051501
2552 002756 051040 041505 044505
2553 002764 042526 020104 052523
2554 002772 041503 051505 043123
2555 003000 046125 054514 026440
2556 003006 047105 020104 043117
2557 003014 052040 051505 020524
2558 003022 041
2559 003023 012 027015 027056 .ASCII <12><15>/....RELOAD PROGRAM..../
2560 003030 051056 046105 040517
2561 003036 020104 051120 043517
2562 003044 040522 027115 027056
2563 003052 000056
2564 003054 006 .BYTE 6 ;NEXT FOUR BYTES CONTAINS TRANSFER ADDRESS
2565 003055 000 .BYTE 0 ;:OF PROGRAM JUST DOWNLINE LOADED.
2566 003056 000 .BYTE 0 ;::THIS PROGRAM STARTS AT ADDRESS 6.
2567 003057 000 .BYTE 0
2568 003060 DLLM2E: ;END MEMORY LOAD MESSAGE FORMAT
2569
2570 .EVEN
2571

```

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```

2572          :COMMAND LINE BUFFER, DATA LOCATIONS AND MESSAGES FOR ACTION ROUTINES
2573
2574 003060 000122  CMDDBUF: .BLKB 82.          ;BUFFER FOR OPERATOR COMMANDS
2575 003202 000000  KEYWD1: .WORD 0          ;THIS LOC WILL =1 IF CLEAR TYPED, 2 FOR SHOW,
2576          ; A 4 IF RUN WAS TYPED, 5 IF HELP WAS TYPED
2577 003204 000000  QUALFG: .WORD 0          ;THIS LOC HOLDS QUALIFIER VALUE (SIZE OR COPY)
2578 003206 000000  QUALVL: .WORD 0
2579 003210 013236  HLPTAB: .WORD HLP1
2580 003212 013251  .WORD HLP2
2581 003214 013366  .WORD HLP3
2582 003216 013453  .WORD HLP3A
2583 003220 013500  .WORD HLP4
2584 003222 013557  .WORD HLP4A
2585 003224 013635  .WORD HLP5
2586 003226 013725  .WORD HLP6
2587 003230
2588          HLPEND:
2589 003230 014063  ;INDEX TABLE FOR REPORT 'RPT>' HELP MESSAGES REV B BY EC
2590 003232 014106  RHLPTB: .WORD RHLP1
2591 003234 014141  .WORD RHLP2
2592 003236 014172  .WORD RHLP3
2593 003240 014224  .WORD RHLP4
2594 003242 014263  .WORD RHLP5
2595 003244 014322  .WORD RHLP6
2596 003246 000000  .WORD RHLP7
2597          RHLPEN: .WORD 0          ;END OF REPORT HELP TABLE
2598 003250 020342  ;INDEX TABLE FOR DMR BASE TABLE DATA DESCRIPTION MESSAGES REV B BY EC
2599 003252 020402  DMRIND: .WORD DMR000
2600 003254 020432  .WORD DMR001
2601 003256 020467  .WORD DMR002
2602 003260 020532  .WORD DMR003
2603 003262 020566  .WORD DMR004
2604 003264 020620  .WORD DMR005
2605 003266 020663  .WORD DMR006
2606 003270 020717  .WORD DMR007
2607 003272 020751  .WORD DMR010
2608 003274 021003  .WORD DMR011
2609 003276 021035  .WORD DMR012
2610 003300 021065  .WORD DMR013
2611 003302 021114  .WORD DMR014
2612 003304 021146  .WORD DMR015
2613 003306 021176  .WORD DMR016
2614 003310 021226  .WORD DMR017
2615 003312 021255  .WORD DMR020
2616 003314 021307  .WORD DMR021
2617 003316 021333  .WORD DMR022
2618 003320 021365  .WORD DMR023
2619 003322 021410  .WORD DMR024
2620 003324 021463  .WORD DMR025
2621 003326 021513  .WORD DMR026
2622 003330 021544  .WORD DMR027
2623 003332 021627  .WORD DMR030
2624 003334 021664  .WORD DMR031
2625 003336 021721  .WORD DMR032
2626 003340 021756  .WORD DMR033
2627 003342 022042  .WORD DMR034
                .WORD DMR035
    
```

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| | | |
|------|--------|--------|
| 2628 | 003344 | 022107 |
| 2629 | 003346 | 022154 |
| 2630 | 003350 | 022212 |
| 2631 | 003352 | 022245 |
| 2632 | 003354 | 022303 |
| 2633 | 003356 | 022351 |
| 2634 | 003360 | 022405 |
| 2635 | 003362 | 022441 |
| 2636 | 003364 | 022472 |
| 2637 | 003366 | 022540 |
| 2638 | 003370 | 022602 |
| 2639 | 003372 | 022630 |
| 2640 | 003374 | 022664 |
| 2641 | 003376 | 022711 |
| 2642 | 003400 | 022744 |
| 2643 | 003402 | 022766 |
| 2644 | 003404 | 023041 |
| 2645 | 003406 | 023114 |
| 2646 | 003410 | 023136 |
| 2647 | 003412 | 023170 |
| 2648 | 003414 | 023222 |
| 2649 | 003416 | 023272 |
| 2650 | 003420 | 023342 |
| 2651 | 003422 | 023376 |
| 2652 | 003424 | 023432 |
| 2653 | 003426 | 023475 |
| 2654 | 003430 | 023540 |

| | |
|---------|--------------|
| .WORD | DMR036 |
| .WORD | DMR037 |
| .WORD | DMR040 |
| .WORD | DMR041 |
| .WORD | DMR042 |
| .WORD | DMR043 |
| .WORD | DMR044 |
| .WORD | DMR045 |
| .WORD | DMR046 |
| .WORD | DMR047 |
| .WORD | DMR050 |
| .WORD | DMR051 |
| .WORD | DMR052 |
| .WORD | DMR053 |
| .WORD | DMR054 |
| .WORD | DMR055 |
| .WORD | DMR056 |
| .WORD | DMR057 |
| .WORD | DMR060 |
| .WORD | DMR061 |
| .WORD | DMR062 |
| .WORD | DMR063 |
| .WORD | DMR064 |
| .WORD | DMR065 |
| .WORD | DMR066 |
| .WORD | DMR067 |
| DMREND: | .WORD DMR177 |

:NO DMR MESSAGES MUST FOLLOW DMREND

:INDEX TABLE FOR DMC BASE TABLE DATA DESCRIPTION MESSAGES REV B BY EC

| | | |
|------|--------|--------|
| 2655 | | |
| 2656 | | |
| 2657 | 003432 | 020322 |
| 2658 | 003434 | 020322 |
| 2659 | 003436 | 023604 |
| 2660 | 003440 | 023625 |
| 2661 | 003442 | 023662 |
| 2662 | 003444 | 023723 |
| 2663 | 003446 | 023756 |
| 2664 | 003450 | 024013 |
| 2665 | 003452 | 024050 |
| 2666 | 003454 | 024103 |
| 2667 | 003456 | 024125 |
| 2668 | 003460 | 024147 |
| 2669 | 003462 | 024206 |

| | |
|---------|--------------|
| DMCIND: | .WORD DMUNKN |
| | .WORD DMUNKN |
| | .WORD DMC002 |
| | .WORD DMC003 |
| | .WORD DMC004 |
| | .WORD DMC005 |
| | .WORD DMC006 |
| | .WORD DMC007 |
| | .WORD DMC010 |
| | .WORD DMC011 |
| | .WORD DMC012 |
| | .WORD DMC013 |
| DMCEND: | .WORD DMC377 |

:NO DMC MESSAGES MUST FOLLOW DMCEND

| | | | | |
|------|--------|--------|--------|--------|
| 2670 | | | | |
| 2671 | 003464 | 014470 | 014477 | 014504 |
| 2672 | 003472 | 014511 | 014516 | 014524 |
| 2673 | 003500 | 014531 | 014537 | |

SHTYTB: .WORD SHTYP0,SHTYP1,SHTYP2,SHTYP3,SHTYP4,SHTYP5,SHTYP6,SHTYP7

: THE LIST OF BYTES BELOW ARE THE FIRST BYTES OF THE PREDEFINED MESSAGES
: USED TO "SHOW" THE TRANSMIT AND COMPARE BUFFER CONTENTS.

| | | | | |
|------|--------|--------|-----|-----|
| 2674 | | | | |
| 2675 | | | | |
| 2676 | | | | |
| 2677 | | | | |
| 2678 | 003504 | 000 | 377 | 252 |
| 2679 | 003507 | 125 | 203 | 177 |
| 2680 | 003512 | 043 | | |
| 2681 | 003513 | | | |
| 2682 | | 003514 | | |
| 2683 | | | | |

SHTAB: .BYTE 0,377,252,125,203,177,043

SHTEND: .EVEN

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| | | |
|------|--------|--------|
| 2684 | 003514 | 014550 |
| 2685 | 003516 | 014560 |
| 2686 | 003520 | 014571 |
| 2687 | 003522 | 014601 |
| 2688 | 003524 | 014610 |
| 2689 | 003526 | 014625 |
| 2690 | 003530 | 014632 |
| 2691 | | |
| 2692 | 003532 | 014641 |
| 2693 | 003534 | 014651 |
| 2694 | 003536 | 014662 |
| 2695 | 003540 | 014670 |
| 2696 | 003542 | 014703 |
| 2697 | | |
| 2698 | | |
| 2699 | | |
| 2700 | 003544 | 000000 |
| 2701 | 003546 | 000000 |
| 2702 | 003550 | 000000 |
| 2703 | 003552 | 000000 |
| 2704 | 003554 | 000000 |
| 2705 | 003556 | 000000 |
| 2706 | 003560 | 000 |
| 2707 | 003561 | 000 |
| 2708 | | |

MODES: .WORD M00 ;ADDRESSES OF MODE TYPES IN ASCII
 .WORD M01
 .WORD M02
 .WORD M03
 .WORD M04
 .WORD M05
 .WORD M06

LOOPS: .WORD LP0 ;ADDRESSES OF LOOP TYPES IN ASCII
 .WORD LP1
 .WORD LP2
 .WORD LP3
 .WORD LP4

;COMMAND LINE TRAVERSE LOCATIONS (USED BY 'P\$TRV')

| | | | |
|----------|-------|---|--|
| P\$BUFA: | .WORD | 0 | .LOC. TO HOLD ADDR. OF CMD LINE BUFFER |
| P\$TREE: | .WORD | 0 | .LOC. TO HOLD ADDR. OF PARSING TREE |
| P\$ACT: | .WORD | 0 | .LOC. TO HOLD ADDR. OF ACTION ROUTINE |
| P\$CNT: | .WORD | 0 | .LOC. TO BE A COUNTER LOCATION |
| P\$NUM: | .WORD | 0 | .LOC. TO HOLD NUMERIC VALUE FROM PARSE |
| P\$RADX: | .WORD | 0 | .LOC. TO HOLD RADIX USED(LO) AND +/- (HI BYTE) |
| P\$NNUF: | .BYTE | 0 | .RETURN =0 IF ENOUGH OF COMMAND FOUND |
| P\$GDBD: | .BYTE | 0 | .RETURN CODE 0 IF NO ERROR FOUND |

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MESSAGE BUFFERS AND POINTER TABLES

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2709          .SBTTL          MESSAGE BUFFERS AND POINTER TABLES
2710
2711 003562 001000          TXBUF: .BLKB  BUFLIM  :TRANSMITTER BUFFERS
2712 004562 001000          RXBUF: .BLKB  BUFLIM  :RECEIVER BUFFERS
2713 005562 001000          CMPBUF: .BLKB  BUFLIM  :COMPARISON BUFFERS
2714 006562 000264          PTRTAB: .BLKW  180.   :TABLE FOR MESSAGE ADDRS. & BYTE COUNTS
2715 007332          PTREND:          : END OF MSG. PTR. TABLE
2716
2717 007332 000000          RXPTR: .WORD  0          :RECEIVER MESSAGE POINTER
2718 007334 000000          TXPTR: .WORD  0          :TRANSMITTER BUFFER POINTER
2719 007336 000000          CMPPTR: .WORD  0          :COMPARISON BUFFER POINTER
2720 007340 000000          CMPTOT: .WORD  0          :CMP MSG TOTAL
2721 007342 000000          CTOTCC: .WORD  0          :COMPARE BUFFER CHAR. COUNT
2722 007344 000000          CCURAD: .WORD  0          :CURRENT ADDR OF CMP BUFF TO ADD AT
2723
2724 007346 000000          DVTXA: .WORD  0          :DEVICE TX ADDR
2725 007350 000000          DVTCC: .WORD  0          :DEVICE TX CHAR CCUNT
2726 007352 000000          DVTCT: .WORD  0          :DEVICE TX MESSAGE COUNT
2727 007354 000000          TXMTOT: .WORD  0          :TX MSG TOTAL
2728 007356 000000          TTOTCC: .WORD  0          :TX BUFFER CHAR. COUNT
2729 007360 000000          TCURAD: .WORD  0          :CURRENT ADDR. OF TX BUFF TO ADD AT
2730
2731 007362 000000          DVRXA: .WORD  0          :DEVICE RX ADDR
2732 007364 000000          DVRCC: .WORD  0          :DEVICE RX CHAR COUNT
2733 007366 000000          DVRCT: .WORD  0          :DEVICE RX MESSAGE COUNT
2734 007370 000000          RXMTOT: .WORD  0          :RX MSG TOTAL
2735
2736 007372 000000          LNCNT: .WORD  0          :NUMBER OF OPERATOR AWAKE MSGS
2737 007374 000000          NOBUF: .WORD  0          :NUMBER OF NO BUFFS
2738 007376 000000          PSCNT: .WORD  0          :PASS COUNTER
2739 007400 000000          ERRCNT: .WORD  0          :ERROR COUNTER
2740 007402 000000          STADD: .WORD  0          :START ADDR.
2741 007404 000000          ENADD: .WORD  0          :END ADDR. FOR DUMP
2742 007406 000000          BYTBIT: .WORD  0          :BYTE BIT FOR DUMP ROUTINE
2743
2744          ;OTHER MESSAGE RELATED STORAGE LOCATIONS
2745 007410 000000          MSGTYP: .WORD  0          :TYPE OF DATA 0=0'S,1=1'S,2=10'S,3=01'S
2746          :4=CCITT,5=QUICK FOX,6=ALPHA/NUM,7=OPER
2747 007412 000000          CURCC: .WORD  0          :TX/RX/CMP CHAR COUNT
2748 007414 000000          CPTRR: .WORD  0          :CURRENT RX POINTER
2749 007416 000000          CPTR: .WORD  0          :CURRENT POINTER
2750 007420 000000          CURADD: .WORD  0          :CURRENT TX/RX/CMP START ADDD
2751 007422 000000          TOTCC: .WORD  0          :TOTAL CHAR COUNT NOT MORE THEN 'BUFLIM'
2752 007424 000000          OFSET: .WORD  0          :OFFSET COUNT
2753 007426 000000          TEMP: .WORD  0          :TEMPORARY LOCATIONS (USED A LOT)
2754 007430 000000          TEMP1: .WORD  0
2755 007432 000000          TEMP2: .WORD  0
2756 007434 000000          TEMP3: .WORD  0
2757 007436 000000          TEMP4: .WORD  0
2758 007440 000000          TEMP5: .WORD  0
2759 007442 000000          CONOTM: .WORD  0          :CONTROL OUT ERROR MSG. ADDRESS
2760 007444 000000          CONTIN: .WORD  0          :WORD FOR CONTORL IN
2761 007446 000          GOOD: .BYTE  0          :BYTE TO HOLD EXPECTED MESSAGE DATA BYTE FOR ERR REPORT
2762 007447 000          BAD: .BYTE  0          :BYTE TO HOLD RECEIVED MESSAGE DATA BYTE FOR ERR REPORT
2763 007450 000000          INDEX: .WORD  0          :WILL CONTAIN POINTER TO DMC OR DMR MESSAGES
2764 007452 000000          INDEXE: .WORD  0          :WILL CONTAIN POINTER TO LAST OF DMC OR DMR MESSAGES

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MESSAGE BUFFERS AND POINTER TABLES

```

2765 007454 000000 SEND: .WORD 0 ;LAST LOCATION IN BASE TABLE TO BE PRINTED
2766
2767
2768
2769 ;MORE INDEPENDENT CODE STORAGE LOCATIONS
2770 007456 000000 BDATA: .WORD 0 ;POINTER TO BASE TABLE
2771 007460 000000 LOGUNT: .WORD 0 ;LOC. TO HOLD LOGICAL UNIT NUMBER
2772 007462 000000 PCADD: .WORD 0 ;LOC. HOLD PC OF CALLIN ROUTINE
2773 007464 000000 DCLFLG: .WORD 0 ;CLEANUP AND EXIT FLAG. 1=DO CLEANUP ROUTINE&EXIT
2774 007466 000000 RESFLG: .WORD 0 ;LOC TO HOLD FLAG (-1) THAT A RESTART WAS GIVEN
2775 007470 000000 MCDTYP: .WORD 0 ;DCLT MODE OF OPERATION TYPE
2776 ; (0=REC-ONLY, 1=TX-ONLY, 2=PASSIVE-LOOPBK,
2777 ; 3=ACTIVE-LOOPBK, 4=DOWN L.L., 5=TALK, 6=LISTEN)
2778 007472 000000 MLTYP: .WORD 0 ;MAINTENANCE LOOP TYPE (0=NONE, 1=INTERNAL TTL,
2779 ; 2=CABLE, 3=MODEM-ANALOG LOOPBK (LOCAL),
2780 ; 4=MODEM-DIGITAL LOOPBK (REMOTE), 5=MOP)
2781 007474 000000 FHDPLX: .WORD 0 ;FULL OR HALF DUPLEX FLAG (1=FULL FROM P-TABLE)
2782 007476 000002 PARAM: .WORD 2 ;PROGRAM PARAMETERS
2783 ; BIT0= STATUS MSGS TO OPR PRINTED (1=YES)
2784 ; BIT1= DATA CHECKING DONE ON RCVD MSGS (1=YES)
2785 ; BIT2= ECHO (TRANSMIT) RCV'D MSG.(PASSIVE)(1=YES)
2786 ; BIT3= SPARE
2787 ; BIT4= CRC CALC./CHECK DONE (1=YES)
2788 ; BIT5= PROTOCGL EMULATION (1=YES)
2789 ; BIT6= SPARE
2790 007500 000000 RPASS: .WORD 0 ;PASS NUMBER FROM RUN COMMAND
2791 007502 000000 FLAG: .WORD 0 ;DEVICE FLAG WORD
2792
2793 ;MODE DISPATCH TABLE
2794 007504 040636 MODE: .WORD RXONLY ;RX ONLY DISPATCH
2795 007506 040670 .WORD TXONLY ;TX ONLY DISPATCH
2796 007510 040730 .WORD PLCK ;PASSIVE LOOP BACK DISP
2797 007512 040764 .WORD ALCK ;ACTIVE LOOP BACK DISP
2798 007514 042114 .WORD DLL ;DOWN LINE LOAD DISP
2799 007516 042734 .WORD TALCK ;TALK MODE DISPATCH
2800 007520 043154 .WORD LISCK ;LISTEN MODE DISPATCH
2801
2802
2803 .SBTTL CLOCK TABLES, EVENT LOG AND POINTERS
2804 007522 000000 CLKCSR: .WORD 0 ;CLOCK CSR ADDRESS
2805 007524 000000 CLKBR: .WORD 0 ;CLOCK INTERRUPT LEVEL
2806 007526 000000 CLKVEC: .WORD 0 ;CLOCK INTERRUPT VECTOR
2807 007530 000074 CLKHZ: .WORD 60. ;CLOCK'S HERTZ RATE
2808 007532 000000 CLKEN: .WORD 0 ;CLOCK'S CSR VALUE TO INTRPT. ENABLE IT
2809
2810 007534 000000 TIMMIN: .WORD 0 ;PLACE TO KEEP TIME-SINCE-START
2811 007536 000000 TIMSEC: .WORD 0
2812 007540 000000 TIMTCK: .WORD 0 ;PLACE TO KEEP # OF TICKS/SEC
2813
2814 007542 000000 TIMER1: .WORD 0 ;EVENT TIMER #1 (TICKS)
2815 007544 000000 TIMER2: .WORD 0 ;EVENT TIMER #2 (TICKS)
2816 007546 000000 TIMERS: .WORD 0 ;EVENT TIMER #3 (SECONDS)
2817

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CLOCK TABLES, EVENT LOG AND POINTERS

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2818 ;EVENT LOG TABLE AND ITS NEXT ENTRY POINTER
2819 007550 007552 EVTPTN: .WORD EVTLOG ;POINTER TO NEXT FREE SPACE IN EVENT LOG
2820 007552 000341 EVTLOG: .BLKW 225. ;EVENT LOG BUFFER
2821 010454 000001 EVTEND: .BLKW 1. ;APPROXIMATE END OF EVENT TABLE (ALLOWS CIRCULAR QUE)
2822
2823 .SBTTL MODEM DATA SECTION
2824
2825 010456 000000 MODS: .WORD 0 ;MODEM STATUS
2826
2827 ;TABLE OF MODEM SIGNAL BIT DEFINITIONS
2828
2829 010460 000004 MOBITS: .WORD CTS ;CLEAR TO SEND (CIRCUIT CB)
2830 010462 000010 .WORD DSR ;DATA SET READY (CIRCUIT CC)
2831 010464 000001 .WORD DCD ;DATA CARRIER DETECT (CIRCUIT CF)
2832 010466 000040 .WORD RTS ;REQUEST TO SEND (CIRCUIT CA)
2833 010470 000200 .WORD RI ;RING INDICATOR (CIRCUIT CE)
2834 010472 040000 .WORD SQD ;SIGNAL QUALITY DETECT (CIRCUIT CG)
2835 010474 001000 .WORD TM ;MODEM IN TEST MODE (RS 449 ONLY CIRCUIT TM)
2836 010476
2837
2838 ;TABLE OF ADDRESSES OF MODEM SIGNAL MESSAGE POSITIONS
2839
2840 010476 017255 MOMSGS: .WORD EVMCTS ;CLEAR TO SEND (CIRCUIT CB)
2841 010500 017261 .WORD EVMDSR ;DATA SET READY (CIRCUIT CC)
2842 010502 017265 .WORD EVMDCD ;DATA CARRIER DETECT (CIRCUIT CF)
2843 010504 017271 .WORD EVMRTS ;REQUEST TO SEND (CIRCUIT CA)
2844 010506 017275 .WORD EVMRI ;RING INDICATOR (CIRCUIT CE)
2845 010510 017301 .WORD EVMSQD ;SIGNAL QUALITY DETECT (CIRCUIT CG)
2846 010512 017305 .WORD EVMTM ;MODEM IN TEST MODE (RS 449 ONLY CIRCUIT TM)
2847
2848 ;TABLE OF ADDRESSES OF EVENT DESCRIPTION MESSAGES
2849 ; ORDER CORRESPONDS TO MESSAGE TYPE VALUES
2850
2851 010514 015631 EVTLS: .WORD EDTXQ ;TRANSMIT MESSAGE QUEUED
2852 010516 015655 .WORD EDTXC ;TRANSMIT OF MESSAGE COMPLETE
2853 010520 015704 .WORD EDRXQ ;RECEIVE MESSAGE SPACE QUEUED
2854 010522 015731 .WORD EDRXC ;MESSAGE RECEIVED - RECEIVE COMPLETE
2855 010524 015757 .WORD EDDER ;DEVICE INFORMATION
2856 010526 016024 .WORD EDDVI ;DEVICE INITIALIZE STARTED
2857 010530 015774 .WORD EDDCK ;DATA COMPARISON DONE
2858 010532 014641 .WORD LPO ;NULL STRING
2859 010534 016052 .WORD EDDLE ;DATA COMPARE LENGTH ERROR
2860 010536 016107 .WORD EDDDE ;DATA COMPARE DATA ERROR
2861 010540 016142 .WORD EDEOP ;END OF PASS
2862 010542 016213 .WORD EDABO ;^ C ABORT
2863
2864 ;:::FOLLOWING TABLE USED IN DOWNLINE LOAD ROUTINE.
2865 ;:::CONTAINS POINTERS TO ASCIZ DEVICE DESCRIPTIONS
2866 010544 020217 DLLIND: .WORD DPM
2867 010546 020222 .WORD DUM
2868 010550 020225 .WORD DLM
2869 010552 020230 .WORD DQM
2870 010554 020233 .WORD DAM
2871 010556 020236 .WORD DUPM
2872 010560 020242 .WORD DMCM
2873 010562 020246 .WORD DNM

```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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MODEM DATA SECTION

```

2874 010564 020251 .WORD DLVM
2875 010566 020255 .WORD DMPM
2876 010570 020261 .WORD DTEM
2877 010572 020265 .WORD DVM
2878 010574 020270 .WORD DZM
2879 010576 020273 .WORD UNKM
2880 010600 020303 .WORD KDPM
2881 010602 020307 .WORD KDZM
2882 010604 020313 .WORD KLM
2883 010606 020316 .WORD DMVM
2884
2885 ;LOCATIONS USED DURING EVENT REPORTING
2886
2887 010610 000000 EVTSEC: .WORD 0 ;TEMPORARY LOCS TO KEEP EVENT TIME WHILE REPORTING
2888 010612 000000 EVTMIN: .WORD 0
2889 010614 000000 EVTTCK: .WORD 0
2890 010616 000000 EVTADD: .WORD 0 ;TEMP. LOC. TO HOLD ADDRESS DURING EVENT REPORTING
2891 010620 000000 EVTBCT: .WORD 0 ; " " BYTE COUNT " " "
2892 010622 000000 EVTTMP: .WORD 0 ; " " OTHER DATA " " "
2893
2894 ;REPORT CODING DISPATCH TABLE
2895
2896 010624 031014 RPTDSP: .WORD RPTTXQ ;TRANSMIT QUEUED ENTRY DECODING
2897 010626 031014 .WORD RPTTXQ ;TRANSMIT COMPLETE ENTRY DECODING
2898 010630 031014 .WORD RPTTXQ ;RECEIVER QUEUED ENTRY DECODING
2899 010632 031014 .WORD RPTTXQ ;RECEIVER COMPLETE ENTRY DECODING
2900 010634 031066 .WORD RPTDER ;DEVICE ERROR ENTRY DECODING
2901 010636 031162 .WORD RPTDVI ;DEVICE INIT ENTRY DECODING
2902 010640 031356 .WORD RPTDCK ;DATA COMPARISON ENTRY DECODING
2903 010642 030642 .WORD RPT ;PLACE HOLDER
2904 010644 031356 .WORD RPTDLE ;DATA COMPARISON LENGH ERROR
2905 010646 031302 .WORD RPTDDE ;DATA COMPARISON DATA ERROR
2906 010650 031226 .WORD RPTTEOP ;END OF PASS
2907 010652 031226 .WORD RPTABO ;^C ABORT
2908
2909
2910 010654 000000 DEV1: .WORD 0 ;TEMP LOCS TO HOLD DATA FOR EVENT REPORTING
2911 010656 000000 DEV2: .WORD 0 ; AND SHOW MODE,... SUBROUTINE
2912 010660 000000 DEV3: .WORD 0
2913 010662 000000 DEV4: .WORD 0
2914

```

.SBTTL COMMAND LINE ACTION TREE

;SAMPLE CLI TREE NODE (ALWAYS AT LEAST 1 WORD)

| | |
|-------------------------------------|----------------------------------|
| ! ACTION ! CHAR CODE ! | |
| ! MISS DISPLACEMENT ! | ONLY IF 'MISS' ARGUMENT DEFINED |
| ! NEXT NODE DISPLMNT ! | ONLY IF 'ASCII' ARGUMENT DEFINED |
| ! ASCIZ MATCH STRING ! (.EVEN) ! | ONLY IF 'ASCII' ARGUMENT DEFINED |

CLITRE:

;FIRST KEYWORD

2915
2916
2917
2918
2919
2920
2921
2922
2923
2924
2925
2926
2927
2928
2929
2930 010664
2931
2932
2933 010664
2934 010670
2935 010674
2936 010676
2937 010712
2938 010714
2939 010730
2940 010732
2941 010746
2942 010750
2943 010762
2944 010766
2945 011002
2946 011006
2947 011022
2948 011026
2949 011032
2950 011044
2951 011050
2952 011062
2953 011066
2954
2955
2956
2957 011070
2958 011074
2959 011110
2960 011114
2961 011132
2962 011136
2963 011154
2964 011160
2965 011176
2966 011202
2967 011220
2968 011224
2969 011250
2970 011254

```

N10$: CLI <'?'>,HLP,N42$ ;SKIP ANY LEADIN SPACES
      CLI CLIEXI,0 ;IS THE FIRST NON-SP CHAR A '?'
N42$: CLI CLISTR,HLP,N43$,<'HELP'> ; IF YES DO 'HLP' AND EXIT
      CLI CLIEXI,0 ;ELSE, IS FIRST WORD A 'HELP'
N43$: CLI CLISTR,PRNT,N44$,<'PRINT'> ; IF YES DO 'HLP' AND EXIT
      CLI CLIEXI,0 ;ELSE, IS FIRST WORD A 'PRINT'
N44$: CLI CLISTR,EXIT,N45$,<'EXIT'> ; IF YES DO 'PRINT' AND EXIT
      CLI CLIEXI,0 ;ELSE, IS FIRST WORD AN 'EXIT';REV B BY E
N45$: CLI CLISTR,RUN,N46$,<'RUN'> ; IF YES DO 'EXIT' AND EXIT
      CLI CLIBR,0,N80$ ;ELSE, IS FIRST WORD A 'RUN'
N46$: CLI CLISTR,NOTNUF,N40$,<'DUMP'> ; IF YES DO 'RUN' & GOTO N80$
      CLI CLIBR,0,N50$ ;ELSE, IS FIRST WORD A 'DUMP'
N40$: CLI CLISTR,CLEAR,N20$,<'CLEAR'> ; IF YES GOTO N80$
      CLI CLIBR,NOTNUF,N100$ ;ELSE, IS FIRST WORD A 'CLEAR'
N20$: CLI <'S'>,NOTNUF,N30$ ; IF YES DO 'CLR' & GOTO N100$
      CLI CLISTR,SHOW,N25$,<'HOW'> ;ELSE, IS FIRST CHAR. A 'S'
      CLI CLIBR,0,N100$ ; IF YES IS REST OF WORD 'HOW'
N25$: CLI CLISTR,0,N30$,<'ET'> ; IF YES, DO 'SHOW',BR N100$
      CLI CLIBR,0,N110$ ; ELSE, IS REST OF WORD 'ET'
N30$: CLI CLIERR,0 ; IF YES, DO 'SET', BR N110$
      ; OTHERWISE 'ILL CMD' - EXIT

```

;SECOND KEYWORD (MODE=) FOR RUN COMMAND

```

N80$: CLI CLISPA,0,N30$ ;SKIP LEADING SPS, IF NONE-ERR
N81$: CLI CLISTR,NOTNUF,N30$,<'MODE'> ;IS NEXT WORD 'MODE='
      CLI <'='>,0,N30$ ; IF NO, IT'S WRONG -ERR -EXIT
      CLI CLISTR,ATVMOD,N82$,<'ACTIVE'> ;IS NEXT WORD 'ACTIVE'
N82$: CLI CLIBR,0,N115$ ; IF YES, DO 'ACTIVE',BR N115$
      CLI CLISTR,PASMOD,N83$,<'PASSIVE'> ;IS NEXT WORD 'PASSIVE'
N83$: CLI CLIBR,0,N115$ ; IF YES, DO 'PASSIVE',BR N115$
      CLI CLISTR,RECMOD,N84$,<'RECEIVE'> ;IS NEXT WORD 'RECEIVE'
N84$: CLI CLIBR,0,N115$ ; IF YES, DO 'RECVE',BR N115$
      CLI CLISTR,LISMOD,N85$,<'LISTEN'> ;IS NEXT WORD 'LISTEN'
N85$: CLI CLIBR,0,N115$ ; IF YES, DO 'LISTEN',BR N115$
      CLI CLISTR,DLLOD,N86$,<'DOWNLINeload'> ;IS NEXT WORD 'DOW...'
N86$: CLI CLIBR,0,N115$ ; IF YES, DO 'DWNLL',BR N115$
      <'T'>,0,N30$ ;IS NEXT CHAR A 'T'

```

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COMMAND LINE ACTION TREE

```

2971 011260      CLI      CLISTR,TRAMOD,N87$,<'RANSMIT'>  ; IS REST OF WORD 'RANSMIT'
2972 011276      CLI      CLIBR,0,N115$                    ; IF YES, DO 'TRANSM',BR N115$
2973 011302      N87$:  CLI      CLISTR,TALMOD,N30$,<'ALK'>    ; IS REST OF WORD 'ALK'
2974 011314      CLI      CLIBR,0,N115$                    ; IF YES, DO 'TALK',BR N115$
2975                                     ; IF NO, ERROR - EXIT
2976
2977      ;SECOND KEYWORD (FOR CLEAR OR SHOW)
2978 011320      N100$: CLI      CLISPA,0,N30$                    ;SKIP LEADING SPACES, NONE-ERR
2979 011324      N102$: CLI      CLISTR,CSHEXP,N104$,<'EXPECT'> ;IS NEXT WORD 'EXPE...'
2980 011342      CLI      CLIEXI,0                          ; IF YES, DO CLR-EXP,EXIT
2981 011344      N104$: CLI      CLISTR,CSHTRN,N30$,<'TRANSMIT'> ;IS NEXT WORD 'TRANS...'
2982 011364      CLI      CLIEXI,0                          ; IF YES, DO CLR-TRN,EXIT
2983                                     ;IF NO - ERROR - EXIT
2984
2985      ;SECOND KEYWORD (FOR SET)
2986
2987 011366      N110$: CLI      CLISPA,0,N30$
2988 011372      N111$: CLI      CLISTR,SETEXP,N112$,<'EXPECT'>
2989 011410      CLI      CLIBR,0,N120$
2990 011414      N112$: CLI      CLISTR,SETTRN,N30$,<'TRANSMIT'>
2991 011434      CLI      CLIBR,0,N120$
2992
2993      ;GET ADDRESSES FOR DUMP COMMAND
2994 011440      N50$:  CLI      CLIALP,0,N51$
2995 011444      N51$:  CLI      CLISPA,0,N52$
2996 011450      N52$:  CLI      CLIOCT,DMP$ ,N30$
2997 011454      CLI      <'>,NOTNUF,N125$
2998 011460      CLI      CLIOCT,DMPE,N30$
2999 011464      CLI      <'>,NOTNUF,N125$
3000 011470      CLI      <'B>,DMPQ,N30$
3001 011474      CLI      CLIBR,0,N125$
3002
3003      ;QUALIFIERS FOR THE RUN COMMAND
3004 011500      N115$: CLI      CLIALP,0,N114$
3005 011504      N114$: CLI      <'>,NOTNUF,N125$
3006 011510      CLI      CLISTR,NO,N116$,<'NO'>
3007 011522      N116$: CLI      <'C>,0,N117$
3008 011526      CLI      CLISTR,CHECK,N117$,<'HECK'>
3009 011542      CLI      CLIBR,0,N115$
3010
3011
3012      ;N113$: CLI      CLISTR,CRC,N30$,<'RC16'>
3013      ;      CLI      CLIBR,0,N115$
3014
3015 011546      N117$: CLI      CLISTR,STATUS,N118$,<'STATUS'>
3016 011564      CLI      CLIBR,0,N115$
3017 011570      N118$: CLI      CLISTR,ECHO,N130$,<'ECHO'>
3018 011604      CLI      CLIBR,0,N115$
3019
3020
3021 011610      N130$: CLI      CLISTR,0,N131$,<'PASS'>
3022 011624      CLI      CLIBR,0,N150$
3023 011630      N131$: CLI      CLISTR,0,N132$,<'LOOP'>
3024 011644      CLI      CLIBR,0,N140$
3025
3026 011650      N132$: CLI      CLISTR,MOSC,N30$,<'MODEM'>      ;MODEM ACTION

```

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COMMAND LINE ACTION TREE

```

3027 011664          CLI      CLIBR,0,N115$          ;;ADDED BY EC
3028
3029                ;GET MESSAGE TYPE FOR SET MESSAGE COMMANDS
3030 011670          N120$: CLI      <'=>,0,N30$
3031
3032                ; LOOK FOR DEFAULT MESSAGE NAME
3033 011674          N60$:  CLI      CLISTR,MSG1,N61$,<'ONES'>
3034 011710          CLI      CLIBR,0,N121$
3035 011714          N61$:  CLI      CLISTR,MSG0,N62$,<'ZER0ES'>
3036 011732          CLI      CLIBR,0,N121$
3037 011736          N62$:  CLI      CLISTR,MSG2,N63$,<'1ALT'>
3038 011752          CLI      CLIBR,0,N121$
3039 011756          N63$:  CLI      CLISTR,MSG3,N64$,<'0ALT'>
3040 011772          CLI      CLIBR,0,N121$
3041 011776          N64$:  CLI      CLISTR,MSG5,N65$,<'ITEP'>
3042 012012          CLI      CLIBR,0,N121$
3043 012016          N65$:  CLI      CLISTR,MSG4,N66$,<'CCITT'>
3044 012032          CLI      CLIBR,0,N121$
3045 012036          N66$:  CLI      CLISTR,MSG6,N67$,<'ALPHA'>
3046 012052          CLI      CLIBR,0,N121$
3047 012056          N67$:  CLI      CLISTR,SETET,N68$,<'TRANSMIT'> ;REV B BY EC
3048 012076          CLI      CLIBR,0,N125$          ;REV B BY EC
3049
3050                ; LOOK FOR QUOTED MESSAGE
3051 012102          N68$:  CLI      <'>,OPRMSG,N30$
3052 012106          N70$:  CLI      <'>,ENDQ0,N71$
3053 012112          CLI      CLIBR,0,N121$
3054 012116          N71$:  CLI      CLISPA,0,N72$
3055 012122          N72$:  CLI      CLIALN,0,N73$          ;ONLY A-Z,SP,TAB, OR 0-9 BETWEEN ''S
3056 012126          CLI      CLIBR,0,N70$
3057 012132          N73$:  CLI      CLIERR,BADCHR          ;PRINT ERROR IF NONE LEGAL CHAR FOR ''S
3058
3059                ;GET QUALIFIERS (SIZE OR COPY) FOR SET MESSAGE COMMANDS
3060 012134          N121$: CLI      CLIALP,0,N123$
3061 012140          N123$: CLI      <'>,NO'NUF,N125$
3062 012144          CLI      CLISTR,SIZE,N122$,<'SIZE'>
3063 012160          CLI      CLIBR,0,N126$
3064 012164          N122$: CLI      CLISTR,QCOPY,N30$,<'COPY'>
3065 012200          CLI      CLIBR,0,N126$
3066
3067                ;NUMER FOR SIZE OR COPY
3068 012204          N126$: CLI      <'=>,0,N30$
3069 012210          CLI      CLIDEC,NUM,N30$
3070 012214          CLI      CLIBR,0,N121$
3071
3072                ;GET MAINTENANCE LOOP TYPE FOR RUN 'LOOP' QUALIFIER
3073 012220          N140$: CLI      <'=>,0,N30$
3074
3075
3076 012224          N141$: CLI      CLISTR,TTLLOP,N142$,<'INTERNAL TTL >
3077 012246          CLI      CLIBR,0,N115$
3078 012252          N142$: CLI      CLISTR,CBLLUP,N143$,<'CABLE'>
3079 012266          CLI      CLIBR,0,N115$
3080 012272          N143$: CLI      CLISTR,LMDLOP,N144$,<'LOCALMODEM'>
3081 012314          CLI      CLIBR,0,N115$
3082 012320          N144$: CLI      CLISTR,RMDLOP,N30$,<'REMOTEMODEM'>

```

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COMMAND LINE ACTION TREE

3083 012342
3084
3085
3086 012346
3087 012352
3088 012356
3089
3090
3091
3092
3093 012362
3094

CLI CLIBR,0,N115\$
;GET LINE NUMBER FOR 'PASS' RUN QUALIFIER
N150\$: CLI <'=>,0,N30\$
CLI CLIDEC,PASC,N30\$
CLI CLIBP,0,N115\$
;END-OF-LINE
N125\$: CLI CLIEXI,0

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 COMMAND LINE ACTION TREE

```

3095
3096
3097           ;DEVICE DEPENDENT STORAGE LOCATIONS FOR
3098           ; CURRENT DEVICE PARAMETERS
3099
3100          SELO:
3101          BSEL0: .WORD 0           ;ADDRESSES OF REGISTERS SELO THRU BSEL7
3102          BSEL1: .WORD 0
3103          SEL2:
3104          BSEL2: .WORD 0
3105          BSEL3: .WORD 0
3106          SEL4:
3107          BSEL4: .WORD 0
3108          BSEL5: .WORD 0
3109          SEL6:
3110          BSEL6: .WORD 0
3111          BSEL7: .WORD 0
3112
3113
3114          INVEC: .WORD 0           ;INPUT INTERRUPT VECTOR ADDRESS
3115          OUTVEC: .WORD 0          ;OUTPUT INTERRUPT VECTOR ADDRESS
3116          INTPRI: .WORD 0         ;INTERRUPT PRICRITY
3117          OPTYP: .WORD 0          ;DEVICE OPTION TYPE(0=DMC,5=DMR-DMC MODE
3118                                     ;7=DMR).
3119
3120
3121
3122
3123           ; ERRIBL

```

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GLOBAL TEXT SECTION

3124
3125
3126
3127
3128
3129
3130
3131
3132
3133
3134
3135
3136 012414
3137 012414
3138 012414 046504 026122 046504
3139 012422 026503 030461 000
3140
3141 012430
3142
3143
3144
3145
3146
3147 012430
3148 012430
3149 012430 055103 046103 041513
3150 012436 020060 046504 026122
3151 012444 042040 041515 030455
3152 012452 020061 040504 040524
3153 012460 041440 046517 027115
3154 012466 046040 047111 020113
3155 012474 042524 052123 000
3156 012502
3157
3158
3159
3160
3161

.SBTTL GLOBAL TEXT SECTION

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

.SBTTL DEVICE SUPPORTED

; NAMES OF DEVICES SUPPORTED BY PROGRAM

DEV TYP <DMR,DMC-11>

L\$DVTYP::
.ASCIZ /DMR,DMC-11/
.EVEN

.SBTTL PROGRAM IDENTIFICATION

; TEST DESCRIPTION

DESCRIPT <CZCLKCO DMR, DMC-11 DATA COMM. LINK TEST>

L\$DESC::
.ASCIZ /CZCLKCO DMR, DM

.EVEN

.EVEN

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GLOBAL FORMAT STATEMENTS, MESSAGES, AND ASCII INFO

```

3162      .SBTTL      GLOBAL FORMAT STATEMENTS, MESSAGES, AND ASCII INFO
3163
012502  041504  052114  000076  CLISPM: .ASCIZ  /DCLT>/
012510  050122  037124  000040  CLISRP: .ASCIZ  /RPT> / ;REV B BY EC
012516  047045  040445  044477  CLIERM: .ASCIZ  /%NZA?ILL CMD-BAD SYNTAX?/
012546  047045  040445  044477  CLINUF: .ASCIZ  /%NZA?INCMPLTE CMD?/
012571    045  022516  037501  CLINBG: .ASCIZ  /%NZA?NUM TOO BIG?/
012613    045  022516  037501  CLIBRX: .ASCIZ  /%NZA?BAD RADIX?/
012633    045  022516  037501  CLIBDL: .ASCIZ  /%NZA?'LOOP' VALID ONLY IN ACTIVE?/
012675    045  022516  037501  CLINPS: .ASCIZ  /%NZA?'ECHO' VALID ONLY IN PASSIVE?/
012740  047045  040445  044477  CLIBCR: .ASCIZ  /%NZA?ILL CHR- 'A-Z,0-9,SP,TAB' ONLY?/
013005    045  022516  037501  CLISEO: .ASCIZ  /%NZA?'SIZE=0' NOT VALID?/
013036  047045  040445  052077  CLIPW:  .ASCIZ  /%NZA?TRANSMIT & EXPECT LIST MUST BE IDENTICAL FOR LOOP?/ ;REV B BY EC
013126  040523  052124  046105  DLLQ1:  .ASCIZ  /SATELLITE PASSWORD= / ;REV B BY EC
013153    045  022516  052101  HLP0:   .ASCIZ  /%N%ATHIS IS DCLT. TYPE 'H' OR '?' FOR DETAILS/
013231    045  022516  000124  HLPF:   .ASCIZ  /%N%T/
013236  041504  052114  041440  HLP1:   .ASCIZ  /DCLT CMDS:/
013251    040  046103  040505  HLP2:   .ASCII  / CLEAR OR SHOW EXPECTLIST OR TRANSMITLIST/<15><12>
013325    040  051120  047111  .ASCII  / PRINT/<15><12>
013335    040  054105  052111  .ASCII  / EXIT/<15><12> ;REV B BY EC
013344  042040  046525  020120  .ASCIZ  ? DUMP START-END/B?
013366  051440  052105  042440  HLP3:   .ASCIZ  ? SET EXPECTMSG OR TRANSMITMSG=TYPE/SIZE=N OR /COPY=N?
013453    040  042523  020124  HLP3A:  .ASCIZ  / SET EXPECT=TRANSMIT/ ;REV B BY EC
013500  020040  052040  050131  HLP4:   .ASCIZ  ? TYPE=ONES,ZEROES,1ALT,0ALT,ITEP,CCITT,ALPHA?
013557    040  020040  020040  HLP4A:  .ASCIZ  / OR 'OPR SPCD=A-Z,SP,TAB,0-9 IN QUOTES'/
013635    040  052522  020116  HLP5:   .ASCIZ  ? RUN MODE=MTYP/LOOP=LTP/CHECK,STATUS,ECHO,MODEM,PASS=N?
013725    040  020040  052115  HLP6:   .ASCII  / MTYP=TRAN,REC,ACT,PAS,TAL,LIS,DOWN/<15><12>
013774  020040  046040  054524  .ASCIZ  / LTP=INT,CAB,LOC,REM/
014024  047045  040445  054524  RHLPO:  .ASCIZ  /%N%ATYPE 'H' OR '?' FOR HELP !/ ;REV B BY EC
014063    104  046103  020124  RHLP1:  .ASCIZ  /DCLT REPORT CMDS :/ ;REV B BY EC
014106  047514  020107  020055  RHLP2:  .ASCIZ  /LOG - PRINT DCLT EVENT LOG/ ;REV B BY EC
014141    105  044530  020124  RHLP3:  .ASCIZ  /EXIT - EXIT REPORT LEVEL/ ;REV B BY EC
014172  042510  050114  026440  RHLP4:  .ASCIZ  /HELP - PRINT THIS MESSAGE/ ;REV B BY EC
014224  040502  042523  042457  RHLP5:  .ASCIZ  !BASE/ERROR - PRINT ONLY ERRORS! ;REV B BY EC
014263    102  051501  027505  RHLP6:  .ASCIZ  !BASE/FULL - PRINT ENTIRE TABLE! ;REV B BY EC
014322  040502  042523  047457  RHLP7:  .ASCIZ  :BASE/OFFSET=NMN - PRINT SINGLE LOCATION!<15><12> ;REV B BY EC
014374  047045  040445  040502  RPTIV:  .ASCIZ  /%N%ABASE OFFSET=%03%A TOO BIG ./ ;REV B BY EC
014434  047045  040445  051515  SHMSG:  .ASCIZ  ?%N%AMSG: TYPE=%T%A/SIZE=%D3?
014470  042532  047522  051505  SHTYP0: .ASCIZ  /ZEROES/
014477    117  042516  000123  SHTYP1: .ASCIZ  /ONES/
014504  040461  052114    000  SHTYP2: .ASCIZ  /1ALT/
014511    060  046101  000124  SHTYP3: .ASCIZ  /0ALT/
014516  041503  052111  000124  SHTYP4: .ASCIZ  /CCITT/
014524  052111  050105    000  SHTYP5: .ASCIZ  /ITEP/
014531    101  050114  040510  SHTYP6: .ASCIZ  /ALPHA/
014537    117  051120  051440  SHTYP7: .ASCIZ  /OPR SPEC/
014550  042522  042503  053111  M00:    .ASCIZ  /RECEIVE/
014560  051124  047101  046523  M01:    .ASCIZ  /TRANSMIT/
014571    120  051501  044523  M02:    .ASCIZ  /PASSIVE/
014601    101  052103  053111  M03:    .ASCIZ  /ACTIVE/
014610  047504  047127  044514  M04:    .ASCIZ  /DOWNLINELOAD/
014625    124  046101  000113  M05:    .ASCIZ  /TALK/
014632  044514  052123  047105  M06:    .ASCIZ  /LISTEN/
014641    000  .ASCIZ  //
014642  046057  047517  036520  LP00:   .ASCIZ  ?/LOOP=?
014651    111  052116  051105  LP1:    .ASCIZ  ?INTERNAL?

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GLOBAL FORMAT STATEMENTS, MESSAGES, AND ASCII INFO

| | | | | | | | |
|--------|--------|--------|--------|--------|---------|---------------------------------|--------------|
| 014662 | 040503 | 046102 | 000105 | LP2: | .ASCIIZ | ?CABLE? | |
| 014670 | 047514 | 040503 | 046514 | LP3: | .ASCIIZ | ?LOCALMODEM? | |
| 014703 | 122 | 046505 | 052117 | LP4: | .ASCIIZ | ?REMODEM? | |
| 014717 | 116 | 117 | | PNST: | .ASCII | /NO/ | |
| 014721 | 123 | 040524 | 052524 | PST: | .ASCIIZ | /STATUS/ | |
| 014730 | 047516 | | | PNCK: | .ASCII | /NO/ | |
| 014732 | 044103 | 041505 | 000113 | PCK: | .ASCIIZ | /CHECK/ | |
| 014740 | 047516 | | | PNEC: | .ASCII | /NO/ | |
| 014742 | 041505 | 047510 | 000 | PEC: | .ASCIIZ | /ECHO/ | |
| 014747 | 116 | 117 | | PNMS: | .ASCII | /NO/ | ;ADDED BY EC |
| 014751 | 115 | 042117 | 046505 | PMS: | .ASCIIZ | /MODEM/ | ;ADDED BY EC |
| 014757 | 045 | 022516 | 046101 | LISP: | .ASCIIZ | /X%ALIS>/ | |
| 014770 | 046124 | 037113 | 000 | OPRMM: | .ASCIIZ | /TLK>/ | |
| 014775 | 124 | 044510 | 020123 | L5060: | .ASCIIZ | /THIS A 50. OR 50. HZ. LSI-11:/ | |
| | 015034 | | | .EVEN | | | |

; FORMAT STATEMENTS USED IN PRINT CALLS

| | | | | | | | |
|--------|--------|--------|--------|---------|---------|---|--|
| 015034 | 047045 | 040445 | 047504 | DLLCM: | .ASCIIZ | /X%ADOWN LINE LOAD COMPLETED SUCCESSFULLY/ | |
| 015106 | 047045 | 040445 | 040502 | NOCLK: | .ASCIIZ | /X%ABAD CLOCK - PROGRAM WILL HANG ON 'TIMEOUT'!./ | |
| 015167 | 115 | 054101 | 020056 | TABEX: | .ASCIIZ | /MAX. CHAR. MSG COUNT EXCEEDED -/ | |
| 015227 | 102 | 043125 | 042506 | BUFEX: | .ASCIIZ | /BUFFER FULL -/ | |
| 015245 | 045 | 022516 | 022524 | MSGTRN: | .ASCIIZ | /X%T% MSG. NOT BUILT !./ | |
| 015276 | 047045 | 040445 | 044103 | MSGTRU: | .ASCIIZ | /X%ACHAR. COUNT EXCEEDS BUFF LIMIT - MSG TRUNCATED/ | |
| 015361 | 045 | 022516 | 032523 | SHF0: | .ASCIIZ | ?X%S%AMODE=X%T%T%T%/PASS=X%Z%? | |
| 015417 | 045 | 022516 | 032523 | SHF1: | .ASCIIZ | ?X%S%S%S%S%T%/X%T%/X%T%/X%T%/X%T%? | |
| 015457 | 045 | 032523 | 040445 | EFM2: | .ASCIIZ | /X%S%ATOTAL MISMATCHES IN MSG = X%D%/ | |
| 015522 | 047045 | 051445 | 022463 | PCPM: | .ASCIIZ | /X%S%ACALLED FROM PC=X%U%/ | |
| 015554 | 051445 | 022465 | 041501 | EFM11: | .ASCIIZ | /X%S%ACOMPARE COUNT=X%D%S%ARECEIVE COUNT=X%D%/ | |

; EVENT DESCRIPTION MESSAGES

| | | | | | | | |
|--------|--------|--------|--------|--------|---------|--------------------------------|--------------|
| 015631 | 124 | 040522 | 051516 | EDTXQ: | .ASCIIZ | /TRANSMIT MSG QUEUED/ | |
| 015655 | 124 | 040522 | 051516 | EDTXC: | .ASCIIZ | /TRANSMIT MSG COMPLETED/ | |
| 015704 | 042522 | 042503 | 053111 | EDRXQ: | .ASCIIZ | /RECEIVE SPACE QUEUED/ | |
| 015731 | 122 | 041505 | 044505 | EDRXC: | .ASCIIZ | /RECFIVE MSG COMPLETED/ | |
| 015757 | 104 | 053105 | 041511 | EDDER: | .ASCIIZ | /DEVICE ERROR/ | |
| 015774 | 040504 | 040524 | 041440 | EDDCK: | .ASCIIZ | /DATA COMPARISON STARTED/ | |
| 016024 | 042504 | 044526 | 042503 | EDDVI: | .ASCIIZ | /DEVICE INIT AND SETUP/ | |
| 016052 | 040504 | 040524 | 041440 | EDDLE: | .ASCIIZ | /DATA COMPARISON LENGTH ERROR/ | |
| 016107 | 104 | 052101 | 020101 | EDDDE: | .ASCIIZ | /DATA COMPARISON DATA ERROR/ | |
| 016142 | 047105 | 020104 | 043117 | EDEOP: | .ASCIIZ | /END OF PASS/ | |
| 016156 | 041101 | 047516 | 046522 | EDMOS: | .ASCIIZ | /ABNORMAL MODEM STATUS CHANGE/ | ;ADDED BY EC |
| 016213 | 136 | 020103 | 041101 | EDABO: | .ASCIIZ | /^C ABORT/ | |

;*****
;THESE TWO STORAGE AREAS MUST NOT BE SEPERATED !!!!

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;EVENT REPORTING MESSAGES
016224 020040 040502 042523 BASM1A: .ASCIZ / RASE TABLE/

016241 045 031523 047445 BASM3: .ASCIZ /%S3%03/
016250 051445 022463 033117 BASM2: .ASCIZ /%S3%06/
016257 045 022516 033117 BASM1: .ASCIZ /%N%06/

016265 045 022516 052101 NULEVT: .ASCIZ ?%N%ATHE DCLT EVENT LOG IS EMPTY?
016325 045 022516 037101 EVTF0: .ASCIZ ?%N%A>>>DCLT EVENT LOG ENTRY <<<<<<<<<<<<<<<<<<<<<<<<<<<<<?
016420 047045 042045 022465 EVTF1: .ASCIZ /%N%D5%A:%Z2%A:%Z2%S3%T/
016447 045 022516 031523 EVTF2: .ASCIZ /%N%S3%AADDR OF MSG=%06%S3%ABYTE COUNT=%D5/
016521 045 022516 031523 EVTF3: .ASCIZ /%N%S3%T%N/
016533 045 031523 047445 EVTF3C: .ASCIZ /%S3%06%S3%06/
016550 051445 022463 033117 EVTF3D: .ASCIZ /%S3%06%S3%06%S3%T/
016572 047045 051445 022463 EVTF4: .ASCIZ /%N%S3%AADDR OF MSG=%06%S3%ABYTE COUNT=%D5%S3%ANO. OF CMP ERRS=%D5/
016674 047045 051445 022463 EVTF4A: .ASCIZ /%N%S3%AADDR OF MSG=%06%S3%ARX BYTES=%D5%S3%ACOMPARE BYTES=%D5/
016772 047045 051445 022463 EVTF4B: .ASCIZ /%N%S3%APASS=%D5%S3%AERRORS=%D5%S3%ANOBUFFS=%D5/
017051 045 032523 040445 EVTF5A: .ASCIZ /%S5%ABYTE # IN MSG.=%D5%S3%AEXPTD=%03%S3%ARECVD=%03/

017135 045 022516 034523 EVMOCG: .ASCIZ /%N%S9%ACHANGED TO:/

; *****
;DO NOT SEPERATE THE NEXT LIST OF MESSAGES - MODEM SIGNAL HEADER AND REPORT

017160 047045 051445 022470 EVMOHD: .ASCIZ /%N%S8%AMODEM STATUS: CTS DSR DCD RTS RI SQD TM/
017240 047045 051445 022471 EVMOST: .ASCII /%N%S9%S9%S5%A/
017255 130 040 040 EVMCTS: .BYTE 'X,40,40,40
017261 130 040 040 EVMDSR: .BYTE 'X,40,40,40
017265 130 040 040 EVMDCD: .BYTE 'X,40,40,40
017271 130 040 040 EVMRTS: .BYTE 'X,40,40,40
017275 130 040 040 EVMRI: .BYTE 'X,40,40,40
017301 130 040 040 EVMSQD: .BYTE 'X,40,40,40
017305 130 040 040 EVMTM: .BYTE 'X,40,40,40
017311 000 .BYTE 0
.EVEN

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BASE TABLE ADDRESS

.SBTTL BASE TABLE ADDRESS
:THIS SECTION IS USED BY A M9301-YJ BOOT ROM FOR DOING DOWN-LINE-LOAD.
:MUST BE IN THE AREA OF '017370 + 256. BYTES' + A FEW

.....!!!!!! BEWARE !!!!! DO NOT ALLOW THE ABOVE ASCII MESSAGES TO EXPAND INTO
.....!!!!!! THIS REGION.

017370 017370
000400 000400
020000 020000

.EVEN
BASE: .=17370
.BLKB 256. ;BASE TABLE ADDRESS
.=20000

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ASCIZ MESSAGES CONTINUED AFTER BASE TABLE REGION

.SBTTL ASCIZ MESSAGES CONTINUED AFTER BASE TABLE REGION

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:EXECUTION STATUS MESSAGES TO BE PRINTED TO KEEP OPERATOR AWAKE
020000 047045 000 CR: .ASCIZ /%N/ ;CR FOR LINES IN A ROW
020003 045 031523 040445 STXQ: .ASCIZ /%S3%ATXQ/ ;ABOUT TO TRANSMIT
020014 051445 022463 052101 STXC: .ASCIZ /%S3%ATXC/ ;TX COMPLETED
020025 045 031523 040445 SRXQ: .ASCIZ /%S3%ARXQ/ ;ABOUT TO RECEIVE
020036 051445 022463 042501 SDVE: .ASCIZ /%S3%AERR/ ;DEVICE ERROR
020047 045 031523 040445 SCM: .ASCIZ /%S3%ACMP/ ;ABOUT TO DO DATA CHECKING OF RECVD VS. EXPTD
020060 051445 022463 044501 SDVI: .ASCIZ /%S3%AINI/ ;DEVICE ABOUT TO BE INITIALIZED
020071 045 031523 040445 SML: .ASCIZ /%S3%ACML/ ;COMPARE LENGTH ERROR
020102 051445 022463 041501 SCMD: .ASCIZ /%S3%ACMD/ ;COMPARE DATA ERROR
020113 045 031523 040445 SEOP: .ASCIZ /%S3%AEOF/ ;END OF PASS
020124 051445 022463 046501 SMSC: .ASCIZ /%S3%AMSC/ ;MODEM STATUS CHANGE ADDED BY EC

```

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:REV B BY EC
:;NEXT ASCIZ LINES ARE USED IN SATELLITE ID MESSAGES
020135 045 022516 051501 SECRM: .ASCIZ /%N%ASECONDARY BOOT REQ FROM %TX% DEVICE-TYPE= %D3/
020217 104 000120 DPM: .ASCIZ /DP/
020222 052504 000 DUM: .ASCIZ /DU/
020225 104 000114 DLM: .ASCIZ /DL/
020230 050504 000 DQM: .ASCIZ /DQ/
020233 104 000101 DAM: .ASCIZ /DA/
020236 052504 000120 DUPM: .ASCIZ /DUP/
020242 046504 000103 DMCM: .ASCIZ /DMC/
020246 047104 000 DNM: .ASCIZ /DN/
020251 104 053114 000 DLVM: .ASCIZ /DLV/
020255 104 050115 000 DMPM: .ASCIZ /DMP/
020261 104 042524 000 DTEM: .ASCIZ /DTE/
020265 104 000126 DVM: .ASCIZ /DV/
020270 055104 000 DZM: .ASCIZ /DZ/
020273 125 045516 047516 UNKM: .ASCIZ /UNKNOWN/
020303 113 050104 000 KDPM: .ASCIZ /KDP/
020307 113 055104 000 KDZM: .ASCIZ /KDZ/
020313 113 000114 KLM: .ASCIZ /KL/
020316 046504 000126 DMVM: .ASCIZ /DMV/
.EVEN

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ASCIZ MESSAGES CONTINUED AFTER BASE TABLE REGION

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:REV B BY EC
.SBTTL DMR BASE TABLE DESCRIPTION MESSAGES
020322 047125 042504 044506 DMRUNKN: .ASCIZ /UNDEFINED DATA / ;LOCATION UNDEFINED BY SPEC
020342 040502 042523 052040 DMR000: .ASCIZ /BASE TABLE UPDATE INDEX POINTER/
020402 040502 042523 052040 DMR001: .ASCIZ /BASE TABLE UPDATE LIMIT/
020432 042502 044507 047116 DMR002: .ASCIZ /BEGINNING OF BASE TABLE DATA/
020467 116 045501 020123 DMR003: .ASCIZ /NAKS RCVD..BUFFER TEMP UNAVAILABLE/
020532 040516 051513 051040 DMR004: .ASCIZ /NAKS RCVD..HEADER BCC ERROR/
020566 040516 051513 051040 DMR005: .ASCIZ /NAKS RCVD..DATA BCC ERROR/
020620 040516 051513 051440 DMR006: .ASCIZ /NAKS SENT..BUFFER TEMP UNAVAILABLE/
020663 116 045501 020123 DMR007: .ASCIZ /NAKS SENT..HEADER BCC ERROR/
020717 116 045501 020123 DMR010: .ASCIZ /NAKS SENT..DATA BCC ERROR/
020751 122 050105 020123 DMR011: .ASCIZ /REPS SENT..CUMUL REP SENT/
021003 122 050105 020123 DMR012: .ASCIZ /REPS RCVD..CUMUL REP RCVD/
021035 116 045501 020123 DMR013: .ASCIZ /NAKS RCVD..REP RESPONSE/
021065 116 045501 020123 DMR014: .ASCIZ /NAKS RCVD..RCV OVERRUN/
021114 040516 051513 051040 DMR015: .ASCIZ /NAKS RCVD..MSG HDR FORMAT/
021146 040516 051513 051040 DMR016: .ASCIZ /NAKS RCVD..MSG TOO LONG/
021176 040516 051513 051440 DMR017: .ASCIZ /NAKS SENT..REP RESPONSE/
021226 040516 051513 051440 DMR020: .ASCIZ /NAKS SENT..RCV OVERRUN/
021255 116 045501 020123 DMR021: .ASCIZ /NAKS SENT..MSG HDR FORMAT/
021307 130 044515 020124 DMR022: .ASCIZ /XMIT UNDERRUN COUNT/
021333 103 046101 020114 DMR023: .ASCIZ /CALL SET UP FAILURE COUNT/
021365 101 052103 020123 DMR024: .ASCIZ /ACTS FAILURE COUNT/
021410 040503 051122 042511 DMR025: .ASCIZ /CARRIER DETECT LOST COUNT(WHILE RECEIVING)/
021463 122 041505 044505 DMR026: .ASCIZ /RECEIVER INACTIVE COUNT/
021513 123 051124 040505 DMR027: .ASCIZ /STREAMING TIME-OUT COUNT/
021544 046530 054502 024124 DMR030: .ASCIZ /XMBYT(LSB) - TOTAL # BYTES XMITTED, 32 BIT COUNTER/
021627 130 041115 052131 DMR031: .ASCIZ ?XMBYT(2/4) - # BYTES XMITTED?
021664 046530 054502 024124 DMR032: .ASCIZ ?XMBYT(3/4) - # BYTES XMITTED?
021721 130 041115 052131 DMR033: .ASCIZ ?XMBYT(MSB) - # BYTES XMITTED?
021756 041522 054502 024124 DMR034: .ASCIZ /RCBYT(LSB) - TOTAL # BYTES RECEIVED, 32 BIT COUNTER/
022042 041522 054502 024124 DMR035: .ASCIZ /RCBYT(2/4) - # BYTES RECEIVED (CONT)?
022107 122 041103 052131 DMR036: .ASCIZ ?RCBYT(3/4) - # BYTES RECEIVED (CONT)?
022154 041522 054502 024124 DMR037: .ASCIZ /RCBYT(MSB) - # BYTES RECEIVED/
022212 047111 047503 050115 DMR040: .ASCIZ /INCOMPLETE SELECTION COUNT/
022245 116 020117 042522 DMR041: .ASCIZ /NO REPLY TO SELECTION COUNTER/
022303 110 043511 042510 DMR042: .ASCIZ /HIGHEST MESSAGE SUCCESSFULLY RECEIVED/
022351 110 043511 042510 DMR043: .ASCIZ /HIGHEST MESSAGE TRANSMITTED/
022405 110 043511 042510 DMR044: .ASCIZ /HIGHEST MESSAGE ACKNOWLEDGED/
022441 116 054105 020124 DMR045: .ASCIZ /NEXT MESSAGE TO TRANSMIT/
022472 040514 052123 046440 DMR046: .ASCIZ /LAST MESSAGE TO COMPLETE TRANSMISSION/
022540 052503 051122 047105 DMR047: .ASCIZ /CURRENT MESSAGE BEING TRANSMITTED/
022602 051124 047101 046523 DMR050: .ASCIZ /TRANSMIT END OF QUEUE/
022630 051124 047101 046523 DMR051: .ASCIZ /TRANSMIT BEGINNING OF QUEUE/
022664 042522 042503 053111 DMR052: .ASCIZ /RECEIVE END OF QUEUE/
022711 122 041505 044505 DMR053: .ASCIZ /RECEIVE BEGINNING OF QUEUE/
022744 040514 042524 052123 DMR054: .ASCIZ /LATEST NAK REASON/
022766 051120 043517 040522 DMR055: .ASCIZ ?PROGRAMMABLE REP/SELECT-TIMER PRESET VALUE?
023041 111 052123 052122 DMR056: .ASCIZ ?ISTR/ASTR/REP/SELECT-TIMER COMPARE LEVEL?
023114 041501 044524 042526 DMR057: .ASCIZ /ACTIVE TIME COUNT/
023136 044124 042522 044123 DMR060: .ASCIZ /THRESHOLD LEVEL NAKS RCVD/
023170 044124 042522 044123 DMR061: .ASCIZ /THRESHOLD COUNT NAKS RCVD/
023222 044124 042522 044123 DMR062: .ASCIZ /THRESHOLD LEVEL NAKS SEND EXCEPT NO BUF/
023272 044124 042522 044123 DMR063: .ASCIZ /THRESHOLD COUNT NAKS SEND EXCEPT NO BUF/
023342 044124 042522 044123 DMR064: .ASCIZ /THRESHOLD LEVEL - REPS SENT/

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DMR BASE TABLE DESCRIPTION MESSAGES

| | | | | | | |
|--------|--------|--------|--------|---------|--------|---------------------------------------|
| 023376 | 044124 | 042522 | 044123 | DMR065: | .ASCIZ | /THRESHOLD COUNT - REPS SENT/ |
| 023432 | 044124 | 042522 | 044123 | DMR066: | .ASCIZ | /THRESHOLD LEVEL - NO BUF AVAILABLE/ |
| 023475 | 124 | 051110 | 051500 | DMR067: | .ASCIZ | /THRESHOLD COUNT - NO BUF AVAILABLE/ |
| 023540 | 042523 | 020105 | 046504 | DMR177: | .ASCIZ | /SEE DMR TECH MANUAL FOR DESCRIPTION/ |

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 DMR BASE TABLE DESCRIPTION MESSAGES

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;RE/ B BY EC
.SBTTL DMC BASE TABLE DATA DESCRIPTION MESSAGES
023604 047101 020120 020055 DMC002: .ASCIZ /ANP - CONSTANT 0/
023625      116 046124 020122 DMC003: .ASCIZ /NTR - NAKS RCVD..NO BUFFERS/
023662 044116 051104 026440 DMC004: .ASCIZ /NHDR - NAKS RCVD..MSG HEADER BAD/
023723      104 052101 020122 DMC005: .ASCIZ /DATR - NAKS RCVD..DATA BAD/
023756 052116 051514 026440 DMC006: .ASCIZ /NTLS - NAKS SENT..NO BUFFERS/
024013      116 042110 020123 DMC007: .ASCIZ /NHDS - NAKS SENT..BAD HEADER/
024050 040504 051524 026440 DMC010: .ASCIZ /DATS - NAKS SENT..BAD DATA/
024103      122 050105 051503 DMC011: .ASCIZ /REPCS - REPS SENT/
024125      122 050105 051103 DMC012: .ASCIZ /REPCR - REPS RECD/
024147      102 051501 020105 DMC013: .ASCIZ /BASE - CORE TABLE BASE ADDRESS/
024206 042523 020105 046504 DMC377: .ASCIZ /SEE DMC TECH MANUAL FOR DESCRIPTION/

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.ZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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 DMC BASE TABLE DATA DESCRIPTION MESSAGES

;DEVICE ERROR MESSAGES

| | | | | | | |
|--------|--------|--------|--------|---------|--------|---|
| 024252 | 044524 | 042515 | 047440 | DVEM0: | .ASCII | /TIME OUT WAITING FOR RDI TO CLEAR/ |
| 024313 | 015 | 020012 | 020040 | | .ASCIZ | <15><12>/ SEL0 SEL2 / |
| 024340 | 044524 | 042515 | 047440 | DVEM1: | .ASCII | /TIME OUT WAITING FOR RDI TO SET/ |
| 024377 | 015 | 020012 | 020040 | | .ASCIZ | <15><12>/ SEL0 SEL2 / |
| 024424 | 044524 | 042515 | 047440 | DVEM3: | .ASCII | /TIME OUT WAITING FOR RUN TO SET/ |
| 024463 | 015 | 020012 | 020040 | | .ASCIZ | <15><12>/ SEL0 SEL2 / |
| 024510 | 044524 | 042515 | 047440 | DVEM4: | .ASCII | /TIME OUT WAITING FOR OUTPUT INTERRUPT/ |
| 024555 | 015 | 020012 | 020040 | | .ASCIZ | <15><12>/ SEL0 SEL2 / |
| 024602 | 047111 | 052520 | 020124 | DVEM5: | .ASCII | /INPUT INTERRUPT WHEN EXPECTING OUTPUT/ |
| 024647 | 015 | 020012 | 020040 | | .ASCIZ | <15><12>/ SEL0 SEL2 / |
| 024674 | 046111 | 042514 | 040507 | DVEM6: | .ASCII | /ILLEGAL OUTPUT INTERRUPT/ |
| 024724 | 005015 | 020040 | 051440 | | .ASCIZ | <15><12>/ SEL2 SEL6 / |
| 024751 | 103 | 047117 | 051124 | DVEM7: | .ASCII | /CONTROL OUT INSTEAD OF BA-CC OUT/ |
| 025011 | 015 | 020012 | 020040 | | .ASCIZ | <15><12>/ SEL2 SEL6 / |
| 025036 | 054124 | 041040 | 043125 | DVEM8: | .ASCII | /TX BUFF COMPLETED AND SHOULD BE RX/ |
| 025100 | 005015 | 020040 | 051440 | | .ASCIZ | <15><12>/ SEL4 SEL6 / |
| 025125 | 122 | 020130 | 052502 | DVEM9: | .ASCII | /RX BUFF COMPLETED AND SHOULD BE TX/ |
| 025167 | 015 | 020012 | 020040 | | .ASCIZ | <15><12>/ SEL4 SEL6 / |
| 025214 | 042040 | 053517 | 020116 | DLLAB: | .ASCII | /DOWN LINE LOAD ABORTED/ |
| 025243 | 015 | 020012 | 020040 | | .ASCIZ | <15><12>/ RXBUF TXBUF / |
| 025270 | 051120 | 041517 | 042105 | PROEM: | .ASCIZ | /PROCEDURE ERROR/ |
| 025310 | 047516 | 020116 | 054105 | NXMM: | .ASCIZ | /NON EXIST MEM/ |
| 025326 | 042104 | 046503 | 020120 | DDCSR: | .ASCIZ | /DDCMP START REC/ |
| 025346 | 044504 | 041523 | 047117 | DISCOM: | .ASCIZ | /DISCONNECT/ |
| 025361 | 114 | 051517 | 020124 | LOSDAM: | .ASCIZ | /LOST DATA/ |
| 025373 | 104 | 041504 | 050115 | DDCMR: | .ASCIZ | /DDCMP MAINT REC/ |
| 025413 | 124 | 046511 | 020105 | TIMOM: | .ASCIZ | /TIME OUT/ |
| 025424 | 040504 | 040524 | 041440 | DATCKM: | .ASCIZ | /DATA CHECK/ |
| 025437 | 122 | 047125 | 051440 | RUNSBM: | .ASCIZ | /RUN SET ILLEGALLY/ |
| 025461 | 122 | 020130 | 042111 | RXIDM: | .ASCIZ | /RX IDLE/ |
| 025471 | 103 | 020104 | 046107 | CDGLM: | .ASCIZ | /CD GLITCHED/ |
| 025505 | 103 | 051524 | 043040 | CTSFM: | .ASCIZ | /CTS FAILED/ |
| 025521 | 124 | 020130 | 047516 | TXNC: | .ASCIZ | /TX NOT COMPLETE/ |
| 025541 | 122 | 020130 | 047516 | RXNC: | .ASCIZ | /RX NOT COMPLETE/ |
| 025561 | 123 | 041505 | 051040 | RXM1: | .ASCIZ | /SEC REQ ERR WORD 1/ |
| 025604 | 042523 | 020103 | 042522 | RXM2: | .ASCIZ | /SEC REQ ERR WORD 2/ |
| 025630 | | | | | .EVEN | |

.SBTTL GLOBAL ERROR REPORT SECTION

..++
: THE GLOBAL ERROR REPORT SECTION CONTAINS MESSAGE PRINTING AREAS
: USED BY MORE THAN TEST TO OUTPUT ADDITIONAL ERROR INFORMATION. PRINTB
: (BASIS AND PRINTX (EXTENDED) CALLS ARE USED TO CALL PRINT SERVICES.
:--

.LIST BEX

| | | | | | | | | |
|------|--------|--------|--------|--------|--------------------------------|---------|--------------------------------|----------------|
| 3164 | | | | BGNMSG | ERR1 | | | |
| 3165 | 025630 | | | | | | | |
| 3166 | 025630 | | | PRINTB | #EVTF5A,OFSET,<B,GOOD>,<B,BAD> | ERR1:: | INDIVIDUAL DATA COMPARE ERROR | |
| 3167 | 025630 | | | | | | CLR | -(SP) |
| 3168 | 025630 | 005046 | | | | | BISB | BAD,(SP) |
| 3169 | 025632 | 153716 | 007447 | | | | CLR | -(SP) |
| 3170 | 025636 | 005046 | | | | | BISB | GOOD,(SP) |
| 3171 | 025640 | 153716 | 007446 | | | | MOV | OFSET, -(SP) |
| 3172 | 025644 | 013746 | 007424 | | | | MOV | #EVTF5A, -(SP) |
| 3173 | 025650 | 012746 | 017051 | | | | MOV | #4, -(SP) |
| 3174 | 025654 | 012746 | 00C004 | | | | MOV | SP,RO |
| 3175 | 025660 | 010600 | | | | | TRAP | C\$PNTB |
| 3176 | 025662 | 104414 | | | | | ADD | #12,SP |
| 3177 | 025664 | 062706 | 000012 | | | | | |
| 3178 | 025670 | | | ENDMSG | | | | |
| 3179 | 025670 | | | | | L10001: | TRAP | C\$MSG |
| 3180 | 025670 | 104423 | | | | | | |
| 3181 | | | | | | | | |
| 3182 | 025672 | | | BGNMSG | ERR2 | | | |
| 3183 | 025672 | | | PRINTB | #EFM2,TEMP4 | ERR2:: | TOTAL DATA COMPARE FAILS ERROR | |
| 3184 | 025672 | | | | | | MOV | TEMP4, -(SP) |
| 3185 | 025672 | 013746 | 007436 | | | | MOV | #EFM2, -(SP) |
| 3186 | 025676 | 012746 | 015457 | | | | MOV | #2, -(SP) |
| 3187 | 025702 | 012746 | 000002 | | | | MOV | SP,RO |
| 3188 | 025706 | 010600 | | | | | TRAP | C\$PNTB |
| 3189 | 025710 | 104414 | | | | | ADD | #6,SP |
| 3190 | 025712 | 062706 | 000006 | | | | | |
| 3191 | 025716 | | | ENDMSG | | L10002: | TRAP | C\$MSG |
| 3192 | 025716 | | | | | | | |
| 3193 | 025716 | 104423 | | | | | | |
| 3194 | | | | | | | | |
| 3195 | 025720 | | | BGNMSG | ERR10 | ERR10:: | | |
| 3196 | 025720 | | | PRINTB | #EFM11,R4,TEMP3 | | MOV | TEMP3, -(SP) |
| 3197 | 025720 | | | | | | MOV | R4, -(SP) |
| 3198 | 025720 | 013746 | 007434 | | | | MOV | #EFM11, -(SP) |
| 3199 | 025724 | 010446 | | | | | MOV | #3, -(SP) |
| 3200 | 025726 | 012746 | 015554 | | | | MOV | SP,RO |
| 3201 | 025732 | 012746 | 000003 | | | | TRAP | C\$PNTB |
| 3202 | 025736 | 010600 | | | | | ADD | #10,SP |
| 3203 | 025740 | 104414 | | | | | | |
| 3204 | 025742 | 062706 | 000010 | | | | | |
| 3205 | 025746 | | | ENDMSG | | L10003: | | |
| 3206 | 025746 | | | | | | | |

CZCLKC DMR,DMC-11 DATA COMM. LINK TEST MACY11 30A(1052) 23-MAR-82 16:45 PAGE 76
 CZCLKC.P11 19-MAR-82 18:32 GLOBAL ERROR REPORT SECTION

| | | | | | | |
|------|--------|--------|--------|--------|----------------------------|-------------------|
| 3207 | 025746 | 104423 | | | TRAP | C\$MSG |
| 3208 | | | | | | |
| 3209 | 025750 | | | BGNMSG | ERR8 | |
| 3210 | 025750 | | | | | ERR8:: |
| 3211 | 025750 | | | PRINTB | #EVTF3D,TEMP3,TEMP4,CONOTM | |
| 3212 | 025750 | 013746 | 007442 | | | MOV CONOTM,-(SP) |
| 3213 | 025754 | 013746 | 007436 | | | MOV TEMP4,-(SP) |
| 3214 | 025760 | 013746 | 007434 | | | MOV TEMP3,-(SP) |
| 3215 | 025764 | 012746 | 016550 | | | MOV #EVTF3D,-(SP) |
| 3216 | 025770 | 012746 | 000004 | | | MOV #4,-(SP) |
| 3217 | 025774 | 010600 | | | | MOV SP,RO |
| 3218 | 025776 | 104414 | | | | TRAP C\$PNTB |
| 3219 | 026000 | 062706 | 000012 | | | ADD #12,SP |
| 3220 | 026004 | | | PRINTB | #PCPM,PCADD | |
| 3221 | 026004 | 013746 | 007462 | | | MOV PCADD,-(SP) |
| 3222 | 026010 | 012746 | 015522 | | | MOV #PCPM,-(SP) |
| 3223 | 026014 | 012746 | 000002 | | | MOV #2,-(SP) |
| 3224 | 026020 | 010600 | | | | MOV SP,RO |
| 3225 | 026022 | 104414 | | | | TRAP C\$PNTB |
| 3226 | 026024 | 062706 | 000006 | | | ADD #6,SP |
| 3227 | 026030 | | | ENDMSG | | |
| 3228 | 026030 | | | | | I 10004: |
| 3229 | 026030 | 104423 | | | | TRAP C\$MSG |
| 3230 | | | | | | |
| 3231 | 026032 | | | BGNMSG | ERR9 | |
| 3232 | 026032 | | | | | ERR9:: |
| 3233 | 026032 | | | PRINTB | #EVTF3C,TEMP3,TEMP4 | |
| 3234 | 026032 | 013746 | 007436 | | | MOV TEMP4,-(SP) |
| 3235 | 026036 | 013746 | 007434 | | | MOV TEMP3,-(SP) |
| 3236 | 026042 | 012746 | 016533 | | | MOV #EVTF3C,-(SP) |
| 3237 | 026046 | 012746 | 000003 | | | MOV #3,-(SP) |
| 3238 | 026052 | 010600 | | | | MOV SP,RO |
| 3239 | 026054 | 104414 | | | | TRAP C\$PNTB |
| 3240 | 026056 | 062706 | 000010 | | | ADD #10,SP |
| 3241 | 026062 | | | PRINTB | #PCPM,PCADD | |
| 3242 | 026062 | 013746 | 007462 | | | MOV PCADD,-(SP) |
| 3243 | 026066 | 012746 | 015522 | | | MOV #PCPM,-(SP) |
| 3244 | 026072 | 012746 | 000002 | | | MOV #2,-(SP) |
| 3245 | 026076 | 010600 | | | | MOV SP,RO |
| 3246 | 026100 | 104414 | | | | TRAP C\$PNTB |
| 3247 | 026102 | 062706 | 000006 | | | ADD #6,SP |
| 3248 | 026106 | | | ENDMSG | | |
| 3249 | 026106 | | | | | L10005: |
| 3250 | 026106 | 104423 | | | | TRAP C\$MSG |
| 3251 | | | | | | |
| 3252 | 026110 | | | BGNMSG | ERR13 | |
| 3253 | 026110 | | | | | ERR13:: |
| 3254 | 026110 | | | PRINTB | #EVTF3C,TEMP3,TEMP4 | |
| 3255 | 026110 | 013746 | 007436 | | | MOV TEMP4,-(SP) |
| 3256 | 026114 | 013746 | 007434 | | | MOV TEMP3,-(SP) |
| 3257 | 026120 | 012746 | 016533 | | | MOV #EVTF3C,-(SP) |
| 3258 | 026124 | 012746 | 000003 | | | MOV #3,-(SP) |
| 3259 | 026130 | 010600 | | | | MOV SP,RO |
| 3260 | 026132 | 104414 | | | | TRAP C\$PNTB |
| 3261 | 026134 | 062706 | 000010 | | | ADD #10,SP |
| 3262 | 026140 | | | ENDMSG | | |

CZLLKCO DMR,DMC-11 DATA COMM. LINK TEST
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GLOBAL ERROR REPORT SECTION

3263 026140
3264 026140 104423
3265
3266 026142
3267 026142
3268 026142
3269 026142 013746 007442
3270 026146 013746 007436
3271 026152 013746 007434
3272 026156 012746 016550
3273 026162 012746 000004
3274 026166 010600
3275 026170 104414
3276 026172 062706 000012
3277 026176
3278 026176
3279 026176 104423
3280
3281 026200
3282 026200 000167
3283 026202 177772
3284
3285

BGNMSG ERR14

PRINTB #EVTFS3D,TEMP3,TEMP4,CONOTM

ENDMSG

EXIT MSG

L10006: TRAP C\$MSG

ERR14::

MOV CONOTM,-(SP)
MOV TEMP4,-(SP)
MOV TEMP3,-(SP)
MOV #EVTFS3D,-(SP)
MOV #4,-(SP)
MOV SP,R0
TRAP C\$PNTB
ADD #12,SP

L10007: TRAP C\$MSG

.WORD JSJMP
.WORD L10007-2-

CZCLKO DMR,DMC-11 DATA COMM. LINK TEST
 CZCLKC.P11 19-MAR-82 18.32

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 GLOBAL SUBROUTINES SECTION

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3286 .SBTTL GLOBAL SUBROUTINES SECTION
3287
3288 :++
3289 : THE GLOBAL SUBROUTINES SECTION CONTAINS THE SUBROUTINES
3290 : THAT ARE USED IN MORE THAN ONE TEST.
3291 :--
3292
3293
3294 .SBTTL          CLOCK SETUP SUBROUTINE
3295
3296 :++
3297 : FUNCTIONAL DESCRIPTION:
3298 : THIS SUBROUTINE SETS UP THE CLOCK INFORMATION TABLE FOLLOWING A "CLOCK"
3299 : CALL EXECUTED IN THE INITIALIZATION CODE. BUT SINCE THE "CLOCK" CALL
3300 : SAYS NOTHING ABOUT AN LSI-11'S CLOCK, THIS ROUTINE IS ONLY USED IF A
3301 : LINE OR P-CLOCK IS FOUND.
3302
3303 : INPUTS:
3304 : R1= POINTS TO SUPERVISOR SPACE WHERE CLOCK INFO WAS RETURNED
3305 : R2= POINTS TO "CLK" TABLE WHERE CLOCK INFO WILL BE KEPT
3306
3307 : IMPLICIT INPUTS:
3308 : THE SUPERVISOR SPACE WHERE CLOCK INFO WAS RETURNED BY THE "CLOCK" CALL
3309
3310 : OUTPUTS:
3311 : "CLKCSR" GETS LOADED WITH THE CLOCK'S CSR ADDRESS
3312 : "CLKBR" GETS LOADED WITH THE CLOCK'S INTERRUPT LEVEL
3313 : "CLKVEC" GETS LOADED WITH THE CLOCK'S INTERRUPT VECTOR
3314 : "CLKHZ" GETS LOADED WITH THE LINE FREQ. (HERTZ RATE) WHICH DETERMINES
3315 : THE NUMBER OF TICKS IN A SECOND
3316
3317 : CALLING SEQUENCE:
3318 : JSR      PC,CLKSET          ;CALL CLOCK SETUP WITH R1 & R2 SETUP
3319 :--
3320
3321 CLKSET:
3322 MOV      (R1)+,(R2)+        ;LOAD CLOCK'S CSR ADDR. INTO "CLKCSR"
3323 MOV      (R1)+,(R2)         ;LOAD CLOCK'S INT. LEVEL INTO "CLKBR"
3324 ASL     (R2)                ;ADJUST THE INT. LEVEL FOR LOADING INTO
3325 ASL     (R2)                ; THE PSW WITH A "SETVEC" CALL
3326 ASL     (R2)
3327 ASL     (R2)
3328 ASL     (R2)+
3329 MOV     (R1)+,(R2)+        ;LOAD CLOCK'S INT. VECTOR INTO "CLKVEC"
3330 MOV     (R1)+,(R2)+        ;LOAD CLOCK'S HERTZ RATE INTO "CLKHZ"
3331 RTS     PC
3332
3321 026204
3322 026204 012122
3323 026206 012112
3324 026210 006312
3325 026212 006312
3326 026214 006312
3327 026216 006312
3328 026220 006322
3329 026222 012122
3330 026224 012122
3331 026226 000207
3332

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CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
CZCLKC.P'1 19-MAR-82 18:32

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CLOCK SETUP SUBROUTINE

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3333
3334 .SBTTL          CLOCK INTERRUPT SERVICE ROUTINE
3335 : **
3336 : FUNCTIONAL DESCRIPTION:
3337 : THIS IS THE CLOCK INTERRUPT SERVICE ROUTINE WHICH TAKES CARE OF
3338 : KEEPING THE "TIME-SINCE-START" AND COUNTING DOWN ANY OF THE
3339 : "EVENT" TIMERS. THE TIMERS ARE USED TO TIME COMPLETION OF DEVICE
3340 : REQUESTS. THE "TIME-SINCE-START" IS USED TO BE LOGGED WITH EACH ENTRY
3341 : INTO THE EVENT LOG.
3342 :
3343 : IMPLICIT INPUTS:
3344 : TIMTCK: THE CURRENT NO. OF TICKS LEFT TO BE COUNTED UNTIL A SECOND
3345 : HAS BEEN COUNTED OFF
3346 : CLKHZ: THE NO. OF TICKS IN A SECOND, DETERMINED BY THE SYS. LINE FREQ.
3347 : TIMMIN & TIMSEC: CURRENT VALUE OF "TIME-SINCE-START"
3348 : IN MINUTES & SECONDS
3349 : TIMER 1,2, & 3: CURRENT VALUES OF THE "EVENT TIMERS"
3350 :
3351 : IMPLICIT OUTPUTS:
3352 : NEW VALUE OF EVENT TIMER "1" DECREMENTED BY 1 TICK IF IT WAS NON-ZERO
3353 : NEW VALUE OF EVENT TIMER "2" DECREMENTED BY 1 TICK IF IT WAS NON-ZERO
3354 : NEW VALUE OF EVENT TIMER "3" DECREMENTED BY 1 SECOND IF IT WAS NON-ZERO
3355 :
3356 : FUNCTIONAL SIDE EFFECTS:
3357 : THE CLOCK IS DISABLED UPON ENTRY AND REENABLED WHEN LEAVING
3358 :
3359 : CALLING SEQUENCE:
3360 : THIS ROUTINE IS CALLED WHEN THE CLOCK INTERRUPTS THRU "CLKVEC".
3361 : THE ADDRESS OF THIS ROUTINE WAS LOADED INTO THE CLOCK'S INTERRUPT
3362 : VECTOR WITH A SUPERVISOR "SETVEC" CALL.
3363 : --
3364
3365 026230          BGNSRV  CLKINT
3366 026230
3367
3368 026230 005077 161266          CLR    @CLKCSR          ;DISABLE THE CLOCK FROM INTERRUPTING
3369 026234 005337 007540          DEC    TIMTCK          ;DECREMENT THE # OF TICKS/SEC.
3370 026240 001015                   BNE    1$              ;GO CHECK TIMERS (1&2-TICKS, 3-SECONDS)
3371 026242 013737 007530 007540  MOV    CLKHZ,TIMTCK    ;RESET THE # OF TICKS/SEC.
3372 026250 005237 007536          INC    TIMSEC          ;INC # OF SECS-SINCE-START
3373 026254 022737 000074 007536  CMP    #60.,TIMSEC    ;SEE IF WE'VE COUNTED 60 SECS. YET
3374 026262 001004                   BNE    1$              ;IF NOT, GO CHECK TIMERS
3375 026264 005237 007534          INC    TIMMIN         ; ELSE INC MINUTES-SINCE-START
3376 026270 005037 007536          CLR    TIMSEC         ; AND RESTART SECOND COUNTER
3377
3378 026274 005737 007542          1$:   TST    TIMER1          ;SEE IF TIMER #1, TIMING ANYTHING
3379 026300 001402                   BEQ    2$              ; IF=0, NOTHING BEING TIMED CHECK NEXT TIMER
3380 026302 005337 007542          DEC    TIMER1         ; ELSE DECREMENT THE TIMER VALUE (BY 1 TICK)
3381 026306 005737 007544          2$:   TST    TIMER2          ;SEE IF TIMER #2, TIMING ANYTHING
3382 026312 001402                   BEQ    3$              ; IF=0, NOTHING BEING TIMED CHECK NEXT TIMER
3383 026314 005337 007544          DEC    TIMER2         ; ELSE DECREMENT THE TIMER VALUE (BY 1 TICK)
3384 026320 005737 007546          3$:   TST    TIMERS          ;SEE IF TIMER #3, TIMING ANYTHING
3385 026324 001406                   BEQ    4$              ; IF=0, NOTHING BEING TIMED, LEAVE
3386 026326 023737 007530 007540  CMP    CLKHZ,TIMTCK    ;SEE IF A SECOND HAS BEEN COUNTED OFF
3387 026334 001002                   BNE    4$              ; BR IF NO
3388 026336 005337 007546          DEC    TIMERS         ; ELSE DECREMENT THE TIMER VALUE (BY 1 SEC.)

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CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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CLOCK INTERRUPT SERVICE ROUTINE

3389 026342 013777 007532 161152 4S:
3390 026350
3391 026350
3392 026350 000002

MOV CLKEN,@CLKCSR ;REENABLE THE CLOCK TO INTERRUPT
ENDSRV

L10010:
RTI

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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 EVENT LOG SUBROUTINES

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026352
 026352 012737 020003 007430
 026360 012737 000000 007426
 026366 000510
 026370
 026370 012737 020014 007430
 026376 012737 000002 007426
 026404 000501
 026406
 026406 012737 020025 007430
 026414 012737 000004 007426
 026422 000472
 026424
 026424 012737 000006 007426
 026432 000466
 026434

```
.SBTTL          EVENT LOG SUBROUTINES

:++
: FUNCTIONAL DESCRIPTION:
: THIS SUBROUTINE HAS A DIFFERENT ENTRY POINT
: FOR EACH EVENT TO BE LOGGED AND ALWAYS PRINTS
: THE SHORT 'OPERATOR AWAKE' MESSAGE TO CONSOLE THEN LOGS THE
: EVENT TYPE, TIME, AND THE OTHER 3 WORDS OF INFO PASSED TO THE
: SUBROUTINE AT CALLING TIME

: INPUTS:
: TIMMIN & TIMSEC:      CURRENT VALUE OF 'TIME-SINCE-START'
: TEMP2: WORD #1 OF EVENT LOG INFORMATION (FOR MOST EVENT TYPES)
: TEMP3: WORD #2 OF EVENT LOG INFORMATION
: TEMP4: WORD #3 OF EVENT LOG INFORMATION
: MODS:  CURRENT VALUE OF THE MODEM SIGNALS AVAILABLE FROM THE DEVICE

: OUTPUTS:
: 'OPERATOR AWAKE' MESSAGE SENT TO THE CONSOLE
: NEW EVENT LOGGED IN 'EVTLOG' (EVENT LOG)
: UPDATED 'EVTPTN' (EVENT LOG ENTRY POINTER)

: SUBORDINATE ROUTINES USED:
: 'DVMODS' THE DEVICE SUBROUTINE THAT RETURNS MODEM STATUS IN 'MODS'
: (FOR SOME EVENT TYPES)

: FUNCTIONAL SIDE EFFECTS:
: TEMP:  USED TO STORE ADDRESS OF 'OPERATOR AWAKE' MESSAGE
: TEMP1: USED TO SETUP THE VALUE OF THE 'EVENT TYPE' BYTE FOR LOGGING

: CALLING SEQUENCE:
: JSR    PC,LOGTXQ      ;CALL THE LOG EVENT SUBROUTINE WITH TEMP,TEMP1,
:          " " " "      ; TEMP2, TEMP3, AND TEMP4 SETUP
: JSR    PC,LOGCMP

:--

LOGTXQ:
MOV     #STXQ,TEMP1    ;SET UP MSG. TO PRINT
MOV     #TXQ,TEMP      ;SET UP EVENT TYPE
BR      LOGS1         ;GO LOG EVENT AND TIME

LOGTXC:
MOV     #STXC,TEMP1    ;SET UP MSG. TO PRINT
MOV     #TXC,TEMP      ;SET UP EVENT TYPE
BR      LOGS1         ;GO LOG EVENT AND TIME

LOGRXQ:
MOV     #SRXQ,TEMP1    ;SET UP MSG. TO PRINT
MOV     #RXQ,TEMP      ;SET UP EVENT TYPE
BR      LOGS1         ;GO LOG EVENT AND TIME

LOGRXC:
MOV     #RXC,TEMP      ;SET UP EVENT TYPE
BR      LOGS1         ;GO LOG EVENT AND TIME

LGDVE:
```


CZCLKCQ DMR,DMC-11 DATA COMM. LINK TEST
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EVENT LOG SUBROUTINES

| | | | | | | | | | |
|------|--------|--------|--------|--------|---------|---------------|---------------------------|---------------------------------------|------------|
| 3449 | 026434 | 012737 | 020036 | 007430 | MOV | #SDVE,TEMP1 | :SET UP MSG. TO PRINT | | |
| 3450 | 026442 | 012737 | 000010 | 007426 | MOV | #DER,TEMP | :SET UP EVENT TYPE | | |
| 3451 | 026450 | 000474 | | | BR | LOGS3 | :GO LOG EVENT AND TIME | | |
| 3452 | | | | | | | | | |
| 3453 | 026452 | | | | LOGDVI: | | | | |
| 3454 | 026452 | 012737 | 020060 | 007430 | MOV | #SDVI,TEMP1 | :SET UP MSG. TO PRINT | | |
| 3455 | 026460 | 012737 | 000012 | 007426 | MOV | #DVI,TEMP | :SET UP EVENT TYPE | | |
| 3456 | 026466 | 113737 | 007470 | 007432 | MOV | MODTYP,TEMP2 | | | |
| 3457 | 026474 | 113737 | 007472 | 007433 | MOV | MLTYP,TEMP2+1 | | | |
| 3458 | 026502 | 013737 | 007500 | 007434 | MOV | RPASS,TEMP3 | | | |
| 3459 | 026510 | 013737 | 007476 | 007436 | MOV | PARAM,TEMP4 | :SET UP EVNT ENTRIES | | |
| 3460 | 026516 | 000451 | | | BR | LOGS3 | :GO LOG EVENT AND TIME | | |
| 3461 | | | | | | | | | |
| 3462 | 026520 | | | | LOGCMP: | | | | |
| 3463 | 026520 | 012737 | 020047 | 007430 | MOV | #SCM,TEMP1 | :SET UP MSG. TO PRINT | | |
| 3464 | 026526 | 012737 | 000014 | 007426 | MOV | #DCK,TEMP | :SET UP EVENT TYPE | | |
| 3465 | 026534 | 000442 | | | BR | LOGS3 | | | |
| 3466 | 026536 | | | | LOGCML: | | | | |
| 3467 | 026536 | 012737 | 020071 | 007430 | MOV | #SCML,TEMP1 | | | |
| 3468 | 026544 | 012737 | 000020 | 007426 | MOV | #DLE,TEMP | :SET UP MSG. AND TYPE | | |
| 3469 | 026552 | 000433 | | | BR | LOGS3 | :GO LOG EVENT AND TIME | | |
| 3470 | 026554 | | | | LOGCMD: | | | | |
| 3471 | 026554 | 012737 | 020102 | 007430 | MOV | #SCMD,TEMP1 | | | |
| 3472 | 026562 | 012737 | 000022 | 007426 | MOV | #DDE,TEMP | | | |
| 3473 | 026570 | 000424 | | | BR | LOGS3 | :GO LOG MSG TYPE AND TIME | | |
| 3474 | 026572 | | | | LOGEOP: | | | | |
| 3475 | 026572 | 012737 | 020113 | 007430 | MOV | #SEOP,TEMP1 | | | |
| 3476 | 026600 | 012737 | 000024 | 007426 | MOV | #EOP,TEMP | | | |
| 3477 | 026606 | 000415 | | | BR | LOGS3 | :GO LOG MSG TYPE AND TIME | | |
| 3478 | | | | | | | | | |
| 3479 | 026610 | 013746 | 007400 | | LOGS1: | MOV | ERRCNT, -(SP) | :SAVE CURRENT ERROR COUNT | |
| 3480 | 026614 | 004737 | 044050 | | | JSR | PC,DVMODS | :GO GET MODEM STATUS | |
| 3481 | 026620 | 012604 | | | | MOV | (SP)+,R4 | :GET SAVED ERRCNT VALUE | |
| 3482 | 026622 | 020437 | 007400 | | | CMP | R4,ERRCNT | :WHERE ANY ERRORS FOUND | |
| 3483 | 026626 | 001402 | | | | BEQ | 1\$ | :BR IF NONE | |
| 3484 | 026630 | 000137 | 027044 | | | JMP | LOGEX | :ELSE, LEAVE WITHOUT LOGGING ANYTHING | |
| 3485 | | | | | | | | : BUT THE DEVICE ERROR FROM 'DVMODS' | |
| 3486 | 026634 | 013737 | 010456 | 007436 | 1\$: | MCV | MODS,TEMP4 | :AND PUT IT IN TEMP4 | |
| 3487 | | | | | | | | | |
| 3488 | 026642 | | | | LOGS3: | | | | |
| 3489 | 026642 | 022737 | 000006 | 007426 | CMP | #RXC,TEMP | | | |
| 3490 | 026650 | 001434 | | | BEQ | LOGS5 | :IF RXC DONT PRINT | | |
| 3491 | 026652 | 032737 | 000001 | 007476 | BIT | #STATB,PARAM | | | |
| 3492 | 026660 | 001430 | | | BEQ | LOGS5 | :IF NO STATUS SELECTED | | |
| 3493 | | | | | | | :GO TO 5 | | |
| 3494 | | | | | | | | | |
| 3495 | 026662 | 022737 | 000010 | 007372 | CMP | #10,LNCNT | :HAVE WE DONE 10? | | |
| 3496 | 026670 | 001012 | | | BNE | LOGS4 | :IF NOT GO TO 4 | | |
| 3497 | 026672 | 005037 | 007372 | | CLR | LNCNT | :ESLE CLEAR IT | | |
| 3498 | | | | | | | | | |
| 3499 | 026676 | | | | PRINTF | #CR | :ELSE PRINT CR | | |
| 3500 | 026676 | 012746 | 020000 | | | | | MOV | #CR, -(SP) |
| 3501 | 026702 | 012746 | 000001 | | | | | MOV | #1, -(SP) |
| 3502 | 026706 | 010600 | | | | | | MOV | SP,R0 |
| 3503 | 026710 | 104417 | | | | | | TRAP | C\$PNTF |
| 3504 | 026712 | 062706 | 000004 | | | | | ADD | #4,SP |

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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REPORT BASE TABLE OR EVENT LOG

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3534 .SBTTL REPORT BASE TABLE OR EVENT LOG
3535 ;REV B BY EC
3536 ;THE FOLLOWING COMMANDS ADDED TO REVISION 6 CZCLK
3537 ;:DMR/DMC DCLT PROGRAM
3538 ;:RPT> LOG
3539 ;: BASE/ERROR
3540 ;: BASE/FULL
3541 ;: BASE/OFFSET=NN
3542 ;: HELP
3543 ;: EXIT
3544
3545 REPORT: MOV R2,-(SP) ;SAVE R2,R3,R4 ON THE STACK
3546 MOV R3,-(SP)
3547 MOV R4,-(SP)
3548
3549 ;PRINT HELP MESSAGE
3550 PRINTF #RHLPO ;BASIC HELP MESSAGE
3551 MOV #RHLPO,-(SP)
3552 MOV #1,-(SP)
3553 MOV SP,R0
3554 TRAP C$PNTF
3555 ADD #4,SP
3556
3557 GETRCL: CLRB P$GDBD ;INIT GOOD/BAD FLAG -1=BAD INPUT
3558 CLRB P$NNUF ;INIT MORE COMMAND LINE INPUT NEEDED
3559
3560 ;PRINT PROMPT 'RPT>'
3561 GMANID CLISRP,CMDBUF,A,0,1,72.,NO
3562 TRAP C$GMAN
3563 BR 10000$
3564 .WORD CMDBUF
3565 .WORD T$CODE
3566 .WORD CLISRP
3567 .WORD 0
3568 .WORD T$LOLIM
3569 .WORD T$HILIM
3570
3571 MOV #CMDBUF,P$BUFA ;INPUT BUFFER
3572 MOV #CLIRT,P$TREE ;REPORT CLI TREE
3573 MOV #CLIRAC,P$ACT ;ACTION ROUTINES
3574 CLR QUALFG
3575 JSR PC,P$TRV ;GO PARSE COMMAND LINE
3576 TSTB P$GDBD ;COMMAND OK ?
3577 BEQ 1$ ;YES,BRANCH
3578 PRINTF #CLIERM ;PRINT INVALID INPUT MESSAGE
3579 MOV #CLIERM,-(SP)
3580 MOV #1,-(SP)
3581 MOV SP,R0
3582 TRAP C$PNTF
3583 ADD #4,SP
3584 JMP GETRCL ;TRY AGAIN
3585
3586 1$: TSTB P$NNUF ;MORE COMMAND NEEDED ?
3587 BEQ 10$ ;NO,BRANCH
3588 PRINTF #CLINUF ;INCOMPLETE MESSAGE
3589 MOV #CLINUF,-(SP)

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CZCLKO DMR,DMC-11 DATA COMM. LINK TEST
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REPORT BASE TABLE OR EVENT LOG

| | | | | | | | | | |
|------|--------|--------|--------|--------|-------|-----|----------------|------|----------------------|
| 3590 | 027222 | 012746 | 000001 | | | | | MOV | #1, -(SP) |
| 3591 | 027226 | 010600 | | | | | | MOV | SP, R0 |
| 3592 | 027230 | 104417 | | | | | | TRAP | (SPNTF |
| 3593 | 027232 | 062706 | 000004 | | | | | ADD | #4, SP |
| 3594 | 027236 | 000137 | 027074 | | | | | | |
| 3595 | | | | | | | | | |
| 3596 | 027242 | 023727 | 003202 | 000002 | 10\$: | CMP | KEYWD1, #RPEXT | | ;EXIT COMMAND ? |
| 3597 | 027250 | 001402 | | | | BEQ | 20\$ | | ;YES, BRANCH |
| 3598 | 027252 | 000137 | 027074 | | | JMP | GETRCL | | ;GET ANOTHER COMMAND |
| 3599 | 027256 | 012604 | | | 20\$: | MOV | (SP)+, R4 | | ;RESTORE R4 |
| 3600 | 027260 | 012603 | | | | MOV | (SP)+, R3 | | ;RESTORE R3 |
| 3601 | 027262 | 012602 | | | | MOV | (SP)+, R2 | | ;RESTORE R2 |
| 3602 | 027264 | 000207 | | | | RTS | PC | | ;RETURN |

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 COMMAND LINE PARSING TREE FOR REPORT

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3603 .SBTTL COMMAND LINE PARSING TREE FOR REPORT
3604 CLIRT: CLI CLISPA,0,R10$ :SKIP SPACES IN COMMAND LINE
3605 R10$: CLI <'?'>,RPHLP,R11$ :IF INPUT = ? THEN PRINT HELP MESSAGE
3606 CLI CLIEXI,0 :AND EXIT PARSER
3607 R11$: CLI CLISTR,RPHLP,R12$,<'HELP'> :IF INPUT = 'HELP' THEN PRINT HELP
3608 CLI CLIEXI,0 :MESSAGE AND EXIT PARSER
3609 R12$: CLI CLISTR,RPEXT,R13$,<'EXIT'> :IF INPUT = 'EXIT' THEN SET KEYWORD =
3610 CLI CLIEXI,0 :RPEXT AND EXIT PARSER
3611 R13$: CLI CLISTR,RPLOG,R14$,<'LOG'> :IF INPUT = 'LOG' THEN GO PRINT EVENT
3612 CLI CLIEXI,0 :LOG AND EXIT PARSER
3613 R14$: CLI CLISTR,RNOTNF,R30$,<'BASE'> :IF INPUT = 'BASE' THEN MORE COMMAND
3614 CLI CLIBR,0,R15$ :LINE IS NEEDED
3615 R15$: CLI < />,RNOTNF,R125$ :IF INPUT = '/' THEN LOOK FOR MORE
3616 CLI CLISTR,RPSWE,R16$,<'ERROR'> :IF INPUT = 'ERROR' THEN GO PRINT
3617 CLI CLIEXI,0 :ERROR INFORMATION
3618 R16$: CLI CLISTR,RPSWF,R17$,<'FULL'> :IF INPUT = 'FULL' THEN GO PRINT
3619 CLI CLIEXI,0 :ENTIRE BASE TABLE
3620 R17$: CLI CLISTR,RNOTNF,R30$,<'OFFSET'> :IF INPUT = 'OFFSET' THEN LOOK FOR
3621 CLI <'='>,0,R30$ :'='
3622 CLI CLIOCT,RPSWO,R30$ :IF INPUT = OCTAL VALUE THEN GO
3623 CLI CLIEXI,0 :PRINT SINGLE BASE TABLE ITEM
3624 R30$: CLI CLIERR,0
3625 R125$: CLI CLIEXI,0

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CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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CLI ACTION DISPATCHER AND ROUTINES

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3626 .SBTTL CLI ACTION DISPATCHER AND ROUTINES
3627 CLIRAC: ASL R2 ;SET UP INDEX
3628 MOV 10$(R2),R2 ;
3629 ADD #10$,R2 ;
3630 JSR PC,(R2) ;GO DO ACTION
3631 RTS PC ;RETURN
3632 10$: .WORD ACTRNL-10$ ;NULL
3633 .WORD ACTRHL-10$ ;HELP ROUTINE
3634 .WORD ACTREX-10$ ;EXIT ROUTINE
3635 .WORD ACTRLG-10$ ;REPORT EVENT LOG ROUTINE
3636 .WORD ACTSWE-10$ ;REPORT ERRORS ROUTINE
3637 .WORD ACTSWF-10$ ;REPORT ENTIRE BASE TABLE
3638 .WORD ACTSWO-10$ ;REPORT SINGLE BASE ADDRESS
3639 .WORD ACTRNF-10$ ;MORE COMMAND NEEDED
3640
3641 ;MORE COMMAND NEEDED
3642 027522 112737 177777 003560 ACTRNF: MOVB #-1,P$NNUF ;MORE COMMAND NEEDED
3643 027530 000207 ACTRNL: RTS PC ;NULL
3644
3645 ;PRINT HELP MESSAGE
3646 027532 012702 003230 ACTRHL: MOV #RHLPTB,R2 ;INDEX FOR HELP MESSAGES
3647 027536 1$: PRINTF #HLPF,(R2)+ ;PRINT IT
3648
3649 027540 012746 013231 MOV (R2)+,-(SP)
3650 027544 012746 000002 MOV #HLPF,-(SP)
3651 027550 010600 MOV #2,-(SP)
3652 027552 104417 MOV SP,R0
3653 027554 062706 000006 TRAP C$PNTF
3654 027560 020227 003246 ADD #6,SP
3655 027564 001364
3656 027566 012737 000001 003202 CMP R2,#RHLPEN ;LAST MESSAGE ?
3657 027574 000207 BNE 1$ ;NO BRANCH
3658 MOV #RPHLP,KEYWD1 ;SET KEYWORD
3659 RTS PC ;RETURN
3660
3661 027576 012737 000002 003202 ACTREX: ;EXIT REPORT LEVEL
3662 MOV #RPEXT,KEYWD1 ;SET KEYWORD AND RETURN
3663 RTS PC
3664
3664 027606 004737 030574 003202 ACTRLG: ;PRINT ERROR LOG
3665 JSR PC,REPLOG ;GO PRINT EVENT LOG
3666 027612 012737 000003 003202 MOV #RPLOG,KEYWD1 ;SET KEYWORD
3667 RTS PC ;RETURN
3668
3669 027622 005737 012412 ACTSWE: ;PRINT ONLY ERROR LOCATIONS
3670 TST OPTYP ;DMR ?
3671 BNE 10$ ;YES,BRANCH
3672 MOV #DMCIND,INDEX ;SETUP DMC MESSAGES
3673 ADD #6,INDEX ;POINT TO CORRECT MESSAGE
3674 MOV #DMCEND,INDEXE ;LAST DMC ADDRESS
3675 MOV #BASE,BEND ;SET UP LAST ADDRESS
3676 ADD #12,BEND ;TO BE PRINTED
3677 MOV #BASE,BDATA ;BASE TABLE START ADDRESS
3678 ADD #3,BDATA ;ERROR START ADDRESS
3679 BR 20$ ;
3680 10$: MOV #DMRIND,INDEX ;SETUP FOR DMR MESSAGES
3681 ADD #6,INDEX ;POINT TO FIRST ERROR MESSAGE
3681 MOV #DMREND,INDEXE ;LAST DMR MESSAGE

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CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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C'I ACTION DISPATCHER AND ROUTINES

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3682 027726 012737 017370 007454      MOV      #BASE,BEND      ;SETUP LAST ADDRESS
3683 027734 062737 000041 007454      ADD      #41,BEND        ;: TO BE PRINTED
3684 027742 012737 017370 007456      MOV      #BASE,BDATA     ;:START ADDRESS BASE TABLE
3685 027750 062737 000003 007456      ADD      #3,BDATA        ;:START ADDRESS ERRORS
3686 027756 004737 030336      JSR      PC,RPBASE       ;GO PRINT DATA
3687 027762 000207      RTS      PC              ;RETURN
3688
3689      ;PRINT FULL BASE TABLE
3690 027764 005737 012412      ACTSWF: TST      OPTYP      ;DMR ?
3691 027770 001020      BNE      10$            ;YES,BRANCH
3692 027772 012737 003432 007450      MOV      #DMCIND,INDEX   ;SETUP DMC MESSAGES
3693 030000 012737 003462 007452      MOV      #DMCEND,INDEXE  ;LAST MESSAGE
3694 030006 012737 017370 007454      MOV      #BASE,BEND      ;TABLE START ADDRESS
3695 030014 062737 000377 007454      ADD      #377,BEND       ;PRINT 256. BYTES OF DATA
3696 030022 012737 017370 007456      MOV      #BASE,BDATA     ;FIRST ADDRESS TO PRINT
3697 030030 000417      BR       20$
3698 030032 012737 003250 007450      10$:  MOV      #DMRIND,INDEX ;SFTUP DMR MESSAGES
3699 030040 012737 003430 007452      MOV      #DMREND,INDEXE  ;LAST DMR MESSAGE
3700 030046 012737 017370 007454      MOV      #BASE,BEND      ;TABLE START ADDRESS
3701 030054 062737 000177 007454      ADD      #177,BEND       ;PRINT 128. BYTES OF DATA
3702 030062 012737 017370 007456      MOV      #BASE,BDATA     ;FIRST ADDRESS TO PRINT
3703 030070 004737 030336      20$:  JSR      PC,RPBASE       ;GO PRINT DATA
3704 030074 000207      RTS      PC              ;RETURN
3705
3706      ;PRINT SINGLE TABLE LOCATION
3707 030076 105037 003560      ACTSWO: CLRB     P$NNUF    ;INIT NOT ENOUGH FLAG
3708 030102 005737 012412      TST      OPTYP          ;DMR?
3709 030106 001004      BNE      5$            ;YES,BRANCH
3710 030110 012737 000377 007454      MOV      #377,BEND       ;BASE TABLE FOR DMC = 256 BYTES
3711 030116 000403      BR       7$            ;BRANCH
3712 030120 012737 000177 007454      5$:  MOV      #177,BEND       ;BASE TABLE FOR DMR = 128 BYTES
3713 030126 023737 003554 007454      7$:  CMP      P$NUM,BEND     ;DMC = 256 BYTES   DMR = 128 BYTES
3714 030134 101416      BLOS     10$           ;YES,BRANCH
3715 030136      PRINTF  #RPTIV,P$NUM    ;PRINT ILLEGAL VALUE
3716 030136 013746 003554      MOV      P$NUM,-(SP)
3717 030142 012746 014374      MOV      #RPTIV,-(SP)
3718 030146 012746 000002      MOV      #2,-(SP)
3719 030152 010600      MOV      SP,RO
3720 030154 104417      TRAP    C$PNTF
3721 030156 062706 000006      ADD      #6,SP
3722 030162 112737 177777 003561      MOVVB   #-1,P$GDBD     ;SET BAD DATA
3723 030170 000461      BR       30$           ;RETURN
3724 030172 013701 003554      10$:  MOV      P$NUM,R1      ;OFFSEI VALUE
3725 030176 006301      ASL     R1              ;MULTIPLY BY 2
3726 030200 005737 012412      TST      OPTYP          ;DMR ?
3727 030204 001025      BNE      15$           ;YES,BRANCH
3728 030206 012737 003432 007450      MOV      #DMCIND,INDEX   ;DMC MESSAGES
3729 030214 060137 007450      ADD     R1,INDEX        ;GET RIGHT MESSAGE
3730 030220 012737 003462 007452      MOV      #DMCEND,INDEXE  ;LAST DMC MESSAGE
3731 030226 012737 017370 007454      MOV      #BASE,BEND      ;TABLE ADDRESS
3732 030234 063737 003554 007454      ADD     P$NUM,BEND      ;LAST ADDRESS
3733 030242 012737 017370 007456      MOV      #BASE,BDATA     ;BASE ADDRESS
3734 030250 063737 003554 007456      ADD     P$NUM,BDATA     ;ADD OFFSET
3735 030256 000424      BR       20$           ;GO PRINT DATA
3736 030260 012737 003250 007450      15$:  MOV      #DMRIND,INDEX ;SETUP FOR DMR MESSAGES
3737 030266 060137 007450      ADD     R1,INDEX        ;GET CORRECT MESSAGE

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CZCLKC0 DMR,DMC-11 DATA COMM. LINK TEST
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CLI ACTION DISPATCHER AND ROUTINES

| | | | | | | | |
|------|--------|--------|--------|--------|-----------|----------------|---------------------------|
| 3738 | 030272 | 012737 | 003430 | 007452 | MOV | #DMREND,INDEXE | :LAST DMR MESSAGE |
| 3739 | 030300 | 012737 | 017370 | 007454 | MOV | #BASE,BEND | :TABLE ADDRESS |
| 3740 | 030306 | 063737 | 003554 | 007454 | ADD | P\$NUM,BEND | :LAST ADDRESS |
| 3741 | 030314 | 012737 | 017370 | 007456 | MOV | #BASE,BDATA | :TABLE ADDRESS |
| 3742 | 030322 | 063737 | 003554 | 007456 | ADD | P\$NUM,BDATA | :ADD OFFSET |
| 3743 | 030330 | 004737 | 030336 | | 20\$: JSR | PC,RPBASE | :GO PRINT SINGLE LOCATION |
| 3744 | 030334 | 000207 | | | 30\$: RTS | PC | :RETURN |

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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CLI ACTION DISPATCHER AND ROUTINES

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3796

:::PRINT BASE TABLE SUBROUTINE
:FUNCTIONAL DESCRIPTION - THIS ROUTINE IS USED TO PRINT DATA
: STORED IN THE BASE TABLE AREA IN MEMORY. THIS BASE
: TABLE IS UPDATED BY THE DMR OR DMC. THE USER HAS THE
: OPTION OF PRINTING THE FULL TABLE, PRINTING THE FIRST
: FEW ERROR LOCATIONS OR A SINGLE LOCATION.
:
:DEFINITIONS
: INDEX - CONTAINS POINTER TO DMR OR DMC DATA
: DESCRIPTION MESSAGES.
: INDEXE - CONTAINS POINTER TO LAST DMR OR DMC
: DESCRIPTION MESSAGES.
: BEND - LAST LOCATION IN TABLE TO BE PRINTED.
: BDATA - ADDRESS OF DATA TO BE PRINTED.
:
: THE ABOVE VARIABLES MUST BE ASSIGNED THE CORRECT VALUES
: BEFORE THIS SUBROUTINE IS CALLED.

```
RPBASE: MOV R1,-(SP) ;SAVE R1
MOV R2,-(SP) ;SAVE R2
PRINTF #BTHEAD ;PRINT BRIEF HEADER MESSAGE
MOV #BTHEAD,-(SP)
MOV #1,-(SP)
MOV SP,R0
TRAP C$PNTF
ADD #4,SP

MOV INDEX,R2 ;POINTER TO MESSAGES
MOV BDATA,R1 ;ADDRESS OF DATA
10$: MOV R1,TEMP3 ;SAVE CURRENT ADDRESS OF DATA
MOVB (R1)+,TEMP1 ;READ DATA
CMP R2,INDEXE ;END OF MESSAGES?
BLT 20$ ;NO BRANCH
MOV INDEXE,R2 ;'SEE MANUAL' MESSAGE
20$: MOV (R2)+,TEMP2 ;READ MESSAGE ADDRESS
PRINTF #DMFMT,TEMP3,<R,TEMP1>,TEMP2 ;PRINT DATA AND MESSAGE
MOV TEMP2,-(SP)
CLR -(SP)
BISB TEMP1,(SP)
MOV TEMP3,-(SP)
MOV #DMFMT,-(SP)
MOV #4,-(SP)
MOV SP,R0
TRAP C$PNTF
ADD #12,SP

CMP R1,BEND ;LAST ADDRESS ?
10$ ;NO BRANCH
CLRB P$NNUF ;CLEAR ENOUGH FLAG
MOV (SP)+,R2 ;RESTORE R2
MOV (SP)+,R1 ;RESTORE R1
RTS PC ;RETURN

.NLIST BEX
BTHEAD: .ASCIZ /%N%ADDRESS%$2%ACONTENTS%$6%ADESCRIPTION/
DMFMT: .ASCIZ /%N%$1%06%$5%03%$5%T/
.EVEN
.LIST BEX
```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST MACY11 30A(1052) 23-MAR-82 16:45 PAGE 91
CZCLKC.P11 19-MAR-82 18:32 PRINT EVENT LOG

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3797 .SBTTL PRINT EVENT LOG
3798 :PRINT THE EVENT LOG
3799 030574 010246 REPROG: MOV R2,-(SP) ;SAVE R2
3800 030576 010346 MOV R3,-(SP) ;SAVE R3
3801 030600 010446 MOV R4,-(SP) ;SAVE R4
3802 030602 013702 007550 MOV EVTPTR,R2 ;MAKE R2 A POINTER TO EVENT TABLE
3803 030606 023727 007552 177777 CMP EVTLOG,#-1 ;SEE IF EVENT TABLE IS EMPTY
3804 030614 001034 BNE RPT0 ;BR IF NO
3805 030616 PRINTS #NULEVT ;IF EMPTY TELL OPERATOR.
3806 030616 012746 016265 MOV #NULEVT,-(SP)
3807 030622 012746 000001 MOV #1,-(SP)
3808 030626 010600 MOV SP,R0
3809 030630 104416 TRAP C$PNTS
3810 030632 062706 000004 ADD #4,SP
3811 030636 000137 031432 JMP ENDEVT ;AND END
3812
3813 030642 162702 000012 RPT: SUB #12,R2 ;NOW POINT BACK TO TOP OF ENTRY U
3814 ;JUST PRINTED
3815
3816 030646 020227 007552 CMP R2,#EVTLOG ;POINTING TO TOP OF EVNT LOG QUEUE?
3817 030652 001010 BNE RPT1 ; BR IF NO
3818 030654 012702 010454 MOV #EVTEND,R2 ;SET R2 TO POINT TO BOTTOM OF LOG
3819 030660 026227 177776 177777 CMP -2(R2),#-1
3820 030666 001007 BNE RPT0 ;IF END OF LOG IS NOT EMPTY
3821 030670 000137 031432 JMP ENDEVT ;CONTINUE...ELSE EXIT
3822
3823 030674 020237 007550 RPT1: CMP R2,EVTPTR ;ARE WE BACK TO POINTER?
3824 030700 001002 BNE RPT0 ;IF NOT CONTINUE
3825 030702 000137 031432 JMP ENDEVT ;IF SO EXIT....
3826
3827 030706 162702 000012 RPT0: SUB #12,R2 ;POINT R2 TO START OF ENTRY
3828 030712 RPTAA: PRINTS #EVTFO ;PRINT EVENT ENTRY HEADER
3829 030712 012746 016325 MOV #EVTFO,-(SP)
3830 030716 012746 000001 MOV #1,-(SP)
3831 030722 010600 MOV SP,R0
3832 030724 104416 TRAP C$PNTS
3833 030726 062706 000004 ADD #4,SP
3834 030732 112203 MOVB (R2)+,R3 ;PUT EVENT TYPE INTO R3
3835 030734 112237 010614 MOVB (R2)+,EVTTCK
3836 030740 112237 010610 MOVB (R2)+,EVTSEC ;PUT EVENT TIME (TICKS,SECS,MINS IN TEMP LOC.S)
3837 030744 112237 010612 MOVB (R2)+,EVTMIN
3838 030750 PRINTS #EVTF1,EVTMIN,EVTSEC,EVTTCK,EVTLS1(R3) ;PRINT EVENT TIME AND DESCRIPT.
3839 030750 016346 010514 MOV EVTLS1(R3),-(SP)
3840 030754 013746 010614 MOV EVTTCK,-(SP)
3841 030760 013746 010610 MOV EVTSEC,-(SP)
3842 030764 013746 010612 MOV EVTMIN,-(SP)
3843 030770 012746 016420 MOV #EVTF1,-(SP)
3844 030774 012746 000005 MOV #5,-(SP)
3845 031000 010600 MOV SP,R0
3846 031002 104416 TRAP C$PNTS
3847 031004 062706 000014 ADD #14,SP
3848 031010 000173 010624 JMP @RPTDSP(R3) ;DISPATCH TO DECODING SECTION FOR SPECIFIC TYPE
3849
3850 031014 012237 010616 RPTTXQ: MOV (R2)+,EVTADD ;STORE MESSAGE ADDRESS FOR PRINTING
3851 031020 012237 010620 MOV (R2)+,EVTBCT ;STORE BYTE COUNT FOR PRINTING
3852 031024 012203 MOV (R2)+,R3 ;STORE MODEM STATUS FOR PRINTING

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CZCLKC DMR,DMC-11 DATA COMM. LINK TEST
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PRINT EVENT LOG

| | | | | | | | |
|------|--------|--------|--------|-----------------------------|-----------------------------|------|--|
| 3853 | 031026 | | | PRINTS #EVTF2,EVTADD,EVTBCT | :PRINT ADDR,BYTE CNT | | |
| 3854 | 031026 | 013746 | 010620 | | | MOV | EVTBCT,-(SP) |
| 3855 | 031032 | 013746 | 010616 | | | MOV | EVTADD,-(SP) |
| 3856 | 031036 | 012746 | 016447 | | | MOV | #EVTF2,-(SP) |
| 3857 | 031042 | 012746 | 000003 | | | MOV | #3,-(SP) |
| 3858 | 031046 | 010600 | | | | MOV | SP,R0 |
| 3859 | 031050 | 104416 | | | | TRAP | C\$PNTS |
| 3860 | 031052 | 062706 | 000010 | | | ADD | #10,SP |
| 3861 | 031056 | 004737 | 031442 | JSR | PC,RPTMSB | | :GO PRINT MODEM STATUS |
| 3862 | 031062 | 000137 | 030642 | JMP | RPT | | :GO BACK FOR NEXT EVENT ENTRY |
| 3863 | | | | | | | |
| 3864 | 031066 | 012237 | 010622 | RPTDER: MOV | (R2)+,EVTMP | | :GET ADDRESS OF DEVICE INFO MESSAGE |
| 3865 | 031072 | 012237 | 010654 | MOV | (R2)+,DEV1 | | :STORE DEVICE REG CONTENTS FOR PRINTING |
| 3866 | 031076 | 012237 | 010656 | MOV | (R2)+,DEV2 | | |
| 3867 | 031102 | | | PRINTS | #EVTF3,EVTMP | | :PRINT DEVICE REG CONTENTS. |
| 3868 | 031102 | 013746 | 010622 | | | MOV | EVTMP,-(SP) |
| 3869 | 031106 | 012746 | 016521 | | | MOV | #EVTF3,-(SP) |
| 3870 | 031112 | 012746 | 000002 | | | MOV | #2,-(SP) |
| 3871 | 031116 | 010600 | | | | MOV | SP,R0 |
| 3872 | 031120 | 104416 | | | | TRAP | C\$PNTS |
| 3873 | 031122 | 062706 | 000006 | | | ADD | #6,SP |
| 3874 | 031126 | | | PRINTS | #EVTF3C,DEV1,DEV2 | | |
| 3875 | 031126 | 013746 | 010656 | | | MOV | DEV2,-(SP) |
| 3876 | 031132 | 013746 | 010654 | | | MOV | DEV1,-(SP) |
| 3877 | 031136 | 012746 | 016533 | | | MOV | #EVTF3C,-(SP) |
| 3878 | 031142 | 012746 | 000003 | | | MOV | #3,-(SP) |
| 3879 | 031146 | 010600 | | | | MOV | SP,R0 |
| 3880 | 031150 | 104416 | | | | TRAP | C\$PNTS |
| 3881 | 031152 | 062706 | 000010 | | | ADD | #10,SP |
| 3882 | 031156 | 000137 | 030642 | JMP | RPT | | :GO BACK FOR NEXT EVENT ENTRY |
| 3883 | | | | | | | |
| 3884 | 031162 | 005037 | 010654 | RPTDVI: CLR | DEV1 | | |
| 3885 | 031166 | 005037 | 010656 | CLR | DEV2 | | :CLEAR UPPER BYTES OF DEV1 & DEV2 BEFORE USE |
| 3886 | 031172 | 112237 | 010654 | MOVB | (R2)+,DEV1 | | :STORE SETUP OPERATION PARAMETERS FOR PRINTING |
| 3887 | 031176 | 112237 | 010656 | MOVB | (R2)+,DEV2 | | |
| 3888 | 031202 | 012237 | 010660 | MOV | (R2)+,DEV3 | | |
| 3889 | 031206 | 012237 | 010662 | MOV | (R2)+,DEV4 | | |
| 3890 | 031212 | 010246 | | MOV | R2,-(SP) | | :SAVE R2 ON THE STACK |
| 3891 | 031214 | 004737 | 032340 | JSR | PC,SHWOP | | :GO PRINT MODE, MAINT-LOOP TYPE, PARAMETERS. |
| 3892 | 031220 | 012602 | | MOV | (SP)+,R2 | | :RESTORE R2 |
| 3893 | 031222 | 000137 | 030642 | JMP | RPT | | :GO BACK FOR NEXT EVENT ENTRY |
| 3894 | | | | | | | |
| 3895 | 031226 | | | | | | ::REPORT END OF PASS OR ^C ABORT |
| 3896 | 031226 | 012237 | 010616 | RPTABO: MOV | (R2)+,EVTADD | | |
| 3897 | 031232 | 012237 | 010620 | MOV | (R2)+,EVTBCT | | |
| 3898 | 031236 | 012237 | 010622 | MOV | (R2)+,EVTMP | | |
| 3899 | 031242 | | | PRINTS | #EVTF4B,EVTADD,EVTBCT,EVTMP | | :PRINT ADDR,RXBYTES,COMPBYTES. |
| 3900 | 031242 | 013746 | 010622 | | | MOV | EVTMP,-(SP) |
| 3901 | 031246 | 013746 | 010620 | | | MOV | EVTBCT,-(SP) |
| 3902 | 031252 | 013746 | 010616 | | | MOV | EVTADD,-(SP) |
| 3903 | 031256 | 012746 | 016772 | | | MOV | #EVTF4B,-(SP) |
| 3904 | 031262 | 012746 | 000004 | | | MOV | #4,-(SP) |
| 3905 | 031266 | 010600 | | | | MOV | SP,R0 |
| 3906 | 031270 | 104416 | | | | TRAP | C\$PNTS |
| 3907 | 031272 | 062706 | 000012 | | | ADD | #12,SP |
| 3908 | | | | | | | |

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 PRINT EVENT LOG

```

3909 031276 000137 030642          JMP      RPT          ;THEN GO GET NEXT EVENT ENTRY
3910
3911
3912 031302 012237 010616          RPTDDE: MOV      (R2)+,EVTADD ;STORE MESSAGE ADDRESS FOR PRINTING
3913 031306 012237 010620          MOV      (R2)+,EVTBCT ;STORE BYTE COUNT FOR PRINTING
3914 031312 012237 010622          MOV      (R2)+,EVTTMP ;STORE TOTAL # OF CMP ERRORS
3915 031316          PRINTS #EVT4,EVTADD,EVTBCT,EVTMP ;PRINT ADDR, BYTE CNT, # CMP ERRS
3916 031316 013746 010622          MOV      EVTMP,-(SP)
3917 031322 013746 010620          MOV      EVTBCT,-(SP)
3918 031326 013746 010616          MOV      EVTADD,-(SP)
3919 031332 012746 016572          MOV      #EVT4,-(SP)
3920 031336 012746 000004          MOV      #4,-(SP)
3921 031342 010600          MOV      SP,R0
3922 031344 104416          TRAP     C$PNTS
3923 031346 062706 000012          ADD      #12,SP
3924 031352 000137 030642          JMP      RPT          ;THEN GO GET NEXT EVENT ENTRY
3925
3926 031356          RPTDLE:
3927 031356 012237 010616          RPTDCK: MOV      (R2)+,EVTADD ;STORE MSG ADDR FOR PRINT
3928 031362 012237 010620          MOV      (R2)+,EVTBCT ;STORE BYTE COUNT
3929 031366 012237 010622          MOV      (R2)+,EVTTMP ;STORE BYTE COUNT COMP
3930 031372          PRINTS #EVT4A,EVTADD,EVTBCT,EVTMP ;PRINT ADDR,RXBYTES,CMPBYTES.
3931 031372 013746 010622          MOV      EVTMP,-(SP)
3932 031376 013746 010620          MOV      EVTBCT,-(SP)
3933 031402 013746 010616          MOV      EVTADD,-(SP)
3934 031406 012746 016674          MOV      #EVT4A,-(SP)
3935 031412 012746 000004          MOV      #4,-(SP)
3936 031416 010600          MOV      SP,R0
3937 031420 104416          TRAP     C$PNTS
3938 031422 062706 000012          ADD      #12,SP
3939
3940 031426 000137 030642          JMP      RPT          ;THEN GO GET NEXT EVENT ENTRY
3941
3942 031432 012604          ENDEVT: MOV      (SP)+,R4 ;RESTORE R4,R3,R2
3943 031434 012603          MOV      (SP)+,R3
3944 031436 012602          MOV      (SP)+,R2
3945 031440 000207          RTS      PC          ;RETURN TO CALLING ROUTINE
3946
3947
3948 ;REPORT MODEM STATUS SUBROUTINE
3949 ; PART OF STATISICAL REPORTING (DUMPING EVENT LOG)
3950
3951 031442          RPTMSB: PRINTS #EVM0HD ;PRINT MODEM STATUS HEADER
3952 031442 012746 017160          MOV      #EVM0HD,-(SP)
3953 031446 012746 000001          MOV      #1,-(SP)
3954 031452 010600          MOV      SP,R0
3955 031454 104416          TRAP     C$PNTS
3956 031456 062706 000004          ADD      #4,SP
3957 031462 012704 010460          MOV      #MOBITS,R4 ;MAKE R4 A POINTER TO MODEM SIG. BIT DEF. TABLE
3958 031466 012705 010476          MOV      #MOMSGS,R5 ;MAKE R5 A POINTER TO MODEM MSG. POSITION TABLE
3959 031472 005714          6$: TST      (R4) ;SEE IF BIT AVAIABLE FROM DEVICE
3960 031474 001004          BNE     7$ ;BR IF THAT MODEM SIG. AVAIABLE
3961 031476 112735 000130          MOVB    #'X,@(R5)+ ;ELSE PUT 'X' IN REPORT IF SIGNAL NOT AVAIABLE
3962 031502 005724          TST      (R4)+ ;BUMP R4 TO POINT TO NEXT BIT DEFINITION
3963 031504 000407          BR      9$ ;GO SEE IF CHECKED ALL MODEM SIGNALS
3964 031506 032403          7$: BIT      (R4)+,R3 ;IF THERE, SEE IF THAT BIT IN DEVICE'S ENTRY=1
    
```


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DUMP BYTES OR WORDS

.SBTTL DUMP BYTES OR WORDS

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:++
FUNCTIONAL DESCRIPTION:
DUMPSR - DUMP BYTES OR WORDS SUBROUTINE

THIS SUBROUTINE PRINTS THE CONTENTS OF THE LOCATIONS BETWEEN
A STARTING AND END ADDRESS IN LOCS. 'STADD' AND 'ENADD'.
THE WORD OR BYTE CONTENTS ARE PRINTED 8 TO A LINE WITH THE
ADDRESS OF THE FIRST BYTE AS THE FIRST 6 OCTAL CHARS. FOLLOWED
BY A SEMICOLON.

INPUTS:
STADD= STARTING ADDRESS (FIRST LOC. TO PRINT)
ENADD= END ADDRESS (LAST LOCATION TO DUMP)
BYTBIT= 1 IF SUPPOSED TO PRINT 'BYTES'
        0 IF SUPPOSED TO PRINT 'WORDS'

OUTPUTS:
CONTENTS OF A RANGE OF LOC.S PRINTED ON THE OPERATORS CONSOLE.

CALLING SEQUENCE:
JSR PC,DUMPSR          ;CALL DUMP BYTES SUBROUTINE
:--
    
```

```

DUMPSR: MOV    STADD,R2      ;SET R2 UP TO STARTING ADDR.
DUM4:   CLR    R3           ;CLEAR R3
        PRINTF #BASM1,R2   ;PRINT ADDRESS

                                MOV    R2,-(SP)
                                MOV    #BASM1,-(SP)
                                MOV    #2,-(SP)
                                MOV    SP,R0
                                TRAP   C$PNTF
                                ADD    #6,SP

DUM3:   TST    BYTBIT       ;IS THIS BYTE OR WORD
        BEQ    DUM1         ;BR IF WORD
        MOVB  (R2)+,TEMP    ;MOV BYTE TO TEMP
        PRINTF #BASM3,<B,TEMP> ;PRINT BYTE

                                CLR    -(SP)
                                BISB  TEMP,(SP)
                                MOV    #BASM3,-(SP)
                                MOV    #2,-(SP)
                                MOV    SP,R0
                                TRAP   C$PNTF
                                ADD    #6,SP

DUM1:   BR     DUM2
        PRINTF #BASM2,(R2)+ ;PRINT WORD

                                MOV    (R2)+,-(SP)
                                MOV    #BASM2,-(SP)
                                MOV    #2,-(SP)
                                MOV    SP,R0
                                TRAP   C$PNTF
                                ADD    #6,SP

DUM2:   CMP    R2,ENADD     ;COMPARE FOR LAST ADD
    
```

```

013702 007402
031560 005003
031562
031562 010246
031564 012746 016257
031570 012746 000002
031574 010600
031576 104417
031600 062706 000006
031604 005737 007406
031610 001416
031612 112237 007426
031616
031616 005046
031620 153716 007426
031624 012746 016241
031630 012746 000002
031634 010600
031636 104417
031640 062706 000006
031644 000411
031646
031646 012246
031650 012746 016250
031654 012746 000002
031660 010600
031662 104417
031664 062706 000006
031670 020237 007404
    
```

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DUMP BYTES OR WORDS

4036 031674 003005
4037 031676 005203
4038 031700 022703 000010
4039 031704 001725
4040 031706 000736
4041
4042 031710 000207
4043

BGT DUMEX ;IF DONE EXIT
INC R3 ;ELSE BUMP R3
CMP #8,R3 ;HAVE WE PRINTED 8 ACCROSS
BEQ DUM4 ;IF SO GO BACK TO 4
BR DUM3 ;ELSE GO BACK AND PRINT ANOTHER
;BYTE OR WORD
DUMEX: RTS PC ;RETURN TO CALLER

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UPDATE TOTAL CHAR. COUNT SUBROUTINE

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.SBTTL      UPDATE TOTAL CHAR. COUNT SUBROUTINE
:
: **
: FUNCTIONAL DESCRIPTION:
:   UPDATES TOTAL CHAR. COUNT TOTCC BASED ON CURCC.
:   LAST MESSAGE IS TRUNCATED TO FIT INTO THE
:   BUFFER IF TOTAL CHAR. COUNT EXCEEDS 'BUFLIM' A MESSAGE
:   IS PRINTED TELLING THE OPERATOR THE TRUNCATION OCCURED.
:
: INPUTS:
:   CURCC= CHAR. COUNT OF MESSAGE BEING ADDED
:   TOTCC= TOTAL CHAR COUNT OF BUFFER ITS BEING ADDED TO
:
: OUTPUTS:
:   MESSAGE TO OPERATOR IF MESSAGE TRUNCATED TO FIT
:
: FUNCTIONAL SIDE EFFECTS:
:   LOCATION 'TEMP' USED FOR CALCULATIONS
:
: CALLING SEQUENCE:
:   JSR      PC,ADCC          ;UPDATED TOTAL CHAR. COUNT
:
: --
```

```
4067 031712 063737 007412 007422 ADDCC: ADD    CURCC,TOTCC      ;ADD CURRENT TO TOTAL
4068 031720 022737 001000 007422      CMP    #BUFLIM,TOTCC      ; COMPARE TO 'BUFLIM'
4069 031726 103027                BHIS   ADDC1              ;IF NOT MORE THEN 'BUFLIM' EXIT
:
: ; PRINT MESSAGE AND TRUNCATE COUNT
4072      PRINTF #MSGTRU
4073 031730                MOV    #MSGTRU,-(SP)
4074 031730 012746 015276                MOV    #1,-(SP)
4075 031734 012746 000001                MOV    SP,R0
4076 031740 010600                TRAP  C$PNTF
4077 031742 104417                ADD    #4,SP
4078 031744 062706 000004                SUB    CURCC,TOTCC      ;SUB CURRENT FROM TOTAL
4079 031750 163737 007412 007422      MOV    #BUFLIM,TEMP     ;MOV 'BUFLIM' TO TEMP
4080 031756 012737 001000 007426      SUB    TOTCC,TEMP       ;SUB TOTAL FROM 'BUFLIM'
4081 031764 163737 007422 007426      MOV    TEMP,CURCC       ;AND ESTABLISH NEW CURRENT
4082 031772 013737 007426 007412      ADD    CURCC,TOTCC      ;ADD 'ADJUSTED CURRENT' TO TOTAL CHAR. CNT.
4083 032000 063737 007412 007422      ADDC1: RTS    PC        ;RETURN TO CALLER
4084 032006 000207
4085
```


CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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BUILD MESSAGE BUFFERS SUBROUTINE

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4086 .SBTTL          BUILD MESSAGE BUFFERS SUBROUTINE
4087
4088 :++
4089 : FUNCTIONAL DESCRIPTION:
4090 :   BLDBUF-- BUILD POINTER TABLE AND BUFFERS
4091
4092 :   THIS SUBROUTINE ADDS A MESSAGE TO THE TRANSMIT OR EXPECT LIST
4093 :   USING THE POINTER, BYTE COUNT, AND ADDRESS PASSED TO IT.
4094
4095 : INPUTS:
4096 :   CURCC= CHAR. COUNT OF MESSAGE TO BE ADDED
4097 :   CURADD= ADDRESS OF MESSAGE TO BE ADDED
4098 :   CPTR= ADDRESS OF POINTER TABLE WORD WHERE MESSAGE POINTERS ARE
4099 :         TO BE BUILT
4100 :   MSGTYP= VALUE TO USE AS AN INDEX TO FIND SOURCE OF MESSAGE DATA
4101 :         INDEX INTO DMSGCT() AND DMSGAD().
4102
4103 : OUTPUTS:
4104 :   A MESSAGE ADDED TO EITHER TXBUF OR CMPBUF
4105 :   APPROPRIATE POINTERS IN PTRTAB POINTER TABLE
4106
4107 : CALLING SEQUENCE:
4108 :   JSR PC,BLDBUF          ;BUILD MESSAGE IN BUFFER AND ADD PTRS.
4109 :--
4110
4110 032010 BLDBUF:
4111 032010 010246      MOV     R2,-(SP)          ;SAVE R2 AND R3 ON THE STACK
4112 032012 010346      MOV     R3,-(SP)
4113 032014 013702 007416  MOV     CPTR,R2
4114
4115 032020 013722 007420 BLDB1:  MOV     CURADD,(R2)+      ;PUT CURRENT ADD ON POINTER TAB
4116 032024 013722 007412      MOV     CURCC,(R2)+      ;PUT CURRENT CC ON POINTER TAB
4117 032030 010237 007416      MOV     R2,CPTR          ;PUT UPDATED R2 BACK TO CURRENT POINT
4118 032034 013702 007410      MOV     MSGTYP,R2        ;GET MESSAGE TYPE TO USE AS INDEX
4119 032040 006302      ASL     R2              ;DOUBLE FOR WORD INDEX
4120 032042 013737 007420 007426  MOV     CURADD,TEMP      ;MOVE CURRENT ADD TO TEMP
4121 032050 063737 007412 007426  ADD     CURCC,TEMP       ;ADD CHAR COUNT TO IT TO GET END
4122 032056 013703 007420      MOV     CURADD,R3        ;SET R3 TO CURRENT START ADD
4123 032062 016237 002150 007432 BLDB2:  MOV     DMSGCT(R2),TEMP2    ;GET BYTE COUNT
4124 032070 016204 002176      MOV     DMSGAD(R2),R4    ;PUT STARTING FROM ADD IN R4
4125 032074 060437 007432      ADD     R4,TEMP2        ;ADD IT TO TEMP2 TO GET END OF FROM
4126 032100 112423      BLDB3:  MOV     (R4)+,(R3)+    ;MOV BYTE FROM PATTERN TO BUFFER
4127 032102 020337 007426      CMP     R3,TEMP         ;ALL DONE?
4128 032106 001404      BEQ    BLDBEX          ;IF SO EXIT
4129 032110 020437 007432      CMP     R4,TEMP2        ;IS PATTERN COUNT EXPIRED
4130 032114 001762      BEQ    BLDB2           ;IF SO GO START AGAIN
4131 032116 000770      BR     BLDB3           ;IF NOT GET ANOTHER BYTE
4132 032120 063737 007412 007420 BLDBEX:  ADD     CURCC,CURADD     ;BUMP CURADD
4133 032126 012603      MOV     (SP)+,R3        ;RESTORE R3 AND R2
4134 032130 012602      MOV     (SP)+,R2
4135 032132 000207      RTS     PC              ;RETURN TO CALLER
4136

```

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 CREATE FACSIMILE OF TX BUFFER AND MESSAGE LIST

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.SBTTL CREATE FACSIMILE OF TX BUFFER AND MESSAGE LIST

..**

.. THIS ROUTINE ADDED FOR REV B BY EC
 .. FUNCTIONAL DESCRIPTION:

.. FACSIMILE: THIS ROUTINE IS USED TO CREATE A FACSIMILE OF THE
 .. OF THE TRANSMIT LIST AND TRANSMIT BUFFER IN THE
 .. EXPECTED LIST AND EXPECTED BUFFER. THE ROUTINE IS
 .. NORMALLY CALLED WHEN USER COMMAND 'SET E [XPECT]=
 .. T [RANSMIT]' IS ENTERED.

.. CALLING SEQUENCE: JSR PC,FACSIMILE

..--

.. DEFINITIONS CMPBUF = EXPECTED DATA BUFFER HOLDS MAX 512 BYTES
 .. TXBUF = TRANSMIT DATA BUFFER HOLDS MAX 512 BYTES
 .. TTOTCC = NUMBER OF BYTES IN TXBUF
 .. PTRTAB = TOP OF MESSAGE LIST POINTER TABLE
 .. CTOTCC = NUMBER OF BYTES IN EXPECT MESSAGE
 .. CMPTOT = NUMBER OF EXPECTED MESSAGES
 .. CMPPTR = EXPECTED MESSAGE LIST POINTER
 .. TXPTR = TRANSMIT MESSAGE LIST POINTER
 .. TXMTOT = NUMBER OF TRANSMIT MESSAGES
 .. CCURAD = STORAGE ADDRESS OF MESSAGE IN CMPBUF
 .. MSGLIM = MAXIMUM NUMBER OF MESSAGES THAT CAN BE STORED

.. BEGIN FACSIMILE ROUTINE
 .. (*COPY TXBUF ==> CMPBUF*)

.. ..SAVE R1
INIT R1
REPEAT
[CMPBUF]R1=[TXBUF]R1
R1=R1+1
UNTIL R1 = BUFLIM

.. (*NOW CALCULATE EXPECT LIST MESSAGE POINTER*)
CMPPTR = PTRTAB + (2 * MSGLIM)

.. (*NOW PRIME THE WHILE - DO LOOP*)

.. ..TXPTR = PTRTAB
CCURAD = CMPBUF
TXPTR = TXPTR + 2
CTOTCC = [TXPTR]
CMPTOT = 0
WHILE TXMTOT <> CMPTOT DO
[CMPPTR] = CCURAD
CMPPTR = CMPPTR + 2
[CMPPTR] = CTOTCC
TXPTR = TXPTR + 4
CCURAD = CCURAD + CTOTCC
CTOTCC = [TXPTR]
CMPPTR = CMPPTR + 2
CMPTOT = CMPTOT + 1
END WHILE DO
CTOTCC = TTOTCC
 .. END FACSIMILE ROUTINE

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 CREATE FACSIMILE OF TX BUFFER AND MESSAGE LIST

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4193
4194 032134
4195 032134 010146
4196 032136 005001
4197 032140 116161 003562 005562 10$:
4198 032146 005201
4199 032150 020127 001000
4200 032154 001371
4201
4202 032156 012701 000017 20$:
4203 032162 006301
4204 032164 006301
4205 032166 012737 006562 007336
4206 032174 060137 007336
4207 032200 005001
4208
4209
4210 032202 012737 006562 007334
4211 032210 012737 005562 007344
4212 032216 062737 000002 007334
4213 032224 017737 155104 007342
4214 032232 005037 007340
4215
4216
4217 032236 023737 007354 007340 30$:
4218 032244 001430
4219 032246 013777 007344 155062
4220 032254 062737 000002 007336
4221 032262 013777 007342 155046
4222 032270 062737 000004 007334
4223 032276 063737 007342 007344
4224 032304 017737 155024 007342
4225 032312 062737 000002 007336
4226 032320 005237 007340
4227 032324 000744
4228
4229 032326 013737 007356 007342 40$:
4230
4231
4232 032334 012601
4233 032336 000207
4234
4235

FACSIMILE:
MOV R1,-(SP) ;SAVE R1
CLR R1 ;INIT R1
MOVB TXBUF(R1),CMPBUF(R1) ;COPY TX BUFFER TO EXPECTED BUFFER
INC R1 ;BUMP INDEX
CMP R1,#BUFLIM ;ALL DATA COPIED ?
BNE 10$ ;NO,BRANCH

;SET UP WHILE - DO LOOP
MOV #MSGLIM,R1 ;MESSAGE LIMIT
ASL R1 ;MULTIPLY BY 2
ASL R1 ;MULTIPLY BY 2
MOV #PTRTAB,CMPPTR ;TOP OF POINTER TABLE
ADD R1,CMPPTR ;START OF EXPECTED POINTER TABLE
CLR R1 ;INIT R1

MOV #PTRTAB, TXPTR ;TX POINTER NOW AT TOP OF TABLE
MOV #CMPBUF,CCURAD ;TRANSFER ADDRESS OF 1ST MESSAGE
ADD #2, TXPTR ;BUMP POINTER
MOV @TXPTR,CTOTCC ;BYTE COUNTER 1ST MESSAGE
CLR CMPTOT ;INIT EXPECTED MESSAGE COUNT

;WHILE TX MESSAGE TOTAL <> EXPECTED MESSAGE TOTAL DO
CMP TXMTOT,CMPTOT ;ALL MESSAGES COPIED ?
BEQ 40$ ;YES,BRANCH
MOV CCURAD,@CMPPTR ;TRANSFER ADDRESS OF MESSAGE
ADD #2,CMPPTR ;BUMP POINTER
MOV CTOTCC,@CMPPTR ;BYTE COUNT OF MESSAGE
ADD #4, TXPTR ;BUMP TX MESSAGE POINTER
ADD CTOTCC,CCURAD ;CALC. TRANSFER ADDRESS
MOV @TXPTR,CTOTCC ;BYTE COUNT NEXT MESSAGE
ADD #2,CMPPTR ;BUMP POINTER
INC CMPTOT ;INCREMENT MESSAGE COUNT
BR 30$ ;DO IT AGAIN

;END WHILE - DO
MOV TTOTCC,CTOTCC ;COPY TOTAL CHARACTER COUNT

;END ROUTINE
MOV (SP)+,R1 ;RESTORE R1
RTS PC ;RETURN

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SHOW MODE OF OPERATION, LOOP TYPE AND QUALIFIERS

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4257 032340 013702 010654
4258 032344 006302
4259 032346 016237 003514 007426
4260 032354 013702 010656
4261 032360 006302
4262 032362 012737 014642 007434
4263 032370 005702
4264 032372 001003
4265 032374 012737 014641 007434
4266 032402 016237 003532 007430
4267 032410 013737 010660 007432
4268 032416
4269 032416 013746 007432
4270 032422 013746 007430
4271 032426 013746 007434
4272 032432 013746 007426
4273 032436 012746 015361
4274 032442 012746 000005
4275 032446 010600
4276 032450 104416
4277 032452 062706 000014
4278
4279 032456 005002
4280 032460 012737 014721 007426
4281 032466 032737 000001 010662
4282 032474 001003
4283 032476 012737 014717 007426
4284 032504 012737 014732 007430
4285 032512 032737 000002 010662
4286 032520 001003
4287 032522 012737 014730 007430
4288 032530 012737 014742 007432
4289 032536 032737 000004 010662
4290 032544 001003
4291 032546 012737 014740 007432

```

.SBTTL SHOW MODE OF OPERATION, LOOP TYPE AND QUALIFIERS

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:++
: FUNCTIONAL DESCRIPTION:
: SHWOP - SHOW MODE OF OPERATION, LOOP, QULAIFIERS
: PRINTED ON THE OPERATOR'S CONSOLE.

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: INPUTS:
: DEV1= MODE TYPE (MODTYP)
: DEV2= MAINT LOOP TYPE (MLTYP)
: DEV3= 'RUN PASS' COUNT (RPASS) - COUNT DOWN
: DEV4= PARAMTERS WORD (PARAM)

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: IMPLICIT INPUTS:
: MODES= TABLE OF ADDRESSES OF MODE NAME STRINGS
: LOOPS= TABLE OF ADDRESSES OF LOOP TYPE NAMES

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: CALLING SEQUENCE:
: JSR PC,SHWOP
:--

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```

SHWOP: MOV     DEV1,R2           ;GET THE MODE TYPE IN R2
        ASL     R2             ;MAKE IT A WORD TABLE OFFSET
        MOV     MODES(R2),TEMP ;GET ADDRESS OF MODE-IN-ASCII
        MOV     DEV2,R2       ;GET MAINTENANCE LOOP TYPE
        ASL     R2
        MOV     #LP00,TEMP3    ;LOAD TEMP3 TO POINT TO '/LOOP='
        TST     R2             ;SEE IF /LOOP=XXXXX OR NONE
        BNE     10$           ;BR IF /LOOP= OF SOME KIND
        MOV     #LP0,TEMP3     ;IF NO LOOP THEN DON'T PRINT '/LOOP='
10$:   MOV     LOOPS(R2),TEMP1 ;GET ADDRESS OF LOOP-IN-ASCII
        MOV     DEV3,TEMP2     ;GET NUMBER OF PASSES
        PRINTS #SHF0,TEMP,TEMP3,TEMP1,TEMP2
                                MOV     TEMP2,-(SP)
                                MOV     TEMP1,-(SP)
                                MOV     TEMP3,-(SP)
                                MOV     TEMP,-(SP)
                                MOV     #SHF0,-(SP)
                                MOV     #5,-(SP)
                                MOV     SP,R0
                                TRAP    C$PNTS
                                ADD     #14,SP
                                ;NOW SET UP FOR QUALIFIERS IN ASCII
                                CLR     R2
                                MOV     #PST,TEMP?
                                BIT     #STATB,DEV4
                                BNE     1$
                                MOV     #PNST,TEMP
                                MOV     #PCK,TEMP1
                                BIT     #DATCKB,DEV4
                                BNE     2$
                                MOV     #PNCK,TEMP1
                                MOV     #PEC,TEMP2
                                BIT     #ECHOB,DEV4
                                BNE     3$
                                MOV     #PNEC,TEMP2
                                ;SEE IF /STATUS OR /NOSTATUS
                                ;BR IF /STATUS
                                ;SEE IF /CHECK OR /NOCHECK
                                ;BR IF /CHECK
                                ;SEE IF /ECHO OR /NOECHO
                                ;BR IF /ECHO

```

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SHOW MODE OF OPERATION, LOOP TYPE AND QUALIFIERS

4292 032554 012737 014751 007440 3\$:
 4293 032562 032737 000010 010662
 4294 032570 001003
 4295 032572 012737 014747 007440
 4296
 4297
 4298 032600 5\$:
 4299 032600 013746 007440
 4300 032604 013746 007432
 4301 032610 013746 007430
 4302 032614 013746 007426
 4303 032620 012746 015417
 4304 032624 012746 000005
 4305 032630 010600
 4306 032632 104416
 4307 032634 062706 000014
 4308 032640 000207
 4309
 4310

MOV #PMS,TEMP5 ;ASSUME /MODEM ;REV B EC
 BIT #MOCHK,DEV4 ;MODEM CHECK ? ;REV B EC
 BNE 5\$;YES,BRANCH ;REV B EC
 MOV #PNMS,TEMP5 ;'/NOMODEM' MESSAGE ;REV B EC

5\$: PRINTS #SHF1,TEMP,TEMP1,TEMP2,TEMP5 ;,TEMP3,TEMP4 **:SEE NOTE ABOVE

MOV TEMP5,-(SP)
 MOV TEMP2,-(SP)
 MOV TEMP1,-(SP)
 MOV TEMP,-(SP)
 MOV #SHF1,-(SP)
 MOV #5,-(SP)
 MOV SP,R0
 TRAP C\$PNTS
 ADD #14,SP

RTS PC ;RETURN

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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TRAVERSE COMMAND LINE SUBROUTINES

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4311 .SBTTL TRVERSE COMMAND LINE SUBROUTINES
4312
4313
4314 :++
4315 : P$TRV SUBROUTINE
4316 : PARSE THE COMMAND LINE SUBROUTINE
4317 : TAKE ACTIONS (VIA ACTION TREE) AS PARSING LINE
4318 : PARSING DIRECTIONS FROM 'CLI PARSING NODES'
4319 : REGS USED:
4320 :
4321 : R1,R5=SCRATCH P$NUM=NUMERIC CODE FROM DATA
4322 : R2=ACTION CODE PARAMETER FROM TREE
4323 : R3=PARSE TREE POINTER
4324 : R4=INPUT STRING POINTER
4325 : CALLING SEQUENCE:
4326 : JSR PC,P$TRV
4327 :--
4328
4329 P$TRV:
4330 032642 013704 003544 MOV P$BUFA,R4
4331 032646 013703 003546 MOV P$TREE,R3
4332 032652 105714 P$TR5: TSTB (R4) ;SEE IF ANY CHARS LEFT IN INPUT STRING
4333 032654 001441 BEQ P$EXIT ;BR IF NO
4334 032656 121327 000013 CMPB (R3),#11. ;SEE IF SPECIAL CLI CHAR CODE OR ASCII
4335 032662 003023 BGT 20$ ;BR IF REGULAR ASCII CHAR.
4336 032664 111305 MOVB (R3),R5 ;GET SPECIAL CHAR CODE INTO R5
4337 032666 006305 ASL R5
4338 032670 016505 032704 MOV 10$(R5),R5 ;BUILD TRAVERSE ROUTINE ADDRESS
4339 032674 062705 032704 ADD #10$,R5
4340 032700 004715 JSR PC,(R5) ;JSR TO SPECIAL CLI TRAVERSE ROUTINE
4341 032702 000763 BR P$TR5 ;GC SEE IF MORE OF STRING LEFT
4342
4343 ;TRAVERSE TABLE FOR 'CLI FUNCTIONS'
4344 032704 000114 10$: .WORD TRVERR-10$ ;TAKE ERROR ACTION
4345 032706 000134 .WORD TRVEXI-10$ ;TAKE EXIT ACTION
4346 032710 000152 .WORD TRVBR-10$ ;TAKE BRANCH ACTION
4347 032712 000162 .WORD TRVBIF-10$ ;TEST PSGDBD & TAKE BRANCH
4348 032714 000204 .WORD TRVSPA-10$ ;SKIP SPACES OR TABS IN CMD LINE
4349 032716 000270 .WORD TRVNUM-10$ ;TRAVERSE NUMERIC FIELD
4350 032720 0C0604 .WORD TRVALP-10$ ;TRAVERSE ALPHABETICS
4351 032722 000650 .WORD TRVALN-10$ ;TRAVERSE ALPHANUMERICS
4352 032724 000270 .WORD TRVOCT-10$ ;SAME AS TRVNUM
4353 032726 000256 .WORD TRVDEC-10$ ;SAME AS CLINUM BUT DECIMAL
4354 032730 000736 .WORD TRVSTR-10$ ;FIND ASCII MATCH IN CMD LINE
4355
4356 ;NOT A SPECIAL CODE
4357
4358 032732 121314 20$: CMPB (R3),(R4) ;SEE IF FIRST CHAR OF STRING IS A MATCH
4359 032734 001403 BEQ 22$ ;BR IF A MATCH
4360 032736 004737 033002 JSR PC,TRVBR ;IF NOT A MATCH, GO TAKE MISS BRANCH
4361 032742 000743 BR P$TR5 ; THEN GO BACK PT'G TO MISS NODE
4362 032744 004737 032762 22$: JSR PC,TRVACT ;IF A MATCH, GO DO ACTION DEFINED BY
4363 032750 062703 000004 ADD #4,R3 ; ACTION CODE IN CLI NODE, THEN
4364 ; ADJUST PTR TO NEXT CLI NODE
4365 032754 005204 INC R4 ;ADJUST BUF PTR TO NEXT CHAR IF MATCH
4366 032756 000735 BR P$TR5

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 TRAVERSE COMMAND LINE SUBROUTINES

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4367
4368 032760 000207 P$EXIT: RTS PC ;RETURN FROM PARSER
4369
4370 ;-----
4371
4372 ;GOTO USER ACTION ROUTINE
4373 032762 116302 000001 TRVACT: MOVB 1(R3),R2 ;GET ACTION CODE FROM CLI NODE
4374 032766 042702 177400 BIC #177400,R2 ;CLEAR ANY SIGN EXTENSION
4375 032772 013705 003550 MOV P$ACT,R5 ;GET ADDRESS OF CLI ACTION ROUTINE
4376 032776 004715 JSR PC,(R5) ;GO DO ACTION DEFINED BY CODE
4377 033000 000207 RTS PC ;RETURN TO CALLING CODE
4378
4379 ;TAKE BRANCH IN TREE
4380 033002 016305 000002 TRVBRC: MOV 2(R3),R5 ;GET BRANCH DISPLACEMENT FROM TREE
4381 033006 060503 ADD R5,R3 ;AND POINT R3 TO THE 'MISS' NODE
4382 033010 000207 RTS PC ;RETURN TO P$TRV
4383
4384 ;NO BRANCH TAKEN
4385 033012 062703 000004 TRVNOB: ADD #4,R3 ;THINGS OK, UPDATE R3 TO POINT TO NEXT
4386 033016 000207 RTS PC ;NODE AND RETURN TO P$TRV
4387
4388 ;-----
4389 033020 004737 032762 TRVERR: JSR PC,TRVACT ;TAKE ERROR ACTION
4390 033024 112737 177777 003561 MOVB #-1,P$GDBD ;SET ERROR RETURN FLAG
4391 033032 005726 TST (SP)+ ;GET RID OF 'JSR PUSH TO TRVERR'
4392 033034 000137 032760 JMP P$EXIT ;RETURN DIRECT TO EXIT OF P$TRV ROUTINE
4393
4394 033040 004737 032762 TRVEXI: JSR PC,TRVACT ;TAKE EXIT ACTION
4395 033044 105037 003561 CLRB P$GDBD ;SET GOOD/BAD FLAG TO 'SUCCESS (0)'
4396 033050 005726 TST (SP)+ ;GET RID OF 'JSR PUSH TO TRVEXI'
4397 033052 000137 032760 JMP P$EXIT ;RETURN DIRECT TO EXIT OF P$TRV ROUTINE
4398
4399 033056 004737 032762 TRVBR: JSR PC,TRVACT ;GO TAKE BRANCH ACTION
4400 033062 000137 033002 JMP TRVBRC
4401
4402 033066 004737 032762 TRVBIF: JSR PC,TRVACT
4403 033072 105737 003561 TSTB P$GDBD ;SEE IF P$GDBD SET OR CLEARED BY ACTION
4404 033076 001402 BEQ 1$ ;IF CLEAR FALL THRU TO NEXT NODE
4405 033100 000137 033002 JMP TRVBRC ;ELSE TAKE THE 'MISS' BRANCH
4406 033104 000137 033012 1$: JMP TRVNOB ;JUST UPDATE TO NEXT NODE IF THINGS OK
4407
4408 033110 005005 TRVSPA: CLR R5 ;CLEAR 'SPACE OR TAB FOUND' FLAG
4409 033112 121427 000011 1$: CMPB (R4),#11 ;SEE IF CHAR. IN CMD LINE= TAB
4410 033116 001003 BNE 2$ ;BR IF NO, NOT A TAB
4411 033120 005204 INC R4 ;INC INPUT STRING POINTER
4412 033122 005205 INC R5 ;INDICATE A TAB FOUND
4413 033124 000772 BR 1$ ;GO CHECK NEXT CHAR
4414
4415 033126 121427 000040 2$: CMPB (R4),#40 ;SEE IF CHAR. IN CMD LINE= SPACE
4416 033132 001003 BNE 10$ ;BR IF NO, NON-SPACE OR NON-TAB CHAR.
4417 033134 005204 INC R4 ;INC INPUT STRING POINTER
4418 033136 005205 INC R5 ;INDICATE A SPACE FOUND
4419 033140 000764 BR 1$ ;GO CHECK NEXT CHAR
4420 033142 005705 10$: TST R5 ;SEE IF ANY SPACES OR TABS FOUND
4421 033144 001404 BEQ 15$ ;BR IF NO, TAKE NO ACTION
4422 033146 004737 032762 JSR PC,TRVACT ;GO TAKE ACTION IF ANY FOUND

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TRAVERSE COMMAND LINE SUBROUTINES

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4423 033152 000137 033012          JMP      TRVNOB          ;JUST GO UPDATE R3 TO NEXT NODE IF OK
4424 033156 000137 033002    15$:    JMP      TRVBRC          ;TAKE BRANCH (MISS) IF NONE FOUND
4425
4426
4427 033162 012737 000012 003556  TRVDEC: MOV      #10.,P$RADX          ;USE DECIMAL AS RADIX AND ASSUME +
4428 033170 000137 033202          JMP      TRVNMA
4429 033174          TRVOCT: ;(SAME AS TRVNUM SINCE DEFAULT RADIX IS OCTAL)
4430 033174 012737 000010 003556  TRVNUM: MOV      #8.,P$RADX          ;USE OCTAL AS RADIX AND ASSUME +
4431 033202 005005          TRVNMA: CLR      R5              ;CLEAR DIGIT COUNTER
4432 033204 121427 000053          CMPB     (R4),#'+'          ;SEE IF THERE'S A + SIGN THERE
4433 033210 001001          BNE     10$              ; BR IF NO
4434 033212 000406          BR      11$              ; ELSE P$RADX ALREADY SAYS +, JUST BR
4435 033214 121427 000055    10$:    CMPB     (R4),#'-'          ;SEE IF THERE'S A - SIGN THERE
4436 033220 001004          BNE     1$              ; BR IF NO
4437 033222 112737 177777 003557  MOVB     #-1,P$RADX+1        ;SET 'MINUS FLAG' (HI BYTE OF P$RADX)
4438 033230 005204          INC     R4              ;BUMP R4 TO POINT TO FIRST CHAR
4439
4440 033232 121427 000060    1$:    CMPB     (R4),#60          ;SEE IF CHAR. LESS THAN A '0'
4441 033236 002434          BLT     2$              ;BR IF YES (NOT NUMERIC)
4442 033240 121427 000067          CMPB     (R4),#67          ;SEE IF CHAR. GREATER THAN A '7'
4443 033244 003426          BLE     13$             ; BR IF YES
4444 033246 123727 003556 000012  CMPB     P$RADX,#10.        ;SEE IF IN DECIMAL MODE
4445 033254 001417          BEQ     12$             ; BR IF YES (CAN USE HIGHER LIMIT)
4446 033256 121427 000071          CMPB     (R4),#71          ;SEE IF DIGIT WAS A 8 OR 9
4447 033262 003022          BGT     2$              ;BR IF NON-NUMERIC
4448 033264          PRINTF #CLIBRX          ;ELSE WAS A 8 OR 9 WHEN IN OCTAL RADIX
4449 033264 012746 012613          MOV     #CLIBRX,-(SP)
4450 033270 012746 000001          MOV     #1,-(SP)
4451 033274 010600          MOV     SP,R0
4452 033276 104417          TRAP   C$PNTF
4453 033300 062706 000004          ADD     #4,SP
4454 033304 112737 177777 003561  MOVB     #-1,P$GDBD        ;SET ERROR RETURN FLAG
4455 033312 000474          BR      5$              ; PRINT ERROR AND TAKE MISS
4456
4457 033314 121427 000071    12$:    CMPB     (R4),#71          ;SEE IF CHAR. GREATER THAN A '9'
4458 033320 003003          BGT     2$              ;BR IF YES (NOT NUMERIC)
4459 033322 005204    13$:    INC     R4              ;UPDATE CMD LINE PTR TO NEXT CHAR.
4460 033324 005205          INC     R5              ;INDICATE A NUMERIC FOUND
4461 033326 000741          BR      1$              ;GO LOOK AT NEXT CHAR.
4462
4463 033330 005705    2$:    TST     R5              ;SEE IF FOUND ANY NUMERICS
4464 033332 001464          BEQ     5$              ;BR IF NO, TAKE 'MISS' BRANCH
4465 033334 010401          MOV     R4,R1          ;GET POINTER TO START OF NUMERIC STRING
4466 033336 160501          SUB     R5,R1
4467 033340 005037 003554          CLR     P$NUM          ;CLEAR LOC. WHERE VALUE WILL BE STORED
4468 033344 112102    3$:    MOVB     (R1)+,R2        ;GET ASCII CHAR AND CONVERT IT TO A #
4469 033346 162702 000060          SUB     #60,R2
4470 033352 006337 003554          ASL     P$NUM          ;SHIFT CURRENT VALUE TO MAKE ROOM
4471 033356 103437          BCS     7$              ;ERROR IF NUMBER TOO BIG
4472 033360 013737 003554 003552  MOV     P$NUM,P$CNT      ;SAVE FOR LATER IN CASE DECIMAL RADIX
4473 033366 006337 003554          ASL     P$NUM
4474 033372 103431          BCS     7$              ;ERROR IF NUMBER TOO BIG
4475 033374 006337 003554          ASL     P$NUM
4476 033400 103426          BCS     7$              ;ERROR IF NUMBER TOO BIG
4477 033402 123727 003556 000012  CMPB     P$RADX,#10.        ;SEE IF DECIMAL RADIX
4478 033410 001004          BNE     4$              ;BR IF NOT EQUAL

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TRAVERSE COMMAND LINE SUBROUTINES

| | | | | | | | | |
|------|--------|--------|--------|--------|-------------|---------------|--|---|
| 4479 | 033412 | 063737 | 003552 | 003554 | ADD | P\$CNT,P\$NUM | | |
| 4480 | 033420 | 103416 | | | BCS | 7\$ | | :ERROR IF NUMBER TOO BIG |
| 4481 | 033422 | 060237 | 003554 | | 4\$: ADD | R2,P\$NUM | | |
| 4482 | 033426 | 103413 | | | BCS | 7\$ | | :ERROR IF NUMBER TOO BIG |
| 4483 | 033430 | 005305 | | | DEC | R5 | | |
| 4484 | 033432 | 001344 | | | BNE | 3\$ | | |
| 4485 | 033434 | 105737 | 003557 | | TSTB | PSRADX+1 | | :SEE IF NUM WAS PRECEDED BY A - SIGN |
| 4486 | 033440 | 001402 | | | BEQ | 15\$ | | : BR IF NO |
| 4487 | 033442 | 005437 | 003554 | | NEG | P\$NUM | | : ELSE NEGATE THE NUMBER BEFORE LEAVING |
| 4488 | 033446 | 004737 | 032762 | | 15\$: JSR | PC,TRVACT | | :SINCE NUMERIC FOUND, GO TAKE ACTION |
| 4489 | 033452 | 000137 | 033012 | | JMP | TRVNOB | | :GO POINT R3 TO NEXT NODE |
| 4490 | | | | | | | | |
| 4491 | 033456 | | | | 7\$: PRINTF | #CLINBG | | :PRINT NUMBER TOO BIG ERROR |
| 4492 | 033456 | 012746 | 012571 | | | | | MOV #CLINBG,-(SP) |
| 4493 | 033462 | 012746 | 000001 | | | | | MOV #1,-(SP) |
| 4494 | 033466 | 010600 | | | | | | MOV SP,R0 |
| 4495 | 033470 | 104417 | | | | | | TRAP C\$PNTF |
| 4496 | 033472 | 062706 | 000004 | | | | | ADD #4,SP |
| 4497 | 033476 | 117737 | 177777 | 003561 | | | | |
| 4498 | 033504 | 000137 | 033002 | | 5\$: MOVB | #-1,P\$GDBD | | :SET ERROR RETURN FLAG |
| 4499 | | | | | JMP | TRVBRC | | :TAKE 'MISS' BRANCH |
| 4500 | | | | | | | | |
| 4501 | 033510 | 005005 | | | TRVALP: | CLR R5 | | :CLEAR ALPHA FOUND FLAG |
| 4502 | 033512 | 121427 | 000101 | | 1\$: CMPB | (R4),#101 | | :SEE IF CHAR. LESS THAN A 'A' |
| 4503 | 033516 | 002406 | | | BLT | 2\$ | | :BR IF YES (NOT ALPHA) |
| 4504 | 033520 | 121427 | 000132 | | CMPB | (R4),#132 | | :SEE IF CHAR. GREATER THAN A 'Z' |
| 4505 | 033524 | 003003 | | | BGT | 2\$ | | :BR IF YES (NOT ALPHA) |
| 4506 | 033526 | 005204 | | | INC | R4 | | :UPDATE CMD LINE PTR TO NEXT CHAR |
| 4507 | 033530 | 005205 | | | INC | R5 | | :INDICATE AN ALPHA WAS FOUND |
| 4508 | 033532 | 000767 | | | BR | 1\$ | | :GO LOOK AT NEXT CHAR. |
| 4509 | 033534 | 005705 | | | 2\$: TST | R5 | | :SEE IF ANY ALPHA'S WERE FOUND |
| 4510 | 033536 | 001404 | | | BEQ | 3\$ | | :BR IF NO |
| 4511 | 033540 | 004737 | 032762 | | JSR | PC,TRVACT | | :IF ANY FOUND TAKE ACTION |
| 4512 | 033544 | 000137 | 033012 | | JMP | TRVNOB | | :THEN UPDATE R3 TO NEXT NODE -NO BRANCH |
| 4513 | 033550 | 000137 | 033002 | | 3\$: JMP | TRVBRC | | :NONE FOUND, TAKE MISS BRANCH |
| 4514 | | | | | | | | |
| 4515 | 033554 | 005005 | | | TRVALN: | CLR R5 | | :CLEAR ALPHANUM FOUND FLAG |
| 4516 | 033556 | 121427 | 000060 | | 10\$: CMPB | (R4),#60 | | :SEE IF CHAR. LESS THAN A '0' |
| 4517 | 033562 | 002417 | | | BLT | 2\$ | | :BR IF YES (NOT NUMERIC OR ALPHA) |
| 4518 | 033564 | 121427 | 000072 | | CMPB | (R4),#72 | | :SEE IF CHAR. GREATER THAN A '9' |
| 4519 | 033570 | 003003 | | | BGT | 1\$ | | :BR IF YES (NOT NUMERIC) |
| 4520 | 033572 | 005204 | | | INC | R4 | | :UPDATE CMD LINE PTR TO NEXT CHAR. |
| 4521 | 033574 | 005205 | | | INC | R5 | | :INDICATE A NUMERIC FOUND |
| 4522 | 033576 | 000767 | | | BR | 10\$ | | :GO LOOK AT NEXT CHAR. |
| 4523 | 033600 | 121427 | 000101 | | 1\$: CMPB | (R4),#101 | | :SEE IF CHAR. LESS THAN A 'A' |
| 4524 | 033604 | 002406 | | | BLT | 2\$ | | :BR IF YES (NOT ALPHA) |
| 4525 | 033606 | 121427 | 000132 | | CMPB | (R4),#132 | | :SEE IF CHAR. GREATER THAN A 'Z' |
| 4526 | 033612 | 003003 | | | BGT | 2\$ | | :BR IF YES (NOT ALPHA) |
| 4527 | 033614 | 005204 | | | INC | R4 | | :UPDATE CMD LINE PTR TO NEXT CHAR |
| 4528 | 033616 | 005205 | | | INC | R5 | | :INDICATE AN ALPHA FOUND |
| 4529 | 033620 | 000756 | | | BR | 10\$ | | :GO LOOK AT NEXT CHAR. |
| 4530 | 033622 | 005705 | | | 2\$: TST | R5 | | :SEE IF ANY ALPHANUM'S WERE FOUND |
| 4531 | 033624 | 001404 | | | BEQ | 3\$ | | :BR IF NO |
| 4532 | 033626 | 004737 | 032762 | | JSR | PC,TRVACT | | :IF ANY FOUND TAKE ACTION |
| 4533 | 033632 | 000137 | 033012 | | JMP | TRVNOB | | :THEN UPDATE R3 TO NEXT NODE -NO BRANCH |
| 4534 | 033636 | 000137 | 033002 | | 3\$: JMP | TRVBRC | | :NONE FOUND, TAKE MISS BRANCH |

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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TRAVERSE COMMAND LINE SUBROUTINES

```

4535
4536
4537
4538 033642 010401          TRVSTR: MOV      R4,R1          ;POINT R1 TO CMD STRING
4539 033644 010305          MOV      R3,R5
4540 033646 062705 000006  ADD      #6,R5          ;POINT R5 TO MATCH STRING FROM CLI NODE
4541 033652 005037 003552  CLR      P%CNT          ;CLEAR CHAR MATCH COUNT
4542 033656 105715          2$:  TSTB   (R5)          ;SEE IF END OF MATCH STRING YET
4543 033660 001411          BEQ     10$             ;BR IF YES
4544 033662 105711          TSTB   (R1)            ;SEE IF END OF CMD LINE YET
4545 033664 001407          BEQ     10$             ;BR IF YES
4546 033666 121115          CMPB   (R1),(R5)       ;SEE IF CHARACTERS MATCH
4547 033670 001005          BNE    10$             ;BR IF NO
4548 033672 005237 003552  INC     P%CNT          ;MATCH -INCREMENT MATCH COUNT
4549 033676 005201          INC    R1              ;UPDATE STRING POINTERS
4550 033700 005205          INC    R5
4551 033702 000765          BR     2$              ;BR TO CONTINUE CHECKING CHARS.
4552
4553 033704 005737 003552  10$:  TST    P%CNT          ;WHEN DONE SEE IF ANY MATCHES FOUND
4554 033710 001406          BEQ    15$             ;BR IF NO, GO TAKE THE MISS BRANCH
4555 033712 010104          MOV    R1,R4           ;POINT CMD POINTER TO END OF STRING &
4556 033714 004737 032762  JSR    PC,TRVACT       ;IF A MATCH FOUND, GO DO MATCH ACTION
4557 033720 066303 000004  ADD    4(R3),R3        ;UPDATE R3 TO NEXT NODE (NO BRANCH)
4558 033724 000207          RTS    PC              ; (NO RETURN THRU TRVNOB SINCE DIFFERNT
4559                                     ;   DISPLACEMENT DUE TO MATCH STRING)
4560 033726 000137 033002  15$:  JMP    TRVBRC         ; GO TAKE BRANCH
4561
4562                                     ; (PARSED OK), -1 IF ILL CMD.....
4563 -----
4564

```

CZCLKO DMR,DMC-11 DATA COMM. LINK TEST
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REPORT CODING SECTION

.SBTTL REPORT CODING SECTION

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

4565
4566
4567
4568
4569
4570
4571
4572
4573
4574
4575
4576
4577
4578
4579
4580
4581
4582
4583
4584
4585

033732
033732

033732 004737 027046

033736
033736
033736 104425

BGNRPT

JSR PC,REPORT

ENDRPT

L\$RPT::

;CALL SUBROUTINE TO DUMP EVENT LOG
; AND BASE TABLE

L10011:

TRAP C\$RPT

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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PROTECTION TABLE

.SBTTL PROTECTION TABLE

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

4586
4587
4588
4589
4590
4591
4592
4593 033740
4594 033740
4595
4596 033740 177777
4597 033742 177777
4598 033744 177777
4599
4600 033746
4601

BGNPROT

L\$PROT::

-1
-1
-1

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

ENDPROT

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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 INITIALIZE SECTION

.SBTTL INITIALIZE SECTION

;++
 ; THE INITIALIZE SECTION CONTAINS THE CODING THAT IS PERFORMED
 ; AT THE BEGINNING OF EACH PASS.
 ;--

```

4602
4603
4604
4605
4606
4607
4608
4609 033746          BGNINIT
4610 033746
4611
4612 033746 005037 003202          CLR    KEYWD1          ;INIT USER COMMAND VARIABLE
4613 033752 005737 007464          TST    DCLFLG          ;CLEANUP & EXIT ?
4614 033756 001403          BEQ    INIT1           ;NO BRANCH
4615 03376C 005037 007464          CLR    DCLFLG          ;CLEAR FLAG
4616 033764          DOCLN          ;GO CLEANUP
4617 033764 104444          TRAP   C$DCLN
4618
4619 033766 012737 177777 007466 INIT1: MOV    #-1,RESFLG       ;SET RESTART FLAG
4620 033774          REAFEF #EF.START      ;IF HERE CAUSE OF START,DO SOME INIT
4621 033774 012700 000040          MOV    #EF.START,RO   ;
4622 034000 104447          TRAP   C$REFG
4623 034002          BCOMPLETE          START
4624 034002 103417          REAFEF #EF.RESTART   ;IF HERE CAUSE OF RESTART, DO SOME INIT
4625 034004          BCS    START
4626 034004 012700 000037          MOV    #EF.RESTART,RO ;
4627 034010 104447          TRAP   C$REFG
4628 034012          BCOMPLETE          RESTRT
4629 034012 103513          REAFEF #EF.CONTINUE  ;SEE IF WE'RE HERE CAUSE OF A CONTINUE
4630 034014          BCS    RESTRT
4631 034014 012700 000036          MOV    #EF.CONTINUE,RO ;
4632 034020 104447          TRAP   C$REFG
4633 034022          BNCOMPLETE        S1
4634 034022 103002          ;BR IF NOT HERE CAUSE OF CONITNUE
4635 034024 000137 034530          JMP    ENDIT
4636 034030          BCC    S1
4637 034030 012700 000035          S1:  REAFEF #EF.NEW     ;JMP IF HERE CAUSE OF A CONTINUE
4638 034034 104447          ;SEE IF THIS IS A 'NEW PASS'
4639 034036          MOV    #EF.NEW,RO
4640 034036 103521          TRAP   C$REFG
4641 034040 000523          BCOMPLETE          NEW
4642          BR        GETPRM
4643          ;IF YES, BR AROUND LOGUNIT # SETUP
4644          BCS    NEW
4645          ;CLEAR RESTART FLAG SINCE HERE ON START
4646 034042 005037 007466          START: CLR    RESFLG
4647 034046 005037 007526          CLR    CLKVEC
4648          ;CLEAR CLK VECTOR PTR. AS A FLAG IN
4649          ; NO CLOCK IS FOUND.
4650 034052 012702 007522          MOV    #CLKCSR,R2
4651 034056          CLOCK    L,R1
4652          ;SETUP R2 AS A PTR. TO CLOCK INFO BLOCK
4653          ;LOOK FOR A LINE CLOCK
4654 034056 012700 000114          MOV    #L,RO
4655 034062 104462          TRAP   C$CLCK
4656 034064 010001          MOV    RO,R1
4657 034066          ; IF NONE THERE GO LOOK FOR A P-CLOCK
4658 034066 103006          BNCOMPLETE          S2
4659 034070 004737 026204          JSR    PC,CLKSET
4660 034074 012737 000100 007532          MOV    #LCLKEN,CLKEN ; GO SET UP CLOCK INFO TABLE & CLK VEC.
4661 034102 000457          BR    RESTRT          ;SETUP THE ENABLE LINE CLOCK DATA
4662
4663          S2:  CLOCK    P,R1
4664          ;LOOK FOR A P-CLOCK SINCE NO LINE CLOCK

```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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INITIALIZE SECTION

```

4658 034104 012700 000120                                MOV    #'P,RO
4659 034110 104462                                TRAP   C$CLK
4660 034112 010001                                MOV    RO,R1
4661 034114                                BNCOMPLETE    S3                ; IF NONE THERE GO SEE IF THIS IS LSI
4662 034114 103017                                BCC    S3
4663 034116 004737 026204                                JSR    PC,CLKSET                ; ELSE GO SET UP CLOCK INFO & VECTOR
4664 034122 062737 000002 007522                ADD    #2,CLKCSR                ;POINT CLKCSR TO P-CLK COUNT SET REG.
4665 034130 012777 001600 153364                MOV    #PCLKCT,@CLKCSR         ;LOAD CLK SET REG. WITH COUNT VALUE
4666 034136 162737 000002 007522                SUB    #2,CLKCSR                ;POINT CLKCSR BAC TO P-CLK CSR
4667 034144 012737 000111 007532                MOV    #PCLKEN,CLKEN           ;SETUP THE ENABLE THE P-CLK DATA
4668 034152 000433                                BR     RESTRT
4669
4670 034154                                S3:  READBUS                    ;READ BUS TYPE TO SEE IF ON AN LSI
4671 034154 104407                                TRAP   C$RDBU
4672 034156                                BNCOMPLETE    S4                ;BR IF NOT, NO CHANCE OF A CLOCK
4673 034156 103021                                BCC    S4
4674 034160 012737 000100 007526                MOV    #100,CLKVEC             ;LOAD 100 AS CLK VECTOR
4675 034166 005037 007524                CLR    CLKBP                    ;LOAD 0 AS CLK INT. LEVEL
4676 034172 012737 007532 007522                MOV    #CLKEN,CLKCSR          ;KLUDGE UP THE CSR & ENABLE DATA LOCS
4677 034200                                GMANID L5060,CLKHZ,D,377,50.,60.,YES
4678 034200 104443                                TRAP   C$GMAN
4679 034202 000406                                BR     10000$
4680 034204 007530                                .WORD CLKHZ
4681 034206 000052                                .WORD T$CODE
4682 034210 014775                                .WORD L5060
4683 034212 000377                                .WORD 377
4684 034214 000062                                .WORD T$LOLIM
4685 034216 000074                                .WORD T$HILIM
4686 034220                                10000$:
4687 034220 000410                                BR     RESTRT
4688
4689 034222                                S4:  PRINTF #NOCLK              ;INFORM OPR. NO CLOCK, & EXIT INIT
4690 034222 012746 015106                                MOV    #NOCLK,-(SP)
4691 034226 012746 000001                                MOV    #1,-(SP)
4692 034232 010600                                MOV    SP,RO
4693 034234 104417                                TRAP   C$PNTF
4694 034236 062706 000004                                ADD    #4,SP
4695
4696 034242 005037 007534                                RESTRT: CLR    TIMMIN           ;CLEAR TIME SINCE START LOCATIONS
4697 034246 005037 007536                                CLR    TIMSEC
4698 034252 013737 007530 007540                MOV    CLKHZ,TIMTCK            ;LOAD TICKS/SEC
4699 034260 012702 007552                                MOV    #EVTLOG,R2             ;INIT EVENT TABLE TO ALL 1'S AFTER EACH
4700 034264 010237 007550                                MOV    R2,EVTPTR              ; START OR RES AND INIT TABLE POINTER
4701 034270 012722 177777                                1$:  MOV    #-1,(R2)+
4702 034274 020227 010454                                CMP    R2,#EVTEND            ;SEE IF REACHED END OF TABLE
4703 034300 001373                                BNE    1$                     ;LOOP UNTIL DONE
4704
4705 034302 012737 177777 007460                NEW:  MOV    #-1,LOGUNT        ;INITIALIZE LOGICAL UNIT #
4706
4707 034310 005237 007460                                GETPRM: INC    LOGUNT          ;POINT TO NEXT LOGICAL UNIT
4708 034314 023737 007460 002012                CMP    LOGUNT,L$UNIT         ;SEE IF PAST MAX. LOG. UNIT #
4709 034322 002367                                BGE    NEW                    ;BR IF YES, AND START OVER
4710
4711 034324                                GPHARD LOGUNT,R1             ;GET THE P-TABLE FOR THIS LOG. UNIT
4712 034324 013700 007460                                MOV    LOGUNT,RO
4713 034330 104442                                TRAP   C$GPHRD

```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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 INITIALIZE SECTION

```

4714 034332 010001
4715 034334          BNCOMPLETE      GETPRM          ;IF NO P-TABLE AVAIL., GO GET NEXT ONE
4716 034334 103365          BCC          GETPRM
4717
4718 034336 011137 007474  MOV      (R1),FHDPLX          ;PUT FULL OR HALF DUPLEX ANSWER IN LOC.
4719
4720
4721          ;DEVICE DEPENDENT PART OF GETTING INFO FROM P-TABLE
4722
4723 034342 016137 000002 012364  MOV      2(R1),SELO          ;STORE AWAY CSR ADDRESSES
4724 034350 016137 000002 012366  MOV      2(R1),BSEL1
4725 034356 005237 012366  INC      BSEL1
4726 034362 016137 000002 012370  MOV      2(R1),SEL2
4727 034370 062737 000002 012370  ADD      #2,SEL2
4728 034376 016137 000002 012372  MOV      2(R1),BSEL3
4729 034404 062737 000003 012372  ADD      #3,BSEL3
4730 034412 016137 000002 012374  MOV      2(R1),SEL4
4731 034420 062737 000004 012374  ADD      #4,SEL4
4732 034426 016137 000002 012376  MOV      2(R1),BSEL5
4733 034434 062737 000005 012376  ADD      #5,BSEL5
4734 034442 016137 000002 012400  MOV      2(R1),SEL6
4735 034450 062737 000006 012400  ADD      #6,SEL6
4736 034456 016137 000002 012402  MOV      2(R1),BSEL7
4737 034464 062737 000007 012402  ADD      #7,BSEL7
4738
4739 034472 016137 000004 012404  MOV      4(R1),INVEC          ;STORE AWAY INPUT INTERRUPT VECTOR
4740 034500 016137 000004 012406  MOV      4(R1),OUTVEC
4741 034506 062737 000004 012406  ADD      #4,OUTVEC          ;BUILD OUTPUT INTERRUPT VECTOR
4742 034514 016137 000006 012410  MOV      6(R1),INTPRI          ;STORE AWAY INTERRUPT PRIORITY
4743 034522 016137 000012 012412  MOV      12(R1),OPTYP          ;STORE AWAY DEVICE OPTION TYPE
4744
4745          ENDIT:
4746 034530          SETVEC  CLKVEC,#CLKINT,#340          ;SETUP CLOCK VECTOR
4747 034530 012746 000340          MOV      #340,-(SP)
4748 034534 012746 026230          MOV      #CLKINT,-(SP)
4749 034540 013746 007526          MOV      CLKVEC,-(SP)
4750 034544 012746 000003          MOV      #3,-(SP)
4751 034550 104437          TRAP    CSSVEC
4752 034552 062706 000010          ADD     #10,SP
4753
4754          ;DEVICE DEPENDENT VECTOR SETUP
4755
4756 034556          SETVEC  INVEC,#DVINS,INTPRI          ;SETUP INPUT INTERRUPT VECTOR
4757 034556 013746 012410          MOV      INTPRI,-(SP)
4758 034562 012746 044664          MOV      #DVINS,-(SP)
4759 034566 013746 012404          MOV      INVEC,-(SP)
4760 034572 012746 000003          MOV      #3,-(SP)
4761 034576 104437          TRAP    CSSVEC
4762 034600 062706 000010          ADD     #10,SP
4763 034604          SETVEC  OUTVEC,#DVOJTS,INTPRI          ;SETUP OUTPUT INTERRUPT VECTOR
4764 034604 013746 012410          MOV      INTPRI,-(SP)
4765 034610 012746 044674          MOV      #DVOJTS,-(SP)
4766 034614 013746 012406          MOV      OUTVEC,-(SP)
4767 034620 012746 000003          MOV      #3,-(SP)
4768 034624 104437          TRAP    CSSVEC
4769 034626 062706 000010          ADD     #10,SP
    
```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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INITIALIZE SECTION

```

4770
4771 034632          SETPRI #PRI00          ;SET THE 'RUN' PRIORITY TO 0
4772 034632 012700 000000          MOV          #PRI00,R0
4773 034636 104441          TRAP          C$SPRI
4774 034640          EXIT          INIT
4775 034640 104432          TRAP          C$EXIT
4776 034642 000002          .WORD          L10013-
4777
4778
4779          .EVEN
4780
4781 034644          ENDINIT
4782 034644
4783 034644 104411          L10013: TRAP          C$INIT

```


CZCLKC DMR,DMC-11 DATA COMM. LINK TEST
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AUTODROP SECTION

.SBTTL AUTODROP SECTION

4784
4785
4786
4787
4788
4789
4790
4791
4792
4793 034646
4794 034646
4795
4796
4797 034646
4798 034646
4799 034646 104461

;++
: 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.
:--

BGNAUTO

LSAUTO::

ENDAUTO

L10014:

TRAP CSAUTO

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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CLEANUP CODING SECTION

.SBTTL CLEANUP CODING SECTION

;++
: THE CLEANUP CODING SECTION CONTAINS THE CODING THAT IS PERFORMED
: AFTER THE HARDWARE TESTS HAVE BEEN PERFORMED.
:--

4800
4801
4802
4803
4804
4805
4806
4807
4808
4809
4810
4811
4812
4813
4814
4815
4816
4817
4818
4819
4820
4821
4822
4823
4824
4825
4826
4827
4828
4829
4830
4831
4832

034650
034650

034650 004737 045774
034654 005077 152642
034660
034660 012700 000340
034664 104441
034666 022737 000057 003202
034674 001416

034676 012737 000026 007426
034704 013737 007374 007436
034712 013737 007376 007432
034720 013737 007400 007434
034726 004737 026742
034732
034732 104432
034734 000002

034736
034736
034736 104412

BGNCLN

JSR PC,DVBTUP ;GO UPDATE BASE TABLE
CLR @CLKCSR ;DISABLE CLOCK
SETPRI #PRI07 ;SET PROCESSOR PRIORITY BACK TO 7

CMP #EXIT,KEYWD1 ;'EXIT' COMMAND ?
BEQ EXITCLN ;YES,BRANCH
: ^C WAS ENTERED-- LOG IT
MOV #ABO,TEMP ;EVENT TYPE
MOV NOBUF,TEMP4 ;:BUFFER NOT AVAILABLE
MOV PSCNT,TEMP2 ;:PASSES
MOV ERRCNT,TEMP3 ;:ERRORS
CALL LOGS5 ;GO LOG IT
CLN

EXITCLN:EXIT

L\$CLEAN::

MOV #PRI07,R0
TRAP C\$SPRI

TRAP C\$EXIT
.WORD L10015-

L10015:
TRAP C\$CLEAN

.EVEN
ENDCLN

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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DROP UNIT SECTION

.SBTTL DROP UNIT SECTION

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

4833
4834
4835
4836
4837
4838
4839
4840 034740
4841 034740
4842
4843
4844 034740
4845 034740 000167
4846 034742 000000
4847
4848
4849
4850
4851 034744
4852 034744
4853 034744 104453

BGNDU

L\$DU::

EXIT DU

.WORD JSJMP
.WORD L100'6-2-.

.EVEN

ENDDU

L10016: TRAP C\$DU

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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 ADD UNIT SECTION

4854
 4855
 4856
 4857
 4858
 4859
 4860
 4861
 4862 034746
 4863 034746
 4864
 4865
 4866 034746
 4867 034746 000167
 4868 034750 000000
 4869
 4870
 4871
 4872
 4873 034752
 4874 034752
 4875 034752 104452
 4876
 4877

.SBTTL ADD UNIT SECTION

:+
 : THE ADD-UNIT SECTION CONTAINS ANY CODE THE PROGRAMMER WISHES
 : TO BE EXECUTED IN CONJUNCTION WITH THE ADDING OF A UNIT BACK
 : TO THE TEST CYCLE.
 :--

BGNAU

L\$AU::

EXIT AU

.WORD JSJMP
 .WORD L10017-2-

.EVEN

ENDAU

L10017: TRAP C\$AU

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST MACY11 30A(1052) 23-MAR-82 16:45 PAGE 118
 CZCLKC.P11 19-MAR-82 18:32 TEST 1: SETUP AND MODES OF OPERATION

.SBTTL TEST 1: SETUP AND MODES OF OPERATION

```

:++
: TEST TO DETECT FAULTS IN THE DATA COMMUNICATION LINK. THIS TEST WILL
: THE PROVIDE COVERAGE NECESSARY TO ISOLATE FAILURES TO THE COMPUTER
: EQUIPMENT, THE COMMUNICATION LINK, OR THE MODEM.
:--
    
```

4878
4879
4880
4881
4882
4883
4884
4885
4886
4887
4888
4889
4890
4891
4892
4893
4894
4895
4896
4897
4898
4899
4900
4901
4902
4903
4904
4905
4906
4907
4908
4909
4910
4911
4912
4913
4914
4915
4916
4917
4918
4919
4920
4921
4922
4923
4924
4925
4926
4927
4928
4929
4930
4931
4932
4933

034754
034754

BGNTST

T1::

.SBTTL PROGRAM SETUP SECTION

MOV CLKEN,@CLKCSR ;ENABLE THE CLOCK

GTXRXB:

GTRA2:

1\$:

```

CLR R1
MOV #1,TIMER1 ;SET TIMER TO COUNT 1 TICK
TST TIMER1 ;CHECK FOR IT TO BE COUNTED OFF
BEQ GTRA3 ;BRANCH IF CLOCK EXISTS (COUNTED A TICK)
DEC R1
BNE 1$ ;KEEP CHECKING UNTIL R1 DOES FULL COUNTDOWN
PRINTF #NOCLK ;PRINT BAD CLK MSG AND WARN OF HANG IF TIMEOUT
    
```

```

MOV #NOCLK,-(SP)
MOV #1,-(SP)
MOV SP,R0
TRAP C$PNTF
ADD #4,SP
    
```

GTRA3:

```

TST RESFLG ;SEE IF HERE AFTER A RESTART.
BNE GTRA5 ;BR IF HERE CAUSE OF A RESTART
    
```

; CLEAR COUNTS AND SET UP DEFAULTS

GTRA4:

```

CLR TOTCC ;CLEAR TOTAL CHAR. COUNT TEMP. LOC.
CLR TIOCC ; CLEAR TOTAL CHAR. COUNT FOR TX BUFF
CLR CTOTCC ; CLEAR TOTAL CHAR. COUNT FOR CMP BUFF
MOV #PTRTAB,R1 ;INIT TRANSMIT MESSAGE POINTER
MOV R1, TXPTR
CLR RXPTR ; ZERO RX POINTER
MOV #MSGLIM,R2
ASL R2
ASL R2
MOV R1,CMPPTR
ADD R2,CMPPTR ;INIT COMPARE MESSAGE POINTER
    
```

```

MOV #5,MSGTYP ;SET UP DEFAULT MSG TYPE (QUICK FOX - ITEMP MSG)
MOV MSG5C,CURCC ;SET UP DEFAULT CHAR COUNT
MOV #TXBUF,TCURAD ;SET UP CURRENT ADD TO START OF TX BUFFER
MOV #CMPBUF,CCURAD ;SET UP CURRENT ADD TO START OF CMP BUFFER
    
```

MOV TCURAD,CURADD ;SETUP CURRENT ADDR TO START OF TXBUF

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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PROGRAM SETUP SECTION

```

4934 035140 013737 007334 007416      MOV      TXPTR,CPTR      ;SETUP CURRENT POINTER TABLE POINTER FOR TXBUF
4935 035146 004737 032010                JSR      PC,BLDBUF      ; GO BUILD POINTER TABLE AND BUFFER
4936 035152 012737 000001 007354      MOV      #1,TXMTOT      ;BUMP TOTAL MESSAGE COUNT
4937
4938 035160 013737 007336 007416      MOV      CMPPTR,CPTR    ;SET UP START OF COMPARE POINTER TABLE
4939 035166 013737 007344 007420      MOV      CCRAD,CURADD   ;SET UP CURRENT ADDR. TO START OF CMPBUF
4940 035174 012737 000005 007410      MOV      #5,MSGTYP
4941 035202 013737 002162 007412      MOV      MSG5C,CURCC
4942 035210 004737 032010                JSR      PC,BLDBUF      ;PUT DEFAULT MESSAGE INTO CMPBUF
4943 035214 012737 000001 007340      MOV      #1,CMPTOT      ;BUMP THE COMP MESSG COUNT
4944 035222 012737 000003 007470      MOV      #ACT,MODTYP    ;SET DEFAULT MODE= ACTIVE
4945 035230 005037 007472                CLR      MLTYP          ;SET DEFAULT MAINTENANCE LOOP MODE =NONE
4946 035234 012737 000001 007500      MOV      #1,RPASS       ;SET UP DEFAULT 'RUN PASS' COUNT TO 1
4947 035242 012737 000002 007476      MOV      #2,PARAM      ;SET UP PROG. PARAMETERS - DATACHECKING ENABLED
4948
4949                                PRINTF  #HLP0          ;
4950 035250                                MOV      #HLP0,-(SP)
4951 035254 012746 000001                MOV      #1,-(SP)
4952 035260 010600                                MOV      SP,R0
4953 035262 104417                                TRAP    C$PNTF
4954 035264 062706 000004                ADD     #4,SP
4955 035270 013737 007470 010654  GTRAS:  MOV      MODTYP,DEV1
4956 035276 013737 007472 010656      MOV      MLTYP,DEV2
4957 035304 013737 007500 010660      MOV      RPASS,DEV3
4958 035312 013737 007476 010662      MOV      PARAM,DEV4
4959 035320 004737 032340                JSR      PC,SHWOP      ;PRINT TO OPERATOR THE CURRENT MODE.....
4960
4961                                MANUAL                ;SEE IF MANUAL INTERVENTION ALLOWED
4962 035324 104450                                TRAP    C$MANI
4963 035326                                BCOMPLETE  GETCL      ; BR IF YES (UAM=0 AND NOT CHAINED)
4964 035326 103412                                BCS     GETCL
4965 035330 005737 007500                TST     RPASS          ;SEE IF THIS IS FIRST 'DCLT PASS'
4966 035334 001002                BNE     1$            ; BR IF NOT COMPLETED 1 PASS
4967 035336                                EXIT     TST           ; IF DONE 1 PASS IN UNATTENDED MODE - EXIT
4968 035336 104432                                TRAP    C$EXIT
4969 035340 010574                                .WORD  L10020-
4970 035342 012737 000001 007472  1$:    MOV      #TTL,MLTYP    ;SET UP DEFAULT FOR UNATTENDED MODE
4971 035350 000137 040400                JMP     GTR9          ; 'R M=ACT/LO=I/PAS=1/NOST/CH' AND RUN
4972
4973                                .SBTTL                COMMAND LINE FETCH & INTERPRETATION SECTION
4974
4975 035354 105037 003561 003561  GETCL:  CLRB   P$GDBD        ;CLEAR CMD LINE PARSING ERROR FLAGS
4976 035360 105037 003560                CLRB   P$NNUF
4977 035364                                GMANID  CLISP,CMDBUF,A,0,1,72.,NO ;GET A COMMAND LINE FROM OPR.
4978 035364 104443                                TRAP    C$GMAN
4979 035366 000406                                BR     10000$
4980 035370 003060                                .WORD  CMDBUF
4981 035372 000142                                .WORD  T$CODE
4982 035374 012502                                .WORD  CLISP
4983 035376 000000                                .WORD  0
4984 035400 000001                                .WORD  T$LOLIM
4985 035402 000110                                .WORD  T$HILIM
4986 035404                                10000$:
4987 035404 012737 003060 003544      MOV     #CMDBUF,P$BUFA
4988 035412 012737 010664 003546      MOV     #CLITRE,P$TREE
4989 035420 012737 036346 003550      MOV     #CLIACT,P$ACT

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| | | | | | | | | | |
|------|--------|--------|--------|--------|-------|--------|-------------------------|-------|---------------------------------------|
| 4990 | 035426 | 005037 | 003204 | | | CLR | QUALFG | | :CLEAR QUALIFIER FLAG LOCATION |
| 4991 | 035432 | 004737 | 032142 | | | JSR | PC,PSTRV | | :GO PARSE COMMAND LINE |
| 4992 | 035436 | 105737 | 003551 | | | TSTB | P\$GDBD | | :SEE IF PARSED OK OR AN ERROR |
| 4993 | 035442 | 001412 | | | | BEQ | 1\$ | | |
| 4994 | 035444 | | | | | PRINTF | #CLIERM | | |
| 4995 | 035444 | 012746 | 012516 | | | | | MOV | #CLIERM,-(SP) |
| 4996 | 035450 | 012746 | 000001 | | | | | MOV | #1,-(SP) |
| 4997 | 035454 | 010600 | | | | | | MOV | SP,R0 |
| 4998 | 035456 | 104417 | | | | | | TRAP | C\$PNTF |
| 4999 | 035460 | 062706 | 000004 | | | | | ADD | #4,SP |
| 5000 | 035461 | 000137 | 035354 | | | JMP | GETCL | | |
| 5001 | 035470 | 105737 | 003560 | 1\$: | | TSTB | P\$NNUF | | :SEE IF INCOMPLETE COMMAND TYPED |
| 5002 | 035474 | 001412 | | | | BEQ | 10\$ | | |
| 5003 | 035476 | | | | | PRINTF | #CLINUF | | |
| 5004 | 035476 | 012746 | 012546 | | | | | MOV | #CLINUF,-(SP) |
| 5005 | 035502 | 012746 | 000001 | | | | | MOV | #1,-(SP) |
| 5006 | 035506 | 010600 | | | | | | MOV | SP,R0 |
| 5007 | 035510 | 104417 | | | | | | TRAP | C\$PNTF |
| 5008 | 035512 | 062706 | 000004 | | | | | ADD | #4,SP |
| 5009 | 035516 | 000137 | 035354 | | | JMP | GETCL | | |
| 5010 | | | | | | | | | |
| 5011 | | | | | | :REV B | BY EC | | |
| 5012 | 035522 | 023727 | 003202 | 000060 | 10\$: | CMP | KEYWD1,#SETET | | :WAS 'SET EXPECT = TRANSMIT' ENTERED? |
| 5013 | 035530 | 001711 | | | | BEQ | GETCL | | :YES,BRANCH |
| 5014 | | | | | | | | | |
| 5015 | 035532 | 023727 | 003202 | 000005 | | CMP | KEYWD1,#HLP | | :SEE IF HELP WAS TYPED |
| 5016 | 035540 | 001705 | | | | BEQ | GETCL | | :GO GET CMD AGAIN IF YES |
| 5017 | 035542 | 023727 | 003202 | 000055 | | CMP | KEYWD1,#PRNT | | :SEE IF PRINT WAS TYPED |
| 5018 | 035550 | 001701 | | | | BEQ | GETCL | | :GO GET CMD AGAIN IF YES |
| 5019 | 035552 | 023727 | 003202 | 000004 | | CMP | KEYWD1,#RUN | | :SEE IF RUN WAS TYPED |
| 5020 | 035560 | 001002 | | | | BNE | 11\$ | | : BR IF NO |
| 5021 | 035562 | 000137 | 040400 | | | JMP | GTR9 | | : START EXEC. IF YES |
| 5022 | 035566 | 023727 | 003202 | 000052 | 11\$: | CMP | KEYWD1,#DMPS | | :SEE IF DUMP WAS TYPED |
| 5023 | 035574 | 001004 | | | | BNE | 12\$ | | : BR IF NO |
| 5024 | 035576 | 004737 | 031554 | | | JSR | PC,DUMPSR | | : ELSE, DUMP PART OF MEMORY |
| 5025 | 035602 | 000137 | 035354 | | | JMP | GETCL | | : THEN RETURN TO GET ANOTHER CMD. |
| 5026 | | | | | | ::EXIT | COMMAND IS A REVISION B | | CHANGE BY EC |
| 5027 | 035606 | 023727 | 003202 | 000057 | 12\$: | CMP | KEYWD1,#EXIT | | :EXIT COMMAND ? |
| 5028 | 035614 | 001005 | | | | BNE | 13\$ | | :NO,BRANCH |
| 5029 | 035616 | 012737 | 000001 | 007464 | | MOV | #1,DCLFLG | | :SET CLEANUP & EXIT FLAG |
| 5030 | 035624 | | | | | EXIT | TST | | :GO BACK TO INIT ROUTINE |
| 5031 | 035624 | 104432 | | | | | | TRAP | C\$EXIT |
| 5032 | 035626 | 010306 | | | | | | .WORD | L10020- |
| 5033 | 035630 | 023727 | 003202 | 000001 | 13\$: | CMP | KEYWD1,#CLEAR | | :SEE IF CLEAR WAS TYPED |
| 5034 | 035636 | 001646 | | | | BEQ | GETCL | | : IF YES, BACK TO GET ANOTHER CMD. |
| 5035 | 035640 | 023727 | 003202 | 000002 | | CMP | KEYWD1,#SHOW | | :SEE IF SHOW WAS TYPED |
| 5036 | 035646 | 001642 | | | | BEQ | GETCL | | : IF YES, BACK TO GET ANOTHER CMD. |
| 5037 | 035650 | 023727 | 003202 | 000010 | 4\$: | CMP | KEYWD1,#SETEXP | | :SEE IF SET EXPECTED |
| 5038 | 035656 | 001512 | | | | BEQ | 2\$ | | : BR IF YES (A SETEXP WAS TYPED) |
| 5039 | 035660 | 013737 | 007356 | 007422 | 5\$: | MOV | TOTCC,TOTCC | | |
| 5040 | 035666 | 023727 | 007422 | 001000 | | CMP | TOTCC,#BUFLIM | | :SEE IF BUFFER ALREADY FULL |
| 5041 | 035674 | 002414 | | | | BLT | 15\$ | | : BR IF NOT FULL (BUFLIM # OF CHARS.) |
| 5042 | 035676 | | | | | PRINTF | #MSGTRN,#BUFEX | | : ELSE TELL OPR. AND DON'T BUILD MSG. |
| 5043 | 035676 | 012746 | 015227 | | | | | MOV | #BUFEX,-(SP) |
| 5044 | 035702 | 012746 | 015245 | | | | | MOV | #MSGTRN,-(SP) |
| 5045 | 035706 | 012746 | 000002 | | | | | MOV | #2,-(SP) |

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| | | | | | | | | |
|------|--------|--------|--------|--------|--------|-----------------|---------------|--|
| 5046 | 035712 | 010600 | | | | | MOV | SP,R0 |
| 5047 | 035714 | 104417 | | | | | TRAP | CSPNTE |
| 5048 | 035716 | 062706 | 000006 | | | | ADD | #6,SP |
| 5049 | 035722 | 000137 | 035354 | | | | | |
| 5050 | 035726 | 005737 | 007356 | 15\$: | JMP | GETCL | | : THEN GO GET A NEW COMMAND |
| 5051 | 035732 | 001002 | | | TST | TTOTCC | | : IF FIRST "SET" THEN GET RID OF DEFAULT |
| 5052 | 035734 | 005037 | 007354 | | BNE | 6\$ | | |
| 5053 | 035740 | 012737 | 006562 | 007334 | 6\$: | CLR | TXMTOT | |
| 5054 | 0357 | 013701 | 007354 | | MOV | #PTRTAB, TXPTR | | : GET POSITION OF END OF TX LIST |
| 5055 | 0357 | 020127 | 000017 | | MOV | TXMTOT, R1 | | |
| 5056 | 035756 | 002414 | | | CMP | R1, #MSGLIM | | : SEE IF MSG COUNT EXCEEDED. |
| 5057 | 035760 | | | | BLT | 17\$ | | : BR IF NO |
| 5058 | 035760 | 012746 | 015167 | | PRINTF | #MSGTRN, #TABEX | | : ELSE TELL OPR AND DON'T BUILD MSG. |
| 5059 | 035764 | 012746 | 015245 | | | | MOV | #TABEX, -(SP) |
| 5060 | 035770 | 012746 | 000002 | | | | MOV | #MSGTRN, -(SP) |
| 5061 | 035774 | 010600 | | | | | MOV | #2, -(SP) |
| 5062 | 035776 | 104417 | | | | | MOV | SP, R0 |
| 5063 | 036000 | 062706 | 000006 | | | | TRAP | CSPNTE |
| 5064 | 036004 | 000137 | 035354 | | | | ADD | #6, SP |
| 5065 | 036010 | 006301 | | 17\$: | JMP | GETCL | | : THEN GO GET A NEW COMMAND. |
| 5066 | 036012 | 006301 | | | ASL | R1 | | : # OF MSGS *4 = NEXT FREE PTR BLOCK |
| 5067 | 036014 | 060137 | 007334 | | ASL | R1 | | |
| 5068 | 036020 | 013737 | 007334 | 007416 | ADD | R1, TXPTR | | |
| 5069 | 036026 | 013737 | 007360 | 007420 | MOV | TXPTR, CPTR | | : SETUP CHAR. COUNT, CURRENT ADDR, & PTR |
| 5070 | 036034 | 004737 | 031712 | | MOV | TCURAD, CURADD | | |
| 5071 | 036040 | 004737 | 032010 | | JSR | PC, ADDCC | | : ADD IN CHAR. COUNT AND CHECK TOTAL |
| 5072 | 036044 | 013737 | 007416 | 007334 | JSR | PC, BLDLBUF | | : GO BUILD MESSAGE IN BUFFER AND PTRS. |
| 5073 | 036052 | 013737 | 007422 | 007356 | MOV | CPTR, TXPTR | | |
| 5074 | 036060 | 013737 | 007420 | 007360 | MOV | TOTCC, TTOTCC | | : UPDATE CHAR. COUNT, CURR ADDR, & PTR |
| 5075 | 036066 | 005237 | 007354 | | MOV | CURADD, TCURAD | | |
| 5076 | 036072 | 005337 | 003206 | | INC | TXMTOT | | |
| 5077 | 036076 | 001270 | | | DEC | QUALVL | | : DEC THE COPY COUNT |
| 5078 | 036100 | 000137 | 035354 | | BNE | 5\$ | | |
| 5079 | | | | | JMP | GETCL | | |
| 5080 | 036104 | 013737 | 007342 | 007422 | 2\$: | MOV | CTOTCC, TOTCC | : SETUP CHAR. COUNT, CURR. ADDR. & PTR |
| 5081 | 036112 | 023727 | 007422 | 001000 | CMP | TOTCC, #BUFLIM | | : SEE IF BUFFER ALREADY FULL |
| 5082 | 036120 | 002414 | | | BLT | 16\$ | | : BR IF NOT FULL (BUFLIM # OF CHARS.) |
| 5083 | 036122 | | | | PRINTF | #MSGTRN, #BUFEX | | : ELSE TELL OPR. AND DON'T BUILD MSG. |
| 5084 | 036122 | 012746 | 015227 | | | | MOV | #BUFEX, -(SP) |
| 5085 | 036126 | 012746 | 015245 | | | | MOV | #MSGTRN, -(SP) |
| 5086 | 036132 | 012746 | 000002 | | | | MOV | #2, -(SP) |
| 5087 | 036136 | 010600 | | | | | MOV | SP, R0 |
| 5088 | 036140 | 104417 | | | | | TRAP | CSPNTE |
| 5089 | 036142 | 062706 | 000006 | | | | ADD | #6, SP |
| 5090 | 036146 | 000137 | 035354 | | | | | |
| 5091 | 036152 | 005737 | 007342 | 16\$: | JMP | GETCL | | : THEN GO GET A NEW COMMAND |
| 5092 | 036156 | 001002 | | | TST | CTOTCC | | : IF FIRST "SET" THEN GET RID OF DEFAULT |
| 5093 | 036160 | 005037 | 007340 | | BNE | 7\$ | | |
| 5094 | 036164 | 012701 | 006562 | 7\$: | CLR | CMPTOT | | |
| 5095 | 036170 | 012702 | 000017 | | MOV | #PTRTAB, R1 | | |
| 5096 | 036174 | 006302 | | | MOV | #MSGLIM, R2 | | |
| 5097 | 036176 | 006302 | | | ASL | R2 | | |
| 5098 | 036200 | 010137 | 007336 | | ASL | R2 | | |
| 5099 | 036204 | 060237 | 007336 | | MOV | R1, CMPPTR | | : INIT COMPARE MESSAGE POINTER |
| 5100 | 036210 | 013701 | 007340 | | ADD | R2, CMPPTR | | |
| 5101 | 036214 | 020127 | 000017 | | MOV | CMPTOT, R1 | | |
| | | | | | CMP | R1, #MSGLIM | | : SEE IF MSG COUNT EXCEEDED. |

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| | | | | |
|------|--------|--------|--------|--------|
| 5102 | 036220 | 002414 | | |
| 5103 | 036222 | | | |
| 5104 | 036222 | 012746 | 015167 | |
| 5105 | 036226 | 012746 | 015245 | |
| 5106 | 036232 | 012746 | 000002 | |
| 5107 | 036236 | 010600 | | |
| 5108 | 036240 | 104417 | | |
| 5109 | 036242 | 062706 | 000006 | |
| 5110 | 036246 | 000137 | 035354 | |
| 5111 | 036252 | 006301 | | |
| 5112 | 036254 | 006301 | | |
| 5113 | 036256 | 060137 | 007336 | |
| 5114 | 036262 | 013737 | 007336 | 007416 |
| 5115 | 036270 | 013737 | 007344 | 007420 |
| 5116 | 036276 | 004737 | 031712 | |
| 5117 | 036302 | 004737 | 032010 | |
| 5118 | 036306 | 013737 | 007416 | 007336 |
| 5119 | 036314 | 005237 | 007340 | |
| 5120 | 036320 | 013737 | 007420 | 007344 |
| 5121 | 036326 | 013737 | 007422 | 007342 |
| 5122 | 036334 | 005337 | 003206 | |
| 5123 | 036340 | 001261 | | |
| 5124 | 036342 | 000137 | 035354 | |
| 5125 | | | | |
| 5126 | | | | |
| 5127 | | | | |
| 5128 | | | | |
| 5129 | | | | |

18\$:

```

BLT      18$
PRINTF  #MSGTRN,#TABEX

          JMP      GETCL
          ASL      R1
          ASL      R1
          ADD      R1,CMPPTR
          MOV      CMPPTR,CPTR
          MOV      CCURAD,CCURAD
          JSR      PC,ADDCC
          JSR      PC,BLDBUF
          MOV      CPTR,CMPPTR
          INC      CMPTOT
          MOV      CURADD,CCURAD
          MOV      TOTCC,CTOTCC
          DEC      QUALVL
          BNE      2$
          JMP      GETCL

```

```

; BR IF NO
; ELSE TELL OPR. AND DON'T BUILD MSG.
          MOV      #TABEX,-(SP)
          MOV      #MSGTRN,-(SP)
          MOV      #2,-(SP)
          MOV      SP,R0
          TRAP     C$PNTF
          ADD      #6,SP
; THEN GO GET A NEW COMMAND.
;# OF MSGS *4 = NEXT FREE PTR BLOCK

;ADD IN XHAR. COUNT AND CHECK TOTAL

;UPDATE CHAR. COUNT, CURR ADDR. & PTR

;IF COPY WAS GIVEN, PUT MSG IN BUFF
; AGAIN
;GO BACK UNTIL GET A 'RUN'

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5130
5131
5132
5133
5134 036346
5135 036346 006302
5136 036350 016202 036364
5137 036354 062702 036364
5138 036360 004712
5139 036362 000207
5140
5141
5142 036364 000150
5143 036366 000152
5144 036370 000162
5145 036372 001604
5146 036374 000262
5147 036376 000172
5148 036400 000306
5149 036402 000434
5150 036404 000756
5151 036406 000766
5152 036410 001004
5153 036412 001014
5154 036414 001024
5155 036416 001116
5156 036420 001612
5157 036422 001136
5158 036424 001216
5159 036426 001224
5160 036430 001234
5161 036432 001244
5162 036434 001254
5163 036436 001264
5164 036440 001302
5165 036442 001370
5166 036444 001400
5167 036446 001420
5168 036450 001426
5169 036452 001436
5170 036454 001446
5171 036456 001456
5172 036460 001504
5173 036462 001514
5174 036464 001620
5175 036466 001634
5176 036470 001666
5177 036472 001676
5178 036474 001706
5179 036476 001716
5180 036500 001726
5181 036502 001736
5182 036504 000142
5183 036506 001174
5184 036510 000712
5185 036512 000742

.SBTTL ACTION TABLE AND ROUTINES
: USER MUST CLEAR/SET P%GDBD IF USE 'CLIBIF' IN CONNECTION WITH ACTION
: R2 WILL HOLD ACTION CODE FROM PARSING (CLI) NODE
:
:CLIACT.
ASL R2 ;MULTIPLY ACTION CODE BY 2
MOV 10$(R2),R2 ;OFFSET VALUE
ADD #10$,R2 ;ADD BASE VALUE
JSR PC,(R2) ;GO DO ACTION
RTS PC ;RETURN TO TRVACT:

;BRIEF DESCRIPTION OF ACTIONS TAKEN
10$: .WORD ACTNUL-10$ ;NULL
      .WORD ACTCLR-10$ ;CLEAR
      .WORD ACTSHO-10$ ;SHOW
      .WORD ACTCHK-10$ ;CHECK
      .WORD ACTRUN-10$ ;RUN
      .WORD ACTHLP-10$ ;HELP
      .WORD ACTCSE-10$ ;CLEAR OR SHOW EXPECTED
      .WORD ACTCST-10$ ;CLEAR OR SHOW TRANSMIT
      .WORD ACTSTE-10$ ;SET EXPECTED
      .WORD ACTSTT-10$ ;SET TRANSMIT
      .WORD ACTSZE-10$ ;SIZE
      .WORD ACTCOP-10$ ;COPY
      .WORD ACTNUM-10$ ;NUMERIC VALUE FOR SIZE OR COPY
      .WORD ACTOPM-10$ ;QUOTED MESSAGE FROM USER
      .WORD ACTSTS-10$ ;S ATUS
      .WORD ACTEQO-10$ ;END OF QUOTED MESSAGE FROM USER
      .WORD ACTMS0-10$ ;ONES
      .WORD ACTMS1-10$ ;ZEROS
      .WORD ACTMS2-10$ ;1ALT
      .WORD ACTMS3-10$ ;OALT
      .WORD ACTMS4-10$ ;ITEP
      .WORD ACTMS5-10$ ;CCITT
      .WORD ACTMS6-10$ ;ALPHA
      .WORD ACTATV-10$ ;ACTIVE MODE
      .WORD ACTPAS-10$ ;PASSIVE MODE
      .WORD ACTREC-10$ ;RECEIVE MODE
      .WORD ACTLIS-10$ ;LISTEN MODE
      .WORD ACTDLL-10$ ;DOWNLINE LOAD
      .WORD ACTTRA-10$ ;TRANSMIT MODE
      .WORD ACTTAL-10$ ;TALK MODE
      .WORD ACTNO-10$ ;NO
      .WORD ACTECH-10$ ;ECHO
      .WORD ACTCRC-10$ ;SET CRC BIT
      .WORD ACTPRO-10$ ;SET PROTOCOL BIT
      .WORD ACTRPS-10$ ;STATUS
      .WORD ACTMOP-10$ ;REMOTE STATION IN MAINTENANCE LOOP MODE
      .WORD ACTTLP-10$ ;INTERNAL TTL
      .WORD ACTCLP-10$ ;CABLE LOOP
      .WORD ACTLLP-10$ ;LOCAL MODEM LOOP
      .WORD ACTRLP-10$ ;REMOTE MODEM LOOP
      .WORD ACTNUF-10$ ;MORE COMMAND LINE NEEDED
      .WORD ACTBCR-10$ ;BAD CHARACTER IN OPERATOR MESSAGE
      .WORD ACTDMS-10$ ;DUMP MEMORY START ADDRESS
      .WORD ACTDME-10$ ;DUMP MEMORY END ADDRESS
    
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5186 036514 000734
5187 036516 000246
5188 036520 001626
5189 036522 000236
5190 036524 001326
5191

.WORD ACTDMQ-10\$:DUMP WORD
.WORD ACTPRT-10\$:PRINT
.WORD ACTMOS-10\$:MODEM ACTION REV B BY EC
.WORD ACTEXT-10\$:EXIT ACTION REV B BY EC
.WORD ACTSEX-10\$:SET E=T ACTION REV B BY EC NPI

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| | | | | | | | | | | | |
|------|--------|--------|--------|--------|---------|--------|---------------|--|--|--|---|
| 5192 | | | | | | | | | | | |
| 5193 | 036526 | 112737 | 177777 | 003560 | ACTNUF: | MOVB | #-1,P\$NNUF | | | | ;SET FLAG TO SAY NEED MORE OF COMMAND |
| 5194 | 036534 | 000207 | | | ACTNUL: | RTS | PC | | | | ;RETURN TO PARSER |
| 5195 | | | | | | | | | | | |
| 5196 | 036536 | 012737 | 000001 | 003202 | ACTCLR: | MOV | #CLEAR,KEYWD1 | | | | ;SET LOC TO SAY A CLEAR WAS TYPED |
| 5197 | 036544 | 000207 | | | | RTS | PC | | | | |
| 5198 | | | | | | | | | | | |
| 5199 | 036546 | 012737 | 000002 | 003202 | ACTSHO: | MOV | #SHOW,KEYWD1 | | | | ;SET LOC. TO SAY A SHOW WAS TYPED |
| 5200 | 036554 | 000207 | | | | RTS | PC | | | | |
| 5201 | | | | | | | | | | | |
| 5202 | 036556 | 012702 | 003210 | | ACTHLP: | MOV | #HLPTAB,R2 | | | | ;SETUP R2 AS A POINTER TO HELP MSG TABLE |
| 5203 | 036562 | | | | 1\$: | PRINTF | #HLPF,(R2)+ | | | | ;PRINT HELP INFORMATION MESSAGES |
| 5204 | 036562 | 012246 | | | | | | | | | MOV (R2)+,-(SP) |
| 5205 | 036564 | 012746 | 013231 | | | | | | | | MOV #HLPF,-(SP) |
| 5206 | 036570 | 012746 | 000002 | | | | | | | | MOV #2,-(SP) |
| 5207 | 036574 | 010600 | | | | | | | | | MOV SP,R0 |
| 5208 | 036576 | 104417 | | | | | | | | | TRAP C\$PNTF |
| 5209 | 036600 | 062706 | 000006 | | | | | | | | ADD #6,SP |
| 5210 | 036604 | 020227 | 003230 | | | | | | | | |
| 5211 | 036610 | 001364 | | | | CMP | R2,#HLPEND | | | | ;SEE IF ALL INFO PRINTED YET |
| 5212 | 036612 | 012737 | 000005 | 003202 | | BNE | 1\$ | | | | ;IF NO KEEP PRINTING |
| 5213 | 036620 | 000207 | | | | MOV | #HLP,KEYWD1 | | | | ;SET LOC. TO SAY A HELP WAS TYPED |
| 5214 | 036622 | 012737 | 000057 | 003202 | ACTEXT: | MOV | #EXIT,KEYWD1 | | | | ;EXIT COMMAND |
| 5215 | 036630 | 000207 | | | | RTS | PC | | | | |
| 5216 | 036632 | 012737 | 000055 | 003202 | ACTPRT: | MOV | #PRNT,KEYWD1 | | | | ;SET LOC. TO SAY A HELP WAS TYPED |
| 5217 | 036640 | 004737 | 027046 | | | JSR | PC,REPORT | | | | ;CALL ROUTINE TO PRINT EVENT LOG AND BASE TABLE |
| 5218 | 036644 | 000207 | | | | RTS | PC | | | | |
| 5219 | | | | | | | | | | | |
| 5220 | 036646 | 012737 | 000004 | 003202 | ACTRUN: | MOV | #RUN,KEYWD1 | | | | ;SET RUN FLAG |
| 5221 | 036654 | 112737 | 177777 | 003560 | | MOVB | #-1,P\$NNUF | | | | ;SET FLAG TO SAY NEED MORE OF COMMAND |
| 5222 | 036662 | 012737 | 000001 | 007500 | | MOV | #1,RPASS | | | | ;SET DEFAULT RUN 'PASS' TO 1 |
| 5223 | 036670 | 000207 | | | | RTS | PC | | | | |
| 5224 | | | | | | | | | | | |
| 5225 | 036672 | 012701 | 006562 | | ACTCSE: | MOV | #PTRTAB,R1 | | | | |
| 5226 | 036676 | 012702 | 000017 | | | MOV | #MSGLIM,R2 | | | | |
| 5227 | 036702 | 006302 | | | | ASL | R2 | | | | |
| 5228 | 036704 | 006302 | | | | ASL | R2 | | | | |
| 5229 | 036706 | 010137 | 007336 | | | MOV | R1,CMPPTR | | | | |
| 5230 | 036712 | 060237 | 007336 | | | ADD | R2,CMPPTR | | | | ;INIT COMPARE MESSAGE POINTER |
| 5231 | 036716 | 013701 | 007336 | | | MOV | CMPPTR,R1 | | | | |
| 5232 | | | | | | | | | | | |
| 5233 | 036722 | 013702 | 007340 | | | MOV | CMPTOT,R2 | | | | |
| 5234 | 036726 | 105037 | 003560 | | | CLRB | P\$NNUF | | | | ;FLAG THAT HAVE VALID COMMAND AT THIS PT. |
| 5235 | 036732 | 023727 | 003202 | 000002 | | CMP | KEYWD1,#SHOW | | | | ;SEE IF A CLEAR OR SHOW WAS TYPED |
| 5236 | 036740 | 001500 | | | | BEQ | ACTSHW | | | | ;BR IF A SHOW WAS TYPED |
| 5237 | 036742 | 012737 | 000001 | 007340 | | MOV | #1,CMPTOT | | | | ;CLEAR COMPARE MESSAGE COUNT, CHAR. COUNT |
| 5238 | 036750 | 005037 | 007342 | | | CLR | CTOTCC | | | | ; AND RESET POINTER |
| 5239 | | | | | | | | | | | |
| 5240 | 036754 | 012701 | 006562 | | | MOV | #PTRTAB,R1 | | | | |
| 5241 | 036760 | 012702 | 000017 | | | MOV | #MSGLIM,R2 | | | | |
| 5242 | 036764 | 006302 | | | | ASL | R2 | | | | |
| 5243 | 036766 | 006302 | | | | ASL | R2 | | | | |
| 5244 | 036770 | 010137 | 007336 | | | MOV | R1,CMPPTR | | | | |
| 5245 | 036774 | 060237 | 007336 | | | ADD | R2,CMPPTR | | | | ;INIT COMPARE MESSAGE POINTER |
| 5246 | 037000 | 013737 | 007336 | 007416 | | MOV | CMPPTR,CPTR | | | | ;SET UP TO FILL IN DEFAULT MESSAGE |
| 5247 | 037006 | 012701 | 005562 | | | MOV | #CMPBUF,R1 | | | | |

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| | | | | | | | | |
|------|--------|--------|--------|--------|-------------|------------------------|--|--|
| 5248 | 037012 | 010137 | 007344 | | MOV | R1,CCURAD | | |
| 5249 | 037016 | 000431 | | | BR | ACTCLB | | |
| 5250 | | | | | | | | |
| 5251 | 037020 | 012701 | 006562 | | ACTCST: MOV | #PTRTAB,R1 | | |
| 5252 | 037024 | 013702 | 007354 | | MOV | TXMTOT,R2 | | |
| 5253 | 037030 | 105037 | 003560 | | CLRB | PSNUF | | :FLAG THAT HAVE VALID COMMAND AT THIS PT. |
| 5254 | 037034 | 023727 | 003202 | 000002 | CMP | KEYWD1,#SHOW | | :SEE IF A CLEAR OR SHOW WAS TYPED |
| 5255 | 037042 | 001437 | | | BEQ | ACTSHW | | :BR IF A SHOW WAS TYPED |
| 5256 | 037044 | 012737 | 000001 | 007354 | MOV | #1,TXMTOT | | :CLEAR TRANSMIT MESSAGE COUNT, CHAR. COUNT |
| 5257 | 037052 | 005037 | 007356 | | CLR | TTOTCC | | : AND RESET POINTER |
| 5258 | 037056 | 012737 | 006562 | 007334 | MOV | #PTRTAB, TXPTR | | |
| 5259 | 037064 | 013737 | 007334 | 007416 | MOV | TXPTR,CPTR | | |
| 5260 | 037072 | 012701 | 003562 | | MOV | #TXBUF,R1 | | |
| 5261 | 037076 | 010137 | 007360 | | MOV | R1,TCURAD | | |
| 5262 | | | | | | | | |
| 5263 | 037102 | 012702 | 001000 | | ACTCLB: MOV | #BUFLIM,R2 | | |
| 5264 | 037106 | 010137 | 007420 | | MOV | R1,CURADD | | :SET UP TO PUT DEFAULT MSG IN LIST AFTER 033'S |
| 5265 | 037112 | 012737 | 000005 | 007410 | MOV | #5,MSGTYP | | |
| 5266 | 037120 | 013737 | 002162 | 007412 | MOV | MSG5C,CURCC | | |
| 5267 | 037126 | 105021 | | | 1\$: CLRB | (R1)+ | | :FILL EXPT OR TRAN BUFFER WITH 0'S IF A CLEAR |
| 5268 | 037130 | 005302 | | | DEC | R2 | | :DO 'BUFLIM' NUMBER OF BYTE LOCATIONS |
| 5269 | 037132 | 001375 | | | BNE | 1\$ | | |
| 5270 | 037134 | 004737 | 032010 | | JSR | PC,BLDBUF | | : 'CLEAR' REALLY MEANS TO PUT DEFAULT MSG IN |
| 5271 | 037140 | 000207 | | | RTS | PC | | :WHEN DONE, RETURN TO PARSER |
| 5272 | | | | | | | | |
| 5273 | | | | | | | | |
| 5274 | 037142 | 012705 | 003504 | | ACTSHW: MOV | #SHTAB,R5 | | |
| 5275 | 037146 | 122571 | 000000 | | 5\$: CMPB | (R5)+,a(R1) | | :LOOK AT FIRST BYTE OF MSG TO DECIPHER TYPE |
| 5276 | 037152 | 001404 | | | BEQ | 6\$ | | |
| 5277 | 037154 | 020527 | 003513 | | CMP | R5,#SHTEND | | :SEE IF LOOKED AT ALL OF DEFAULTS YET |
| 5278 | 037160 | 001372 | | | BNE | 5\$ | | |
| 5279 | 037162 | 005205 | | | INC | R5 | | :MUST BE OPR. SPEC'D THEN |
| 5280 | 037164 | 162705 | 003505 | | 6\$: SUB | #SHTAB+1,R5 | | |
| 5281 | 037170 | 006305 | | | ASL | R5 | | |
| 5282 | 037172 | 016137 | 000002 | 007426 | MOV | 2(R1),TEMP | | |
| 5283 | 037200 | | | | PRINTF | #SHMSG,SHTYTB(R5),TEMP | | :PRINT MSG SIZE & TYPE |
| 5284 | 037200 | 013746 | 007426 | | | | | MOV TEMP,-(SP) |
| 5285 | 037204 | 016546 | 003464 | | | | | MOV SHTYTB(R5),-(SP) |
| 5286 | 037210 | 012746 | 014434 | | | | | MOV #SHMSG,-(SP) |
| 5287 | 037214 | 012746 | 000003 | | | | | MOV #3,-(SP) |
| 5288 | 037220 | 010600 | | | | | | MOV SP,R0 |
| 5289 | 037222 | 104417 | | | | | | TRAP C\$PNTF |
| 5290 | 037224 | 062706 | 000010 | | | | | ADD #10,SP |
| 5291 | 037230 | 062701 | 000004 | | ADD | #4,R1 | | :BUMP R1 TO NEXT SET OF POINTERS |
| 5292 | 037234 | 005302 | | | DEC | R2 | | |
| 5293 | 037236 | 001341 | | | BNE | ACTSHW | | |
| 5294 | 037240 | 013737 | 007470 | 010654 | MOV | MODTYP,DEV1 | | |
| 5295 | 037246 | 013737 | 007472 | 010656 | MOV | MLTYP,DEV2 | | |
| 5296 | 037254 | 013737 | 007500 | 010660 | MOV | RPASS,DEV3 | | |
| 5297 | 037262 | 013737 | 007476 | 010662 | MOV | PARAM,DEV4 | | |
| 5298 | 037270 | 004737 | 032340 | | JSR | PC,SHWOP | | :SHOW THE OPERATOR THE CURRENT MODE..... ALSO |
| 5299 | 037274 | 000207 | | | RTS | PC | | |
| 5300 | | | | | | | | |
| 5301 | 037276 | 013737 | 003554 | 007402 | ACTDMS: MOV | PSNUM,STADD | | :SETUP STARTING ADDRESS FOR DUMP |
| 5302 | 037304 | 005037 | 007406 | | CLR | BYTBIT | | :SET DEFAULT OF WORD DUMP |
| 5303 | 037310 | 012737 | 000052 | 003202 | MOV | #DMPS,KEYWD1 | | :FLAG THAT A DUMP WAS TYPED |

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5304 037316 000403

BR ACTDME

5305

5306 037320 012737 177777 007406

ACTDMQ: MOV

#-1,BYTBIT

;SET DUMP FLAG TO 'DUMP-WORD'

5307 037326 013737 003554 007404

ACTDME: MOV

P\$NUM,ENADD

;SETUP END ADDRESS FOR DUMP (=START IF NO 'EEE')

5308 037334 105037 003560

ACTDMX: CLRB

P\$NNUF

;CLEAR NOT-ENOUGH FLAG, 'DUMP N-N/B' IS VALID

5309 037340 000207

RTS

PC

5310

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5311
5312
5313 037342 012737 000010 003202 ACTSTE: MOV #SETEXP,KEYWD1
5314 037350 000403 BR ACTSTX
5315
5316 037352 012737 000011 003202 ACTSTT: MOV #SETTRN,KEYWD1
5317 037360 012737 000001 003206 ACTSTX: MOV #1,QUALVL ;SET UP DEFAULT COPY TO 1 (/COPY=0)
5318 037366 000207 RTS PC
5319
5320 037370 012737 000012 003204 ACTSIZE: MOV #SIZE,QUALFG
5321 037376 000207 RTS PC
5322
5323 037400 012737 000013 003204 ACTCOP: MOV #QCOPY,QUALFG
5324 037406 000207 RTS PC
5325
5326 037410 023727 003204 000012 ACTNUM: CMP QUALFG,#SIZE ;SEE IF A SIZE OR COPY TYPED
5327 037416 001023 BNE 1$ ;BR IF IT WAS A COPY
5328 037420 005737 003554 TST PSNUM ;CHECK TO BE SURE DIDN'T TRY SIZE=0
5329 037424 001014 BNE 3$ ; BR IF NO
5330 037426 PRINTF #CLISEO
5331 037426 012746 013005 MOV #CLISEO,-(SP)
5332 037432 012746 000001 MOV #1,-(SP)
5333 037436 010600 MOV SP,R0
5334 037440 104417 TRAP C$PNTF
5335 037442 062706 000004 ADD #4,SP
5336 037446 112737 003561 MOV #1,PSGDBD ;SEE ERROR-IN-CMD FLAG
5337 037454 000411 BR 2$
5338 037456 013737 003554 007412 3$: MOV PSNUM,CURCC ;IF A SIZE LOAD CURCC WITH BYTE COUNT
5339 037464 000405 BR 2$
5340 037466 013737 003554 003206 1$: MOV PSNUM,QUALVL ;IF A COPY, LOAD COPY COUNT
5341 037474 005237 003206 INC QUALVL ;INCREMENT SO FIRST DEC MAKES IT REAL #
5342 037500 000522 BR 2$ ACTMEX
5343
5344 037502 012737 000007 007410 ACTOPM: MOV #7,MSGTYP
5345 037510 010437 007426 MOV R4,TEMP ;KEEP TRACK OF START OF QUOTED TEXT
5346 037514 005237 007426 INC TEMP ; SO CAN CALC OPCNT AT END OF QUOTES
5347 037520 000207 RTS PC
5348
5349 037522 010402 ACTEQO: MOV R4,R2
5350 037524 163702 007426 SUB TEMP,R2
5351 037530 010237 007412 MOV R2,CURCC ;CALC BYTE COUNT FOR QUOTED TEXT
5352 037534 010237 002166 MOV R2,OPCNT
5353 037540 013701 007426 MOV TEMP,R1
5354 037544 012705 002524 MOV #OPBUF,R5
5355 037550 112125 1$: MOV #OPBUF,R5 ;COPY QUOTED TEXT TO OPBUF
5356 037552 005302 MOV (R1)+,(R5)+
5357 037554 001375 DEC R2
5358 037556 000473 BNE 1$
BR ACTMEX
5359
5360 037560 ACTBCR: PRINTF #CLIBCR ;BAD CHAR. IN OPR. QUOTED STRING
5361 037560 012746 012740 MOV #CLIBCR,-(SP)
5362 037564 012746 000001 MOV #1,-(SP)
5363 037570 010600 MOV SP,R0
5364 037572 104417 TRAP C$PNTF
5365 037574 062706 000004 ADD #4,SP
5366 037600 000207 RTS PC

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5367 ;SET THE MESSAGE TYPE AS PER COMMAND LINE
5368 037602 005037 007410 ACTMS0: CLR MSGTYP
5369 037606 000435 BR ACTME1
5370 037610 012737 000001 007410 ACTMS1: MOV #1,MSGTYP ;ALL ONES
5371 037616 000431 BR ACTME1
5372 037620 012737 000002 007410 ACTMS2: MOV #2,MSGTYP ;ONES & ZEROS
5373 037626 000425 BR ACTME1
5374 037630 012737 000003 007410 ACTMS3: MOV #3,MSGTYP ;ZEROS & ONES
5375 037636 000421 BR ACTME1
5376 037640 012737 000004 007410 ACTMS4: MOV #4,MSGTYP ;CCITT
5377 037646 000415 BR ACTME1
5378 037650 012737 000005 007410 ACTMS5: MOV #5,MSGTYP ;QUICK FOX
5379 037656 013737 002162 007412 MOV MSG5C,CURCC ;SETUP DEFAULT SIZE FOR THIS TYPE
5380 037664 000430 BR ACTMEX
5381 037666 012737 000006 007410 ACTMS6: MOV #6,MSGTYP ;ALPHA/NUM
5382 037674 013737 002164 007412 MOV MSG6C,CURCC ;SETUP DEFAULT SIZE FOR THIS TYPE
5383
5384 037702 012737 000100 007412 ACTME1: MOV #64,CURCC ;SETUP DEFAULT SIZE FOR MSG0-4
5385 037710 000416 BR ACTMEX ;GO TO EXIT
5386
5387 ;REV B BY EC
5388 037712 022737 000010 003202 ACTSEX: CMP #SETEXP,KEYWD1 ;DID WE GET HERE FROM 'SET E =' COMMAND?
5389 037720 001404 BEQ 10$ ;YES,BRANCH
5390 037722 112737 177777 003561 MOVB #-1,PSGDBD ;SET ERROR FLAG
5391 037730 000406 BR ACTMEX ;GO TO EXIT
5392 037732 004737 032134 10$: JSR PC,FACSIMILE ;GO COPY TRANSMIT BUFFER TO EXPECT BUFFER
5393 037736 012737 000060 003202 MOV #SETET,KEYWD1 ;SET FLAG TO BE USED IN T1::
5394 037744 000400 BR ACTMEX ;GO TO EXIT
5395
5396 037746 105037 003560 ACTMEX: CLRB PSNUF ;CLEAR NOT-ENOUGH FLAG
5397 037752 000207 RTS PC
5398

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| | | | | | | | |
|------|--------|--------|--------|--------|-------------|--------------|---------------------------------------|
| 5399 | 037754 | 012737 | 000003 | 007470 | ACTATV: MOV | #ACT,MODTYP | |
| 5400 | 037762 | 000432 | | | BR | ACTM2X | |
| 5401 | | | | | | | |
| 5402 | 037764 | 012737 | 000002 | 007470 | ACTPAS: MOV | #PAS,MODTYP | |
| 5403 | 037772 | 105037 | 003560 | | CLRB | PSNNUF | :CLEAR NOT-ENOUGH FLAG |
| 5404 | 037776 | 005037 | 007472 | | CLR | MLTYP | :CLEAR MAINT LOOP TYPE |
| 5405 | 040002 | 000207 | | | RTS | PC | |
| 5406 | | | | | | | |
| 5407 | 040004 | 005037 | 007470 | | ACTREC: CLR | MODTYP | |
| 5408 | 040010 | 000417 | | | BR | ACTM2X | |
| 5409 | | | | | | | |
| 5410 | 040012 | 012737 | 000006 | 007470 | ACTLIS: MOV | #LIS,MODTYP | |
| 5411 | 040020 | 000413 | | | BR | ACTM2X | |
| 5412 | | | | | | | |
| 5413 | 040022 | 012737 | 000004 | 007470 | ACTDLL: MOV | #DOW,MODTYP | |
| 5414 | 040030 | 000407 | | | BR | ACTM2X | |
| 5415 | | | | | | | |
| 5416 | 040032 | 012737 | 000001 | 007470 | ACTTRA: MOV | #TRA,MODTYP | |
| 5417 | 040040 | 000403 | | | BR | ACTM2X | |
| 5418 | | | | | | | |
| 5419 | 040042 | 012737 | 000005 | 007470 | ACTTAL: MOV | #TAL,MODTYP | |
| 5420 | | | | | | | |
| 5421 | 040050 | 042737 | 000004 | 007476 | ACTM2X: BIC | #ECHOB,PARAM | :DISABLE /ECHO (ALL BUT PASSIVE MODE) |
| 5422 | 040056 | 105037 | 003560 | | CLRB | PSNNUF | :CLEAR NOT-ENOUGH FLAG |
| 5423 | 040062 | 005037 | 007472 | | CLR | MLTYP | :CLEAR MAINT LOOP TYPE |
| 5424 | 040066 | 000207 | | | RTS | PC | |
| 5425 | | | | | | | |

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| | | | | | | | | | |
|------|--------|--------|--------|--------|---------|--------|--------------|--|--|
| 5426 | 040070 | 012737 | 000036 | 003204 | ACTNO: | MOV | #NO,QUALFG | | |
| 5427 | 040076 | 000207 | | | | RTS | PC | | |
| 5428 | | | | | | | | | |
| 5429 | 040100 | 022737 | 000036 | 003204 | ACTECH: | CMP | #NO,QUALFG | | |
| 5430 | 040106 | 001422 | | | | BEQ | 1\$ | | |
| 5431 | 040110 | 052737 | 000004 | 007476 | | BIS | #ECHOB,PARAM | | |
| 5432 | 040116 | 022737 | 000002 | 007470 | | CMP | #PAS,MODTYP | | ;BE SURE IN PASSIVE MODE IF |
| 5433 | 040124 | 001416 | | | | BEQ | 2\$ | | ;IF TRYING TO SET /ECHO |
| 5434 | 040126 | | | | | PRINTF | #CLINPS | | |
| 5435 | 040126 | 012746 | 012675 | | | | | | MOV #CLINPS,-(SP) |
| 5436 | 040132 | 012746 | 000001 | | | | | | MOV #1,-(SP) |
| 5437 | 040136 | 010600 | | | | | | | MOV SP,R0 |
| 5438 | 040140 | 104417 | | | | | | | TRAP C\$PNTF |
| 5439 | 040142 | 062706 | 000004 | | | | | | ADD #4,SP |
| 5440 | 040146 | 112737 | 177777 | 003561 | | MOVB | #-1,P\$GDBD | | |
| 5441 | 040154 | 042737 | 000004 | 007476 | 1\$: | BIC | #ECHOB,PARAM | | |
| 5442 | 040162 | 005037 | 003204 | | 2\$: | CLR | QUALFG | | ;CLEAR 'NO' OUT OF QUALIFIER FLAG |
| 5443 | 040166 | 000501 | | | | BR | ACTLXX | | |
| 5444 | | | | | | | | | |
| 5445 | 040170 | 012701 | 000002 | | ACTCHK: | MOV | #DATCKB,R1 | | ;SET DATA CHECK BIT |
| 5446 | 040174 | 000413 | | | | BR | ACTQFG | | |
| 5447 | | | | | | | | | |
| 5448 | 040176 | 012701 | 000001 | | ACTSTS: | MOV | #STATB,R1 | | ;SET THE STATUS BIT |
| 5449 | 040202 | 000410 | | | | BR | ACTQFG | | |
| 5450 | | | | | | | | | |
| 5451 | 040204 | 012701 | 000020 | | ACTCRC: | MOV | #CRCB,R1 | | ;SET THE CRC BIT |
| 5452 | 040210 | 000405 | | | | BR | ACTQFG | | |
| 5453 | | | | | | | | | |
| 5454 | 040212 | 012701 | 000010 | | ACTMOS: | MOV | #MOCHK,R1 | | ;MODEM BIT ADDED BY EC |
| 5455 | 040216 | 000402 | | | | BR | ACTQFG | | |
| 5456 | | | | | | | | | |
| 5457 | 040220 | 012701 | 000040 | | ACTPRO: | MOV | #PROTOB,R1 | | ;SET THE PROTOCOL BIT |
| 5458 | | | | | | | | | |
| 5459 | 040224 | 050137 | 007476 | | ACTQFG: | BIS | R1,PARAM | | |
| 5460 | 040230 | 022737 | 000036 | 003204 | | CMP | #NO,QUALFG | | |
| 5461 | 040236 | 001002 | | | | BNE | 1\$ | | |
| 5462 | 040240 | 040137 | 007476 | | | BIC | R1,PARAM | | |
| 5463 | 040244 | 005037 | 003204 | | 1\$: | CLR | QUALFG | | ;CLEAR 'NO' OUT OF QUALIFIER FLAG |
| 5464 | 040250 | 000450 | | | | BR | ACTLXX | | |
| 5465 | | | | | | | | | |
| 5466 | 040252 | 013737 | 003554 | 007500 | ACTRPS: | MOV | P\$NUM,RPASS | | ;GET NUMBER OF 'RUN PASSES' |
| 5467 | 040260 | 000444 | | | | BR | ACTLXX | | |
| 5468 | | | | | | | | | |
| 5469 | 040262 | 012737 | 000005 | 007472 | ACTMOP: | MOV | #5,MLTYP | | |
| 5470 | 040270 | 000417 | | | | BR | ACTLPX | | |
| 5471 | 040272 | 012737 | 000001 | 007472 | ACTTLP: | MOV | #1,MLTYP | | |
| 5472 | 040300 | 000413 | | | | BR | ACTLPX | | |
| 5473 | 040302 | 012737 | 000002 | 007472 | ACTCLP: | MOV | #2,MLTYP | | |
| 5474 | 040310 | 000407 | | | | BR | ACTLPX | | |
| 5475 | 040312 | 012737 | 000003 | 007472 | ACTLLP: | MOV | #3,MLTYP | | |
| 5476 | 040320 | 000403 | | | | BR | ACTLPX | | |
| 5477 | 040322 | 012737 | 000004 | 007472 | ACTRLP: | MOV | #4,MLTYP | | |
| 5478 | | | | | | | | | |
| 5479 | 040330 | 022737 | 000003 | 007470 | ACTLPX: | CMP | #ACT,MODTYP | | ;BE SURE IN ACTIVE IF TRYING TO SET LOOP |
| 5480 | 040336 | 001415 | | | | BEQ | ACTLXX | | ; BR IF IN ACTIVE |
| 5481 | 040340 | 112737 | 177777 | 003561 | | MOVB | #-1,P\$GDBD | | |

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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ACTION TABLE AND ROUTINES

5482 040346 005037 007472
5483 040352
5484 040352 012746 J12633
5485 040356 012746 000001
5486 040362 010600
5487 040364 104417
5488 040366 062706 000004
5489 040372 105037 003560
5490 040376 000207
5491

CLR MLTYP
PRINTF #CLIBDL

;CLEAR ANY LOOP TYPE THAT MAY HAVE GOT SET

MOV #CLIBDL,-(SP)
MOV #1,-(SP)
MOV SP,RO
TRAP C\$PNTF
ADD #4,SP

ACTLXX: CLRB P\$NNUF
RTS PC

;CLEAR NOT-ENOUGH FLAG

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RECEIVE MODE SECTION

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040636
040636 013737 007332 007414
040644 013737 007370 007366
040652 052737 000104 007502
040660 005037 007416
040664 000137 041026

```
.SBTTL RECEIVE MODE SECTION
++
: FUNCTIONAL DESCRIPTION:
: RECEIVE-ONLY (OR ONE-WAY-IN) ROUTINE
: IN THIS MODE OF TESTING THE DEVICE'S RECEIVER IS ENABLED IN EXPECTATION
: OF RECEIVING A MESSAGE. AFTER RECEIVING AN 'EXPECTED' NUMBER OF
: MESSAGES, THE DATA RECEIVED CAN BE COMPARED AGAINST A LIST OF 'EXPECT
: TO RECEIVE' MESSAGES IF DATA-CHECKING IS ENABLED.
:
: SUBORDINATE ROUTINES USED:
: 'ALLTR'
:
: CALLING SEQUENCE:
: JMP @MODE(R2) ;DISPATCH TO MODE BASED ON MODE TYPE IN R2
:--
RXONLY:
RXON2: MOV RXPTR,CPTRR
MOV RXMTOT,DVRCT ;SET UP MESSAGE COUNT
BIS #QRX+#ERX,FLAG ;SET UP RX QUE
CLR CPTR ;CLEAR THE TX POINTER
JMP ALLTR ;GO RX.
```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
CZCLKC.P11 19-MAR-82 18:32

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TRANSMIT MODE SECTION

.SBTTL TRANSMIT MODE SECTION

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:++
: FUNCTIONAL DESCRIPTION:
: TRANSMIT-ONLY (OR ONE-WAY-OUT) ROUTINE
: IN THIS MODE OF TESTING A LIST OF MESSAGES IS TRANSMITTED WITHOUT
: EXPECTING ANY DATA TO BE RECEIVED. A REPETITION COUNT CAN BE
: SPECIFIED TO REPETITIVELY TRANSMIT THE LIST.
:
: SUBORDINATE ROUTINES USED:
: 'ALLTR'
:
: CALLING SEQUENCE:
: JMP @MODE(R2) ;DISPATCH TO MODE BASED ON MODE TYPE IN R2
:--
: TXONLY: BIC #DATCKB,PARAM ;SET NOCHECK
: TXON2: MOV TXPTR,CPTR
: MOV TXMTOT,DVTCT ;COPY COUNTER FOR THIS PASS
: BIS #QTX+#ETX,FLAG ;SET THE QUE TX FLAG
: CLR CPTRR ;CLEAR RX POINTER
: JMP ALLTR ;GO TX.

040670 042737 000002 007476
040676 013737 007334 007416
040704 013737 007354 007352
040712 052737 000210 007502
040720 005037 007414
040724 000137 041026

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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 PASSIVE MODE SECTION

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.SBTTL

PASSIVE MODE SECTION

:++

: FUNCTIONAL DESCRIPTION:
 : PASSIVE MODE SECTION
 : IN THIS MODE OF TESTING, THE DEVICE'S RECEIVER IS ENABLED IN
 : EXPECTATION OF RECEIVING A MESSAGE. THEN EVERY TIME A MESSAGE IS
 : RECEIVED, A MESSAGE IS TRANSMITTED. DATA CHECKING CAN BE DONE ON THE
 : RECEIVED DATA.

: SUBORDINATE ROUTINES USED:

:"ALLTR"

: CALLING SEQUENCE:

JMP @MODE(R2) ;DISPATCH TO MODE BASED ON MODE TYPE IN R2

:--

040730
 040730 013737 007354 007352
 040736 013737 007334 007416
 040744 013737 007332 007414
 040752 052737 000104 007502
 040760 000137 041026

PLCK:
 PLCK2: MOV TXMTOT,DVTCT ;SET UP THE TRANSMIT COUNT
 MOV TXPTR,CPTR ;SET UP CPTR TO TRANSMIT POINTER
 PLCK3: MOV RXPTR,CPTRR ;SET UP CPTRR TO REC POINTER
 BIS #QRX+#ERX,FLAG ;SET UP Q AND EXPECT RX
 JMP ALLTR ;AND GO RX FIRST MSG.

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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ACTIVE MODE SECTION

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.SBTTL ACTIVE MODE SECTION

:++
: FUNCTIONAL DESCRIPTION:
: ACTIVE MODE SECTION
: IN THIS MODE OF TESTING A LIST OF MESSAGES IS TRANSMITTED AND
: MESSAGES ARE EXPECTED TO BE RECEIVED. RECEIVED DATA CAN BE COMPARED
: AGAINST "EXPECTED" DATA IF DATA-CHECKING IS ENABLED.
: NOTE: IF BOTH ENDS OF THE LINK ARE IN ACTIVE MODE, THEN THE
: LINK MUST BE A FULL DUPLEX LINK!

: SUBORDINATE ROUTINES USED:

'ALLTR'

: CALLING SEQUENCE:

JMP @MODE(R2) ;DISPATCH TO MODE BASED ON MODE TYPE IN R2

:--

040764 013737 007354 007352
040772 013737 007334 007416
041000 013737 007370 007366
041006 013737 007332 007414
041014 052737 000314 007502
041022 000137 041026

ALCK: MOV TXMTOT,DVTCT
MOV TXPTR,CPTR ;SET UP TX COUNTS
MOV RXMTOT,DVRCT ;SET UP COUNTS
MOV RXPTR,CPTR
BIS #QRX+#QTX+#ETX+#ERX,FLAG
JMP ALLTR

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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TRANSMIT - RECEIVE FOR ALL STANDARD MODES

.SBTTL TRANSMIT - RECEIVE FOR ALL STANDARD MODES

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++
: FUNCTIONAL DESCRIPTION:
: THIS CODE PERFORMS THE FOLLOWING FUNCTIONS
: 1.) IF RX BUFFERS ARE TO BE QUED, TELL DEVICE
:   CODE TO QUE THEM ,LOG RECEIVE QUED.
: 2.) IF TX BUFFERS ARE TO BE QUED ,TELL DEVICE
:   CODE TO QUE THEM, LOG TRANSMIT QUED.
: 3.) WAIT FOR EITHER RECIVE BUFFER OR TRANSMIT BUFFER OR
:   BOTH TO COMPLETE
: 4.) IF RECEIVE COMPLETE LOG IT UPDATE RX TABLE IF DATA
:   CHECKING
: 5.) IF TRANSMIT COMPLETE LOG IT.
: 6.) WHEN BOTH TRANSMIT AND RECIEVE LISTS ARE DONE
:   GO TO THE COMPARE BUFFER CODE

: SUBORDINATE ROUTINES USED:
:   'DVRXQ' -QUE RECEIVE BUFFER SPACE TO DEVICE
:   'LOGRXQ' -LOG RECEIVE BUFFER SPACE TO EVENT LOG
:   'LOGTXQ' -LOG TRANSMIT BUFFER QUED TO EVENT LOG
:   'DVTXRX' -QUE TRANSMIT BUFFER AND WAIT FOR RX
:             OR TX TO COMPLETE
:   'LOGRXC' -LOG RECEIVE BUFFER COMPLETED TO EVENT LOG
:   'LOGTXC' -LOG TRANSMIT BUFFER COMPLETED TO EVENT LOG

: USE OF FLAG BITS:
: QRX - SET ON INPUT TO ALLTR IF REC IS TO BE QUED TO
:   DEVICE. CLEARED BY DVRXQ AND THEN SET BY DVTXRX
:   WHEN RX BUFFER IS COMPLETED.
: QTX - SET ON INPUT TO ALLTR IF TRANSMIT IS TO BE QUED TO
:   DEVICE. CLEARED ON ENTRY TO DVTXRX AND SET BY DVTXRX
:   WHEN TX BUFFER IS COMPLETED.
: ETX - USED BY DVTXRX TO DETERMINE IF TX BUFFER COMPLETED IS
:   EXPECTED.
: ERX - USED BY DVTXRX TO DETERMINE IF RX BUFFER COMPLETED IS
:   EXPECTED.

: CALLING SEQUENCE:
:   JMP ALLTR ;GO TO TRANSMIT-RECEIVE FOR ALL STANDARD MODES
: --

: ALLTR:
: ALCK5: BIT #QRX,FLAG
: BEQ ALCK1 ;IF NOT RX GO TO TX'S
: MOV CPTRR,R2
: MOV (R2),TEMP2
: MOV (R2)+,DVRXA
: MOV (R2),TEMP3
: MOV (R2),DVRCC
: MOV R2,CPTRR
: JSR PC,DVRXQ ;GO QUE DEVICE
: JSR PC,LOGRXQ ;LOG REC QUED
: ALCK1: BIT #QTX,FLAG

```

```

041026
041026 032737 000004 007502
041034 001420
041036 013702 007414
041042 011237 007432
041046 012237 007362
041052 011237 007434
041056 011237 007364
041062 010237 007414
041066 004737 044104
041072 004737 026406
041076 032737 000010 007502

```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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TRANSMIT - RECEIVE FOR ALL STANDARD MODES

| | | | | | | | | | |
|------|--------|--------|--------|--------|---------|----------------|---------------|--|--|
| 5698 | 041104 | 001416 | | | BEQ | ALCK2 | | | ;IF NO TX'S GO TO 2 |
| 5699 | 041106 | 013702 | 007416 | | MOV | CPTR,R2 | | | |
| 5700 | 041112 | 011237 | 007432 | | MOV | (R2),TEMP2 | | | |
| 5701 | 041116 | 012237 | 007346 | | MOV | (R2)+,DVTXA | | | |
| 5702 | 041122 | 011237 | 007434 | | MOV | (R2),TEMP3 | | | |
| 5703 | 041126 | 012237 | 007350 | | MOV | (R2)+,DVTCC | | | |
| 5704 | 041132 | 010237 | 007416 | | MOV | R2,CPTR | | | |
| 5705 | 041136 | 004737 | 026352 | | JSR | PC,LOGTXQ | | | |
| 5706 | | | | | | | | | |
| 5707 | 041142 | 004737 | 044164 | | ALCK2: | JSR | PC,DVTXRX | | ;GO TO TX AND RX SUB ROUT. |
| 5708 | | | | | | | | | |
| 5709 | 041146 | 032737 | 000004 | 007502 | BIT | #QRX,FLAG | | | ;CHECK FOR REC. MSG. |
| 5710 | 041154 | 001514 | | | BEQ | ALCK3 | | | |
| 5711 | 041156 | 013737 | 007362 | 007432 | MOV | DVRXA,TEMP2 | | | |
| 5712 | 041164 | 013737 | 007364 | 007434 | MOV | DVRCC,TEMP3 | | | |
| 5713 | 041172 | 004737 | 026424 | | JSR | PC,LOGRXC | | | ;LOG REC COMPLETE |
| 5714 | 041176 | 032737 | 000004 | 007476 | UPTABL: | BIT | #ECHOB,PARAM | | ;IS THIS ECHO MODE(PASSIVE) |
| 5715 | 041204 | 001406 | | | BEQ | UPTA4 | | | ;IF NOT GO TO 4 |
| 5716 | 041206 | 013702 | 007416 | | MOV | CPTR,R2 | | | ;ELSE SET R2 TO PRESENT TX TABL |
| 5717 | 041212 | 013722 | 007432 | | MOV | TEMP2,(R2)+ | | | ;STORE OFF RX ADD |
| 5718 | 041216 | 013712 | 007434 | | MOV | TEMP3,(R2) | | | ;AND CC |
| 5719 | 041222 | 032737 | 000002 | 007476 | UPTA4: | BIT | #DATCKB,PARAM | | ;DATA CHECK? |
| 5720 | 041230 | 001015 | | | BNE | UPTA1 | | | ;YES,BRANCH |
| 5721 | 041232 | 012737 | 000001 | 007366 | MOV | #01,DVRCT | | | ;ELSE SET DVRCT TO A 1 |
| 5722 | 041240 | 013737 | 007332 | 007414 | MOV | RXPTR,CPTRR | | | ;RESET POINTER |
| 5723 | 041246 | 022737 | 000003 | 007470 | CMP | #ACT,MODTYP | | | ;IS THIS ACTIVE |
| 5724 | 041254 | 001002 | | | BNE | UPTA3 | | | |
| 5725 | 041256 | 005237 | 007366 | | INC | DVRCT | | | ;IF YES BUMP COUNT |
| 5726 | 041262 | 000424 | | | UPTA3: | BR | UPTEX | | |
| 5727 | 041264 | 013702 | 007414 | | UPTA1 | MOV | CPTRR,R2 | | |
| 5728 | 041270 | 011237 | 007426 | | MOV | (R2),TEMP | | | ;LOAD TEMP WITH PREV. COUNT |
| 5729 | 041274 | 163737 | 007434 | 007426 | SUB | TEMP3,TEMP | | | ;LOAD TEMP WITH PREV.COUNT-CURRENT |
| 5730 | 041302 | 013722 | 007434 | | MOV | TEMP3,(R2)+ | | | |
| 5731 | 041306 | 063737 | 007434 | 007432 | ADD | TEMP3,TEMP2 | | | |
| 5732 | 041314 | 013722 | 007432 | | MOV | TEMP2,(R2)+ | | | ;STORE OF NEW ADD |
| 5733 | 041320 | 013712 | 007426 | | MOV | TEMP,(R2) | | | ;AND NEW CC |
| 5734 | 041324 | 162702 | 000002 | | SUB | #2,R2 | | | ;PUT POINTER BACK TO ADDR. |
| 5735 | 041330 | 010237 | 007414 | | MOV | R2,CPTRR | | | ;AND RESTORE IT. |
| 5736 | 041334 | | | | UPTEX: | | | | |
| 5737 | 041334 | 022737 | 000002 | 007470 | CMP | #PAS,MODTYP | | | |
| 5738 | 041342 | 001007 | | | BNE | ALCK2A | | | ;IF NOT PASSIVE LOOP THEN GO TO 2A |
| 5739 | 041344 | 042737 | 000104 | 007502 | BIC | #QRX+#ERX,FLAG | | | ;CLEAR BOTH EXPECTED AND COMPLETED FLAGS |
| 5740 | 041352 | 052737 | 000210 | 007502 | BIS | #QTX+#ETX,FLAG | | | ;SET THE TX FLAGS |
| 5741 | 041360 | 000646 | | | BR | ALCK1 | | | |
| 5742 | | | | | | | | | |
| 5743 | 041362 | 005337 | 007366 | | ALCK2A: | DEC | DVRCT | | ;DEC REC COUNT |
| 5744 | 041366 | 005737 | 007366 | | TST | DVRCT | | | ;IS IT ALL DONE |
| 5745 | 041372 | 001005 | | | BNE | ALCK3 | | | ;NO. GO CHECK TX |
| 5746 | 041374 | 042737 | 000004 | 007502 | BIC | #QRX,FLAG | | | ;CLEAR THE RX FLAG |
| 5747 | 041402 | 005037 | 007414 | | CLR | CPTRR | | | ;YES. CLEAR POINTER |
| 5748 | 041406 | 032737 | 000010 | 007502 | ALCK3: | BIT | #QTX,FLAG | | ;IS IT TX |
| 5749 | 041414 | 001447 | | | BEQ | ALCK4 | | | ;IF NOT TX THEN GO BACK |
| 5750 | 041416 | 013737 | 007346 | 007432 | MOV | DVTXA,TEMP2 | | | |
| 5751 | 041424 | 013737 | 007350 | 007434 | MOV | DVTCC,TEMP3 | | | ;LOG TX COMPLETED |
| 5752 | 041432 | 004737 | 026370 | | JSR | PC,LOGTXC | | | |
| 5753 | 041436 | 005337 | 007352 | | DEC | DVICT | | | ;DEC TX COUNT |

CZCLKC0 DMR,DMC-11 DATA COMM. LINK TEST
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 TRANSMIT - RECEIVE FOR ALL STANDARD MODES

| | | | | | | | |
|------|--------|--------|--------|--------|-------------|---------------|-------------------------------|
| 5754 | 041442 | 022737 | 000002 | 007470 | CMP | #PAS,MODTYP | |
| 5755 | 041450 | 001013 | | | BNE | ALCK3A | :IF NOT PASSIVE MODE GO TO 3A |
| 5756 | 041452 | 042737 | 000210 | 007502 | BIC | #QTX+ETX,FLAG | :CLEAR THE TX FLAGS |
| 5757 | 041460 | 052737 | 000104 | 007502 | BIS | #QRX+ERX,FLAG | :AND SET THE RX FLAGS |
| 5758 | 041466 | 005737 | 007352 | | TST | DVTCT | |
| 5759 | 041472 | 001005 | | | BNE | ALCK3C | :IF MORE RX'S DO IT |
| 5760 | 041474 | 000137 | 041554 | | JMP | CMPSR | : ELSE COMPARE |
| 5761 | 041500 | 005737 | 007352 | | ALCK3A: TST | DVTCT | :IS IT ALL DONE |
| 5762 | 041504 | 001402 | | | BEQ | ALCK3B | :IF NOT GO BACK TO 5 |
| 5763 | 041506 | 000137 | 041026 | | ALCK3C: JMP | ALCK5 | |
| 5764 | 041512 | 005037 | 007416 | | ALCK3B: CLR | CPTR | :IF SO CLEAR POINTER |
| 5765 | 041516 | 042737 | 000010 | 007502 | BIC | #QTX,FLAG | :CLEAR TX FLAG |
| 5766 | 041524 | 032737 | 000002 | 007476 | BI | #DATCKB,PARAM | :IS IT DAT CK |
| 5767 | 041532 | 001403 | | | BF | ALCK4A | :IF NOT THEN END WO CKING RX. |
| 5768 | 041534 | 005737 | 007414 | | ALCK4: TST | CPTRR | |
| 5769 | | | | | | | |
| 5770 | 041540 | 001362 | | | BNE | ALCK3C | :IF SOME RX'S LEFT GO BACK |
| 5771 | 041542 | 005737 | 007416 | | ALCK4A: TST | CPTR | |
| 5772 | 041546 | 001402 | | | BEQ | ALCK4B | :BRANCH IF ANY TX'S LEFT |
| 5773 | 041550 | 000137 | 041142 | | JMP | ALCK2 | |
| 5774 | 041554 | | | | ALCK4B: | | |
| 5775 | | | | | | | |
| 5776 | | | | | | | |
| 5777 | | | | | | | |

CZCLKCQ DMR,DMC-11 DATA COMM. LINK TEST
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DATA COMPARISON CODE

.SBTTL DATA COMPARISON CODE

++
FUNCTIONAL DESCRIPTION:

CMPSR - COMPARE CODE
THIS CODE COMPARES THE RECEIVED DATA AGAINST THE
EXPECTED AND FILLS THE EVENT LOG WITH 1 OF 3 MSGS.

NOTE: IF NO DATA CHECKING SKIP THIS CODE

- 1.) A DATA COMPARISON ENTRY WHICH REPORTS THE NUMBER OF COMPARISON ERRORS FOUND.
- 2.) A DATA COMPARISON ENTRY WHICH REPORTS DIFFERENCES IN REC LENGTH TO COMPARE LENGTH.
- 3.) A DATA COMPARISON STARTED ENTRY WHICH REPORTS ADDRESS OF RECEIVE BUFFER AND BYTE COUNT.
THIS CODE ALSO REPORTS SOFT ERRORS FOR DATA COMPARISON (THE FIRST 5 ONLY),LENGTH ERROR,AND TOTAL NUMBER OF ERRORS

SUBORDINATE ROUTINES USED:

'LOGCMP' - SEE ITEM 3 ABOVE
'LOGCML' - SEE ITEM 2 ABOVE
'LOGCMD' - SEE ITEM 1 ABOVE

CALLING SEQUENCE:

JMP CMPSR ;JUMP TO DATA COMPARISON CODE

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5810 041554 032737 000002 007476
5811 041562 001522
5812 041564 013737 007332 007416
5813 041572 013737 007336 007414
5814 041600 013737 007370 007366
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5816 041606
5817 041606 013702 007416
5818 041612 011237 007432
5819 041616 012201
5820 041620 012237 007434
5821 041624 010237 007416
5822
5823 041630 013702 007414
5824 041634 012203
5825 041636 012204
5826 041640 010237 007414
5827 041644 010437 007436
5828 041650 004737 026520
5829
5830 041654 020437 007434
5831 041660 001410
5832 041662 005237 007400
5833 041666

CMPSR: BIT #DATCKB,PARAM ;IS DATA CHECKING TO BE DONE
BEQ CMPSEX ;IF NOT THEN EXIT
MOV RXPTR,CPTR ;PUT START OF RX POINTERS TO CPTR
MOV CMPPTR,CPTRR ; AND START OF COMPARE POINTS TO CPTRR
MOV RXMTOT,DVRCT

CMPS3:
MOV CPTR,R2 ;MOVE CURRET RX PT.TO R2
MOV (R2),TEMP2 ;MOVE RX ADD TO EVENT LOG
MOV (R2)+,R1 ;SET R1 TO START ADD OF RX
MOV (R2)+,TEMP3 ;SET CHAR COUNT TO FVENT LOG
MOV R2,CPTR ;RESTORE RX POINT

MOV CPTRR,R2 ;PUT R2 AT COMPARE TABLE
MOV (R2)+,R3 ;SET R3 TO COMPARE ADD
MOV (R2)+,R4 ;SET R4 TO COMP CC
MOV R2,CPTRR ;RESTORE POINTER
MOV R4,TEMP4
JSR PC,LOGCMP ;LOG COMPARE START.

CMP R4,TEMP3 ;IS COMPARE COUNT = TO RX COUNT
BEQ CMPS7 ;IF SO GO TO 7
INC ERRCNT
ERRSOFT 1,EDDLE,ERR10 ;PRINT ERROR

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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DATA COMPARISON CODE

| | | | | | | | | | |
|------|--------|--------|--------|--------|---------|-----------|--------------|-------|-----------|
| 5834 | 041666 | 104457 | | | | | | TRAP | C\$ERSOFT |
| 5835 | 041670 | 000001 | | | | | | .WORD | 1 |
| 5836 | 041672 | 016052 | | | | | | .WORD | EDDLE |
| 5837 | 041674 | 025720 | | | | | | .WORD | ERR10 |
| 5838 | 041676 | 004737 | 026536 | | JSR | PC,LOGCML | | | |
| 5839 | | | | | | | | | |
| 5840 | 041702 | 005037 | 007436 | | CMPS7: | CLR | TEMP4 | | |
| 5841 | 041706 | 012737 | 000001 | 007424 | | MOV | #1,OFSET | | |
| 5842 | 041714 | 122123 | | | CMPS1: | CMPB | (R1)+,(R3)+ | | |
| 5843 | 041716 | 001422 | | | | BEQ | CMPS6 | | |
| 5844 | | | | | | | | | |
| 5845 | 041720 | 005237 | 007436 | | CMPS2: | INC | TEMP4 | | |
| 5846 | 041724 | 023727 | 007436 | 000005 | | CMP | TEMP4,#5 | | |
| 5847 | 041732 | 101014 | | | | BHI | CMPS6 | | |
| 5848 | 041734 | 114337 | 007446 | | | MOVB | -(R3),GOOD | | |
| 5849 | 041740 | 114137 | 007447 | | | MOVB | -(R1),BAD | | |
| 5850 | 041744 | 005237 | 007400 | | | INC | ERRCNT | | |
| 5851 | 041750 | | | | | ERRSOFT | 2,EDDDE,ERR1 | | |
| 5852 | 041750 | 104457 | | | | | | | |
| 5853 | 041752 | 000002 | | | | | | TRAP | C\$ERSOFT |
| 5854 | 041754 | 016107 | | | | | | .WORD | 2 |
| 5855 | 041756 | 025630 | | | | | | .WORD | EDDDE |
| 5856 | 041760 | 005201 | | | | | | .WORD | ERR1 |
| 5857 | 041762 | 005203 | | | | INC | R1 | | |
| 5858 | 041764 | 005237 | 007424 | | CMPS6: | INC | R3 | | |
| 5859 | 041770 | 005304 | | | | INC | OFSET | | |
| 5860 | 041772 | 001350 | | | | DEC | R4 | | |
| 5861 | 041774 | 005737 | 007436 | | | BNE | CMPS1 | | |
| 5862 | 042000 | 001410 | | | | TST | TEMP4 | | |
| 5863 | 042002 | 005237 | 007400 | | | BEQ | CMPS5A | | |
| 5864 | 042006 | | | | | INC | ERRCNT | | |
| 5865 | 042006 | 104457 | | | | ERRSOFT | 3,EDDDE,ERR2 | | |
| 5866 | 042010 | 000003 | | | | | | | |
| 5867 | 042012 | 016107 | | | | | | TRAP | C\$ERSOFT |
| 5868 | 042014 | 025672 | | | | | | .WORD | 3 |
| 5869 | 042016 | 004737 | 026554 | | CMPS5: | JSR | PC,LOGCMD | | |
| 5870 | 042022 | | | | CMPS5A: | | | | |
| 5871 | 042022 | 005337 | 007366 | | | DEC | DVRCT | | |
| 5872 | 042026 | 001267 | | | | BNE | CMPS3 | | |
| 5873 | | | | | | | | | |

;LOG LENGTH ERROR

;CLEAR BAD BYTE COUNTER
;SET OFSET BYTE COUNT TO 1
;COMPARE RX WITH EXPETED
;IF EQUAL THEN GO TO 6;INC BAD COUNT
;IS IT MORE THEN 5
;IF SO GO FOR MORE
;STORE GOOD BYTE FOR ERROR
;STORE BAD BYTE FOR ERROR

;REPORT COMPARISON FAILURE TO OPR.

;INC OFFSET
;ELSE DEC CHAR COUNT AND SEE IF 0
;IF NOT GO BACK
;SEE IF ANY CMP ERRS FOR THIS MSG
;BR IF NONE

;REPORT # OF MISMATCHES FOR MESSAGE

;LOG DATA ERROR IN COMPARE

;IF NOT ALL DONE GO BACK

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 INTERNAL END OF PASS CODE

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5874          .SBTTL          INTERNAL END OF PASS CODE
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5876
5877          :++
5878          : FUNCTIONAL DESCRIPTION:
5879          :   THIS CODE INCREMENTS THE PASS COUNT FOR THE
5880          :   EVENT LOG. LOGS THE END OF PASS EVENT
5881          :   IF 'RPASS' IS A MINUS ONE RETURN TO MODE
5882          :   DISPATCHER. IF NOT -1 THEN DECREMENT RPASS
5883          :   AND IF 'RPASS' IS THEN = TO 0 GO TO DCLT PROMT
5884          :   IN NOT = TO 0 THEN GO BACK TO MODE DISPATCHER
5885
5886          : SUBORDINATE ROUTINES USED:
5887          :
5888          :   'LOGEOP' - LOG END OF PASS TO EVENT LOG
5889          :-----
5890
5891 042030 005237 007376      CMPSEX: INC      PSCNT          ;BUMP PASS COUNT
5892
5893 042034 013737 007374 007436      MOV      NOBUF,TEMP4
5894 042042 013737 007376 007432      MOV      PSCNT,TEMP2
5895 042050 013737 007400 007434      MOV      ERRCNT,TEMP3
5896 042056 004737 026572          JSR      PC,LOGEOP          ;LOG END OF PASS
5897 042062 022737 177777 007500 5$:  CMP      #-1,RPASS          ;SEE IF RPASS=-1
5898 042070 001403          BEQ      1$                ;IF IT IS DON'T DECRMNT, LOOP FOREVER
5899 042072 005337 007500          DEC      RPASS            ;DEC PASS COUNT
5900 042076 001402          BEQ      2$                ;IF DONE EXIT TEST
5901 042100 000137 040570 1$:      JMP      GTRX2            ;ELSE GO BACK AND DISPATCH
5902 042104 004737 045774 2$:      JSR      PC,DVBTUP        ;GO UPDATE BASE TABLE
5903 042110 000137 035270          JMP      GTRAS            ;WHEN RPASS=0 GO BACK TO 'DCLT>'
5904

```

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DOWN-LINE-LOAD SECTION

.SBTTL DOWN-LINE-LOAD SECTION

++
FUNCTIONAL DESCRIPTION:
DOWN-LINE-LOAD SECTION
IN THIS MODE OF TESTING THE 'HOST' OR ORIGINATING STATION
REQUESTS THE 'SATELLITE' OR BOOT STATION TO ENTER MOP MODE.
THE BOOT STATION THEN SENDS A 'REQUEST PROGRAM MESSAGE'.
THE 'HOST' THEN SENDS A 'MEMORY LOAD WITH TRANSFER ADDRESS'.
THAT CONTAINS IMAGE DATA TO BE LOADED BY THE BOOT STATION'S
M9312 STARTING AT LOC. 0. THIS IMAGE DATA WILL CONTAIN A
PROGRAM THAT WILL PRINT A MSG THAT DOWN-LINE-LOAD WAS SUCCESSFUL.

SUBORDINATE ROUTINES USED.

'DLTXRX' - SPECIAL TX RX ROUTINE FOR DLL
'DVRXQ' - QUE RX BUFFER SPACE TO DEVICE
'LOGRXQ' - LOG RX SPACE QUED TO EVENT LOG
'LOGTXQ' - LOG TX BUFFER QUED TO EVENT LOG
'DVTXRX' - QUE TX BUFFER AND WAIT FOR RX OR .X TO COMPLETE
'LOGTXC' - LOG TX COMPLETED TO EVENT LOG
'LOGRXC' - LOG RX COMPLETED TO EVENT LOG

CALLING SEQUENCE:

JMP @MODE(R2) ;DISPATCH TO MODE BASED ON MODE TYPE IN R2

--
DLL: GMANID DLLQ1,TEMP3,0,377,0,377,NO ;GET PASSWORD

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5932 042114
5933 042114 104443
5934 042116 000406
5935 042120 007434
5936 042122 000022
5937 042124 013126
5938 042126 000377
5939 042130 000000
5940 042132 000377
5941 042134
5942 042134 113737 007434 002650
5943 042142 113737 007434 002651
5944 042150 113737 007434 002652
5945 042156 113737 007434 002653
5946 042164 052737 000100 007502
5947 042172 042737 000002 007476
5948 042200 012737 002647 007420
5949 042206 013737 002172 007412
5950 042214 004737 042306
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5954 042220 012737 002654 007420
5955 042226 013737 002174 007412
5956 042234 042737 000400 007502
5957 042242 004737 042306
5958
5959
5960 042246

TRAP CSGMAN
BR 10001\$
.WORD TEMP3
.WORD T\$CODE
.WORD DLLQ1
.WORD 377
.WORD T\$LOLIM
.WORD T\$HILIM

10001\$:
;PUT PASSWORD IN MESSAGE
;PASSWORD IS DUPLICATE
;:HERE
;:AND HERE.
;SET EXPECTED TO RX
;CLEAR NOCHECK
;SET THE DOWN LINE LOAD MSG TO #1
;SET THE CC
;GO TO THE DOWN LINE TX RX ROUTINE

;RETURN WHEN TX AND RX ARE COMPLETED

MOV #DLLM2,CURADD ;SET THE DOWN LINE LOAD MSG TO #2
MOV DLLM2C,CURCC ;SET CC
BIC #DLLGA,FLAG ;CLEAR THE GO AHEAD FLAG
JSR PC,DLTXRX ;GO TO THE DOWN LINE TX RX ROUTINE

; RETURN WHEN TX AND RX ARE COMPLETED

DLLPRI:

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DOWN-LINE-LOAD SECTION

| | | | | | | | | | |
|------|--------|--------|--------|--------|---------|----------------|----------------|--------------|-------------------------------|
| 5961 | 042246 | | | | PRINTF | #DLLCM | | | |
| 5962 | 042246 | 012746 | 015034 | | | | MOV | #DLLCM,-(SP) | |
| 5963 | 042252 | 012746 | 000001 | | | | MOV | #1,-(SP) | |
| 5964 | 042256 | 010600 | | | | | MOV | SP,R0 | |
| 5965 | 042260 | 104417 | | | | | TRAP | C\$PNTF | |
| 5766 | 042262 | 062706 | 000004 | | | | ADD | #4,SP | |
| 5967 | 042266 | 000137 | 035270 | | JMP | GTRA5 | | | |
| 5968 | | | | | | | | | |
| 5969 | 042272 | | | | DLLEA: | | | | |
| 5970 | 042272 | | | | | ERRHRD | 20,DLLAB,ERR14 | | |
| 5971 | 042272 | 104456 | | | | | | TRAP | C\$ERHRD |
| 5972 | 042274 | 000074 | | | | | | .WORD | 20 |
| 5973 | 042276 | 025214 | | | | | | .WORD | DLLAB |
| 5974 | 042300 | 026142 | | | | | | .WORD | ERR14 |
| 5975 | | | | | | | | | |
| 5976 | 042302 | 000137 | 035270 | | JMP | GTRA5 | | :PRINT | ABORT AND EXIT |
| 5977 | | | | | | | | | |
| 5978 | | | | | | | | | |
| 5979 | | | | | | | | | |
| 5980 | 042306 | | | | DLTXRX: | | | | |
| 5981 | 042306 | 052737 | 000004 | 007502 | BIS | #QRX,FLAG | | :SET | THE QUE RX FLAG |
| 5982 | 042314 | 012737 | 004562 | 007362 | MOV | #RXBUF,DVRXA | | :SET | THE DEVICE RX BUFFER TO RXBUF |
| 5983 | 042322 | 012737 | 004562 | 007432 | MOV | #RXBUF,TEMP2 | | :SET | UP FOR LOG |
| 5984 | 042330 | 012737 | 000400 | 007364 | MOV | #256.,DVRCC | | :SET | UP FOR CC OF 256 |
| 5985 | 042336 | 012737 | 000400 | 007434 | MOV | #256.,TEMP3 | | :SET | UP FOR LOG |
| 5986 | 042344 | 004737 | 044104 | | JSR | PC,DVRXQ | | :GO | QUE RX |
| 5987 | 042350 | 004737 | 026406 | | JSR | PC,LOGRXQ | | :AND | LOG IT... |
| 5988 | | | | | | | | | |
| 5989 | 042354 | 013737 | 007420 | 007346 | MOV | CURADD,DVTXA | | :SET | UP FOR TX |
| 5990 | 042362 | 013737 | 007420 | 007432 | MOV | CURADD,TEMP2 | | :AND | LOG |
| 5991 | 042370 | 013737 | 007412 | 007350 | MOV | CURCC,DVTCC | | :SE | UP FOR TX COUNT |
| 5992 | 042376 | 013737 | 007412 | 007434 | MOV | CURCC,TEMP3 | | :AND | LOG IT |
| 5993 | 042404 | 004737 | 026352 | | JSR | PC,LOGTXQ | | :LOG | THE TX QUEUED |
| 5994 | 042410 | 052737 | 000210 | 007502 | BIS | #QTX+#ETX,FLAG | | :SET | UP TO QUE AND EXPECTED |
| 5995 | 042416 | 004737 | 044164 | | JSR | PC,DVTXRX | | :GO | TO DEVICE ROUTINE |
| 5996 | 042422 | 032737 | 000400 | 007502 | BIT | #DLLGA,FLAG | | :TEST | FOR GO AHEAD BIT |
| 5997 | 042430 | 001047 | | | BNE | DLLE1 | | :IF | SET GO TO ONE |
| 5998 | 042432 | 032737 | 000010 | 007502 | BIT | #QTX,FLAG | | :ELSE | CHECK FOR TX DONE |
| 5999 | 042440 | 001020 | | | BNE | DLLE6 | | :IF | DONE THEN BRANCH |
| 6000 | | | | | | | | :ELSE | ERROR |
| 6001 | 042442 | 012737 | 025521 | 007442 | MOV | #TXNC,CONOTM | | | |
| 6002 | 042450 | 013737 | 004562 | 007434 | DLLE7: | MOV | RXBUF,TEMP3 | | |
| 6003 | 042456 | 013737 | 003562 | 007436 | MOV | TXBUF,TEMP4 | | | |
| 6004 | 042464 | 012737 | 025214 | 007432 | MOV | #DLLAB,TEMP2 | | | |
| 6005 | 042472 | 004737 | 026434 | | JSR | PC,LGDVE | | :LOG | ERROR |
| 6006 | 042476 | 000137 | 042272 | | JMP | DLLEA | | :ABORT | TEST |
| 6007 | | | | | | | | | |
| 6008 | 042502 | 013737 | 007346 | 007432 | DLLE6: | MOV | DVTXA,TEMP2 | | |
| 6009 | 042510 | 013737 | 007350 | 007434 | MOV | DVTCC,TEMP3 | | | |
| 6010 | 042516 | 004737 | 026370 | | JSR | PC,LOGTXC | | :LOG | TX DONE |
| 6011 | 042522 | 042737 | 000210 | 007502 | BIC | #QTX+#ETX,FLAG | | :CLEAR | QUE AND EXPECTED |
| 6012 | 042530 | 052737 | 000400 | 007502 | BIS | #DLLGA,FLAG | | :SET | THE GO AHEAD BIT |
| 6013 | 042536 | 023737 | 002174 | 007350 | CMP | DLLM2C,DVTCC | | | |
| 6014 | 042544 | 001472 | | | BEQ | DLLE5 | | :EXIT | IF SECOND MSG. |
| 6015 | 042546 | 000723 | | | BR | DLLE2 | | :AND | GO BACK TO 2 |
| 6016 | 042550 | 032737 | 000004 | 007502 | DLLE1: | BIT | #QRX,FLAG | :IS | THE A RX COMPLETED |

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TALK MODE SECTION

.SBTTL TALK MODE SECTION

++
FUNCTIONAL DESCRIPTION:
TALK MODE SECTION
IN THIS MODE, THE "TALK" END OF THE LINK TRANSMITS OPERATOR
SPECIFIED MESSAGES UNTIL A "EXIT" MESSAGE IS TYPE. AT THAT POINT,
THIS END OF THE LINK GOES INTO "LISTEN" MODE.

SUBORDINATE ROUTINES USED:
"LOGTXQ" - LOG TX BUFFER QUED TO EVENT LOG
"DVTXRX" - QUE TX BUFFER TO DEVICE AND WAIT FOR COMPLETE
"LOGTXC" - LOG TX COMPLETE TO EVENT LOG
CALLING SEQUENCE:
JMP @MODE(R2) ;DISPATCH TO MODE BASED ON MODE TYPE IN R2

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6074 042734
6075 042734 042737 000002 007476
6076 042742 012702 002524
6077 042746 012722 177777
6078 042752 022702 002646
6079 042756 001373
6080 042760
6081 042760 104443
6082 042762 000406
6083 042764 002524
6084 042766 000142
6085 042770 014770
6086 042772 000000
6087 042774 000001
6088 042776 000110
6089 043000
6090 043000 005002
6091 043002 122762 000377 002524 2\$:
6092 043010 001402
6093 043012 005202
6094 043014 000772
6095 043016 010237 002166 3\$:
6096
6097 043022 012737 002524 007346
6098 043030 012737 002524 007432
6099 043036 013737 002166 007434
6100 043044 013737 002166 007350
6101 043052 004737 026352
6102 043056 052737 000210 007502
6103 043064 005037 007414
6104
6105 043070 004737 044164
6106
6107 043074 013737 007346 007432
6108 043102 013737 007350 007434
6109 043110 004737 026370
6110 043114 022737 054105 002524

TALCK:
BIC #DATCKB,PARAM ;SET NOCHECK
MOV #OPBUF,R2
1\$: MOV #-1,(R2)+ ;CLEAR OUT OPBUFFER FIRST
CMP #OPEND,R2
BNE 1\$
GMANID OPRMM,OPBUF,A,0,1,72.,NO ;GET TALK MESSAGE
TRAP CS\$GMAN
BR 10002\$
.WORD OPBUF
.WORD T\$CODE
.WORD OPRMM
.WORD 0
.WORD T\$LOLIM
.WORD T\$HILIM
10002\$:
CLR R2 ;NOW GET CHAR COUNT
2\$: CLPB #377,OPBUF(R2)
BEQ 3\$
INC R2
BR 2\$
3\$: MOV R2,OPCNT
MOV #OPBUF,DVTXA ;SET UP TX ADDR.
MOV #OPBUF,TEMP2
MOV OPCNT,TEMP3
MOV OPCNT,DVTCC ;SET UP TX CC
JSR PC,LOGTXQ
BIS #QTX+METX,FLAG ;SET UP FLAGS
CLR CPTRR ;CLEAR RX POINTER
JSR PC,DVTXRX
MOV DVTXA,TEMP2
MOV DVTCC,TEMP3
JSR PC,LOGTXC
CMP #'EX,OPBU\$;CHECK FOR EXIT

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TALK MODE SECTION

| | | | | |
|------|--------|--------|--------|--------|
| 6111 | 043122 | 001304 | | |
| 6112 | 043124 | 022737 | 052111 | 002526 |
| 6113 | 043132 | 001300 | | |
| 6114 | 043134 | 042737 | 000210 | 007502 |
| 6115 | 043142 | 012737 | 000006 | 007470 |
| 6116 | 043150 | 000137 | 040570 | |

| | | |
|-----|----------------|--------------------------|
| BNE | TALCK | |
| CMP | #'IT,OPBUF+2 | |
| BNE | TALCK | |
| BIC | #QTX+#ETX,FLAG | :CLEAR THE TX BITS |
| MOV | #LIS,MODTYP | :CHANGE TO LISTEN MODE |
| JMP | GTRX2 | :AND GO BACK TO DISPATCH |

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LISTEN MODE SECTION

.SBTTL LISTEN MODE SECTION

++
FUNCTIONAL DESCRIPTION:
LISTEN MODE SECTION
IN THIS MODE, THE 'LISTEN' END OF THE LINK PRINTS ALL OF THE MESSAGES
RECEIVED BY THE DEVICE ON THE OPERATOR'S CONSOLE. IF THE MESSAGE
RECEIVED IS AN 'EXIT' MESSAGE, THEN THE NODE ENTERS 'TALK' MODE.

SUBORDINATE ROUTINES USED:
'DVRXQ' - QUE RECEIVE BUFFER SPACE TO DEVICE
'LOGRXQ' - LOG RECEIVE BUFFER QUED TO EVENT LOG
'DVTXRX' - WAIT FOR RX TO COMPLETE
'LOGRXC' - LOG RX COMPLETE TO EVENT LOG

CALLING SEQUENCE:
JMP @MODE(R2) ;DISPATCH TO MODE BASED ON MODE TYPE IN R2

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6136
6137 043154 042737 000002 007476 LISCK: BIC #DATCKB,PARAM ;CLEAR CHECK BIT
6138 043162 PRINTF #LISP ;PRINT PROMPT FOR OPR.
6139 043162 012746 J14757 MOV #LISP,-(SP)
6140 043166 012746 000001 MOV #1,-(SP)
6141 043172 010600 MOV SP,R0
6142 043174 104417 TRAP C$PNTF
6143 043176 062706 000004 ADD #4,SP
6144 043202 012737 002524 007362 LISCKA: MOV #OPBUF,DVRXA ;SET DEVICE UP TO REC AT OPBUF
6145 043210 012737 002524 007432 MOV #OPBUF,TEMP2
6146 043216 012737 000122 007364 MOV #82.,DVRCC ;SET UP CHAR COUNT TO 82.
6147 043224 012737 000122 007434 MOV #82.,TEMP3
6148 043232 052737 000104 007502 BIS #QRX+#ERX,FLAG ;SET UP FLAG
6149 043240 005037 007416 CLR CPTR ;CLEAR THE TX.
6150
6151 043244 004737 044104 JSR PC,DVRXQ ;QUE RX
6152 043250 004737 026406 JSR PC,LOGRXQ
6153
6154 043254 004737 044164 JSR PC,DVTXRX ;GO TO DEVICE RX. SUBROUTINE
6155
6156 043260 013737 007362 007432 MOV DVRXA,TEMP2
6157 043266 013737 007364 007434 MOV DVRCC,TEMP3 ;SET UP ADDR.AND CC.
6158 043274 004737 026424 JSR PC,LOGRXC ;LOG COMPLETED
6159 043300 063737 007362 007364 ADD DVRXA,DVRCC
6160 043306 105077 144052 CLR @DVRCC
6161 043312 PRINTF #OPBFPT
6162 043312 012746 002520 MOV #OPBFPT,-(SP)
6163 043316 012746 000001 MOV #1,-(SP)
6164 043322 010600 MOV SP,R0
6165 043324 104417 TRAP C$PNTF
6166 043326 062706 000004 ADD #4,SP
6167 043332 022737 054105 002524 CMP #'EX,OPBUF ;COMPARE FOR EX OF 'EXIT'
6168 043340 001320 BNE LISCKA ;IF NOT EXIT THEN GO BACK
6169 043342 022737 052111 002526 CMP #'IT,OPBUF+2 ;IF FIRST HALF OK CHECK NEXT PART
6170 043350 001314 BNE LISCKA ;IF NOT EXIT THE GO BACK
6171 043352 012737 000005 007470 MOV #TAL,MODTYP ;CHANGE MODE TO TALK
6172 043360 000137 040570 JMP GTRX2 ;RETURN TO DISPATCHER

```

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LISTEN MODE SECTION

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 DEVICE FUNCTION SUBROUTINES

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6175 .SBTTL DEVICE FUNCTION SUBROUTINES
6176
6177
6178
6179
6180 .SBTTL DEVICE INIT SUBROUTINE
6181
6182
6183 :++
6184 FUNCTIONAL DESCRIPTION:
6185 DVINIT- DEVICE INIT ROUTINE
6186 THIS ROUTINE IS DEVICE DEPENDENT CODE THAT INITIS
6187 THE DEVICE BEING TESTED. (I.E. FULL/HALF DUPLEX BAUD RATE, MAINT MODE.)
6188
6189 INPUTS: 'FHDPLX' INDICATES IF MODE IS FULL OR HALF DUPLEX. (1=FULL)
6190 ADDRESS POINTERS (SELO,...) ALREADY POINT TO DEVICE'S REG.S
6191
6192 SUBORDINATE ROUTINES USED:
6193
6194 'LGDVE' - LOG DEVICE ERROR TO EVENT LOG
6195 'TOORIO' - TIME OUT OR INPUT INTERRUPT OR OUTPUT INTERRUPT
6196 'CLR' - CLEAR RQI AND WAIT FOR RDI TO GO AWAY
6197
6198
6199 CALLING SEQUENCE:
6200 JSR PC,DVINIT
6201
6202
6203 DVINIT:
6204 ;MASTER CLEAR DEVICE
6205
6206 043364 012737 000100 007542 MOV #100,TIMER1 ;SET UP TIMER 1 FOR 100(OCTAL) TICKS
6207 043372 005077 147002 CLR @SEL6
6208 043376 005077 146772 CLR @SEL4
6209 043402 012777 040000 146754 MOV #MCLR,@SELO ;DO A MASTER CLEAR
6210
6211 043410 022737 000004 012412 CMP #DMRC6,OPTYP ;IS THIS A 8206
6212 043416 001003 BNE DVIN6 ;IF NOT GO TO 6
6213 043420 112777 000200 146740 MOVB #200,@BSEL1 ;SET RUN FOR 8206
6214 043426 022737 000006 012412 DVIN6: CMP #DMR6,OPTYP ;IS THIS AN 8206 DMR
6215 043434 001003 BNE DVIN2 ;IF NOT GO TO 2
6216 043436 112777 000200 146722 MOVB #200,@BSEL1 ;SET RUN BIT FOR 8206
6217
6218 043444 005777 146714 DVIN2: TST @SELO ;IS RUN BIT SET
6219 043450 100426 BMI DVIN1 ;IF YES GO TO 1 ELSE...
6220 043452 BREAK
6221 043452 104422
6222 043454 005737 007542 TST TIMER1 ;SEE IF TIME HAS EXPIRED TRAP CSBRK
6223 043460 001371 BNE DVIN2 ;IF NOT GO BACK AND CHECK
6224 ;AGAIN ELSE...PRINT ERROR
6225 043462 012737 024424 007432 MOV #DVEM3,TEMP2
6226 043470 017737 146670 007434 MOV @SELO,TEMP3
6227 043476 017737 146666 007436 MOV @SEL2,TEMP4 ;LOAD UP ERRM. AND REG OUTPUTS
6228 043504 004737 026434 JSR PC,LGDVE ;LOG TIME OUT WAITING FOR RUN
6229 043510 005237 007400 INC ERRCNT
6230 043514 ER,SOFT 11,DVEM3,ERR13
    
```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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DEVICE INIT SUBROUTINE

TRAP C\$ERSOFT
.WORD 11
.WORD DVEM3
.WORD ERR13

```

6231 043514 104457
6232 043516 000013
6233 043520 024424
6234 043522 026110
6235
6236 043524 000717
6237
6238 043526
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6242 043526 042737 000003 007502
6243 043534 112777 000143 146622
6244 043542 004737 045012
6245 043546 012777 017370 146620
6246
6247 043554 012777 000000 146616
6248 043562 023727 012412 000006
6249 043570 002403
6250 043572 012777 000522 146600
6251 043600 052777 000100 146562
6252 043606 042777 004000 146550
6253 043614 022737 000001 007472
6254 043622 001003
6255 043624 052777 004000 146532
6256 043632 004737 044704
6257
6258
6259
6260 043636 023727 012412 000006
6261 043644 002437
6262 043646 112777 000145 146510
6263 043654 004737 045012
6264 043660 042777 000014 146512
6265 043666 022737 000004 007472
6266 043674 001003
6267 043676 052777 000004 146474
6268 043704 022737 000003 007472
6269 043712 001003
6270 043714 052777 000010 146456
6271 043722 004737 044704
6272
6273
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6276 043726 112777 000146 146430
6277 043734 004737 045012
6278 043740 004737 044704
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6280
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6282 043744 112777 000141 146412
6283 043752 004737 045012
6284 043756 005077 146416
6285 043762 022737 000004 007470
6286 043770 001004

```

```

BR DVINIT ;GO BACK AND TRY MSTR CLR AGAIN IF ERROR

DVIN1:
; DO BASE IN COMMAND

BIC #3,FLAG ;CLEAR INPUT AND OUTPUT INT FLAGS
MOVB #143,@BSEL0 ;SET UP BASE IN INT EN
JSR PC,TOORIO ;GO WAIT FOR INTERRUPT OR TIME OUT
MOV #BASE,@SEL4

MOV #0,@SEL6 ;SET UP SEL 6
CMP OPTYP,#6 ;IS THIS DMR MODE
BLT DVIN7 ;IF NOT GO TO 7
MOV #522,@SEL6 ;SET DMR MODE
DVIN7: BIS #IEO,@SEL2 ;SET IEO
BIC #LULOOP,@SELO ;CLEAR LU LOUP
CMP #TTL,MLTYP ;IS TTL SELECTED
BNE DVIN3 ; IF NOT GO TO 3
DVIN3: BIS #LULOOP,@SELO ;ELSE SET LU LOOP
JSR PC,CLRAW

; DO WRITE MODEM IF DMR MODE

CMP OPTYP,#6 ;IS THIS DMR MODE
BLT DVIN8 ;IF NOT GO TO 8
MOVB #145,@BSEL0 ;SET UP WRITE MODEM
JSR PC,TOORIO ;GO TO WAIT FOR INT
BIC #BIT2+#BIT3,@SEL6 ;CLEAR BSEL6 AND 7
CMP #MODREM,MLTYP ;IS THIS REMOTE LOOP
BNE DVIN9 ;IF NOT GO TO 9
DVIN9: BIS #BIT2,@BSEL6 ;SET THE BIT
CMP #MODLOC,MLTYP ;IS IT MODEM LOCAL
BNE DVIN10 ;IF NOT EXIT
DVIN10: BIS #BIT3,@BSEL6 ;SET MODEM LOCAL
JSR PC,CLRAW ;CLEAR RDI AND WAIT

; ENABLE EXTENDED ERROR IF DMR MODE

MOVB #146,@BSEL0 ;SET UP FOR ENABLE
JSR PC,TOORIO
JSR PC,CLRAW ;CLEAR RDI AND WAIT

; DO CONTROL IN COMMAND

DVIN8: MOVB #141,@BSEL0 ;SET UP CONTROL IN
JSR PC,TOORIO ;WAIT FOR INT OR TIME OUT
CLR @SEL6 ;CLEAR HALF/DUP
CMP #DOW,MODTYP ;IS THIS DOWN LINE LOAD?
BNE DVIN5 ; BR IF NOT

```

CZCLKC DMR,DMC-11 DATA COMM. LINK TEST
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DEVICE INIT SUBROUTINE

| | | | | | | | |
|------|--------|--------|--------|--------|---------|----------------------|---------------------------------|
| 6287 | 043772 | 052777 | 002400 | 146400 | BIS | #MAINTB+HALFDB,@SEL6 | :IF SO SET MAINT MODE BIT |
| 6288 | 044000 | 000406 | | | BR | DVIN4 | : AND FORCE HALF DUPLEX |
| 6289 | | | | | | | |
| 6290 | 044002 | 005737 | 007474 | | DVIN5: | TST FHDPLX | :IS THIS A HALF/DUP |
| 6291 | 044006 | 001003 | | | BNE | DVIN4 | :IF NOT GO TO 4 |
| 6292 | 044010 | 052777 | 002000 | 146362 | BIS | #HALFDB,@SEL6 | :ELSE SET HALF/DUP |
| 6293 | | | | | | | |
| 6294 | 044016 | 017737 | 146356 | 007444 | DVIN4: | MOV @SEL6,CONTIN | :SET UP CONTROL IN FOR MODS |
| 6295 | 044024 | 004737 | 044704 | | JSR | PC,CLRAW | :GO CLEAR RQI AND WAIT |
| 6296 | | | | | | | :FOR RDI TO GO AWAY. |
| 6297 | 044030 | 023727 | 012412 | 000006 | CMR | OPTYP,#6 | :IS THIS DMR ? |
| 6298 | 044036 | 002403 | | | BLT | DVINEX | :NO,EXIT |
| 6299 | 044040 | 052737 | 001000 | 007502 | BIS | #DMRRUN,FLAG | :SET DMRRUN OUTPUT EXPECTED BIT |
| 6300 | 044046 | 000207 | | | DVINEX: | RTS | :RETURN TO CALLER |
| 6301 | | | | | | | |
| 6302 | | | | | | | |
| 6303 | | | | | | | |
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| 6305 | | | | | | | |

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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 DEVICE GET MODEM STATUS SUBROUTINE

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.SBTTL

DEVICE GET MODEM STATUS SUBROUTINE

```

:++
: FUNCTIONAL DESCRIPTION:
:   'DVMODS' GET MODEM STATUS
:
: IMPLICIT INPUTS:
:   THE BIT POSITION AND AVAILABILITY OF THE MODEM SIGNALS CTS,DSR,...RI..
:   IN THE DEPENDENT PORTION OF THE GLOBAL EQUATES SECTION.
:
: OUTPUTS:
:   CURRENT MODEM SIGNAL VALUES IN 'MODS'
:
: SUBORDINATE ROUTINES USED:
:
:   'TOORIO' - TIME OUT OR INPUT INTERRUPT OR OUTPUT INTERRUPT
:   'CLRWA' - CLEAR RQI AND WAIT FOR RDI TO CLEAR
:
: CALLING SEQUENCE:
:   JSR PC,DVMODS
:--

```

```

6331 044050 112777 000141 146306 DVMODS: MOVB #141,@BSELO ;SET UP CONTROL IN
6332 044056 004737 045012 JSR PC,TOORIO ;GO TIME OUT CHECK
6333 044062 017737 146306 010456 MOV @SEL4,MODS ;SET UP MODEM STATUS
6334 044070 013777 007444 146302 MOV CONTIN,@SEL6 ;SET UP OLD CONTROL IN
6335 044076 004737 044704 JSR PC,CLRWA
6336 044102 000207 RTS PC ;RETURN TO CALLER
6337
6338

```

CZCLKC0 DMR,DMC-11 DATA COMM. LINK TEST
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DEVICE QUEUE RECEIVE SPACE SUBROUTINE

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```
.SBTTL                DEVICE QUEUE RECEIVE SPACE SUBROUTINE
:++
: FUNCTIONAL DESCRIPTION:
:   DVRXQ - THIS SUB ROUTINE QUES THE REC BUFFER SPACE TO THE
:           DEVICE, THEN CLEARS THE QRX BIT OF THE FLAG WORD.
:
: INPUTS:
:   DVRXA = ADDRESS OF RX BUFFER SPACE
:   DVRCC = BYTE CHAR COUNT OF RX BUFFER
:   QRX FLAG BIT = SET BY CALLING ROUTINE
:
: OUTPUTS:
:   QRX FLAG BIT = CLEARED BY ROUTINE
:
: SUBORDINATE ROUTINES USED:
:
:   'TOORIO' - TIME OUT OR OUTPUT INTERRUPT OR INPUT INTERRUPT
:   'CLRWA'  - CLEAR RQI AND WAIT FOR RDI TO CLEAR
:
: CALLING SEQUENCE:
:   JSR     PC,DVRXQ
:--
```

```
044104
044104 032737 000004 007502
044112 001423
044114 042737 000004 007502
044122 112777 000144 146234
044130 004737 045012
044134 017737 146234 010456
044142 013777 007362 146224
044150 013777 007364 146222
044156 004737 044704
044162 000207
```

```
DVRXQ:
BIT      #QRX,FLAG
BEQ      DVREX          ;IF NOT RX THEN EXIT
                        ;ELSE QUE RX
                        ;CLEAR FLAG FOR RX
BIC      #QRX,FLAG
MOVB     #144,@BSELO
JSR      PC,TOORIO     ;GO CHECK FOR IN OR OUT
MOV      @SEL4,MODS    ;SET UP NEW MOD STATUS
MOV      DVRXA,@SEL4
MOV      DVRCC,@SEL6
JSR      PC,CLRWA     ;LOAD CL AND ADDR
                        ;CLEAR AND WAIT
DVREX:   RTS          ;RETURN TO CALLER
```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
 CZCLKC.P11 19-MAR-82 18:32

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 DEVICE TRANSMIT AND RECEIVE SUBROUTINE

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.SBTTL DEVICE TRANSMIT AND RECEIVE SUBROUTINE

```

    : **
    : FUNCTIONAL DESCRIPTION:
    : DVTXRX-DEVICE TRANSMIT AND RECEIVE ROUTINE
    : THIS CODE QUES THE TRANSMIT BUFFER TO THE DEVICE
    : IF NEEDED. THE CODE THEN WAITS FOR A TX COMPLE,
    : RX COMPLETE OR BOTH. THE CODE REPORTS A TIME OUT
    : ERROR IF NO BACC OUTPUT INTERRUPT IS RECIEVED BEFORE
    : 60 SECONDS. AFTEP REPORTING ERROR TIMER IS RE STARTED
    : AND DEVICE WILL CONTINUE TO WAIT FOR INTERRUPT. CODE
    : ALSO REPORTS ERROR IF INPUT INTERRUPT OCCURS WHEN
    : EXPECTING OUTPUT INTERRUPT;WHEN RX BACC OCCURS WHEN
    : EXPECTING TX,AND WHEN TX INT. OCCURS WHEN EXPECTING
    : RECIEVE.
    
```

```

    : INPUTS:
    : 'DVTXA' = ADDRESS OF TRANSMIT MSG.
    : 'DVTCC' = BYTE COUNT OF TRANSMIT MSG.
    : 'QTX' BIT = SET IF TRANSMIT REQUESTED
    : 'ETX' BIT = SET IF TRNASMIT EXPFCTED
    : 'ERX' BIT = SET IF RECIEVE EXPECTED
    
```

```

    : OUTPUTS:
    : 'DVTXA' = ADDRESS OF TX MSG. COMPLETED
    : 'DVTCC' = B/TE COUNT OF TX MSG. COMPLETED
    : 'QTX' = SET IF TX COMPLETED
    : 'DVRXA' = ADDRESS OF RX MSG. COMPLETED
    : 'DVRCC' = BYTE COUNT OF RX MSG. COMPLETED
    : 'QRX' = SET IF RX COMPLETED
    
```

```

    : SUBORDINATE ROUTINES USED:
    :
    : 'TOORIO' - TIME OUT OR OUTPUT INTERRUPT OR INTPUT INTERRUPT
    : 'CLRWA' - CLEAR RQI AND WAIT FOR RDI TO CLEAR
    : 'LGDVE' - LOG DEVICE ERROR TO EVENT LOG
    : 'OUTHDL' - OUTPUT INTERRUPT HANDLER CODE
    
```

```

    : CALLING SEQUENCE:
    : JSR PC,DVTXRX
    : --
    
```

```

    DVTXRX: BIT #QTX,FLAG ;ANY TX TO QUE
    BEQ DVTR3 ;IF NOT GO WAIT FOR OUPUT
    BIC #QTX,FLAG ;CLEAR FLAG
    MOVB #140,@BSEL0
    JSR PC,TOORIO ;GO CHECK FOR IN OR OUT
    MOV @SEL4,MODS ;PUT IN NEW MOD STAT
    MOV DVTXA,@SEL4
    MOV DVTCC,@SEL6
    JSR PC,CLRWA ;CLEAR RQI ANDWAIT
    DVTR3: MOV #60.,TIMERS ;SET TIMER FOR 60 SECS
    TOINOT: BIT #CRX+#CTX,FLAG ;IS IT TX OR RX COMP ALREADY?
    
```

```

    044164 032737 000010 007502
    044172 001423
    044174 042737 000010 007502
    044202 112777 000140 146154
    044210 004737 045012
    044214 017737 146154 010456
    044222 013777 007346 146144
    044230 013777 007350 146142
    044236 004737 044704
    012737 000074 007546
    032737 000060 007502
    
```

CZCLKC0 MR,DMC-11 DATA COMM. LINK TEST
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DEVICE TRANSMIT AND RECEIVE SUBROUTINE

| | | | | | |
|------|--------|--------|--------|--------|--|
| 6434 | 044256 | 001071 | | | |
| 6435 | | | | | |
| 6436 | 044260 | 005737 | 007546 | | |
| 6437 | 044264 | 001022 | | | |
| 6438 | 044266 | 012737 | 024510 | 007432 | |
| 6439 | 044274 | 017737 | 146064 | 007434 | |
| 6440 | 044302 | 017737 | 146062 | 007436 | |
| 6441 | 044310 | 004737 | 026434 | | |
| 6442 | 044314 | 005237 | 007400 | | |
| 6443 | 044320 | | | | |
| 6444 | 044320 | 104457 | | | |
| 6445 | 044322 | 000014 | | | |
| 6446 | 044324 | 024510 | | | |
| 6447 | 044326 | 026110 | | | |
| 6448 | 044330 | 000744 | | | |
| 6449 | | | | | |
| 6450 | | | | | |
| 6451 | 044332 | | | | |
| 6452 | 044332 | 104422 | | | |
| 6453 | 044334 | 032737 | 000001 | 007502 | |
| 6454 | 044342 | 001425 | | | |
| 6455 | | | | | |
| 6456 | 044344 | 012737 | 024602 | 007432 | |
| 6457 | 044352 | 017737 | 146006 | 007434 | |
| 6458 | 044360 | 017737 | 146004 | 007436 | |
| 6459 | 044366 | 004737 | 026434 | | |
| 6460 | 044372 | 042737 | 000001 | 007502 | |
| 6461 | 044400 | 005237 | 007400 | | |
| 6462 | 044404 | | | | |
| 6463 | 044404 | 104457 | | | |
| 6464 | 044406 | 000015 | | | |
| 6465 | 044410 | 024602 | | | |
| 6466 | 044412 | 026110 | | | |
| 6467 | 044414 | 000715 | | | |
| 6468 | | | | | |
| 6469 | 044416 | 032737 | 000002 | 007502 | |
| 6470 | 044424 | 001711 | | | |
| 6471 | | | | | |
| 6472 | 044426 | 004737 | 045134 | | |
| 6473 | 044432 | 032737 | 000060 | 007502 | |
| 6474 | 044440 | 001703 | | | |
| 6475 | 044442 | 032737 | 000020 | 007502 | |
| 6476 | 044450 | 001440 | | | |
| 6477 | 044452 | 032737 | 000200 | 007502 | |
| 6478 | 044460 | 001020 | | | |
| 6479 | 044462 | 012737 | 025125 | 007432 | |
| 6480 | 044470 | 013737 | 045762 | 007434 | |
| 6481 | 044476 | 013737 | 045764 | 007436 | |
| 6482 | 044504 | 004737 | 026434 | | |
| 6483 | 044510 | | | | |
| 6484 | 044510 | 104457 | | | |
| 6485 | 044512 | 000016 | | | |
| 6486 | 044514 | 025125 | | | |
| 6487 | 044516 | 026110 | | | |
| 6488 | | | | | |
| 6489 | 044520 | 000411 | | | |

```

BNE DVTR4 ;IS SO EXIT
TST TIMERS ;IS TIMER EXPIRED
BNE TOIN1
MOV #DVEM4,TEMP2
MOV @SELO,TEMP3
MOV @SEL2,TEMP4
JSR PC,LGDVE
INC ERRCNT
ERRSOFT 12,DVEM4,ERR13
TRAP .WORD C$ERSOFT
        .WORD 12
        .WORD DVEM4
        .WORD ERR13
BR DVTR3 ;RETURN TO CHECK TIMER
TOIN1: BREAK
TRAP C$BRK
BIT #ININT,FLAG ;IS IT INPUT INTERRUPT
BEQ TOIN2 ;IF SO LOG ERROR
MOV #DVEM5,TEMP2
MOV @SELO,TEMP3
MOV @SEL2,TEMP4
JSR PC,LGDVE
BIC #ININT,FLAG ;CLEAR BIT
INC ERRCNT
ERRSOFT 13,DVEM5,ERR13
TRAP .WORD C$ERSOFT
        .WORD 13
        .WORD DVEM5
        .WORD ERR13
BR TOINOT
TOIN2: BIT #OTINT,FLAG
BEQ TOINOT ;IF NOT OUTPUT GO BACK AND
;CHECK TIMER AGAIN
;ELSE HANDLE OUTPUT AND RETURN
JSR PC,OUTHDL ;IS IT TX OR RX
BIT #CTX+#CRX,FLAG ;IF NOT GO BACK AND TRY AGAIN
BEQ TOINOT ;IS IT TX
BIT #CTX,FLAG ;IF NOT TRY RX
BEQ DVTR5 ;IF SO SHOULD IT BE
;IF IT SHOULD GO TO 4A
BIT #ETX,FLAG ;ELSE LOG ERROR
BNE DVTR4A
MOV #DVEM9,TEMP2
MOV TSEL4,TEMP3
MOV TSEL6,TEMP4
JSR PC,LGDVE
ERRSOFT 14,DVEM9,ERR13 ;REPORT ERROR
TRAP .WORD C$ERSOFT
        .WORD 14
        .WORD DVEM9
        .WORD ERR13
BR DVTR4B ;THEN CLEAR COMPL.FLAG

```

CLKCO DMR,DMC-11 DATA COMM. LINK TEST
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 DEVICE TRANSMIT AND RECEIVE SUBROUTINE

```

6490 044522 013737 045762 007366 DVTR4A: MOV TSEL4,DVTXA
6491 044530 013737 045764 007350 MOV TSEL6,DVTCC
6492 044536 052737 000010 007502 BIS #QT,,FLAG ;AND SET TX COMPL FLAG
6493 044544 042737 000020 007502 DVTR4B: BIC #CTX,FLAG ;ELSE CLEAR FLAG
6494 044552 032737 000040 007502 DVTR5: BIT #CRX,FLAG ;IS IT RX TOO?
6495 044560 001440 BEQ DVTR5X ;IF NOT THEN EXIT.
6496 044562 032737 000100 007502 BIT #ERX,FLAG ;TEST IS THIS SUPPOSED TO BE RX
6497 044570 001020 BNE DVTR5A ;IF YES PROCESS AS SUCH
6498 044572 012737 025036 007432 MOV #DVEM8,TEMP2
6499 044600 013737 045766 007434 MOV RSEL4,TEMP3
6500 044606 013737 045770 007436 MOV RSEL6,TEMP4 ;ELSE
6501 044614 004737 026434 JSR PC,LGDVE ;LOG ERROR
6502 044620 ERRSOFT 15,DVEM8,ERR13
6503 044620 104457 TRAP CSERSOFT
6504 044622 000017 .WORD 15
6505 044624 025036 .WORD DVEM8
6506 044626 026110 .WORD ERR13
6507
6508 044630 000411 BR DVTRX1 ;AND EXIT
6509 044632 013737 045766 007362 DVTR5A: MOV RSEL4,DVRXA
6510 044640 013737 045770 007364 MOV RSEL6,DVRCC
6511 044646 052737 000004 007502 BIS #QRX,FLAG
6512 044654 042737 000040 007502 DVTRX1: BIC #CRX,FLAG ;CLEAR FLAG FOR RX DONE
6513 044662 000207 DVTR5X: RTS PC ;AND EXIT
6514
    
```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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 DEVICE TRANSMIT AND RECEIVE SUBROUTINE

: DEVICE DEPENDENT SUBROUTINES

.SBTTL DEVICE INTERRUPT SERVICE ROUTINES

| | | | | | | | | | |
|------|--------|--------|--------|--------|--------|-------------|--|----------|-----|
| 6515 | | | | | | | | | |
| 6516 | | | | | | | | | |
| 6517 | | | | | | | | | |
| 6518 | | | | | | | | | |
| 6519 | | | | | | | | | |
| 6520 | | | | | | | | | |
| 6521 | 044664 | | | | BGNSRV | DVINS | | | |
| 6522 | 044664 | | | | | | | DVINS:: | |
| 6523 | 044664 | 052737 | 000001 | 007502 | BIS | #ININT,FLAG | | | |
| 6524 | 044672 | | | | ENDSRV | | | | |
| 6525 | 044672 | | | | | | | L10021: | |
| 6526 | 044672 | 000002 | | | | | | | RTI |
| 6527 | | | | | | | | | |
| 6528 | 044674 | | | | BGNSRV | DVOUTS | | | |
| 6529 | 044674 | | | | | | | DVOUTS:: | |
| 6530 | 044674 | 052737 | 000002 | 007502 | BIS | #OTINT,FLAG | | | |
| 6531 | 044702 | | | | ENDSRV | | | | |
| 6532 | 044702 | | | | | | | L10022: | |
| 6533 | 044702 | 000002 | | | | | | | RTI |
| 6534 | | | | | | | | | |
| 6535 | | | | | | | | | |
| 6536 | | | | | | | | | |
| 6537 | | | | | | | | | |
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| 6553 | | | | | | | | | |
| 6554 | | | | | | | | | |

```

:++
: FUNCTIONAL DESCRIPTION:
: CLRAW - CLEAR RQI AND WAIT FOR RDI TO GO AWAY
: THIS CODE CLEARS THE INPUT REQUEST BIT(RQI) SETS A
: TIMER UP TO TIME 50(OCTAL) TICKS AND MAKES SURE
: RDI CLEARS BEFORE TIMER EXPIRES. IF TIMER EXPIRES
: CODE REPORTS ERROR AND SETS UP TIMER AND WAITS AGAIN.
    
```

```

: SUBORDINATE ROUTINES USED:
: 'LGDVE' - LOG DEVICE ERROR (TIME OUT)
    
```

```

: CALLING SEQUENCE:
: JSR PC,CLRAW
:--
    
```

| | | | | | | | | | |
|------|--------|--------|--------|--------|--------|-------|--------------|--|-----------------------------------|
| 6555 | 044704 | 011637 | 007462 | | CLRAW: | MOV | (SP),PCADD | | ;SAVE PC OF CALLING ROUTINE |
| 6556 | 044710 | 042777 | 000040 | 145446 | | BIC | #RQI,@SELO | | |
| 6557 | 044716 | 012737 | 000050 | 007542 | CLRA3: | MOV | #50,TIMER1 | | ;SET UP TIMER FOR 50(OCTAL) TICKS |
| 6558 | 044724 | 005737 | 007542 | | CLRA1: | TST | TIMER1 | | |
| 6559 | 044730 | 001406 | | | | BEQ | CLRA2 | | ;IF TIMER EXPIRED ERROR |
| 6560 | 044732 | | | | | BREAK | | | |
| 6561 | 044732 | 104422 | | | | | | | TRAP CSBRK |
| 6562 | 044734 | 032777 | 000200 | 145422 | | BIT | #RDI,@SELO | | ;IS RDI CLEAR |
| 6563 | 044742 | 001370 | | | | BNE | CLRA1 | | ;IF NOT GO CHECK TIMER |
| 6564 | | | | | | | | | ; ELSE |
| 6565 | 044744 | 000207 | | | | RTS | PC | | ;RETURN TO CALLER |
| 6566 | 044746 | 012737 | 024252 | 007432 | CLRA2: | MOV | #DVEMO,TEMP2 | | |
| 6567 | 044754 | 017737 | 145404 | 007434 | | MOV | @SELO,TEMP3 | | |
| 6568 | 044762 | 017737 | 145402 | 007436 | | MOV | @SEL2,TEMP4 | | |
| 6569 | 044770 | 004737 | 026434 | | | JSR | PC,LGDVE | | ;LOG DEVEICE EVENT 0 |
| 6570 | 044774 | 005237 | 007400 | | | INC | ERRCNT | | |

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
CZCLKC.P11 19-MAR-82 18:32

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DEVICE INTERRUPT SERVICE ROUTINES

ERRSOF 16,DVEMO,ERR9 ;WHILE WAITING FOR RDI

TRAP C\$ERSOFT
.WORD 16
.WORD DVEMO
.WORD ERR9

6571 045000
6572 045000 104457
6573 045002 000020
6574 045004 024252
6575 045006 026032
6576 045010 000742

BR CLRA3 ;RESET TIMER AND CONTINUE

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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TIME OUT OR INPUT INT. OR OUTPUT INT.

.SBTTL TIME OUT OR INPUT INT. OR OUTPUT INT.

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++
FUNCTIONAL DESCRIPTION:
TOORIO - TIME OUT OR INPUT INTERRUPT OR OUTPUT INTERRUPT
THIS ROUTINE SETS UP A TIMFR FOR '00 (OCTAL) TICKS
THEN CHECKS FOR TIME OUT,OR INPUT INTERRUPT,OR CJTPUT
INTERRUPT IF TIME OUT OCCURS IT REPORTS ERROR AND
RESTARTS TIMER. IF INPUT INTERRUPT OCCURS RETURN TO CALLER
IF OUTPUT INTERRUPT OCCURS LOG IT AND CONTINUE WAITING FOR
INPUT INTERRUPT.

USE OF FLAGS:
'OTINT' - SET BY OUTPUT INT ROUTINE
'ININT' - SET BY INPUT INT. ROUTINE
CLEAKED BY THIS ROUTINE.

SUBORDINATE ROUTINES USED:
'OUTHDL' - OUTPUT INTERRUPT HANDLER

CALLING SEQUENCE:
JSR PC,TOORIO

TOORIO: MOV (SP),PCADD ;SAVE ADDR. OF CALLING ROUTINE
MOV #100,TIMER1 ;SET UP TIMER
TOOR3: TST TIMER1 ;IS TIME EXPIRED
BNE TOOR1 ;IF NOT CONTINUE
;IF YES ERROR
MOV #DVEM1,TEMP2
MOV @SEL2,TEMP4
MOV @SELO,TEMP3
JSR PC,LGDVE
INC ERRCNT
ERRSOFT 17,DVEM1,ERR9
TRAP C\$ERSOFT
.WORD 17
.WORD DVEM1
.WORD EPR9
BR TOORIO
TOOR1: BREAK
TRAP C\$BRK
BIT #OTINT,FLAG ;IS THERE AN OUTPUT
;PENDING
BEQ TOOR2 ;IF NOT GO TO 2
;ELSE GO HANDL IT
JSR PC,OUTHDL
TOOR2: BIT #ININT,FLAG ;IS THERE AN INPUT PENDING
BEQ TOOR3 ;IF NOT GO BACK TO TIMER CK.
BIC #ININT,FLAG ;ELSE CLEAR THE INPUT PEND FLAG
RTS PC ;AND RETURN TO CALLER

011637 007462
012737 000100 007542
005737 007542
0101022
012737 024340 007432
017737 145324 007436
017737 145312 007434
004737 026434
005237 007400
104457
000021
024340
026032
000746
045076
045076 104422
045100 032737 000002 007502
001402
045110 004737 045134
045114 032737 000001 007502
045122 001740
045124 042737 000001 007502
045132 000207

CZCLKCO DMR,DMC-11 DATA COMM. 'INK TEST
CZCLKC.P11 19-MAR-82 18:32

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OUTPUT INTERRUPT HANDLER

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.SBTTL OUTPUT INTERRUPT HANDLER
: **
: FUNCTIONAL DESCRIPTION:
: OUTHDL - OUTPUT INTERRUPT HANDLER
: THIS ROUTINE IS CALLED WHEN AN OUTPUT INTERRUPT HAS SET
: THE 'OTINT' BIT IN THE 'FLAG' WORD. IT CHECKS FOR
: AN RDO SIGNAL IF NO RDO THEN REPORT ILLEGAL INTERRUPT.
: THEN IT CHECKS FOR BACC OUT IF NOT BACC OUT REPORT THE
: TYPE OF OUTPUT ERROR. IF BACC OUT FIND IF RX OR TX
: IF RX SET CRX BIT AND MOVE ADDR AND BYTE COUNT TO RSEL4
: AND RSEL6. IF TX SET CTX BIT AND MOVE ADDR AND BYTE COUNT
: TO TSEL4 AND TSEL6. CLEAR OTINT FLAG AND RETURN TO CALLER.
:
: USE OF FLAGS:
: 'OTINT' - SET BY OUPUT ROUTINE
: CLEARED BY THIS ROUTINE
: 'DMRRUN' - SET BY DVINIT ROUTINE IF THIS IS DMR
: CHECKED AND CLEARED BY THIS ROUTINE.
: 'CTX' - SET IF TRANSMIT COMPLETED
: 'CRX' - SET IF RECIEVE COMPLETED
:
: SUBORDINATE ROUTINES USED:
: 'LGDVE' -LOG DEVICE ERRORS TO EVENT LOG
:
: CALLING SEQUENCE
: JSR PC,OUTHDL
:--

045134 011637 007462
045140 042737 000002 007502
045146 032777 000200 145214
045154 001023
045156 012737 024674 007432
045164 017737 145200 007434
045172 017737 145202 007436
045200 004737 026434
045204 005237 007400
045210
045210 104457
045212 000022
045214 024674
045216 026032
OUTHDL: MOV (SP),PCADD ;SAVE ADDR. OF CALLING ROUTINE
BIC #OTINT,FLAG
BIT #RDO,@SEL2 ;CLEAR PEND FLAG AND CHK FOR RDO
BNE OUTH1 ;IF RDO OK ...ELSE LOG ERROR
MOV #DVEM6,TEMP2
MOV @SEL2,TEMP3
MOV @SEL6,TEMP4
JSR PC,LGDVE ;GO LOG ERROR
INC ERRCNT
ERRSOFT 18,DVEM6,ERR9
TRAP C\$ERSOFT
.WORD 18
.WORD DVEM6
.WORD ERR9
:EXIT TEST IF ERROR
ESCAPE TST
TRAP C\$ESCAPE
.WORD L10020-.
OUTH1: BIT #BACC,@SEL2 ;IS THE OUTPUT BACC
BNE 1\$; BR IF NO
JMP OUTH2 ;IF SO GO TO 2

CZCLKC0 DMR,DMC-11 DATA COMM. LINK TEST
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OUTPUT INTERRUPT HANDLER

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6688                                     :ELSE LOG ERROR AND PRINT IT
6689 045240 017737 145134 007436 1$: MOV    @SEL6,TEMP4
6690                                     ; IF NO BUFFER OUTPUT JUST COUNT THEM
6691
6692 045246 032737 000004 007436      BIT    #BIT2,TEMP4
6693 045254 001404                                     BEQ    OUTH6          ;IF NO BUFF INC COUNT AND EXIT
6694                                     ;ELSE GO TO 6
6695 045256 005237 007374      INC    NOBUF
6696 045262 000137 045752      JMP    OUTHEX
6697
6698 045266 023727 012412 000006  OUTH6: CMP    OPTYP,#6      ;DMR ?
6699 045274 002426      BLT    51$          ;IF NOT DMR MODE SKIP TO 51
6700 045276 032737 002000 007502      BIT    #BTUP,FLAG   ;HERE BECAUSE OF BASE TABLE UPDATE REQ ? REV B BY EC
6701 045304 001402      BEQ    50$          ;NO BRANCH REV B BY EC
6702 045306 000137 045752      JMP    OUTHEX      ;EXIT
6703 045312 032737 000040 007436 50$: BIT    #BIT5,TEMP4   ;IS IT RUN STATE
6704 045320 001414      BEQ    51$          ;IF NOT BRANCH
6705 045322 032737 001000 007502      BIT    #DMRRUN,FLAG ;IS RUN EXPECTED
6706 045330 001405      BEQ    52$          ;IF NOT BRANCH
6707 045332 042737 001000 007502      BIC    #DMRRUN,FLAG ;IF SO THEN CLEAR EXPECTED
6708 045340 000137 045752      JMP    OUTHEX      ;AND EXIT
6709 045344 012737 025437 007442 52$: MOV    #RUNSBM,CONOTM
6710 045352 012737 024751 007432 51$: MOV    #DVEM7,TEMP2
6711 045360 017737 145004 007434      MOV    @SEL2,TEMP3
6712
6713 045366 004737 026434      JSR    PC,LGDVE
6714 045372 012737 014641 007442      MOV    #LPO,CONOTM ;LOAD 'NULL STRING' TO INIT CONOTM
6715 045400 032737 000001 007436      BIT    #BIT0,TEMP4 ;IS THIS DATA CHECK
6716 045406 001403      BEQ    1$
6717 045410 012737 025424 007442      MOV    #DATCKM,CONOTM
6718 045416 032737 000002 007436 1$: BIT    #BIT1,TEMP4   ;IS THIS TIMEOUT
6719 045424 001403      BEQ    2$
6720 045426 012737 025413 007442      MOV    #TIMOM,CONOTM
6721 045434 032737 000010 007436 2$: BIT    #BIT3,TEMP4   ;IS THIS DDCMP MAINT RECVD
6722 045442 001403      BEQ    4$
6723 045444 012737 025373 007442      MOV    #DDCMRM,CONOTM
6724 045452 032737 000020 007436 4$: BIT    #BIT4,TEMP4   ;IS THIS LOST DATA
6725 045460 001403      BEQ    5$
6726 045462 012737 025361 007442      MOV    #LOSDAM,CONOTM
6727 045470 032737 000100 007436 5$: BIT    #BIT6,TEMP4   ;IS THIS DISCONNECT
6728 045476 001403      BEQ    6$
6729 045500 012737 025346 007442      MOV    #DISCOM,CONOTM
6730 045506 032737 000200 007436 6$: BIT    #BIT7,TEMP4   ;IS THIS DDCMP START RECVD
6731 045514 001403      BEQ    7$
6732 045516 012737 025326 007442      MOV    #DDCSRMM,CONOTM
6733 045524 032737 000400 007436 7$: BIT    #BIT8,TEMP4   ;IS THIS NON-EXISTENT MEMORY
6734 045532 001403      BEQ    8$
6735 045534 012737 025310 007442      MOV    #NXMM,CONOTM
6736 045542 032737 001000 007436 8$: BIT    #BIT9,TEMP4   ;IS THIS PROCEDURE ERROR
6737 045550 001403      BEQ    9$
6738 045552 012737 025270 007442      MOV    #PROEM,CONOTM
6739 045560 023727 012412 000006 9$: CMP    OPTYP,#6      ;IS THIS DMR MODE
6740 045566 002416      BLT    11$         ;IF NOT BRANCH
6741 045570 032737 002000 007436      BIT    #BIT10,TEMP4 ;IS THIS A RX IDLE
6742 045576 001403      BEQ    10$         ;IF NOT BRANCH
6743 045600 012737 025461 007442      MOV    #RXIDM,CONOTM ;IF SO SET UP MESSAGE

```

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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OUTPUT INTERRUPT HANDLER

```

6744 045606 032737 004000 007436 10$: BIT #BIT11,TEMP4 ;IS THIS CTS FAILED
6745 045614 001403 BEQ 11$ ;IF NOT BRANCH
6746 045616 012737 025505 007442 MOV #CTSFM,CONOTM ;IF SO SET UP MESSAGE
6747 045624 032737 010000 007436 11$: BIT #BIT12,TEMP4 ;IS THIS CD GLITCHED
6748 045632 001403 BEQ 12$ ;BR IF NO
6749 045634 012737 025471 007442 MOV #CDGLM,CONOTM ;IF SO SET UP MESSAGE
6750
6751 045642 005237 007400 12$: INC ERRCNT
6752 045646 ERRSOFT 19,DVEM7,ERR8
6753 045646 104457
6754 045650 000023
6755 045652 024751
6756 045654 025750
6757 045656 000435 BR OUTH2 ;CLEAR RDO AND RETURN TO CALLER
6758
6759 045660 OUTH2:
6760 045660 032777 000004 144502 BIT #RXBIT,@SEL2 ;IS THIS RX BACC OUT
6761 045666 001012 BNE OUTH3 ;IF NOT THEN IT MUST BE TX.
6762 045670 052737 000020 007502 BIS #CTX,FLAG
6763 045676 017737 144472 045762 MOV @SEL4,TSEL4
6764 045704 017737 144470 045764 MOV @SEL6,TSEL6
6765 045712 000417 BR OUTH3
6766
6767 045714 052737 000040 007502 OUTH3: BIS #CRX,FLAG ;SET RX COMPL
6768 045722 017737 144446 045766 OUTH4: MOV @SEL4,RSEL4 ;THEN MOVE TO TEMP
6769 045730 017737 144444 045770 MOV @SEL6,RSEL6 ;AND SEL6 TO TEMP
6770 045736 005737 012412 TST OPTYP ;DMC ?
6771 045742 001003 BNE OUTH3 ;NO BRANCH
6772 045744 042737 140000 045770 BIC #BIT15!BIT14,RSEL6 ;CLEAR 0 SYNC & SELECT BITS
6773 045752 042777 000200 144410 OUTH3: BIC #RDO,@SEL2 ;CLEAR RDO
6774 045760 000207 RTS PC ;RETURN TO CALLER
6775 045762 000000 TSEL4: .WORD 0
6776 045764 000000 TSEL6: .WORD 0
6777 045766 000000 RSEL4: .WORD 0
6778 045770 000000 RSEL6: .WORD 0
6779
6780 045772 000207 RTS PC
6781
6782

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TRAP C$ERSOFT
.WORD 19
.WORD DVEM7
.WORD ERR8

```

CZCLKO DMR,DMC-11 DATA COMM. LINK TEST
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OUTPUT INTERRUPT HANDLER

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.EVEN

.SBTTL REQUEST BASE TABLE UPDATE
THIS ROUTINE ADDED FOR REV B BY EC

++
:FUNCTIONAL DESCRIPTION:

DVBTUP - THIS ROUTINE IS CALLED AT END OF PASS TO UPDATE THE DMR
BASE TABLE IN LOCAL MEMORY BY ISSUING AN UPDATE BASE TABLE
REQUEST TO THE DMR.

:USE OF FLAGS:

FLAG - BITS IN THIS WORD ARE SET BY THE DEVICE INTERRUPT ROUTINE.
WHEN SET TO A 1, THE FOLLOWING BITS MEAN
ININT = BIT 1 = DEVICE INPUT READY
OTINT = BIT 2 = DEVICE OUT READY

:INPUTS: NONE REQUIRED.

:SUBORDINATE ROUTINES USED:

CLRAW - CLEAR RQI AND WAIT FOR DEVICE TO CLEAR RDI.
OUTHDL - THE DEVICE OUTPUT SERVICE ROUTINE.
LGDVE - LOG A DEVICE ERROR TO EVENT LOG.

:CALLING SEQUENCE:

JSR PC,DVBTUP

:DEVICE BASE TABLE UPDATE ROUTINE

DVBTUP:

| | | | | | |
|-------|-------------|--------|--------|--------|--------------------------------------|
| CMP | OPTYP,#6 | | | | :DMR IN DMR MODE ? |
| BLT | 40\$ | | | | :NO,BRANCH |
| MOVB | #151,@BSEL0 | | | | :REQUEST BASE TABLE UPDATE |
| BIS | #1EO,@SEL2 | | | | :ENABLE INTERRUPT ON OUTPUT READY |
| JSR | PC,TOORIO | | | | :WAIT FOR RDI |
| JSR | PC,CLRAW | | | | :CLEAR RQI AND WAIT FOR RDI TO CLEAR |
| MOV | #200,TIMER1 | | | | :WAIT FOR INTERRUPT |
| 10\$: | BREAK | | | | |
| 6823 | 046036 | 104422 | | | TRAP C\$BRK |
| 6824 | 046040 | 032737 | 000002 | 007502 | |
| 6825 | 046046 | 001021 | | | |
| 6826 | 046050 | 005737 | 007542 | | |
| 6827 | 046054 | 001370 | | | |
| 6828 | 046056 | 012737 | 024424 | 007432 | |
| 6829 | 046064 | 017737 | 144274 | 007434 | |
| 6830 | 046072 | 017737 | 144272 | 007436 | |
| 6831 | 046100 | 004737 | 026434 | | |
| 6832 | 046104 | 005237 | 007400 | | |
| 6833 | 046110 | 000410 | | | |
| 6834 | 046112 | 052737 | 002000 | 007502 | 30\$: |
| 6835 | 046120 | 004737 | 045134 | | |
| 6836 | 046124 | 042737 | 002000 | 007502 | |
| 6837 | 046132 | 000207 | | | 40\$: |
| | | | | | RTS PC |

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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REQUEST BASE TABLE UPDATE

ENDTST

L10020: TRAP CSETST

6839 046134
6840 046134
6841 046134 104401
6842
6843
6844

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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HARDWARE PARAMETER CODING SECTION

.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.
:--

6845
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6856
6857 046136
6858 046136 000025
6859 046140

BGNHRD

.WORD L10023-L\$HARD/2
L\$HARD::

.SBTTL DEVICE INDEPENDENT SECTION

6861
6862
6863
6864 046140
6865 046140 000130
6866 046142 046212
6867 046144 000001

GPRML DPLX,0,1,YES

.WORD T\$CODE
.WORD DPLX
.WORD 1

.SBTTL DEVICE DEPENDENT SECTION

6873
6874 046146
6875 046146 001031
6876 046150 046243
6877 046152 160000
6878 046154 177776
6879 046156
6880 046156 002031
6881 046160 046271
6882 046162 000300
6883 046164 000776
6884 046166
6885 046166 003032
6886 046170 046324
6887 046172 000340
6888 046174 000004
6889 046176 000007

GPRMA CSRADR,2,0,160000,177776,YES

.WORD T\$CODE
.WORD CSRADR
.WORD T\$LLOLIM
.WORD T\$HILIM

GPRMA VECTOR,4,0,300,776,YES

.WORD T\$CODE
.WORD VECTOR
.WORD T\$LLOLIM
.WORD T\$HILIM

GPRMD PRIOR,6,0,340,4,7,YES

.WORD T\$CODE
.WORD PRIOR
.WORD 340
.WORD T\$LLOLIM
.WORD T\$HILIM

: GPRMD DEVPRM,10,D,17,0,15.,YES

6890
6891
6892 046200
6893 046200 005032
6894 046202 046352
6895 046204 000007
6896 046206 000000
6897 046210 000007

GPRMD OPTN,12,0,7,0,7,YES

.WORD T\$CODE
.WORD OPTN
.WORD 7
.WORD T\$LLOLIM
.WORD T\$HILIM

: GPRMD BAUD,14,0,7,0,7,YES
: GPRMD LININ,16,0,7,0,7,YES

6898
6899
6900

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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DEVICE DEPENDENT SECTION

6901 046212
6902
6903 046212
6904
6905

ENDHRD

L10023: .EVEN

.NLIST BCX

;DEVICE INDEPENDENT QUESTIONS

046212 052506 046114 042040 DPLX: .ASCIZ /FULL DUPLEX OPERATION : /

;DEVICE DEPENDENT QUESTION

046243 104 053105 041511 CSRADR: .ASCIZ /DEVICE CSR ADDRESS : /
046271 111 052116 051705 VECTOR: .ASCIZ /INTERRUPT VECTOR ADDRESS: /
046324 047111 042524 051122 PRIOR: .ASCIZ /INTERRUPT PRIORITY : /
046352 042504 044526 042503 OPTN: .ASCIZ /DEVICE OPTION TYPE : (0=DMC,5=DMR-DMC MODE ,7=DMR)/

.LIST BCX
.EVEN

6906 046436
6907
6908

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST
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 DEVICE DEPENDENT SECTION

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 6932 046436
 6933 046436 000030
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 6935
 6936 046516
 6937
 6938 046516 000000
 6939 046520 000000
 6940 046522
 6941 046522
 6942
 6943 000001

;.SBTTL SOFTWARE PARAMETER CODING SECTION

;++
 : THE SOFTWARE PARAMETER CODING SECTION CONTAINS MACROS
 : THAT ARE USED BY THE SUPERVISOR TO BUILD P-TABLES. THE
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 : INTERPRETED BY THE SUPERVISOR AS DATA STRUCTURES. THE
 : MACROS ALLOW THE SUPERVISOR TO ESTABLISH COMMUNICATIONS
 : WITH THE OPERATOR.

 : BGNSFT

: ENDSFT

::: :::
 : TEMPORARY PATCH AREA - FOR DEBUG PURPOSES
 ::: :::

\$PATCH:
 .BLKW 30

LASTAD

.EVEN
 .WORD 0
 .WORD 0

L\$LAST::
 ENDMOD

.END

CZCLKCO DMR,DMC-11 DATA COMM. LINK TEST MACY11 30A(1052) 23-MAR-82 16:45 PAGE 171
 CZCLKC.P11 19-MAR-82 18:32 CROSS REFERENCE TABLE -- USER SYMBOLS

| | | | | | | | | | | |
|--------|---|--------|-------|-------|-------|------|-------|-------|-------|--|
| ABO | = | 000026 | 2301# | 4818 | | | | | | |
| ACT | = | 000003 | 2253# | 4944 | 5399 | 5479 | 5723 | | | |
| ACTATV | | 037754 | 5165 | 5399# | | | | | | |
| ACTBCR | | 037560 | 5183 | 5360# | | | | | | |
| ACTCHK | | 040170 | 5145 | 5445# | | | | | | |
| ACTCLB | | 037102 | 5249 | 5263# | | | | | | |
| ACTCLP | | 040302 | 5179 | 5473# | | | | | | |
| ACTCLR | | 036536 | 5143 | 5196# | | | | | | |
| ACTCOP | | 037400 | 5153 | 5323# | | | | | | |
| ACTCRC | | 040204 | 5174 | 5451# | | | | | | |
| ACTCSE | | 036672 | 5148 | 5225# | | | | | | |
| ACTCST | | 037020 | 5149 | 5251# | | | | | | |
| ACTDLL | | 040022 | 5169 | 5413# | | | | | | |
| ACTDME | | 037326 | 5185 | 5304 | 5307# | | | | | |
| ACTDMQ | | 037320 | 5186 | 5306# | | | | | | |
| ACTDMS | | 037276 | 5184 | 5301# | | | | | | |
| ACTDMX | | 037334 | 5308# | | | | | | | |
| ACTECH | | 040100 | 5173 | 5429# | | | | | | |
| ACTEQO | | 037522 | 5157 | 5349# | | | | | | |
| ACTEXT | | 036622 | 5189 | 5214# | | | | | | |
| ACTHLP | | 036556 | 5147 | 5202# | | | | | | |
| ACTLIS | | 040012 | 5168 | 5410# | | | | | | |
| ACTLLP | | 040312 | 5180 | 5475# | | | | | | |
| ACTLPX | | 040330 | 5470 | 5472 | 5474 | 5476 | 5479# | | | |
| ACTLXX | | 040372 | 5443 | 5464 | 5467 | 5480 | 5489# | | | |
| ACTMEX | | 037746 | 5342 | 5358 | 5380 | 5385 | 5391 | 5394 | 5396# | |
| ACTME1 | | 037702 | 5369 | 5371 | 5373 | 5375 | 5377 | 5384# | | |
| ACTMOP | | 040262 | 5177 | 5469# | | | | | | |
| ACTMOS | | 040212 | 5188 | 5454# | | | | | | |
| ACTMS0 | | 037602 | 5158 | 5368# | | | | | | |
| ACTMS1 | | 037610 | 5159 | 5370# | | | | | | |
| ACTMS2 | | 037620 | 5160 | 5372# | | | | | | |
| ACTMS3 | | 037630 | 5161 | 5374# | | | | | | |
| ACTMS4 | | 037640 | 5162 | 5376# | | | | | | |
| ACTMS5 | | 037650 | 5163 | 5378# | | | | | | |
| ACTMS6 | | 037666 | 5164 | 5381# | | | | | | |
| ACTM2X | | 040050 | 5400 | 5408 | 5411 | 5414 | 5417 | 5421# | | |
| ACTNO | | 040070 | 5172 | 5426# | | | | | | |
| ACTNUF | | 036526 | 5182 | 5193# | | | | | | |
| ACTNUL | | 036534 | 5142 | 5194# | | | | | | |
| ACTNUM | | 037410 | 5154 | 5326# | | | | | | |
| ACTOPM | | 037502 | 5155 | 5344# | | | | | | |
| ACTPAS | | 037764 | 5166 | 5402# | | | | | | |
| ACTPRO | | 040220 | 5175 | 5457# | | | | | | |
| ACTPRT | | 036632 | 5187 | 5216# | | | | | | |
| ACTQFG | | 040224 | 5446 | 5449 | 5452 | 5455 | 5459# | | | |
| ACTREC | | 040004 | 5167 | 5407# | | | | | | |
| ACTREX | | 027576 | 3634 | 3660# | | | | | | |
| ACTRHL | | 027532 | 3633 | 3646# | | | | | | |
| ACTRLG | | 027606 | 3635 | 3664# | | | | | | |
| ACTRLP | | 040322 | 5181 | 5477# | | | | | | |
| ACTRNF | | 027522 | 3639 | 3642# | | | | | | |
| ACTRNL | | 027530 | 3632 | 3643# | | | | | | |
| ACTRPS | | 040252 | 5176 | 5466# | | | | | | |
| ACTRUN | | 036646 | 5146 | 5220# | | | | | | |
| ACTSEX | | 037712 | 5190 | 5388# | | | | | | |

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| | | | | | |
|---------|--------|-------|-------|-------|------|
| DLM | 020225 | 2868 | 3163# | | |
| DLTXRX | 042306 | 5950 | 5957 | 59804 | |
| DLVM | 020251 | 2874 | 3163# | | |
| DMC = | 000000 | 2282# | | | |
| DMCEND | 003462 | 2669# | 3673 | 3693 | 3730 |
| DMCIND | 003432 | 2657# | 3671 | 3692 | 3728 |
| DMCM | 020242 | 2872 | 3163# | | |
| DMC002 | 023604 | 2659 | 3163# | | |
| DMC003 | 023625 | 2660 | 3163# | | |
| DMC004 | 023662 | 2651 | 3163# | | |
| DMC005 | 023723 | 2662 | 3163# | | |
| DMC006 | 023756 | 2663 | 3163# | | |
| DMC007 | 024013 | 2664 | 3163# | | |
| DMC010 | 024050 | 2665 | 3163# | | |
| DMC011 | 024103 | 2666 | 3163# | | |
| DMC012 | 024125 | 2667 | 3163# | | |
| DMC013 | 024147 | 2668 | 3163# | | |
| DMC377 | 024206 | 2669 | 3163# | | |
| DMFMT | 030547 | 3785 | 3796# | | |
| DMPE | 000053 | 2375# | 2999 | | |
| DMPM | 020255 | 2875 | 3163# | | |
| DMPQ = | 000054 | 2376# | 3001 | | |
| DMP5 = | 000052 | 2374# | 2997 | 5022 | 5303 |
| DMRC6 = | 000004 | 2283# | 6211 | | |
| DMRC7 = | 000005 | 2284# | | | |
| DMREND | 003430 | 2654# | 3681 | 3699 | 3738 |
| DMRIND | 003250 | 2598# | 3679 | 3698 | 3736 |
| DMRRUN= | 001000 | 2314# | 6299 | 6705 | 6707 |
| DMR000 | 020342 | 2598 | 3163# | | |
| DMR001 | 020402 | 2599 | 3163# | | |
| DMR002 | 020432 | 2600 | 3163# | | |
| DMR003 | 020467 | 2601 | 3163# | | |
| DMR004 | 020532 | 2602 | 3163# | | |
| DMR005 | 020566 | 2603 | 3163# | | |
| DMR006 | 020620 | 2604 | 3163# | | |
| DMR007 | 020663 | 2605 | 3163# | | |
| DMR010 | 020717 | 2606 | 3163# | | |
| DMR011 | 020751 | 2607 | 3163# | | |
| DMR012 | 021003 | 2608 | 3163# | | |
| DMR013 | 021035 | 2609 | 3163# | | |
| DMR014 | 021065 | 2610 | 3163# | | |
| DMR015 | 021114 | 2611 | 3163# | | |
| DMR016 | 021146 | 2612 | 3163# | | |
| DMR017 | 021176 | 2613 | 3163# | | |
| DMR020 | 021226 | 2614 | 3163# | | |
| DMR021 | 021255 | 2615 | 3163# | | |
| DMR022 | 021307 | 2616 | 3163# | | |
| DMR023 | 021333 | 2617 | 3163# | | |
| DMR024 | 021365 | 2618 | 3163# | | |
| DMR025 | 021410 | 2619 | 3163# | | |
| DMR026 | 021463 | 2620 | 3163# | | |
| DMR027 | 021513 | 2621 | 3163# | | |
| DMR030 | 021544 | 2622 | 3163# | | |
| DMR031 | 021627 | 2623 | 3163# | | |
| DMR032 | 021664 | 2624 | 3163# | | |
| DMR033 | 021721 | 2625 | 3163# | | |

| | | | | |
|--------|--------|-------|-------|-------|
| DMR034 | 021756 | 2626 | 3163# | |
| DMR035 | 022042 | 2627 | 3163# | |
| DMR036 | 022107 | 2628 | 3163# | |
| DMR037 | 022154 | 2629 | 3163# | |
| DMR040 | 022212 | 2630 | 3163# | |
| DMR041 | 022245 | 2631 | 3163# | |
| DMR042 | 022303 | 2632 | 3163# | |
| DMR043 | 022351 | 2633 | 3163# | |
| DMR044 | 022405 | 2634 | 3163# | |
| DMR045 | 022441 | 2635 | 3163# | |
| DMR046 | 022472 | 2636 | 3163# | |
| DMR047 | 022540 | 2637 | 3163# | |
| DMR050 | 022602 | 2638 | 3163# | |
| DMR051 | 022630 | 2639 | 3163# | |
| DMR052 | 022664 | 2640 | 3163# | |
| DMR053 | 022711 | 2641 | 3163# | |
| DMR054 | 022744 | 2642 | 3163# | |
| DMR055 | 022766 | 2643 | 3163# | |
| DMR056 | 023041 | 2644 | 3163# | |
| DMR057 | 023114 | 2645 | 3163# | |
| DMR060 | 023136 | 2646 | 3163# | |
| DMR061 | 023170 | 2647 | 3163# | |
| DMR062 | 023222 | 2648 | 3163# | |
| DMR063 | 023272 | 2649 | 3163# | |
| DMR064 | 023342 | 2650 | 3163# | |
| DMR065 | 023376 | 2651 | 3163# | |
| DMR066 | 023432 | 2652 | 3163# | |
| DMR067 | 023475 | 2653 | 3163# | |
| DMR177 | 023540 | 2654 | 3163# | |
| DMR6 = | 000006 | 2285# | 6214 | |
| DMR7 = | 000007 | 2286# | | |
| DMSGAD | 002176 | 2442# | 4124 | |
| DMSGCT | 002150 | 2427# | 4123 | |
| DMUNKN | 020322 | 2657 | 2658 | 3163# |
| DMVM | 020316 | 2883 | 3163# | |
| DNM | 020246 | 2873 | 3163# | |
| DOW - | 000604 | 2254# | 5413 | 6285 |
| DPLX | 046212 | 6866 | 6905# | |
| DPM | 020217 | 2866 | 3163# | |
| DQM | 020230 | 2869 | 3163# | |
| DSR = | 000010 | 2396# | 2830 | |
| DTEM | 020261 | 2876 | 3163# | |
| DUM | 020222 | 2867 | 3163# | |
| DUMEX | 031710 | 4036 | 4042# | |
| DUMPSR | 031554 | 4007# | 5024 | |
| DUM1 | 031646 | 4017 | 4028# | |
| DUM2 | 031670 | 4027 | 4035# | |
| DUM3 | 031604 | 4016# | 4040 | |
| DUM4 | 031560 | 4008# | 4039 | |
| DUPM | 020236 | 2871 | 3163# | |
| DVBTUP | 045774 | 4810 | 5902 | 6814# |
| DVEM0 | 024252 | 3163# | 6566 | 6574 |
| DVEM1 | 024340 | 3163# | 6608 | 6616 |
| DVEM3 | 024424 | 3163# | 6225 | 6233 |
| DVEM4 | 024510 | 3163# | 6438 | 6446 |
| DVEM5 | 024602 | 3163# | 6456 | 6465 |

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| | | | | | | | | | | | | | | | | | | | | | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|--|--|--|--|
| GSEXCP= 000400 | 1996# | | | | | | | | | | | | | | | | | | | | |
| GSHILI= 000002 | 1996# | | | | | | | | | | | | | | | | | | | | |
| GSLOLI= 000001 | 1996# | | | | | | | | | | | | | | | | | | | | |
| GSNO = 000000 | 1996# | 3565 | 4981 | 5936 | 6084 | | | | | | | | | | | | | | | | |
| GSOFFS= 000400 | 1996# | 3565 | 4681 | 4981 | 5936 | 6084 | 6865 | 6875 | 6880 | 6885 | 6893 | | | | | | | | | | |
| GSOFSI= 000376 | 1996# | 3565 | 4681 | 4981 | 5936 | 6084 | 6865 | 6875 | 6880 | 6885 | 6893 | | | | | | | | | | |
| GSPRMA= 000001 | 1996# | 6875 | 6880 | | | | | | | | | | | | | | | | | | |
| GSPRMD= 000002 | 1996# | 3565 | 4681 | 4981 | 5936 | 6084 | 6885 | 6893 | | | | | | | | | | | | | |
| GSPRML= 000000 | 1996# | 6865 | | | | | | | | | | | | | | | | | | | |
| GSRADA= 000140 | 1996# | 3565 | 4981 | 6084 | | | | | | | | | | | | | | | | | |
| GSRADB= 000000 | 1996# | | | | | | | | | | | | | | | | | | | | |
| GSRADD= 000040 | 1996# | 4681 | | | | | | | | | | | | | | | | | | | |
| GSRADL= 000120 | 1996# | 6865 | | | | | | | | | | | | | | | | | | | |
| GSRADO= 000020 | 1996# | 5936 | 6875 | 6880 | 6885 | 6893 | | | | | | | | | | | | | | | |
| GSXFER= 000004 | 1996# | | | | | | | | | | | | | | | | | | | | |
| G\$YES = 000010 | 1996# | 4681 | 6865 | 6875 | 6880 | 6885 | 6893 | | | | | | | | | | | | | | |
| HALFDB= 002000 | 2413# | 6287 | 6292 | | | | | | | | | | | | | | | | | | |
| HELP = 000000 | 1# | 1996 | 2010 | 2100 | 2112 | 2126 | 2157 | 2161 | 2163 | 3121 | 3142 | 3159 | 3163 | | | | | | | | |
| | | 3293 | 4576 | 4580 | 4582 | 4602 | 4612 | 4778 | 4796 | 4810 | 4827 | 4843 | 4848 | 4865 | | | | | | | |
| | | 4870 | 4887 | 4888 | 4892 | 6793 | 6788 | 6861 | 6908 | 6922 | 6927 | 6935 | | | | | | | | | |
| HELPDC= 000000 | 1# | 3 | 2099 | 2135 | 2156 | 2389 | 2403 | 3095 | 3122 | 3143 | 3163 | 3209 | 4720 | | | | | | | | |
| | | 4756 | 6177 | 6182 | 6308 | 6340 | 6380 | 6517 | 6520 | 6528 | 6870 | 6905 | | | | | | | | | |
| HLP = 000005 | 2337# | 2935 | 2937 | 5015 | 5212 | | | | | | | | | | | | | | | | |
| HLPEND 003230 | 2587# | 5210 | | | | | | | | | | | | | | | | | | | |
| HLPF 013231 | 3163# | 3649 | 5205 | | | | | | | | | | | | | | | | | | |
| HLPTAB 003210 | 2579# | 5202 | | | | | | | | | | | | | | | | | | | |
| HLP0 013153 | 3163# | 4950 | | | | | | | | | | | | | | | | | | | |
| HLP1 013236 | 2579 | 3163# | | | | | | | | | | | | | | | | | | | |
| HLP2 013251 | 2580 | 3163# | | | | | | | | | | | | | | | | | | | |
| HLP3 013366 | 2581 | 3163# | | | | | | | | | | | | | | | | | | | |
| HLP3A 013453 | 2582 | 3163# | | | | | | | | | | | | | | | | | | | |
| HLP4 013500 | 2583 | 3163# | | | | | | | | | | | | | | | | | | | |
| HLP4A 013557 | 2584 | 3163# | | | | | | | | | | | | | | | | | | | |
| HLP5 013635 | 2585 | 3163# | | | | | | | | | | | | | | | | | | | |
| HLP6 013725 | 2586 | 3163# | | | | | | | | | | | | | | | | | | | |
| HOE - 100000 | G | 2237# | | | | | | | | | | | | | | | | | | | |
| IBE = 010000 | G | 2234# | | | | | | | | | | | | | | | | | | | |
| IDU = 000040 | G | 2227# | | | | | | | | | | | | | | | | | | | |
| IEO = 000100 | | 2415# | 6251 | 6818 | | | | | | | | | | | | | | | | | |
| IER = 020000 | G | 2235# | | | | | | | | | | | | | | | | | | | |
| INDEX 007450 | | 2763# | 3671* | 3672* | 3679* | 3680* | 3692* | 3698* | 3728* | 3729* | 3736* | 3737* | 3772 | | | | | | | | |
| INDEXE 007452 | | 2764# | 3673* | 3681* | 3693* | 3699* | 3730* | 3738* | 3776 | 3778 | | | | | | | | | | | |
| ININT - 000001 | | 2305# | 6453 | 6460 | 6523 | 6627 | 6629 | | | | | | | | | | | | | | |
| INIT1 033766 | | 4614 | 4619# | | | | | | | | | | | | | | | | | | |
| INTPRI 012410 | | 3116# | 4742* | 4757 | 4764 | | | | | | | | | | | | | | | | |
| INVEC 012404 | | 3114# | 4739* | 4759 | | | | | | | | | | | | | | | | | |
| ISR - 000100 | G | 2228# | | | | | | | | | | | | | | | | | | | |
| IXE - 004000 | G | 2233# | | | | | | | | | | | | | | | | | | | |
| ISAU = 000041 | | 1996# | 4863# | 4876# | | | | | | | | | | | | | | | | | |
| ISAUTO= 000041 | | 1996# | 4794# | 4800# | | | | | | | | | | | | | | | | | |
| ISCLN = 000041 | | 1996# | 4808# | 4824 | 4833# | | | | | | | | | | | | | | | | |
| ISDU = 000041 | | 1996# | 4841# | 4854# | | | | | | | | | | | | | | | | | |
| ISHRD = 000041 | | 6858# | 6904# | | | | | | | | | | | | | | | | | | |
| ISINIT- 000041 | | 1996# | 4610# | 4775 | 4784# | | | | | | | | | | | | | | | | |
| ISMJD = 000041 | | 1996# | 1998# | 6942# | | | | | | | | | | | | | | | | | |
| ISMSG = 000041 | | 1996# | 3166# | 3181# | 3183# | 3194# | 3196# | 3208# | 3210# | 3230# | 3232# | 3251# | 3253# | 3265# | | | | | | | |

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| | | | | | |
|---------|--------|---|-------|-------|-------|
| L\$AUT | 002070 | G | 2072# | | |
| L\$AUTO | 034646 | G | 2089 | 4794# | |
| L\$CCP | 002106 | G | 2086# | | |
| L\$CLEA | 034650 | G | 2087 | 4808# | |
| L\$CC | 002032 | G | 2042# | | |
| L\$DEPO | 002011 | G | 2024# | | |
| L\$DESC | 012430 | G | 2079 | 3148# | |
| L\$DESP | 002076 | G | 2078# | | |
| L\$DEVP | 002060 | G | 2064# | | |
| L\$DISP | 002124 | G | 2049 | 2109# | |
| L\$DLY | 002116 | G | 2094# | | |
| L\$DTP | 002040 | G | 2048# | | |
| L\$DTYP | 002034 | G | 2044# | | |
| L\$DU | 034740 | G | 2075 | 4841# | |
| L\$DUT | 002072 | G | 2074# | | |
| L\$DVTY | 012414 | G | 2065 | 3137# | |
| L\$EF | 002052 | G | 2059# | | |
| L\$ENVI | 002044 | G | 2052# | | |
| L\$ETP | 002102 | G | 2082# | | |
| L\$EXP1 | 002046 | G | 2054# | | |
| L\$EXP4 | 002064 | G | 2068# | | |
| L\$EXP5 | 002066 | G | 2070# | | |
| L\$HARD | 046140 | G | 2031 | 6858 | 6859# |
| L\$HIME | 002120 | G | 2096# | | |
| L\$HPCP | 002016 | G | 2030# | | |
| L\$HPTP | 002022 | G | 2034# | | |
| L\$HW | 002130 | G | 2035 | 2122 | 2123# |
| L\$ICP | 002104 | G | 2084# | | |
| L\$INIT | 033746 | G | 2085 | 4610# | |
| L\$LADP | 002026 | G | 2038# | | |
| L\$LAST | 046522 | G | 2039 | 6940# | |
| L\$LOAD | 002100 | G | 2080# | | |
| L\$LUN | 002074 | G | 2076# | | |
| L\$MREV | 002050 | G | 2056# | | |
| L\$NAME | 002000 | G | 2013# | | |
| L\$PRIO | 002042 | G | 2050# | | |
| L\$PROT | 033740 | G | 2091 | 4594# | |
| L\$PRT | 002112 | G | 2090# | | |
| L\$REPP | 002062 | G | 2066# | | |
| L\$REV | 002010 | G | 2022# | | |
| L\$RPT | 033732 | G | 2067 | 4574# | |
| L\$SPC | 002056 | G | 2062# | | |
| L\$SPCP | 002020 | G | 2032# | | |
| L\$SPTP | 002024 | G | 2036# | | |
| L\$STA | 002030 | G | 2040# | | |
| L\$TEST | 002114 | G | 2092# | | |
| L\$TIML | 002014 | G | 2028# | | |
| L\$UNIT | 002012 | G | 2026# | 4708 | |
| L10000 | 002150 | | 2122 | 2153# | |
| L10001 | 025670 | | 3179# | | |
| L10002 | 025716 | | 3192# | | |
| L10003 | 025746 | | 3206# | | |
| L10004 | 026030 | | 3228# | | |
| L10005 | 026106 | | 3249# | | |
| L10006 | 026140 | | 3263# | | |
| L10007 | 026176 | | 3278# | 3283 | |

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| | | | | | | |
|--------|----------|-------|-------|-------|------|-------|
| MSGR | 002646 | 2436 | 2451 | 2515# | | |
| MSG8C | 002170 | 2436# | | | | |
| NEW | 034302 | 4640 | 4705# | 4709 | | |
| NO | = 000036 | 2362# | 3007 | 5426 | 5429 | 5460 |
| NOBUF | C07374 | 2737# | 4819 | 5527* | 5893 | 6695* |
| NOCLK | 015106 | 3163# | 4690 | 4905 | | |
| NOD0 | 010664 | 2934# | | | | |
| NOD1 | 010670 | 2935# | | | | |
| NOD10 | 010746 | 2942# | | | | |
| NOD100 | 011564 | 3017# | | | | |
| NOD101 | 011570 | 3018# | | | | |
| NOD102 | 011604 | 3019# | | | | |
| NOD103 | 011610 | 3022# | | | | |
| NOD104 | 011624 | 3023# | | | | |
| NOD105 | 011630 | 3024# | | | | |
| NOD106 | 011644 | 3025# | | | | |
| NOD107 | 011650 | 3027# | | | | |
| NOD11 | 010750 | 2943# | | | | |
| NOD110 | 011664 | 3028# | | | | |
| NOD111 | 01170 | 3031# | | | | |
| NOD112 | 011674 | 3034# | | | | |
| NOD113 | 011710 | 3035# | | | | |
| NOD114 | 011714 | 3036# | | | | |
| NOD115 | 011732 | 3037# | | | | |
| NOD116 | 011736 | 3038# | | | | |
| NOD117 | 011752 | 3039# | | | | |
| NOD12 | 010762 | 2944# | | | | |
| NOD120 | 011756 | 3040# | | | | |
| NOD121 | 011772 | 3041# | | | | |
| NOD122 | 011776 | 3042# | | | | |
| NOD123 | 012012 | 3043# | | | | |
| NOD124 | 012016 | 3044# | | | | |
| NOD125 | 012032 | 3045# | | | | |
| NOD126 | 012036 | 3046# | | | | |
| NOD127 | 012052 | 3047# | | | | |
| NOD13 | 010766 | 2945# | | | | |
| NOD130 | 012056 | 3048# | | | | |
| NOD131 | 012076 | 3049# | | | | |
| NOD132 | 012102 | 3052# | | | | |
| NOD133 | 012106 | 3053# | | | | |
| NOD134 | 012112 | 3054# | | | | |
| NOD135 | 012116 | 3055# | | | | |
| NOD136 | 012122 | 3056# | | | | |
| NOD137 | 012126 | 3057# | | | | |
| NOD14 | 011002 | 2946# | | | | |
| NOD140 | 012132 | 3058# | | | | |
| NOD141 | 012134 | 3061# | | | | |
| NOD142 | 012140 | 3062# | | | | |
| NOD143 | 012144 | 3063# | | | | |
| NOD144 | 012160 | 3064# | | | | |
| NOD145 | 012164 | 3065# | | | | |
| NOD146 | 012200 | 3066# | | | | |
| NOD147 | 012204 | 3069# | | | | |
| NOD15 | 011006 | 2947# | | | | |
| NOD150 | 012210 | 3070# | | | | |
| NOD151 | 012214 | 3071# | | | | |

CZCLKC0 DMR,DMC-11 DATA COMM. LINK TEST MACY11 30A(1052) 23-MAR-82 16:45 PAGE 187
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| | | |
|--------|--------|-------|
| NOD152 | 012220 | 3074# |
| NOD153 | 012224 | 3077# |
| NOD154 | 012246 | 3078# |
| NOD155 | 012252 | 3079# |
| NOD156 | 012266 | 3080# |
| NOD157 | 012272 | 3081# |
| NOD16 | 011022 | 2948# |
| NOD160 | 012314 | 3082# |
| NOD161 | 012320 | 3083# |
| NOD162 | 012342 | 3084# |
| NOD163 | 012346 | 3087# |
| NOD164 | 012352 | 3088# |
| NOD165 | 012356 | 3089# |
| NOD166 | 012362 | 3094# |
| NOD167 | 027266 | 3605# |
| NOD17 | 011026 | 2949# |
| NOD170 | 027272 | 3606# |
| NOD171 | 027276 | 3607# |
| NOD172 | 027300 | 3608# |
| NOD173 | 027314 | 3609# |
| NOD174 | 027316 | 3610# |
| NOD175 | 027332 | 3611# |
| NOD176 | 027334 | 3612# |
| NOD177 | 027346 | 3613# |
| NOD2 | 010674 | 2936# |
| NOD20 | 011032 | 2950# |
| NOD200 | 027350 | 3614# |
| NOD201 | 027364 | 3615# |
| NOD202 | 027370 | 3616# |
| NOD203 | 027374 | 3617# |
| NOD204 | 027410 | 3618# |
| NOD205 | 027412 | 3619# |
| NOD206 | 027426 | 3620# |
| NOD207 | 027430 | 3621# |
| NOD21 | 011044 | 2951# |
| NOD210 | 027446 | 3622# |
| NOD211 | 027452 | 3623# |
| NOD212 | 027456 | 3624# |
| NOD213 | 027460 | 3625# |
| NOD214 | 027462 | 3626# |
| NOD22 | 011050 | 2952# |
| NOD23 | 011062 | 2953# |
| NOD24 | 011066 | 2954# |
| NOD25 | 011070 | 2958# |
| NOD26 | 011074 | 2959# |
| NOD27 | 011110 | 2960# |
| NOD3 | 010676 | 2937# |
| NOD30 | 011114 | 2961# |
| NOD31 | 011132 | 2962# |
| NOD32 | 011136 | 2963# |
| NOD33 | 011154 | 2964# |
| NOD34 | 011160 | 2965# |
| NOD35 | 011176 | 2966# |
| NOD36 | 011202 | 2967# |
| NOD37 | 011220 | 2968# |
| NOD4 | 010712 | 2938# |

| | | | | | | | | | | | | | | |
|---------|--------|-------|-------|-------|------|------|------|------|------|------|------|-------|------|------|
| SEOP | 020113 | 3163# | 3475 | | | | | | | | | | | |
| SETET = | 000060 | 2380# | 3048 | 5012 | 5393 | | | | | | | | | |
| SETEXP= | 000010 | 2340# | 2989 | 5037 | 5313 | 5388 | | | | | | | | |
| SETTRN= | 000011 | 2341# | 2991 | 5316 | | | | | | | | | | |
| SHFO | 015361 | 3163# | 4273 | | | | | | | | | | | |
| SHF1 | 015417 | 3163# | 4303 | | | | | | | | | | | |
| SHMSG | 014434 | 3163# | 5286 | | | | | | | | | | | |
| SHOW = | 000002 | 2334# | 2950 | 5035 | 5199 | 5235 | 5254 | | | | | | | |
| SHTAB | 003504 | 2678# | 5274 | 5280 | | | | | | | | | | |
| SHTEND | 003513 | 2681# | 5277 | | | | | | | | | | | |
| SHTYPO | 014470 | 2671 | 3163# | | | | | | | | | | | |
| SHTYP1 | 014477 | 2671 | 3163# | | | | | | | | | | | |
| SHTYP2 | 014504 | 2671 | 3163# | | | | | | | | | | | |
| SHTYP3 | 014511 | 2671 | 3163# | | | | | | | | | | | |
| SHTYP4 | 014516 | 2671 | 3163# | | | | | | | | | | | |
| SHTYP5 | 014524 | 2671 | 3163# | | | | | | | | | | | |
| SHTYP6 | 014531 | 2671 | 3163# | | | | | | | | | | | |
| SHTYP7 | 014537 | 2671 | 3163# | | | | | | | | | | | |
| SHTYTB | 003464 | 2671# | 5285 | | | | | | | | | | | |
| SHWOP | 032340 | 3891 | 4257# | 4959 | 5298 | | | | | | | | | |
| SIZE = | 000012 | 2342# | 3063 | 5320 | 5326 | | | | | | | | | |
| SMSC | 020124 | 3163# | | | | | | | | | | | | |
| SQD = | 040000 | 2400# | 2834 | | | | | | | | | | | |
| SRXQ | 020025 | 3163# | 3441 | | | | | | | | | | | |
| STADD | 007402 | 2740# | 4007 | 5301* | | | | | | | | | | |
| START | 034042 | 4624 | 4643# | | | | | | | | | | | |
| STATB = | 000001 | 2273# | 3491 | 4281 | 5448 | | | | | | | | | |
| STATUS= | 000016 | 2346# | 3016 | | | | | | | | | | | |
| STXC | 020014 | 3163# | 3436 | | | | | | | | | | | |
| STXQ | 020003 | 3163# | 3431 | | | | | | | | | | | |
| SVCGBL= | 000000 | 1996# | 2013 | 2022 | 2024 | 2026 | 2028 | 2030 | 2032 | 2034 | 2036 | 2038 | 2040 | 2042 |
| | | 2044 | 2046 | 2048 | 2050 | 2052 | 2054 | 2056 | 2059 | 2062 | 2064 | 2066 | 2068 | 2070 |
| | | 2072 | 2074 | 2076 | 2078 | 2080 | 2082 | 2084 | 2086 | 2088 | 2090 | 2092 | 2094 | 2096 |
| | | 2109 | 2123 | 2124 | 3137 | 3148 | 3166 | 3183 | 3196 | 3210 | 3232 | 3253 | 3267 | 3366 |
| | | 4574 | 4594 | 4610 | 4794 | 4808 | 4841 | 4863 | 6522 | 6529 | 6859 | 6940# | 6941 | |
| SVCINS= | 000001 | 1996# | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2023 | 2025 | 2027 | 2029 |
| | | 2031 | 2033 | 2035 | 2037 | 2039 | 2041 | 2043 | 2045 | 2047 | 2049 | 2051 | 2053 | 2055 |
| | | 2057 | 2058 | 2060 | 2061 | 2063 | 2065 | 2067 | 2069 | 2071 | 2073 | 2075 | 2077 | 2079 |
| | | 2081 | 2083 | 2085 | 2087 | 2089 | 2091 | 2093 | 2095 | 2097 | 2108 | 2110 | 2122 | 3138 |
| | | 3140 | 3149 | 3156 | 3168 | 3169 | 3170 | 3171 | 3172 | 3173 | 3174 | 3175 | 3176 | 3177 |
| | | 3180 | 3185 | 3186 | 3187 | 3188 | 3189 | 3190 | 3193 | 3198 | 3199 | 3200 | 3201 | 3202 |
| | | 3203 | 3204 | 3207 | 3212 | 3213 | 3214 | 3215 | 3216 | 3217 | 3218 | 3219 | 3221 | 3222 |
| | | 3223 | 3224 | 3225 | 3226 | 3229 | 3234 | 3235 | 3236 | 3237 | 3238 | 3239 | 3240 | 3242 |
| | | 3243 | 3244 | 3245 | 3246 | 3247 | 3250 | 3255 | 3256 | 3257 | 3258 | 3259 | 3260 | 3261 |
| | | 3264 | 3269 | 3270 | 3271 | 3272 | 3273 | 3274 | 3275 | 3276 | 3279 | 3282 | 3283 | 3392 |
| | | 3500 | 3501 | 3502 | 3503 | 3504 | 3508 | 3509 | 3510 | 3511 | 3512 | 3551 | 3552 | 3553 |
| | | 3554 | 3555 | 3562 | 3563 | 3564 | 3565 | 3566 | 3567 | 3568 | 3569 | 3579 | 3580 | 3581 |
| | | 3582 | 3583 | 3589 | 3590 | 3591 | 3592 | 3593 | 3648 | 3649 | 3650 | 3651 | 3652 | 3653 |
| | | 3716 | 3717 | 3718 | 3719 | 3720 | 3721 | 3767 | 3768 | 3769 | 3770 | 3771 | 3781 | 3782 |
| | | 3783 | 3784 | 3785 | 3786 | 3787 | 3788 | 3789 | 3806 | 3807 | 3808 | 3809 | 3810 | 3829 |
| | | 3830 | 3831 | 3832 | 3833 | 3839 | 3840 | 3841 | 3842 | 3843 | 3844 | 3845 | 3846 | 3847 |
| | | 3854 | 3855 | 3856 | 3857 | 3858 | 3859 | 3860 | 3868 | 3869 | 3870 | 3871 | 3872 | 3873 |
| | | 3875 | 3876 | 3877 | 3878 | 3879 | 3880 | 3881 | 3900 | 3901 | 3902 | 3903 | 3904 | 3905 |
| | | 3906 | 3907 | 3916 | 3917 | 3918 | 3919 | 3920 | 3921 | 3922 | 3923 | 3931 | 3932 | 3933 |
| | | 3934 | 3935 | 3936 | 3937 | 3938 | 3952 | 3953 | 3954 | 3955 | 3956 | 3972 | 3973 | 3974 |
| | | 3975 | 3976 | 4010 | 4011 | 4012 | 4013 | 4014 | 4015 | 4020 | 4021 | 4022 | 4023 | 4024 |

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 4025 | 4026 | 4029 | 4030 | 4031 | 4032 | 4033 | 4034 | 4074 | 4075 | 4076 | 4077 | 4078 |
| 4269 | 4270 | 4271 | 4272 | 4273 | 4274 | 4275 | 4276 | 4277 | 4299 | 4300 | 4301 | 4302 |
| 4303 | 4304 | 4305 | 4306 | 4307 | 4449 | 4450 | 4451 | 4452 | 4453 | 4492 | 4493 | 4494 |
| 4495 | 4496 | 4585 | 4617 | 4621 | 4622 | 4624 | 4626 | 4627 | 4629 | 4631 | 4632 | 4634 |
| 4637 | 4638 | 4640 | 4648 | 4649 | 4650 | 4652 | 4658 | 4659 | 4660 | 4662 | 4671 | 4673 |
| 4678 | 4679 | 4680 | 4681 | 4682 | 4683 | 4684 | 4685 | 4690 | 4691 | 4692 | 4693 | 4694 |
| 4712 | 4713 | 4714 | 4716 | 4747 | 4748 | 4749 | 4750 | 4751 | 4752 | 4757 | 4758 | 4759 |
| 4760 | 4761 | 4762 | 4764 | 4765 | 4766 | 4767 | 4768 | 4769 | 4772 | 4773 | 4775 | 4776 |
| 4783 | 4799 | 4813 | 4814 | 4824 | 4825 | 4832 | 4845 | 4846 | 4853 | 4867 | 4868 | 4875 |
| 4905 | 4906 | 4907 | 4908 | 4909 | 4950 | 4951 | 4952 | 4953 | 4954 | 4962 | 4964 | 4968 |
| 4969 | 4978 | 4979 | 4980 | 4981 | 4982 | 4983 | 4984 | 4985 | 4995 | 4996 | 4997 | 4998 |
| 4999 | 5004 | 5005 | 5006 | 5007 | 5008 | 5031 | 5032 | 5043 | 5044 | 5045 | 5046 | 5047 |
| 5048 | 5058 | 5059 | 5060 | 5061 | 5062 | 5063 | 5084 | 5085 | 5086 | 5087 | 5088 | 5089 |
| 5104 | 5105 | 5106 | 5107 | 5108 | 5109 | 5204 | 5205 | 5206 | 5207 | 5208 | 5209 | 5284 |
| 5285 | 5286 | 5287 | 5288 | 5289 | 5290 | 5331 | 5332 | 5333 | 5334 | 5335 | 5361 | 5362 |
| 5363 | 5364 | 5365 | 5435 | 5436 | 5437 | 5438 | 5439 | 5484 | 5485 | 5486 | 5487 | 5488 |
| 5501 | 5502 | 5503 | 5504 | 5505 | 5834 | 5835 | 5836 | 5837 | 5852 | 5853 | 5854 | 5855 |
| 5865 | 5866 | 5867 | 5868 | 5933 | 5934 | 5935 | 5936 | 5937 | 5938 | 5939 | 5940 | 5962 |
| 5963 | 5964 | 5965 | 5966 | 5971 | 5972 | 5973 | 5974 | 6044 | 6045 | 6046 | 6047 | 6048 |
| 6049 | 6050 | 6081 | 6082 | 6083 | 6084 | 6085 | 6086 | 6087 | 6088 | 6139 | 6140 | 6141 |
| 6142 | 6143 | 6162 | 6163 | 6164 | 6165 | 6166 | 6221 | 6231 | 6232 | 6233 | 6234 | 6444 |
| 6445 | 6446 | 6447 | 6452 | 6463 | 6464 | 6465 | 6466 | 6484 | 6485 | 6486 | 6487 | 6503 |
| 6504 | 6505 | 6506 | 6526 | 6533 | 6561 | 6572 | 6573 | 6574 | 6575 | 6614 | 6615 | 6616 |
| 6617 | 6621 | 6674 | 6675 | 6676 | 6677 | 6682 | 6683 | 6753 | 6754 | 6755 | 6756 | 6823 |
| 6841 | 6858 | 6865 | 6866 | 6867 | 6875 | 6876 | 6877 | 6878 | 6880 | 6881 | 6882 | 6883 |
| 6885 | 6886 | 6887 | 6888 | 6889 | 6893 | 6894 | 6895 | 6896 | 6897 | 6902 | 6937 | 6938 |
| 6939 | | | | | | | | | | | | |

SVCSUB= 000001
SVCTAG= 000001

SVCTST= 000001
SLSYM= 010000

S1 034030
S2 034104
S3 034154
S4 034222
TABEX 015167
TAL = 000005
TALCK 042734
TALMOD= 000035
TC IRAD 007360
TEMP 007426

TEMP1 007430

TEMP2 007432

TEMP3 007434

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1996# | | | | | | | | | | | | |
| 1996# | 2153 | 3179 | 3192 | 3206 | 3228 | 3249 | 3263 | 3278 | 3391 | 3570 | 4584 | 4686 |
| 4782 | 4798 | 4831 | 4852 | 4874 | 4986 | 5941 | 6089 | 6525 | 6532 | 6840 | 6903 | |
| 1996# | 4890 | | | | | | | | | | | |
| 1996# | 2154# | 3180# | 3193# | 3207# | 3229# | 3250# | 3264# | 3279# | 3392# | 3563 | 3570 | 3571# |
| 4585# | 4679 | 4686 | 4687# | 4783# | 4799# | 4832# | 4853# | 4875# | 4979 | 4986 | 4987# | 5934 |
| 5941 | 5942# | 6082 | 6089 | 6090# | 6526# | 6533# | 6841# | 6904# | | | | |
| 4634 | 4636# | | | | | | | | | | | |
| 4652 | 4657# | | | | | | | | | | | |
| 4662 | 4670# | | | | | | | | | | | |
| 4673 | 4689# | | | | | | | | | | | |
| 3163# | 5058 | 5104 | | | | | | | | | | |
| 2255# | 5419 | 6171 | | | | | | | | | | |
| 2799 | 6074# | 6111 | 6113 | | | | | | | | | |
| 2361# | 2974 | | | | | | | | | | | |
| 2729# | 4930* | 4933 | 5069 | 5074* | 5261* | | | | | | | |
| 2753# | 3432* | 3437* | 3442* | 3476* | 3450* | 3455* | 3464* | 3468* | 3472* | 3476* | 3489 | 3515 |
| 3516* | 3517* | 3518 | 4018* | 40.1 | 4080* | 4081* | 4082 | 4120* | 4121* | 4127 | 4259* | 4272 |
| 4280* | 4283* | 4302 | 4818* | 5282* | 5284 | 5345* | 5346* | 5350 | 5353 | 5728* | 5729* | 5733 |
| 6035* | 6041* | 6045 | | | | | | | | | | |
| 2754# | 3431* | 3436* | 3441* | 3449* | 3454* | 3463* | 3467* | 3471* | 3475* | 3508 | 3775* | 3783 |
| 4266* | 4270 | 4284* | 4287* | 4301 | | | | | | | | |
| 2755# | 3456* | 3457* | 3521 | 3779* | 3781 | 4123* | 4125* | 4129 | 4267* | 4269 | 4288* | 4291* |
| 4300 | 4820* | 5690* | 5700* | 5711* | 5717 | 5731* | 5732 | 5750* | 5818* | 5894* | 5983* | 5990* |
| 6004* | 6008* | 6020* | 6098* | 6107* | 6145* | 6156* | 6225* | 6438* | 6455* | 6479* | 6498* | 6566* |
| 6608* | 6668* | 6710* | 6828* | | | | | | | | | |
| 2756# | 3198 | 3214 | 3235 | 3256 | 3271 | 3458* | 3522 | 3774* | 3784 | 4262* | 4265* | 4271 |
| 4821* | 5692* | 5702* | 5712* | 5718 | 5729 | 5730 | 5731 | 5751* | 5820* | 5830 | 5895* | 5935 |
| 5942 | 5943 | 5944 | 5945 | 5985* | 5992* | 6002* | 6009* | 6021* | 6099* | 6108* | 6147* | 6157* |

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| | | | | | | | | | | | | | | |
|---------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| TEMP4 | 007436 | 6226* | 6439* | 6457* | 6490* | 6499* | 6567* | 6610* | 6659* | 6711* | 6829* | 5827* | 5840* | 5845* |
| | | 2757# | 3185 | 3213 | 3234 | 3255 | 3270 | 3459* | 3486* | 3523 | 4819* | 6609* | 6670* | 6689* |
| | | 5846 | 5861 | 5893* | 6003* | 6227* | 6440* | 6458* | 6481* | 6500* | 6568* | 6741 | 6744 | 6747 |
| | | 6692 | 6703 | 6715 | 6718 | 6721 | 6724 | 6727 | 6730 | 6733 | 6736 | | | |
| | | 6830* | | | | | | | | | | | | |
| TEMP5 | 007440 | 2758# | 4292* | 4295* | 4299 | | | | | | | | | |
| TIMERS | 007546 | 2816# | 3384 | 3388* | 6432* | 6436 | | | | | | | | |
| TIMER1 | 007542 | 2814# | 3378 | 3380* | 4899* | 4900 | 6206* | 6222 | 6557* | 6558 | 6604* | 6605 | 6821* | 6826 |
| TIMER2 | 007544 | 2815# | 3381 | 3383* | | | | | | | | | | |
| TIMMIN | 007534 | 2810# | 3375* | 3520 | 4696* | | | | | | | | | |
| TIMOM | 025413 | 3163# | 6720 | | | | | | | | | | | |
| TIMSEC | 007536 | 2811# | 3372* | 3373 | 3376* | 3519 | | 4697* | | | | | | |
| TIMTCK | 007540 | 2812# | 3369* | 3371* | 3386 | 3517 | | 4698* | | | | | | |
| TM | = 001000 | 2401# | 2835 | | | | | | | | | | | |
| TOINOT | 044250 | 6433# | 6467 | 6470 | 6474 | | | | | | | | | |
| TOIN1 | 044332 | 6437 | 6451# | | | | | | | | | | | |
| TOIN2 | 044416 | 6454 | 6469# | | | | | | | | | | | |
| TOOR:O | 045012 | 6244 | 6263 | 6277 | 6283 | 6332 | 6371 | 6426 | 6603# | 6618 | 6819 | | | |
| TOOR1 | 045076 | 6606 | 6620# | | | | | | | | | | | |
| TOOR2 | 045114 | 6624 | 6621* | | | | | | | | | | | |
| TOOP3 | 045024 | 6605# | 6628 | | | | | | | | | | | |
| TOTCC | 007422 | 2751# | 4067* | 4068 | 4079* | 4081 | 4083* | 4916* | 5039* | 5040 | 5073 | 5080* | 5081 | 5121 |
| TRA | = 000001 | 2251# | 5416 | | | | | | | | | | | |
| TRAMOD= | 000034 | 2360# | 2972 | | | | | | | | | | | |
| TRVACT | 032762 | 4362 | 4373# | 4389 | 4394 | 4399 | 4402 | 4422 | 4488 | 4511 | 4532 | 4556 | | |
| TRVALN | 033554 | 4351 | 4515# | | | | | | | | | | | |
| TRVALP | 033510 | 4350 | 4501# | | | | | | | | | | | |
| TRVBIF | 033066 | 4347 | 4402# | | | | | | | | | | | |
| TRVBR | 033056 | 4346 | 4399# | | | | | | | | | | | |
| TRVBRC | 033002 | 4360 | 4380# | 4400 | 4405 | 4424 | 4498 | 4513 | 4534 | 4560 | | | | |
| TRVDEC | 033162 | 4353 | 4427# | | | | | | | | | | | |
| TRVERR | 033020 | 4344 | 4389# | | | | | | | | | | | |
| TRVEXI | 033040 | 4345 | 4394# | | | | | | | | | | | |
| TRVNMA | 033202 | 4428 | 4431# | | | | | | | | | | | |
| TRVNOB | 033012 | 4385# | 4406 | 4423 | 4489 | 4512 | 4533 | | | | | | | |
| TRVNUM | 033174 | 4349 | 4430# | | | | | | | | | | | |
| TRVOCT | 033174 | 4352 | 4429# | | | | | | | | | | | |
| TRVSPA | 033110 | 4348 | 4408# | | | | | | | | | | | |
| TRVSTR | 033642 | 4354 | 4538# | | | | | | | | | | | |
| TSEL4 | 045762 | 6480 | 6490 | 6763* | 6775# | | | | | | | | | |
| TSEL6 | 045764 | 6481 | 6491 | 6764* | 6776# | | | | | | | | | |
| TFL | = 000001 | 2259# | 4970 | 6253 | | | | | | | | | | |
| TILLOP- | 000044 | 2368# | 3077 | | | | | | | | | | | |
| TTOTCC | 007356 | 2728# | 4229 | 4917* | 5039 | 5050 | 5073* | 5257* | | | | | | |
| TXBUF | 003562 | 2711# | 4197 | 4930 | 5260 | 6003 | | | | | | | | |
| TXC | = 000002 | 2291# | 3437 | | | | | | | | | | | |
| TXMTOT | 007354 | 2727# | 4217 | 4936* | 5052* | 5054 | 5075* | 5252 | 5256* | 5498 | 5585 | 5608 | 5633 | |
| TXNC | 025521 | 3163# | 6001 | | | | | | | | | | | |
| TXONLY | 040670 | 2795 | 5583# | | | | | | | | | | | |
| TXON2 | 040676 | 5584# | | | | | | | | | | | | |
| TXPTR | 007334 | 2718# | 4210* | 4212* | 4213 | 4222* | 4224 | 4920* | 4934 | 5053* | 5067* | 5068 | 5072* | 5258* |
| | | 5259 | 5510* | 5584 | 5609 | 5634 | | | | | | | | |
| | | 2290# | 3432 | | | | | | | | | | | |
| TXQ | = 000000 | 2014# | 2015# | 2016# | 2017# | 2018# | 2019# | 3168# | 3177 | 3185# | 3190 | 3198# | 3204 | 3212# |
| TSARGC- | 000001 | 3219 | 3221# | 3226 | 3234# | 3240 | 3242# | 3247 | 3255# | 3261 | 3269# | 3276 | 3500# | 3504 |
| | | 3508# | 3512 | 3551# | 3555 | 3579# | 3583 | 3589# | 3593 | 3648# | 3653 | 3716# | 3721 | 3767# |

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 CZCLKC.P11 19-MAR-82 18:32 CROSS REFERENCE TABLE -- MACRO NAMES

| | | | | | | | | | | | | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|--|--|
| ENDMOD | 1# | 1996# | 6941 | | | | | | | | | | | | | | | | | |
| ENDMSG | 1# | 1996# | 3178 | 3191 | 3205 | 3227 | 3248 | 3262 | 3277 | | | | | | | | | | | |
| ENDPRO | 1# | 1996# | 4600 | | | | | | | | | | | | | | | | | |
| ENDPTA | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| ENDRPT | 1# | 1996# | 4583 | | | | | | | | | | | | | | | | | |
| ENDSEG | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| ENDSET | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| ENDSFT | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| ENDSRV | 1# | 1996# | 3390 | 6524 | 6531 | | | | | | | | | | | | | | | |
| ENDSUB | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| ENDSW | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| ENDTST | 1# | 1996# | 6839 | | | | | | | | | | | | | | | | | |
| EQUALS | 1# | 1996# | 2169 | | | | | | | | | | | | | | | | | |
| ERRDF | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| ERRHRD | 1# | 1996# | 5970 | | | | | | | | | | | | | | | | | |
| ERROR | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| ERRSF | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| ERRSOF | 1# | 1996# | 5833 | 5851 | 5864 | 6230 | 6443 | 6462 | 6483 | 6502 | 6571 | 6613 | 6673 | 6752 | | | | | | |
| ERRTBL | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| ESCAPE | 1# | 1996# | 6681 | | | | | | | | | | | | | | | | | |
| EXIT | 1# | 1996# | 3281 | 4774 | 4823 | 4844 | 4866 | 4967 | 5030 | | | | | | | | | | | |
| FEQUAL | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| GETBYT | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| GETPRI | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| GETWOR | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| GMANIA | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| GMANID | 1# | 1996# | 3561 | 4677 | 4977 | 5932 | 6080 | | | | | | | | | | | | | |
| GMANIL | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| GPHARD | 1# | 1996# | 4711 | | | | | | | | | | | | | | | | | |
| GPRMA | 1# | 1996# | 6874 | 6879 | | | | | | | | | | | | | | | | |
| GPRMD | 1# | 1996# | 3562# | 3565 | 4678# | 4681 | 4978# | 4981 | 5933# | 5936 | 6081# | 6084 | 6884 | 6892 | | | | | | |
| GPRML | 1# | 1996# | 6864 | | | | | | | | | | | | | | | | | |
| HEADER | 1# | 1996# | 2012 | | | | | | | | | | | | | | | | | |
| INLOOP | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| IOSETU | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| IOSTAR | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| KT11 | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| LASTAD | 1# | 1996# | 6936 | | | | | | | | | | | | | | | | | |
| MANUAL | 1# | 1996# | 4961 | | | | | | | | | | | | | | | | | |
| MEMORY | 1# | 1996# | | | | | | | | | | | | | | | | | | |
| MSBYTE | 1# | 1996# | 2013# | 2019 | 2020 | 2021 | | | | | | | | | | | | | | |
| MSCHEC | 1# | 1996# | 3282# | 4775# | 4824# | 4845# | 4867# | 4968# | 5031# | | | | | | | | | | | |
| MSCNTO | 1# | 1996# | 3565# | 4681# | 4981# | 5936# | 6081# | 6865# | 6875# | 6880# | 6885# | 6893# | | | | | | | | |
| MSCOUN | 1# | 1996# | 3168# | 3185# | 3198# | 3212# | 3221# | 3234# | 3242# | 3255# | 3269# | 3500# | 3508# | 3551# | 3579# | | | | | |
| | 3589# | 3648# | 3716# | 3767# | 3781# | 3806# | 3829# | 3839# | 3854# | 3868# | 3875# | 3900# | 3916# | 3931# | 3952# | | | | | |
| | 3972# | 4010# | 4020# | 4029# | 4074# | 4269# | 4299# | 4449# | 4492# | 4690# | 4905# | 4950# | 4995# | 5004# | 5043# | | | | | |
| | 5058# | 5084# | 5104# | 5204# | 5284# | 5331# | 5361# | 5435# | 5484# | 5501# | 5962# | 6044# | 6139# | 6162# | | | | | | |
| MSDATA | 1# | 1996# | 2013# | 2022 | 2024 | 2026 | 2028 | 2030 | 2032 | 2034 | 2036 | 2038 | 2040 | 2042 | 2044 | | | | | |
| | 2046 | 2048 | 2050 | 2052# | 2054 | 2056 | 2059 | 2062 | 2064 | 2066 | 2068 | 2070 | 2072 | 2074 | 2076 | | | | | |
| | 2078 | 2080 | 2082 | 2084 | 2086 | 2088 | 2090 | 2092 | 2094 | 2096 | 3137# | 3148# | | | | | | | | |
| MSDECR | 1# | 1996# | 2153# | 3179# | 3192# | 3206# | 3228# | 3249# | 3263# | 3278# | 3391# | 4584# | 4601# | 4782# | 4798# | | | | | |
| | 4831# | 4852# | 4874# | 6525# | 6532# | 6840# | 6902# | 6942# | | | | | | | | | | | | |
| MSDEFA | 1# | 1996# | 3565# | 4681# | 4981# | 5936# | 6084# | 6865# | 6875# | 6880# | 6885# | 6893# | | | | | | | | |
| MSENDE | 1# | 1996# | 2153# | 3179# | 3192# | 3206# | 3228# | 3249# | 3263# | 3278# | 3391# | 4584# | 4782# | 4798# | 4831# | | | | | |
| | 4852# | 4874# | 6525# | 6532# | 6840# | 6902# | 6942# | | | | | | | | | | | | | |
| MSERRI | 1# | 1996# | 5834# | 5852# | 5865# | 5971# | 6231# | 6444# | 6463# | 6484# | 6503# | 6572# | 6614# | 6674# | 6753# | | | | | |

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| | | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 5503 | 5504# | 5505 | 5834# | 5835# | 5836# | 5837# | 5852# | 5853# | 5854# | 5855# | 5865# | 5866# | 5867# | 5868# |
| | 5933# | 5934# | 5935# | 5936# | 5937 | 5938 | 5939 | 5940 | 5962# | 5963# | 5964 | 5965# | 5966 | 5971# | 5972# |
| | 5973# | 5974# | 6044# | 6045# | 6046# | 6047# | 6048 | 6049# | 6050 | 6081# | 6082# | 6083# | 6084# | 6085 | 6086 |
| | 6087 | 6088 | 6139# | 6140# | 6141 | 6142# | 6143 | 6162# | 6163# | 6164 | 6165# | 6166 | 6221# | 6231# | 6232# |
| | 6233# | 6234# | 6444# | 6445# | 6446# | 6447# | 6452# | 6463# | 6464# | 6465# | 6466# | 6484# | 6485# | 6486# | 6487# |
| | 6503# | 6504# | 6505# | 6506# | 6525# | 6526 | 6532# | 6533 | 6561# | 6572# | 6573# | 6574# | 6575# | 6614# | 6615# |
| | 6616# | 6617# | 6621# | 6674# | 6675# | 6676# | 6677# | 6682# | 6683# | 6753# | 6754# | 6755# | 6756# | 6823# | 6841# |
| | 6858# | 6865# | 6866 | 6867 | 6875# | 6876 | 6877 | 6878 | 6880# | 5881 | 6882 | 6883 | 6885# | 6885 | 6887 |
| | 6888 | 6889 | 6893# | 6894 | 6895 | 6896 | 6897 | 6902# | 6937# | 6938# | 6939# | | | | |
| MSGNLS | 1# | 1996# | 3562# | 3570 | 4678# | 4686 | 4978# | 4986 | 5933# | 5941 | 6081# | 6089 | | | |
| MSGNSU | 1# | 1996# | | | | | | | | | | | | | |
| MSGNTA | 1# | 1996# | 2153# | 3179# | 3192# | 3206# | 3228# | 3249# | 3263# | 3278# | 3391# | 4584# | 4782# | 4798# | 4831# |
| | 4852# | 4874# | 6525# | 6532# | 6840# | 6902# | 6903 | | | | | | | | |
| MSGNTE | 1# | 1996# | 4890# | | | | | | | | | | | | |
| MSHAPT | 1# | 1996# | 2013# | | | | | | | | | | | | |
| MSHNAP | 1# | 1996# | 2013# | 2052 | | | | | | | | | | | |
| MSINCR | 1# | 1996# | 1998# | 2122# | 3166# | 3176# | 3180# | 3183# | 3189# | 3193# | 3196# | 3203# | 3207# | 3210# | 3218# |
| | 3225# | 3229# | 3232# | 3239# | 3246# | 3250# | 3253# | 3260# | 3264# | 3267# | 3275# | 3279# | 3366# | 3503# | 3511# |
| | 3554# | 3562# | 3571 | 3582# | 3592# | 3652# | 3720# | 3770# | 3788# | 3809# | 3832# | 3846# | 3859# | 3872# | 3880# |
| | 3906# | 3922# | 3937# | 3955# | 3975# | 4014# | 4025# | 4033# | 4077# | 4276# | 4306# | 4452# | 4495# | 4574# | 4585# |
| | 4594# | 4610# | 4617# | 4622# | 4627# | 4632# | 4638# | 4649# | 4659# | 4671# | 4678# | 4687 | 4693# | 4713# | 4751# |
| | 4761# | 4768# | 4773# | 4775# | 4783# | 4794# | 4799# | 4808# | 4814# | 4824# | 4832# | 4841# | 4853# | 4863# | 4875# |
| | 4890# | 4891# | 4908# | 4953# | 4962# | 4968# | 4978# | 4987 | 4998# | 5007# | 5031# | 5047# | 5062# | 5088# | 5108# |
| | 5208# | 5289# | 5334# | 5364# | 5438# | 5487# | 5504# | 5834# | 5852# | 5865# | 5933# | 5942 | 5965# | 5971# | 6049# |
| | 6081# | 6090 | 6142# | 6165# | 6221# | 6231# | 6444# | 6452# | 6463# | 6484# | 6503# | 6522# | 6529# | 6561# | 6572# |
| | 6614# | 6621# | 6674# | 6682# | 6753# | 6823# | 6841# | 6858# | | | | | | | |
| MSIOSE | 1# | 1996# | | | | | | | | | | | | | |
| MSLDRO | 1# | 1996# | 4621# | 4626# | 4631# | 4637# | 4648# | 4658# | 4712# | 4772# | 4813# | | | | |
| MSMASK | 1# | 1996# | | | | | | | | | | | | | |
| MSMCHI | 1# | 1996# | | | | | | | | | | | | | |
| MSMCLO | 1# | 1996# | | | | | | | | | | | | | |
| MSMSK1 | 1# | 1996# | | | | | | | | | | | | | |
| MSPOP | 1# | 1996# | 2153# | 3179# | 3192# | 3206# | 3228# | 3249# | 3263# | 3278# | 3391# | 4584# | 4601# | 4782# | 4798# |
| | 4831# | 4852# | 4874# | 6525# | 6532# | 6840# | 6902# | 6942# | | | | | | | |
| MSPRIN | 1# | 1996# | 3168# | 3185# | 3198# | 3212# | 3221# | 3234# | 3242# | 3255# | 3269# | 3500# | 3508# | 3551# | 3579# |
| | 3589# | 3648# | 3716# | 3767# | 3781# | 3806# | 3829# | 3839# | 3854# | 3868# | 3875# | 3900# | 3916# | 3931# | 3952# |
| | 3972# | 4010# | 4020# | 4029# | 4074# | 4269# | 4299# | 4449# | 4492# | 4690# | 4905# | 4950# | 4995# | 5004# | 5043# |
| | 5058# | 5084# | 5104# | 5204# | 5284# | 5331# | 5361# | 5435# | 5484# | 5501# | 5962# | 6044# | 6139# | 6162# | |
| MSPLUSH | 1# | 1996# | 1998# | 2122# | 3166# | 3183# | 3196# | 3210# | 3232# | 3253# | 3267# | 3366# | 4574# | 4594# | 4610# |
| | 4794# | 4808# | 4841# | 4863# | 4890# | 4891 | 6522# | 6529# | 6858# | | | | | | |
| MSPUT | 1# | 1996# | 3168# | 3185# | 3198# | 3212# | 3221# | 3234# | 3242# | 3255# | 3269# | 3500# | 3508# | 3551# | 3579# |
| | 3589# | 3648# | 3716# | 3767# | 3781# | 3806# | 3829# | 3839# | 3854# | 3868# | 3875# | 3900# | 3916# | 3931# | 3952# |
| | 3972# | 4010# | 4020# | 4029# | 4074# | 4269# | 4299# | 4449# | 4492# | 4690# | 4747# | 4757# | 4764# | 4905# | 4950# |
| | 4995# | 5004# | 5043# | 5058# | 5084# | 5104# | 5204# | 5284# | 5331# | 5361# | 5435# | 5484# | 5501# | 5962# | 6044# |
| | 6139# | 6162# | | | | | | | | | | | | | |
| MSPUT1 | 1# | 1996# | 3168# | 3170 | 3172 | 3173 | 3174 | 3185# | 3186 | 3187 | 3198# | 3199 | 3200 | 3201 | 3212# |
| | 3213 | 3214 | 3215 | 3216 | 3221# | 3222 | 3223 | 3234# | 3235 | 3236 | 3237 | 3242# | 3243 | 3244 | 3255# |
| | 3256 | 3257 | 3258 | 3269# | 3270 | 3271 | 3272 | 3273 | 3500# | 3501 | 3508# | 3509 | 3551# | 3552 | 3579# |
| | 3580 | 3589# | 3590 | 3648# | 3649 | 3650 | 3716# | 3717 | 3718 | 3767# | 3768 | 3781# | 3782 | 3784 | 3785 |
| | 3786 | 3806# | 3807 | 3829# | 3830 | 3839# | 3840 | 3841 | 3842 | 3843 | 3844 | 3854# | 3855 | 3856 | 3857 |
| | 3868# | 3869 | 3870 | 3875# | 3876 | 3877 | 3878 | 3900# | 3901 | 3902 | 3903 | 3904 | 3916# | 3917 | 3918 |
| | 3919 | 3920 | 3931# | 3932 | 3933 | 3934 | 3935 | 3952# | 3953 | 3972# | 3973 | 4010# | 4011 | 4012 | 4020# |
| | 4022 | 4023 | 4029# | 4030 | 4031 | 4074# | 4075 | 4269# | 4270 | 4271 | 4272 | 4273 | 4274 | 4299# | 4300 |
| | 4301 | 4302 | 4303 | 4304 | 4449# | 4450 | 4492# | 4493 | 4690# | 4691 | 4747# | 4748 | 4749 | 4750 | 4757# |
| | 4758 | 4759 | 4760 | 4764# | 4765 | 4766 | 4767 | 4905# | 4906 | 4950# | 4951 | 4995# | 4996 | 5004# | 5005 |
| | 5043# | 5044 | 5045 | 5058# | 5059 | 5060 | 5084# | 5085 | 5086 | 5104# | 5105 | 5106 | 5204# | 5205 | 5206 |

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| | | | | | | | | | | | | | | | |
|--------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|
| POINTE | 1# | 1996# | 2008 | | | | | | | | | | | | |
| PRINTB | 1# | 1996# | 3167 | 3184 | 3197 | 3211 | 3220 | 3233 | 3241 | 3254 | 3268 | | | | |
| PRINTF | 1# | 1996# | 3499 | 3507 | 3550 | 3578 | 3588 | 3647 | 3715 | 3766 | 3780 | 4009 | 4019 | 4028 | 4073 |
| | 4448 | 4491 | 4689 | 4904 | 4949 | 4994 | 5003 | 5042 | 5057 | 5083 | 5103 | 5203 | 5283 | 5330 | 5360 |
| | 5434 | 5483 | 5500 | 5961 | 6043 | 6138 | 6161 | | | | | | | | |
| PRINTS | 1# | 1996# | 3805 | 3828 | 3838 | 3853 | 3867 | 3874 | 3899 | 3915 | 3930 | 3951 | 3971 | 4268 | 4298 |
| PRINTX | 1# | 1996# | | | | | | | | | | | | | |
| READBU | 1# | 1996# | 4670 | | | | | | | | | | | | |
| READEF | 1# | 1996# | 4620 | 4625 | 4630 | 4636 | | | | | | | | | |
| RFLAGS | 1# | 1996# | | | | | | | | | | | | | |
| SETPRI | 1# | 1996# | 4771 | 4812 | | | | | | | | | | | |
| SETVEC | 1# | 1996# | 4746 | 4756 | 4763 | | | | | | | | | | |
| SLASH | 1# | 1996# | | | | | | | | | | | | | |
| STARS | 1# | 1996# | | | | | | | | | | | | | |
| SVC | 1# | 1996# | | | | | | | | | | | | | |
| XFER | 1# | 1996# | 3282# | 4775# | 4824# | 4845# | 4867# | 4968# | 5031# | | | | | | |
| XFERF | 1# | 1996# | | | | | | | | | | | | | |
| XFERT | 1# | 1996# | | | | | | | | | | | | | |

. ABS. 046522 000

ERRORS DETECTED: 0

CZCLKC,CZCLKC.LST/CRF/SOL=SVC34R.MLB,CZCLKC.P11
 RUN-TIME: 26 32 4 SECONDS
 RUN-TIME RATIO: 93/62=1.4
 CORE USED: 22K (43 PAGES)