

TEXT LISTING

068-001061-01

PROGRAM

MICRO NOVA COMMUNICATION  
SUBSYSTEM RELIABILITY

TEXT TAPE

097-001061-01

ABSTRACT

THE COMMUNICATIONS SUBSYSTEM RELIABILITY TEST IS A MAINTENANCE PROGRAM DESIGNED TO EXERCISE THE MICRO NOVA COMMUNICATION SUBSYSTEM. THE METHOD OF TEST CONSISTS OF TRANSMISSION AND RECEPTION (VIA MAINTENANCE FEATURES OF THE HARDWARE) OF PSEUDO RANDOM CHARACTERS.

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PROGRAM NAME
MNCMM.SR
REVISION HISTORY 04/21/78
REV. 0
REV. 1 03/02/79
FACILITATE SECONDARY
DEVICE CODE
MACHINE REQUIREMENTS (MINIMUM)
MICRO NUVA PROCESSOR
BK READ/WRITE MEMORY
CONSOLE DEVICE
DISKETTE DRIVE OR PAPER TAPE READER
COMMUNICATION CONTROLLER BOARD
ASYNCHRONOUS OR SYNCHRONOUS
COMMUNICATION BOARD
TEST REQUIREMENTS (MAXIMUM CONFIGURATION)
COMMUNICATION CONTROLLER BOARD
CRC GENERATOR BOARD
ANY COMBINATION OF ASYNCHRONOUS AND SYNCHRONOUS
BOARDS NOT TO EXCEED FOUR
MODEM TEST PLUGS (ONE PER BOARD)
SUMMARY
THE COMMUNICATIONS SUBSYSTEM RELIABILITY TEST IS
A MAINTENANCE PROGRAM DESIGNED TO EXERCISE THE
MICRO NUVA COMMUNICATION SUBSYSTEM.
THE METHOD OF TEST CONSISTS OF TRANSMISSION
AND RECEPTION (VIA MAINTENANCE FEATURES OF THE
HARDWARE) OF PSEUDO RANDOM CHARACTERS. SINCE
CHARACTERISTICS ARE DETERMINED VIA A RANDOM NUMBER
GENERATOR AND ARE CHANGED PERIODICALLY, SELECTION
OF LINES FOR TESTING IS VIA THE CONSOLE.
: *****
: NAME: MNCMM.TX          PART NUMBER: 097-001061
:
: DESCRIPTION: MICRU NUVA COMMUNICATION SUBSYSTEM RELIABILITY
:
: REVISION HISTORY:
:
: REV.          DATE
: 00          04/21/78
: 01          03/02/79
:
: FACILITATE SECONDARY
: DEVICE CODE
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: COPYRIGHT (C) DATA GENERAL CORPORATION, 1978,1979
: ALL RIGHTS RESERVED.
: *****

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16.0 RESTRICTIONS
16.1 WHEN RUNNING BOTH TYPES OF LINES, SYNC LINES SHOULD
    HAVE LOWER ADDRESSES THAN ASYNC LINES.
16.2 9600 AND 19200 BAUD ARE NOT INCLUDED IN RANDOM
    SELECTION OF CHARACTERISTICS
16.3 9600 OR 19200 BAUD MAY BE CHOSEN IF OPERATOR SELECTS
    CHARACTERISTICS BUT ONLY ONE LINE SHOULD BE RUN
    AT A TIME, OTHERWISE, "OVERRUN" ERRORS MAY OCCUR.
    FURTHERMORE, SYNC LINES RUNNING AT 19200 BAUD MUST
    BE ADDRESS 0 WITH 8 LEVEL CODE SELECTED AND NO CRC.
16.4 IF MODEMS ARE TESTED WITH THE LINE, CLEAR TO SEND
    (CTS) IS NOT CHECKED.
16.5 CTS MAY BE TESTED BY SELECTING MODEMS ONLY ON
    ASYNC LINES, THIS IS NOT PERMITTED ON SYNC LINES.
16.6 ALTERING SWRGS WHILE THE PROGRAM IS RUNNING
    MAY CAUSE "OVERRUN" ERRORS.
16.7 AN "OVERRUN" OR "RECEIVE BUFFER OVERFLOW" ERROR
    PRINTOUT MAY BE AN INDICATION THAT THE THROUGHPUT
    OF THIS PROGRAM (APPROXIMATELY 10000 CPS) IS BEING
    EXCEEDED. IT MAY BE NECESSARY ON A LARGE NUMBER
    OF HIGH BAUD RATE LINES (>4800) TO TEST SMALLER
    GROUPS OF LINES AT A TIME, FORCE A LOWER BAUD RATE
    FOR THE ASYNC LINES, OR CHANGE BAUD RATE JUMPERS.
    THE SUM OF THE BAUD RATE FOR ALL SYNC LINES
    SHOULD NOT EXCEED 9600.
16.8 A MAXIMUM TIME COUNTER IS PROVIDED TO DETECT A LOSS
    OF ACTIVITY ON A LINE (BLOCK DONE NEVER SETS AFTER
    STARTING). FOR MANY LOW BAUD RATES (<100), TIME COUNT
    (TIMEX) SHOULD BE INCREASED IF "LOSS OF LINE ACTIVITY"
    ERROR MESSAGES APPEAR.
16.9 THE RANDOM NUMBERS ARE TRANSMITTED IN BLOCKS AT A
    TIME AND COMPARED IN NON-INTERRUPT TIME. THE TRANS-
    MIT/RECEIVE BUFFER AREAS ARE DIVIDED ACCORDING TO
    HOW MANY LINES ARE ACTIVE. THEN EACH LINE IS GIVEN
    A RANDOM BLOCK LENGTH EVERY TIME A NEW BLOCK IS SENT,
    WITHIN THE CONSTRAINTS OF THE MAXIMUM BLOCK SIZE. TO
    TRANSMIT LARGER BLOCKS OF CHARACTERS AT A TIME, THE
    OPERATOR MAY WANT TO SELECT FEWER LINES TO ACTIVATE.

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17.0 PROGRAM DESCRIPTION/THEORY OF OPERATION
17.1 FOR OPERATOR SELECTED LINES, THIS PROGRAM IS
    DESIGNED TO EXERCISE THE COMMUNICATIONS SYSTEM IN
    ALL MODES. FOR SYSTEM FAILURES, THE ASYNC OR SYNC
    CONTROLLER DIAGNOSTIC IS PREREQUISITE.
17.2 INITIALIZATION - OPERATOR INPUTS DEFINE THE LINES
    LINES TO BE TESTED, AND MODEM AND CRC LINES. THE
    PROGRAM WILL THEN DEFINE THE LCB BLOCKS FOR ACTIVE
    LINES, ALLOCATE TRANSMIT AND RECEIVE BUFFERS, CHOOSE
    RANDOM LINE CHARACTERISTICS AND BLOCK LENGTHS, AND
    FILL THE TRANSMIT BUFFERS WITH RANDOM DATA. RANDOM
    DLE WORDS, SPECIFIC ALLOWABLE SYNC WORDS (SEE STABLE),
    FORCED UNDERRUNS, ENTER AND LEAVE TRANSPARENCY, AND
    BREAK CHARACTERS ARE ALSO LOADED AT VARIOUS INTERVALS
    IN THE TRANSMIT TABLES. IF MODEM IS SELECTED, RANDOM
    CHANGE SEQUENCES ARE SELECTED FOR THE SYNC LINES AND
    SPECIFIC UN/OFF SEQUENCE FOR ASYNC ARE LOADED (SEE
    GMUD AND GAMOD).
    AFTER ALL INITIALIZATION IS COMPLETED, DMAN
    OUTPUTS LINE CHARACTERISTICS (AFTER TURNING OFF AND
    INITIALIZING ALL LINES), TURNS ON ACTIVE TRANSMITTERS
    AND RECEIVERS, AND OUTPUTS INITIAL MODEM STATES. IT
    IS A CAUSE-AND-EFFECT INTERACTION BETWEEN THE HOST
    MONITOR AND CHECKING ROUTINES AND DMAN'S SUBROUTINE.
    DATA IS TRANSMITTED FROM THE BUFFERS ON A TRANSMIT
    INTERRUPT AND RECEIVED AND STORED (ALONG WITH ERROR
    STATUS) IN THE INTERRUPT ROUTINE WITH A MINIMUM OF
    ERROR CHECKING. THE DMAN ROUTINE WILL MONITOR AND
    DETECT WHEN A LINE HAS TRANSMITTED AND RECEIVED (VIA
    EOT CHARACTER) A FULL BLOCK OF DATA, THEN SHUT DOWN
    THE LINE AND SET A BLOCK DONE BIT IN THE MCW FOR THE
    HOST. THE HOST WILL MONITOR LINE ACTIVITY, AND, UPON
    RECEIPT OF THE BLOCK DONE BIT, WILL COMPARE THE TRANS-
    MIT AND RECEIVE DATA AND RECORD AND PRINT OUT ANY
    ERROR CONDITION. AFTER CHECKING ALL DATA, THE HOST
    WILL CHANGE LINE CHARACTERISTICS (IF NO ERRORS AND
    SWITCH I(1)), GENERATE A NEW BLOCK OF DATA, AND SIGNAL
    DMAN (VIA BIT 1 OF THE MCW) TO START THE LINE AGAIN.
    THIS PROCESS IS REPEATED CONTINUALLY ON ALL LINES.
    MODEMS ARE HANDLED IN A SIMILAR MANNER.

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OPERATING MODES/SWITCH SETTINGS
S2WPD 8

19.3
19.4
19.5

ADDITIONAL SWITCH OPTIONS IN THIS PROGRAM ARE:
BIT OCTAL BINARY INTERPRETATION
VALUE VALUE

A 0 RANDOM SELECTION OF LINE
CHARACTERISTICS
OPERATOR SELECTS LINE
CHARACTERISTICS

B 00040 1

C 00020 1 DO NOT TEST MODEMS
MODEM TESTING DESIRED

D 00010 1 DO NOT TEST CRC
CRC TESTING DESIRED

E 0 DO NOT REQUEST PARAMETERS
AFTER RESTART
REQUEST PARAMETERS AFTER RESTART

F 00002 1 USE ERR? SERVICE ROUTINE
CONVERT TRAP# TO ERROR MESSAGE

00001 1

OPERATING PROCEDURE/OPERATOR INPUT
CONNECT THE MODEM TEST PLUGS - IF IT IS
DESIRED TO TEST ANY MODEM LINES.

ASYNC MODEM TEST PLUG
RTS 0 TO RING 0 AND CD 1
RTS 1 TO RING 1 AND CD 0
RTS 2 TO RING 2 AND CD 3
RTS 3 TO RING 3 AND CD 2
UTR 0 TO CTS 0 AND DSR 1
UTR 1 TO CTS 1 AND DSR 0
UTR 2 TO CTS 2 AND DSR 3
UTR 3 TO CTS 3 AND DSR 2

SYNC MODEM TEST PLUG
UTR TO RING
RTS TO DSR
SPA TO CD AND XMT CLK
SPB TO CTS

LOAD THE TEST PROGRAM VIA THE BINARY
LOADER OR DIAGNOSTIC OPERATING SYSTEM.
STARTING ADDRESS = 000200

THE PROGRAM WILL LIST AND REQUEST
OPTIONS DESIRED. USE SWITCH PACK
COMMANDS AND OPTIONS IN PARAGRAPH 8.

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;9.6 THE PROGRAM WILL REQUEST THE DEVICE CODE (DIAL)
; OF THE SUBSYSTEM FOLLOWED BY A CARRIAGE RETURN.
;
;9.7 THE PROGRAM WILL REQUEST THE COMM. LINES THAT
; ARE TO BE TESTED, FIRST THE SYNC LINES, THEN
; SYNC LINES. THE OPERATOR MAY DEFINE A GROUP OF
; LINES FOR TESTING BY TYPING (FIRST LINE, SLASH,
; LAST LINE). SINGLE LINES MAY BE TESTED BY TYPING
; THE LINE NUMBER. ALL LINE NUMBERS ARE IN DECIMAL.
; OTHER VIA COMMAS WITH THE FINAL LINE OR GROUP
; ENDING IN A CARRIAGE RETURN. FOR EXAMPLE: 4,8/11,
; 15 "CARRIAGE" LINES 4,8,9,10,11, AND 15 WILL BE
; EXERCISED. THE LINE FEED CHARACTER MAY BE USED
; LIKE A COMMA WHEN INPUT FORMATTING IS NECESSARY.
; TYPING AN "N" (NO LINES OF THIS TYPE) DOES NOT
; REQUIRE A CARRIAGE RETURN.
;
;9.8 IF MODEM LINES ARE TO BE TESTED (SWITCH "B"), TYPE
; THE LINE NUMBERS IN THE FORMAT DESCRIBED ABOVE.
; A TEST FIXTURE IS REQUIRED FOR THE MODEM TEST.
;
;9.9 IF CRC IS TESTED (SWITCH "C"), THE DEVICE CODE
; (DIAL) FOLLOWED BY A CARRIAGE RETURN WILL BE
; REQUESTED, THEN TYPE THE LINE NUMBERS IN THE
; FORMAT DESCRIBED ABOVE.
;
;NOTE: THE PROGRAM WILL DETECT AN ERROR AND REPEAT THE INPUT
; REQUEST IF ANY OF THE FOLLOWING INPUT ERRORS ARE COM-
; MITTED:
;
; 1. A LINE NUMBER GREATER THAN 15 (DECIMAL) IS
; TYPED.
; 2. MULTIPLE DEFINED LINES.
; 3. A SECOND LINE (FOLLOWING SLASH) LESS THAN
; FIRST LINE
; 4. A SYNC LINE OTHER THAN 0,4,8,12.
; 5. A SYNC LINE THAT HAS AN ASYNC LINE ALREADY
; DEFINED IN THAT QUADRANT.
; 6. A DEVICE CODE OTHER THAN 34 OR 44
; FOR THE SUBSYSTEM.
; 7. A DEVICE CODE OTHER THAN 35 OR 45
; FOR THE CRC BOARD.
;
;9.10 IF OPERATOR SELECTION OF CHARACTERISTICS DESIRED,
; (SWITCH "A"), THE PROGRAM WILL ASK A SERIES OF
; QUESTIONS TO BE ANSWERED AS OPERATOR INPUTS.
; ONLY THE CHARACTERISTICS UNIQUE TO THAT TYPE OF
; LINE (SYNC OR ASYNC) WILL BE REQUIRED. IF MORE
; THAN ONE LINE IS DESIRED, THE PROGRAM WILL LOOP
; UNTIL A 0 IS GIVEN TO THE LAST QUESTION. THESE
; CHARACTERISTICS WILL REMAIN ON THOSE LINES
; REQUESTED UNTIL SWITCH 1 = 1. "ALL LINES
; OF THIS TYPE" MEANS ALL DEFINED ASYNC, OR ALL
; DEFINED SYNC LINES WILL RECEIVE THE OPERATOR
; DESIRED PARAMETERS. IF A "1" IS ANSWERED TO
; THIS QUESTION, TYPE THE ADDRESS OF THE FIRST
; LINE NUMBER OF THE DESIRED TYPE (SYNC OR ASYNC).

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10008 .MAIN
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;10. THE PROGRAM ENTERS AN ERROR STATE WHEN RECEIVER
; AND TRANSMITTER DATA DO NOT COMPARE. A FAULTY
; STATUS CONDITION EXISTS, AN OUT OF SEQUENCE OR
; UNEXPECTED EVENT OCCURS. AN ERROR MESSAGE TO THE
; OPERATOR WILL BE TYPED AT THE CONSOLE TELETYPE.
; SWITCH "F" WILL DETERMINE WHICH ERROR REPORTING
; IS TO BE USED. DURING THE PRESENTATION OF THE
; ERROR MESSAGE, NORMAL OPERATION WILL CONTINUE
; ON THE OTHER LINES. WHEN THE ERROR MESSAGE IS
; COMPLETE, THE CONDITION OF THE LINE IS MAINTAINED.
; THE OPERATOR MAY SCOPE THE LINE TO DETERMINE THE
; CAUSE OF FAILURE.
;
;10.2 SETTING SWITCH 1(1) WILL ALLOW NEW PSEUDO RANDOM
; NUMBERS TO BE GENERATED AFTER THE ERROR STATE HAS
; BEEN ENTERED. ERROR MESSAGES WILL CONTINUE TO BE
; TYPED AS ERRORS ARE DETECTED.
;
;10.3 CERTAIN ERRORS ARE DETECTED DURING INTERRUPT TIME.
; THESE ERRORS WILL NOT BE PRINTED UNTIL BEFORE THE
; NEXT ERROR IS TO BE PRINTED. POWER FAIL IS ALSO
; DETECTED HERE.
;
;10.4 TRAP NUMBER TO ERROR MESSAGE TABLE FOLLOWS:
; 001 LOSS OF LINE ACTIVITY
; 002 RECEIVER FAILED TO SET DUNE
; 003 XMIT FAILED TO SET DONE
; 004 GOOD= BAD= (ASYNC)
; 005 FRAMING ERROR
; 006 OVERRUN (ASYNC)
; 007 PARITY ERROR (ASYNC)
; 010 FAILED TO DETECT BREAK
; 011 OVERRUN (SYNC)
; 012 PARITY ERROR (SYNC)
; 013 GOOD= BAD= (SYNC)
; 014 RECEIVE BUFFER OVERFLOW
; 015 FAILURE TO OPERATE IN
; TRANSPARENT MODE
; 016 LINE FAILED TO UNDERRUN
; 017 UNDERRUN IN TRANSPARENT
; MODE WITHOUT DLE
; 020 CRC DOES NOT CHECK
; 021 LINE FAILED TO INTERRUPT
; 022 MODEM INTERRUPT FROM
; ILLEGAL LINE
; 023 MODEM FAILURE - RING BIT
; 024 MODEM FAILURE - DSR BIT
; 025 MODEM FAILURE - CTS BIT
; 026 MODEM FAILURE - CD BIT
; 027 FALSE INTERRUPT -
; NO CHANGE IN STATUS
; 030 UNIDENTIFIABLE ERROR -
; XMTS, RCVS TOO FAR APART
; 031 UNEXPECTED INTERRUPT FROM DEVICE

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DEBUS HELP
07UD0 11

11.4 TO AID IN TROUBLE SHOOTING, EXAMINE THE LCB'S
FOR THE FAILING LINE(S) FOR ADDITIONAL INFORMATION.
TO FIND THE APPROPRIATE LCB STARTING ADDRESS, ADD
THE LINE NUMBER TO THE LCB AND EXAMINE THAT LOCATION.
A DESCRIPTION OF LCB WORDS IS FOUND IN 11.7

11.5 DESCRIPTION OF COMMUNICATION SYSTEM I/O FUNCTIONS:
DEVICE CODES MUX = (OCTAL) PRIMARY-54 SECONDARY-44
CRC = (OCTAL) PRIMARY-55 SECONDARY-45

00A AC,MUX SPECIFIES THE ABSOLUTE LINE ADDRESS TO
BE USED IN CONJUNCTION WITH A DATA OUT
INSTRUCTION TO TRANSMIT, RECEIVE, OR
MODEM.
BITS 0-10 NOT USED
BITS 11-14 ABSOLUTE LINE ADDRESS
0 = RECEIVE OR MODEM CONTROL
1 = TRANSMIT CONTROL

00B AC,MUX SPECIFIES TRANSMIT DATA, TRANSMIT MODE
(TRANSPARENT OR BREAK), AND MODEM OUT.
BITS 0-1 TRANSMIT OR MODEM CONTROL
10 = MODEM CONTROL
00 = NORMAL TRANSMIT DATA
01 = TRANSMIT BREAK(ASYN ONLY)

BITS 2-3 TRANSPARENCY CONTROL (SYNC ONLY)
00 = NORMAL TRANSMIT
10 = TRANSMIT AND LEAVE XSPARENT
11 = TRANSMIT AND ENTER XSPARENT

BITS 4-7 NOT USED

BITS 8-15 TRANSMIT DATA (IN TRANSMIT MODE)
MODEM CONTROL SIGNALS
BIT 12 1 = TURN ON SPA (SYNC ONLY)
0 = TURN OFF SPA (SYNC ONLY)
BIT 13 1 = TURN ON SPB (SYNC ONLY)
0 = TURN OFF SPB (SYNC ONLY)
BIT 14 1 = TURN ON RTS
0 = TURN OFF RTS
BIT 15 1 = TURN ON DTR
0 = TURN OFF DTR

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DUC AC,MUX SPECIFIES ON/OFF CONTROL OF TRANSMITTER UK
RECEIVER, OUTPUT SYNC AND DLE CHARACTERS
(SYNC ONLY), AND LINE CHARACTERISTICS.
BITS 0-1 00 = XMIT/RCV CONTROL
NOT USED
BITS 2-6 NOT USED
BIT 7 0 = RESETS DONE (OFFLINE)
1 = SETS DONE (OFFLINE)
BIT 8-14 NOT USED
BIT 15 0 = OFF
1 = ON

DUC AC,MUX 01 = SYNC CHARACTER (SYNC ONLY)
NOT USED
SYNC CHARACTER
DUC AC,MUX 11 = DLE CHARACTER (SYNC ONLY)
NOT USED
DLE CHARACTER
DUC AC,MUX (FOR SYNC LINES)
BITS 0-1 10 = SPEC LINE CHARACTERISTICS
NOT USED
BITS 2-5 NOT USED
BIT 6 SELECT CRC POLYNOMIAL
0 = CRC-16
1 = CRC-CCITT
NOT USED
BITS 7-10 CODE LEVEL
00 = RESERVED
01 = 6 BITS
10 = 7 BITS
11 = 8 BITS
BITS 11-12 PARITY SELECT
00 = NO PARITY
01 = ODD PARITY
10 = EVEN PARITY
11 = RESERVED
BIT 15 LOOPBACK MODE
0 = ON
1 = OFF

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D0C AC,MUX (FOR ASYNC LINES)
BITS 0=1
BITS 2=4
BITS 5=8

10 SPEC LINE CHARACTERISTICS
NOT USED
BAUD RATE SELECT
0000 = 0
0001 = 19,200
0010 = 50
0011 = 75
0100 = 134.5
0101 = 200
0110 = 600
0111 = 2,400
1000 = 9,600
1001 = 4,800
1010 = 1,800
1011 = 1,200
1100 = 2,400
1101 = 300
1110 = 150
1111 = 110

SPECIFY NUMBER OF STOP BITS
(ASYNC ONLY)
00 = 1 STOP BIT
01 = 2 STOP BITS (1-1/2 FOR
5 LEVEL CODE)
10 = RESERVED
11 = RESERVED

SPECIFY CODE LEVEL
00 = 5 LEVEL CODE
01 = 6 LEVEL CODE
10 = 7 LEVEL CODE
11 = 8 LEVEL CODE

PARITY SELECT
00 = NO PARITY
01 = ODD PARITY
10 = EVEN PARITY
11 = RESERVED

LOOPBACK CONTROL
0 = LOOPBACK OFF
1 = LOOPBACK ON

D0B AC,MUX
BITS 0-6
BIT 7
BITS 8-15

SPECIFIES RECEIVED DATA ON RECEIVE INT-
ERRUPT.
NOT USED
PHASE OF T/R CLOCK (OFFLINE)
RECEIVE DATA

SPECIFIES RECEIVER DONE/STATUS OR
MODEM DONE/STATUS
NOT USED

RECEIVER STATUS
BIT 12 FRAMING ERROR (ASYNC ONLY)
BIT 13 PARITY ERROR
BIT 14 OVERRUN
BIT 15 0 = RECEIVER STATUS

D0A AC,MUX
SPECIFIES IMPLICIT ADDRESS OF INT-
ERRUPTING LINE, RECEIVE, MODEM, OR
TRANSMIT, AND FORCES A DOA AS EXPLICIT
ADDRESS FOR OUTPUTTING.
BITS 0-10 NOT USED
BITS 11-14 EXPLICIT ADDRESS
BIT 15 TRANSMIT OR RECV/MODEM CONTROL
0 = RECEIVE OR MODEM INTERRUPT
1 = TRANSMIT INTERRUPT

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10017 .MAIN

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01 TRANSMIT TABLE POINTER (XTP)
02
03 STARTING ADDRESS OF TRANSMIT BLOCK
04 FOR THIS LINE
05
06 TRANSMIT TABLE SIZE (XTS)
07
08 NUMBER OF CHARACTERS IN BLOCK TO
09 BE TRANSMITTED
10
11 TRANSMITTED WORD COUNT (XC)
12
13 NUMBER OF CHARACTERS IN BLOCK
14 ALREADY TRANSMITTED
15
16 RECEIVE TABLE POINTER (RTP)
17
18 STARTING ADDRESS OF RECEIVE BLOCK
19 FOR THIS LINE
20
21 RECEIVE TABLE SIZE (XRS)
22
23 MAXIMUM ALLOWABLE NUMBER OF
24 RECEIVE WORDS (2*XTS)
25
26 RECEIVED WORD COUNT (RC)
27
28 NUMBER OF CHARACTERS RECEIVED
29 IN THIS BLOCK
30
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10018 .MAIN

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01 SYNC WORD (SYNC)
02
03 BITS 0-7 NOT USED
04
05 BITS 8-15 SYN CHARACTER
06
07
08 DLE WORD (DLE)
09
10
11 BITS 0-7 NOT USED
12
13 BITS 8-15 DLE CHARACTER
14
15
16 CRC TEMPORARY (SCRC)
17
18 PRESENT CRC TEMPORARY
19
20
21 TIME COUNTER (TIME)
22
23
24 NUMBER OF TIMES THROUGH
25 MONITOR ROUTINE
26
27
28 TRANSMIT WORD TABLE (XTBL)
29
30 NOT USED
31
32 BIT 0
33
34 UNDERKUN FOR THE REST OF THE BLOCK SIZE
35
36 DLE CHARACTER FOLLOWS
37
38 BIT 3
39
40 0=LEAVE TRANSPARENCY
41 1=ENTER TRANSPARENCY
42
43 BITS 4-7 NOT USED
44
45 BITS 8-15 TRANSMIT DATA
46
47
48 RECEIVE WORD TABLE (XTBL+BL)
49
50 BITS 0-3 NOT USED
51
52 BITS 4-7 ERROR STATUS
53
54 BITS 8-15 RECEIVE DATA WORD

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SPECIAL NOTES/FEATURES  
CATWRITTEN IS NOT INCLUDED IN THIS PROGRAM

112.1  
112.2  
113.  
113.1  
113.2  
113.3  
113.4

IF NO ASYNC, SYNC, OR MODEMS LINES ARE  
SELECTED THIS PROGRAM WILL RUN ERROR FREE  
BUT NO XFER'S WILL TAKE PLACE.

RUN TIME  
A PRINTOUT OF THE ACCUMULATED TRANSMIT AND  
RECEIVED WORDS IS PROVIDED AFTER EACH PASS  
(IF SWITCH 450). THE INITIAL PASS IS SHORT  
TO INDICATE PROGRAM IS RUNNING. SUBSEQUENT  
PASSES ARE OF EQUAL DURATION AND DEPEND ON  
THE VALUE OF THE INTERNAL PASS COUNTER (NU.)  
AND SYSTEM CONFIGURATION.

THE OPERATOR MAY VARY THE FREQUENCY OF THE  
PRINTOUT BY ALTERING THE VALUE OF THE INTERNAL  
PASS COUNTER (NU.) BY USING THE ODT DESCRIBED  
IN PARAGRAPH 11.

IF ANY MODEMS ARE SELECTED RUN TIME IS  
APPROXIMATELY DOUBLED.

A TYPICAL SYSTEM OF ONE SYNC LINE WITH  
MODEM AND CRC, FOUR ASYNC LINES WITH MODEMS,  
AND THE VALUE OF NU. = 1000  
THE DURATION OF EACH PASS WOULD BE APPROX-  
IMATELY SIX AND A HALF MINUTES.

10020 .MAIN

\*\*00005 TOTAL ERRORS, 00000 PASS 1 ERRORS

0021 .MAIN

070D 0000000

9/02

STMPD 0000000

5/02