EDM-1

THE UNIQUELY SOPHISTICATED

THIRD GENERATION COMPUTER EDITING SYSTEM

NAB 1977

ARNOLD TAYLOR

SYSTEM CAPABILITIES

EASY ASSIGNMENT AND REASSIGNMENT OF MACHINES

6 PLAYBACKS AND 2 RECORD MACHINES WITH DUAL RECORD
    CAPABILITY

AUTOMATIC STORING OF REEL NUMBERS INTO RECORDS WHILE
    LOADING ON-THE-FLY

OPTIONAL MANUAL SYNCHRONIZING FROM THE SYSTEM CONSOLE

MULTIPLE LOADING ON THE FLY FROM 3 SYNCHRONOUS PLAYBACKS

RECORD-IN-TIME PROVIDED AUTOMATICALLY IF POSSIBLE ON
    A RECORD CREATE

EASY TRIMS

EASY ENTRY OF SPECIFIC TIME CODES

AUTOMATIC UPDATE OF RECORD TIMES ON RECORD CHANGES

WIDE VARIETY OF SWITCHER CONTROL THROUGH THE RECORDS

VARIETY OF RECORD TYPES TO ENABLE WIDER CHOICE OF
    FUNCTIONS DURING AUTOMATIC ASSEMBLY

RECORD SEARCH VIA RECORD NUMBER, RECORD-IN TIME OR
    PLAIN LANGUAGE COMMENT

MANEUVERABILITY OF RECORDS IN THE CORE FILE

SINGLE EDIT, RECORDING, PREVIEW, REVIEW

MULTIPLE TASK CAPABILITY

FLOPPY DISC I/O

VARIABLE CHOICE AUTO ASSEMBLIES FROM MULTIPLE FLOPPY
    DISC FILES

8 UTILITY STORES WITH LOADING-ON-THE-FLY CAPABILITY

PRINTER O/P OF WHOLE FILES OR SELECTED RECORDS

GOOD PREVIEW CAPABILITIES AND CHOICE OF PREVIEW MODE

2 MODES OF RECORDING SELECTABLE AT CONSOLE (INSERT/
    ASSEMBLE)

TIME-TO-GO AND DURATION BOTH DISPLAYED

SYSTEM EXPANSION CAPABILITY DUE TO COMMAND LINE USE

RESEQUENCE FUNCTION

OPERATOR COMMENTS CAN BE STORED FOR FUTURE REFERENCE

CONTINUOUS T.C. READ-OUTS FOR ANY 4 MACHINES SIMUL-
    TANEOUSLY

CURRENT STATUS OF SYSTEM ALWAYS DISPLAYED

OPERATOR NOTES ALLOW SYSTEM TO HALT DURING AUTO
    ASSEMBLY FOR REQUIRED OPERATOR INTERVENTION

AUTOLEARN SWITCHER ALLOWING FULL PRODUCTION DECISION
    MAKING (OPTION)

EXTENDED FILE MANAGEMENT WITH ADDITIONAL CORE (OPTION)

SYSTEM QUESTIONS

WHAT IS EDM-1?

HOW MANY MACHINES DOES IT CONTROL?

HOW MANY RECORDS ARE RETAINED IN SYSTEM?

HOW MANY RECORDS CAN BE USED IN A CONTINUOUS ASSEMBLY?

ONTO WHAT OUTPUT DEVICES CAN DATA BE SENT?

IS SYSTEM SELF-SUPPORTING IN CASE OF POWER FAILURE?

HOW IS INFORMATION ENTERED INTO SYSTEM?

CAN INFORMATION BE CHANGED ONCE ENTERED?

IS THERE ANY MEANS OF ENTERING COMMENTS?

IS THERE A PREVIEW MODE?

CAN THE PREVIEW BE OVERRIDDEN?

IS THERE ANY MEANS OF SAVING TIME CODES FOR LATER?

WHAT IS CALCULATOR AND WHAT DOES IT DO?

IS THERE ANY INDICATION TO OPERATOR OF HOW FAR INTO
    A SHOW THE FILE IS?

ARE RUNNING TIME CODES DISPLAYED?

DOES SYSTEM INDICATE ITS CURRENT RUNNING MODE?

ARE THERE ERROR INDICATIONS TO OPERATOR?

CAN INVALID DATA BE ENTERED INTO THE SYSTEM?

DO TIME CODES GET ADJUSTED WHEN CHANGES ARE MADE IN
    EARLIER RECORDS?

CAN A WHOLE FILE HAVE ITS TIME CODE MOVED UP OR DOWN?

IS THE SYSTEM TIED UP WHEN A FUNCTION SUCH AS PRINTING
    IS TAKING PLACE?

IS THIS A 1 BUTTON PER FUNCTION SYSTEM?

IS THERE EASY ACCESS TO A REQUIRED RECORD IN A FILE?

WHAT OPERATIONS CAN I PERFORM ON A RECORD ONCE IT IS
    IN A FILE?

HOW IS SYSTEM DELIVERED AND STARTED?

AFTER SYSTEM START-UP, WHAT NEXT?

HOW IS BASIC DATA ENTERED?

HOW DOES A RECORD GET DELETED?

HOW ARE TIME CODES TRIMMED?

WHAT ABOUT A/V SPLIT EDITS?

DOES THE SYSTEM HAVE SLAVING CAPABILITIES?

HOW ARE EFFECTS AND TRANSITIONS SET UP?

HOW IS ONE OF P/B, REC, REV SELECTED?

WHAT HAPPENS IF STOP IS USED DURING AN EDIT?

DO DIFFERENT PROGRAMS HAVE TO BE LOADED FOR DIFFERENT
    FUNCTIONS?

HOW IS EFFECT OR TRANSITION IN A RECORD CHANGED?

HOW DOES SYSTEM KNOW WHICH SCENE TO P/V?

CAN A NUMBER OF SCENES BE PERFORMED SIMULTANEOUSLY?

CAN THE SWITCHER BE USED MANUALLY TO OVERRIDE PREVIOUSLY
    PROGRAMMED MATERIAL?

CAN SWITCHER STILL BE USED IF SYSTEM IS DOWN?

CAN CMX/CDL PAPER TAPES BE ACCEPTED BY SYSTEM?

CAN TIME CODES BE MARKED IN AND OUT FROM THE RUNNING VTR?

CAN RECORDS BE MOVED AROUND ONCE IN A FILE?

CAN MACHINES BE MANUALLY CONTROLLED FROM THE SYSTEM
    CONTROL PANEL?

CAN OPEN-ENDED EDITS BE PERFORMED?

IS IT POSSIBLE TO ATTEMPT TO MANUALLY CONTROL A
MACHINE ALREADY BEING USED IN AN EDIT?

IS IT POSSIBLE TO QUICKLY SCROLL THROUGH THE CORE
FILE AND SEE THIS ON THE DISPLAY?

IS THERE ANY MEANS OF ENTERING OPERATOR COMMENTS
OR SPECIAL INSTRUCTIONS?

1. A COMMENT RECORD IS GENERATED BY ENTERING AN "/"
CHARACTER IN THE REC TYPE FIELD. INFORMATION IN A
COMMENT RECORD IS STORED AND DISPLAYED LIKE OTHER
RECORDS AND IS FUNCTIONALLY IGNORED BY THE SYSTEM.

2. A NOTE RECORD IS GENERATED BY ENTERING AN "N"
CHARACTER IN THE REC TYPE FIELD. A NOTE RECORD
WILL CAUSE THE SYSTEM TO "HALT" AT ITS POSITION IN
THE FILE AND DISPLAY THE INFORMATION IN THE "N"
RECORD. THE SYSTEM MUST BE "RESTARTED" BY THE
OPERATOR AND WILL CONTINUE AT THE RECORD FOLLOW-
ING THE "N" RECORD UNLESS OTHERWISE DIRECTED.

3. COMMENTS CAN ALSO BE STORED WITHIN SCENE RECORDS
IN A SPECIAL COMMENT FIELD OF 6 CHARACTERS INCLUDING
THE SPECIAL COMMENT IDENTIFICATION CHARACTER "/".
IF THE RECORD EXIT FIELD IS NOT BEING UTILIZED,
THE SCENE COMMENT FIELD CAN BEGIN AT THE FIRST
CHARACTER POSITION OF THE RECORD EXIT FIELD PRO-
VIDING ADDITIONAL SCENE COMMENT SPACE.

THE SCENE COMMENT FIELD CAN BE USED TO STORE A REAL
LANGUAGE, KEY-WORD OR COMMENT ENABLING A RECORD
RETRIEVAL VIA REAL LANGUAGE INPUT, USING THE "FE"
COMMAND. THE SYSTEM SEARCHES THE FILE FOR THE
RECORD IDENTIFIED WITH THE FIRST 6 UNIQUE CHARACTERS
INCLUDING "/" (E.G. FE/SNOW WILL FETCH THE RECORDING
CONTAINING /SNOW IN THE SCENE COMMENT FIELD AND DIS-
PLAY IT ON THE CURRENT EDIT LINE WITH THE 3 PRE-
CEDING SCENES ABOVE AND THE 4 FOLLOWING SCENES
BELOW THE EDIT LINE.)

IS THERE A PREVIEW MODE?

YES. PREVIEWS ARE DISPLAYED ON THE CONSOLE MONITOR
THROUGH THE PREVIEW SWITCHES. THE ENTRY OR EXIT
OR BOTH CAN BE SELECTED AND THE PREVIEW CAN BE BVB,
VBV OR VVV WITH 3 SECONDS PRECEDING AND FOLLOWING
THE EDIT POINT, AUTOMATICALLY PROVIDED.

CAN THE PREVIEW MODE BE OVERRIDEN?

YES. THERE ARE TWO METHODS; A) AFTER SELECTING
MANUAL, A SWITCH OUTPUT CAN BE SELECTED USING
THE ROTARY SELECTOR SWITCH, OR B) BY REQUESTING
PB1, PB2, ETC. OUTPUT WITH THE PUSHBUTTONS.

IS THERE ANY MEANS OF SAVING TIME CODE ADDRESSES
FOR POSSIBLE LATER USE?

YES. THE SYSTEM PROVIDES 8 "SCRATCH PAD" STORAGE
REGISTERS. THESE REGISTERS CAN BE LOADED DIRECTLY
FROM RECORDS VIA THE CALCULATOR PROVIDED IN THE
SYSTEM.

A ——   E ——
B ——   F ——
C ——   G ——
D ——   H ——

WHAT DOES THE CALCULATOR DO?

IT ALLOWS THE OPERATOR TO CALCULATE THE SUM OR
DIFFERENCE OF TIME CODES AND SAVE THE ORIGINAL
AND/OR THE RESULTS IN ANY SPECIFIED STORAGE
LOCATION(S). IT ALSO ENABLES TIME CODES TO
BE MOVED FROM ONE LOCATION TO ANOTHER.

DOES THE SYSTEM DISPLAY FOR THE OPERATOR HOW MUCH
RECORDING HAS BEEN DONE AND/OR THE TIME REMAINING?

YES. BOTH OF THESE TIMES ARE AVAILABLE AS FOLLOWS:

THE OPERATOR MUST ENTER THE RECORD START TIME
INTO THE DONE STORE AND THE DURATION INTO THE TGO
(TIME TO GO)STORE AT THE BEGINNING OF AN EDITING
SEQUENCE. THE TIMES IN THE DONE AND TGO STORES
ARE UPDATED RELATIVE TO THE RECORD TAPE'S ACTUAL
POSITION.

ARE ANY OF THE MACHINE'S TIME CODES DISPLAYED
BY THE SYSTEM?

YES, THE SYSTEM DISPLAYS THE TIME CODES OF ALL
ASSIGNED MACHINES PROVIDING THEY HAVE TAPE WITH
TIME CODE LOADED. SHOWN ALSO IS THE STATUS
OF EACH OF THESE MACHINES (E.G., STP, PLY, ETC.)

DOES THE SYSTEM INDICATE THE OPERATING MODE?

YES, THE TOP LINE OF THE DISPLAY ALWAYS SHOWS
THE MODE OR THE CURRENT PHASE OF THE MODE
(E.G. RECORD, PREVIEW, CUEING, SYNCHRONIZING, ETC.).

ARE THERE ANY ERROR MESSAGES DISPLAYED?

YES. MACHINE CONTROL ERROR MESSAGES ARE ON
THE LINE BENEATH THE "SCRATCH PAD" REGISTER
AREA OF THE DISPLAY AND COMMAND ERROR MESSAGES
ARE ON THE BOTTOM LINE, RIGHT-HAND SIDE OF
THE DISPLAY.

CAN INVALID DATA BE ENTERED INTO THE SYSTEM?

NORMALLY NO. HOWEVER, ERROR-CHECKING HAS NOT
BEEN FULLY IMPLEMENTED AND IT MAY BE POSSIBLE
TO ENTER INVALID DATA IN SOME INSTANCES. IF
INVALID DATA IS ENTERED WHICH WOULD CAUSE A
PROBLEM DURING EDITING, THE SYSTEM WILL OUTPUT
AN ERROR MESSAGE.

WHEN TIME CODE ADDRESSES ARE MODIFIED, DO THE
TIME CODES IN THE FOLLOWING SCENES GET CHANGED?

YES, UNLESS THE MODIFIED RECORD IS AN AUDIO OR
VIDEO INSERT.

IS THERE A MEANS OF MOVING TIME-CODES IN ALL
RECORDS UP OR DOWN IN THE FILE?

YES. THERE IS A COMMAND CALLED SHIFT AND THE
ADJUSTMENT CAN BE A + OR - VALUE.

IS USE OF THE SYSTEM INHIBITED WHEN A FUNCTION
SUCH AS PRINTING OR PUNCHING IS TAKING PLACE?

NO. ONE OF THE SPECIAL FEATURES OF THE SYSTEM
IS THE TIME-SHARING OF TASKS, THUS ALLOWING
SEVERAL FUNCTIONS TO BE PERFORMED SIMULTANEOUSLY.

IS THE SYSTEM CONTROLLED BY SINGLE BUTTON FUNCTIONS.

FOR SIMPLE FUNCTIONS - YES.
FOR MORE COMPLEX FUNCTIONS THE SYSTEM USES
COMMANDS WHICH PROVIDE -
(A) MORE FLEXIBILITY
(B) THE ABILITY FOR AN OPERATOR TO PRECISELY DEFINE
    THESE FUNCTIONS
(B) EASIER ADDITION OF POSSIBLE NEW FUNCTIONS AT
    A LATER DATE

IS THERE EASY ACCESS TO A REQUIRED RECORD IN A FILE?

YES, BY SEVERAL MEANS: SCENE NUMBER IDENTIFICATION,
RECORD-IN TIME, OR A COMMENT IN THE RECORD EXIT FIELD.

WHAT CAN BE DONE WITH RECORDS ONCE THEY ARE
IN A FILE?

THEY CAN BE ACCESSED, MODIFIED, DELETED, MOVED,
COPIED AND TRANSFERRED TO ANOTHER DEVICE.

HOW IS THE SYSTEM SOFTWARE DELIVERED?

ON A DISKETTE. TO START THE SYSTEM THE DISKETTE
IS INSERTED INTO DISK UNIT NUMBER 0, AN ADDRESS
ENTERED INTO THE COMPUTER VIA THE COMPUTER FRONT
PANEL, AND START OPERATED. ONCE THIS HAS BEEN
DONE, THE DISKETTE IS NOT REQUIRED UNLESS FILES
ARE SENT TO OR READ FROM IT.

ONCE THE SYSTEM IS STARTED, WHAT HAPPENS?

THE SYSTEM WILL SUPPLY INITIAL ASSIGNMENT
AND REEL NUMBER INFORMATION ON THE CRT.
THE NEXT STEP IS FOR THE OPERATOR TO CREATE
RECORDS AND ENTER THE NECESSARY DATA TO DO
THE REQUIRED EDITS.

HOW IS THE BASIC DATA ENTERED?

THERE ARE TWO MAIN METHODS OF DATA ENTRY: -
A) DIRECTLY FROM THE VTR/ATR TIME-CODE TRACK.
    THE STEPS INVOLVED ARE:
    i) ASSIGN THE REQUIRED MACHINES, SEE AREA B,
       FIG. 6.1., OF THE DISPLAY.
    ii) CREATE A RECORD USING THE CREA BUTTON
    iii) SELECT THE MACHINE TO BE CONTROLLED
    iv) PUT THE MACHINE IN PLAY
    v) MONITOR THE AUDIO/VIDEO WITH THE PROVIDED
       MONITORS.
    vi) PRESS MARK ENTRY OR MARK EXIT. THE RESPECTIVE
        IN POINT OR OUT POINT WILL BE LOADED INTO THE
        CURRENT EDIT LINE RECORD. IF THE DEVICE WAS
        A PLAYBACK MACHINE, ITS REEL NUMBER WILL ALSO
        BE LOADED INTO THE RECORD.
    vii) REPEAT ii TO vi FOR EACH PLAYBACK DEVIDE AND/OR EDIT.

NOTE:
    i) A RECORD TIME CAN BE LOADED WITH A PLAYBACK
       IF BOTH MACHINES ARE PLAYING SIMULTANEOUSLY.
    ii) UP TO 3 PLAYBACK TIME-CODES CAN BE LOADED ON-
        THE-FLY SIMULTANEOUSLY IF 3 RECORDS HAVE BEEN
        CREATED AND EACH ONE HAS AN APPROPRIATE REEL
        NUMBER ASSOCIATED WITH IT.
B) BY ENTERING PREVIOUSLY SELECTED TIME-CODES VIA
   THE KEYBOARD.
    i) ASSIGN THE REQUIRED MACHINES
    ii) CREATE A RECORD WITH THE CREA BUTTON
    iii) TAB RIGHT ONCE TO THE REEL NUMBER FIELD AND
         ENTER A 3-CHARACTER REEL NUMBER
    iv) SELECT THE APPROPRIATE TIME-CODE FIELD TO
        POSITION THE CURSOR
    v) ENTER A TIME-CODE USING THE NUMERIC KEYS
    vi) PRESS LOAD
    vii) REPEAT iv TO vi FOR EACH TIME-CODE FIELD OF
         THE RECORD.
    viii) REPEAT ii TO vii FOR EACH RECORD REQUIRED.
    IN ADDITION TO THE ABOVE, DATA CAN ALSO BE ENTERED
    FROM FILES STORED ON DISKETTES OR FROM PAPER TAPE.

HOW ARE RECORDS DELETED?

THERE ARE TWO METHODS:

I) POSITION THE LINE TO BE DELETED AT THE
CURRENT EDIT LINE AND PRESS THE DELETE KEY.

II) TYPE DELETE IN THE COMMAND LINE FOLLOWED BY
THE SCENE NUMBERS TO BE DELETED (MM-NN) AND
PRESS THE RETURN KEY.

WHEN CAN A PLAYBACK OR RECORD TIME-CODE BE TRIMMED?

WHENEVER THE APPROPRIATE RECORD IS IN THE CURRENT
EDIT LINE BY:

I) SELECTING THE RECORD IN, PLAYBACK OUT TIME

II) ENTERING THE TIME-CODE ADJUSTMENT VALUE BY USING
THE GROUP K OR L NUMERIC KEYS.

III) PRESSING THE + OR - KEY IN GROUP F, WHICH ADDS
OR SUBTRACTS THE ENTERED VALUE AND PUTS THE
RESULTS INTO THE SELECTED FIELD. (THE SCRATCH
LINE IS CLEARED).

HOW IS A COMBINED, AUTIO OR VIDEO RECORD INDICATED?

WHEN A RECORD IS CREATED USING THE CREA BUTTON
IT IS AUTOMATICALLY A COMBINED RECORD. TO
CHANGE IT TO AUDIO ONLY OR VIDEO ONLY, PRESS
THE AUD OR VID BUTTON. THE COMB WILL BE CHANGED
TO THE APPROPRIATE A OR V.

HOW DOES SPLIT AUDIO/VIDEO WORK?

TO SET THIS UP, TWO RECORDS SHOULD BE CREATED,
AS DESCRIBED ABOVE. ONE RECORD SHOULD BE AUDIO
ONLY, AND ONE VIDEO ONLY WITH THE APPROPRIATE
AUDIO OR VIDEO TIME-CODE ADDRESSES. NEXT,
CENTER THE REEL NUMBER INTO EACH RECORD. IF
BOTH RECORDS (A AND V) HAVE THE SAME REEL
NUMBER THE SYSTEM WILL DO BOTH THE AUDIO AND
VIDEO IN ONE PASS PROVIDED THE TIME-CODES ARE
SYNCHRONOUS. IF THE REEL NUMBERS ARE DIFFERENT
THE SYSTEM WILL TAKE AUDIO FROM ONE MACHINE AND
VIDEO FROM THE OTHER IN ONE PASS.

HOW DOES SLAVING WORK (ESP. IN AUTOMATIC ASSEMBLY)?

THE SYSTEM CONTINUALLY CHECKS THE ASSIGNMENT AREA
DURING EDITS. AS LONG AS A SLAVE IS ASSIGNED,
COMMANDS ARE SENT TO IT. AS SOON AS THIS ASSIGN-
MENT IS REMOVED, THE SYSTEM IGNORES THE SLAVE.
AS FAR AS SWITCHER SELECTION IS CONCERNED, THE
MASTER IS THE VIDEO AND THE SLAVE IS THE AUDIO
SOURCE.

HOW DOES THE OPERATOR SET UP EFFECTS AND TRANSI-
TIONS?

SET-UP IS DEPENDENT UPON THE COMPLEXITY OF THE
EFFECT OR TRANSITION. A SIMPLE KEY, SPLIT,
MATTE, SPOTLIGHT, CHROMA KEY AND/OR LINEAR
DISSOLVES OR WIPES CAN ALL BE ACCOMMODATED
IN A NORMAL SCENE RECORD. FOR EXAMPLE, A D
IS ENTERED INTO THE SCENE RECORD IN WHICH
THE DISSOLVE IS TO TAKE PLACE, BY PRESSING THE
DISS BUTTON IN GROUP A. FOR EITHER D OR W A
DURATION SHOULD ALSO BE ENTERED. THIS IS
ACHIEVED BY ACCESSING THE PB RATE BUTTON AND
THEN ENTERING A TIME-CODE ADDRESS AND PRESSING
LOAD.

A KEY IS INDICATED IN THE RECORD DESCRIBING
THE KEY SOURCE, BY SELECTING THE K KEY IN
GROUP A. THE K WILL AUTOMATICALLY BE ENTERED
INTO THE RECORD.

TO SET UP EFFECTS AND TRANSITIONS (CONT.)

WHEN A DISS/WIPE IS PRESENT IN A GROUP OF
RECORDS, THE DISSOLVE/WIPE STARTS AT THE OUT
POINT OF THE FIRST PLAYBACK AND THE IN POINT
OF THE SECOND. THE RECORD CONTAINING THE
D/W CONTAINS THE RECORD-IN TIME AT WHICH THIS
DISS/WIPE WILL TAKE PLACE.

IN THE MORE COMPLICATED TYPES OF TRANSITIONS
AND EFFECTS, THE OPERATOR CAN USE THE LEARN
OPTION.

TO USE THIS THE FOLLOWING PROCEDURE IS REQUIRED:

i) CREATE A NORMAL SCENE GROUP AND ENTER
AN INITIAL RECORD ENTRY OR PB ENTRY TIME
WHICH WILL BE USED BY THE SYSTEM AS A
BASE FOR THE LEARN SEQUENCE.

ii) CREATE A SECOND RECORD AND CHANGE ITS TYPE
TO L. ENTER A SEQUENCE NUMBER IN THE RANGE
001-015 IN THE REEL NUMBER FIELD TO IDENTIFY
THE LEARN SEQUENCE NUMBER. NOTE: AT
LEAST A PB ENTRY SHOULD BE PRESENT IN THE
SCENE GROUP.

iii) SELECT THE LEARN MODE WITH THE BUTTON IN GROUP G.

iv) SET UP THE SWITCHER TO THE DESIRED INITIAL
SETTING.

TO SET UP EFFECTS AND TRANSITIONS (CONT.)

v) START A P/V OR REC IN THE NORMAL WAY.
THE SYSTEM WILL MEMORIZE THE INITIAL STATE OF THE
SWITCHER AND THEN MONITOR CHANGES MADE TO THAT
STATE UNTIL MASTER STOP OR A RECORD OR PB EXIT TIME
IS REACHED.

A LEARN SEQUENCE CAN BE USED A NUMBER OF TIMES
IN A FILE AND IS IDENTIFIED BY ITS LEARN SEQUENCE
NUMBER IN THE REEL NUMBER FIELD. IF THE NUMBER
CHOSEN ALREADY EXISTS ON THE DISK, A WARNING
MESSAGE WILL BE DISPLAYED WHEN LEARN IS DEPRESSED.
DOING A P/V OR REC WITH THIS LEARN RECORD OVERWRITES
THE PREVIOUS CONTENTS OF THIS LEARN SEQUENCE AND
CANCELS THE ERROR INDICATION.

HOW IS P/V, REV OR REC SELECTED?

  I) TO DO A P/V, THE MODE (I.E. BVB,VBV,VVV)
     AND ENTRY, EXIT OR BOTH, SHOULD FIRST BE
     SELECTED USING THE GROUP D BUTTONS OF THE
     CONTROL PANEL. THE REQUIRED MACHINE SHOULD
     HAVE TIME-CODES ENTERED IN THE RECORD TO
     BE USED. THE P/V BUTTON SHOULD THEN BE
     SELECTED (GROUP M). THE SYSTEM WILL CUE
     THE ASSOCIATED MACHINES AND SIMULATE THE
     EDIT BY SWITCHING THE AUDIO/VIDEO MONITORS
     AT THE EDIT ENTRY AND EXIT ADDRESSES. THE
     TRANSITION FROM THE PREVIOUS RECORD WILL
     BE DONE IN AN ALL MACHINES SITUATION.
 II) TO DO A REVIEW OF THE LAST RECORDED SCENE,
     SELECT A REV IN GROUP M, WHEN NO EDITING
     IS IN PROGRESS. THE SYSTEM RECUES TO THE
     START OF THE LAST RECORDED RECORD AND DOES
     A BLACK-VIDEO-BLACK SWITCH.

III) TO DO A SINGLE REC, POSITION THE FILE SO
     THAT THE RECORD AT WHICH THE RECORDING IS
     TO START IS AT THE CURRENT POSITION ('I')
     ON THE DISPLAY. HAVE THE REQUIRED MACHINES
     ASSIGNED AND PRESS REVIEW AND MREC IN GROUP M,
     SIMULTANEOUSLY.
 IV) TO DO AN AUTOMATIC REC, TYPE IN THE REQUIRED
     EDIT COMMAND AND THEN PRESS REV AND MREC
     SIMULTANEOUSLY.

WHAT HAPPENS IF MSTOP IS USED DURING AN EDIT?

   i) PREVIEW - IMMEDIATELY TERMINATES PREVIEW, STOPPING
            ALL MACHINES AND TURNING OFF EDITORS.
  ii) RECORD   - EDITS OUT ON REC MACHINE, THEN STOPS
            ALL MACHINES.
 iii) AUTO RECORD - DOES EDIT OUT AND SUSPENDS THE AUTO
            RECORD; RESUMES AT START OF CURRENT SCENE
            WHEN MREC AND REVIEW IS PRESSED AGAIN.
  iv) NONE OF ABOVE - STOP AND EDITOR OFF IS SENT TO
            ALL MACHINES (WHETHER UNDER MANUAL
            CONTROL OR NOT).

DO DIFFERENT PROGRAMS HAVE TO BE LOADED FOR
DIFFERENT FUNCTIONS?

NO. ONE OF THE MAIN ADVANTAGES OF THE SYSTEM
IS THAT ONCE THE PROGRAM IS LOADED INTO THE
COMPUTER, ALL SYSTEM FUNCTIONS CAN BE PERFORMED
WITHOUT MODIFICATIONS.

HOW IS AN EFFECT OR TRANSITION CHANGED IN A RECORD?

I) POSITION THE REQUIRED RECORD AT THE CURRENT EDIT
   LINE.
II) SELECT THE NEW TRANSITION OR EFFECT AND WHEN IT
   IS ENTERED THE PREVIOUS MODE WILL BE OVERWRITTEN.

HOW DOES THE SYSTEM KNOW WHICH SCENES TO PREVIEW?

IF A SINGLE PREVIEW IS TO BE DONE, POSITION THE
RECORD TO BE PREVIEWED AT THE CURRENT EDIT LINE,
SELECT A PREVIEW MODE - BVB, VBV, VVV (GROUP D)
AND SELECT EITHER ENTRY, EXIT OR BOTH (GROUP D)
AND PRESS THE PREVIEW BUTTON (GROUP D)

CAN A NUMBER OF RECORDS BE USED IN AN EDIT SIMULTANEOUSLY?

YES. THIS IS ALWAYS TRUE IF MORE THAN ONE PLAYBACK
MACHINE OR A PLAYBACK MACHINE PLUS A SWITCHER
CROSSPOINT ARE USED IN THE EDIT. EACH RECORD
CONTAINS ALL THE NECESSARY INFORMATION FOR ONE
PLAYBACK DEVICE OR ONE SWITCHER CROSSPOINT.

CAN THE SWITCHER BE USED MANUALLY TO OVERRIDE
PREVIOUSLY PROGRAMMED INFORMATION?

YES. BOTH THE PREVIEW AND PROGRAM SWITCHERS
CAN BE OVERRIDEN MANUALLY.
  I) THE PREVIEW SWITCHER IS AUTOMATICALLY SET UP
     BY THE SYSTEM DURING PREVIEW, RECORD AND REVIEW.
     HOWEVER, IF THE OPERATOR WISHES TO CHOOSE A
     DIFFERENT SOURCE IT CAN BE DONE EITHER BY (A)
     SELECTING ONE OF THE SOURCE BUTTONS, P1 OUT
     ETC. OR (B) SELECTING THE MANUAL BUTTON AND THEN
     DIALING UP THE SOURCE WITH THE ROTARY SWITCH. IN
     THE FIRST CASE THE SYSTEM AUTOMATICALLY RESETS
     THE PREVIEW SWITCHER TO THE NEXT EDIT POINT.
     IN THE SECOND CASE, THE OPERATOR HAS TO SELECT
     THE AUTO BUTTON TO RETURN TO NORMAL SYSTEM CON-
     TROLLED OPERATION.
  II) THE PROGRAM SWITCHER IS AUTOMATICALLY SET UP FROM
     INFORMATION IN THE FILE RECORDS. AT ANY TIME
     THE OPERATOR CAN TAKE MANUAL CONTROL BUT AT ITS
     NEXT EDIT POINT THE SYSTEM WILL AUTOMATICALLY
     RESUME CONTROL AGAIN.

CAN THE PROGRAM SWITCHER BE USED IF THE SYSTEM IS NOT
OPERATIONAL?

YES. PROVIDED THE CONTROL CONSOLE HAS POWER, IT IS
POSSIBLE TO USE THE PROGRAM SWITCHER MANUALL.Y

CAN THE P/V SWITCHER BE USED IF THE SYSTEM IS NOT
OPERATIONAL?
YES. PROVIDED THE SELECTED SOURCE IS AVAILABLE
V IA THE MANUAL SELECTOR (THE MANUAL BUTTON LAMPS
ARE LIT). THIS ENABLES THE OPERATOR TO SELECT THE
MONITOR INPUT FROM THE ROTARY SWITCH ON THE PREVIEW
CONTROL PANEL.

CAN TIME-CODES BE LOADED-ON-THE-FLY FROM RUNNING
MACHINES?

YES. THIS CAN BE DONE IN SEVERAL DIFFERENT WAYS:
 i) THE TIME-CODES CAN BE PICKED UP FROM THE VTR'S
    AND LOADED INTO THE UTILITY STORES A-H WHEN
    THESE ARE DISPLAYED ON THE CRT, VIA THE MARK
    ENTRY AND MARK EXIT BUTTONS. MARK ENTRY WILL
    CAUSE TIME-CODE TO BE LOADED FROM THE RECORD
    MACHINE TO STORE E, PLAYBACK 1 TO F, ETC.
ii) IF THE STORES ARE NOT BEING DISPLAYED TIME-
    CODES WILL BE LOADED FROM THE APPROPRIATE
    MACHINE INTO THE IN OR OUT POINT OF THE CURRENT
    EDIT LINE RECORD (IT MUST BE SCENE TYPE RECORD).
    IF THE RECORD MACHINE IS RUNNING, RECORD
    TIMES WILL BE LOADED. IF A PLAYBACK MACHINE
    IS RUNNING, ITS TIME-CODE AND REEL NUMBER
    (DISPLAYED IN THE SYSTEM INFORMATION SECTION
    OF THE CRT) WILL BE LOADED INTO THE RECORD.
    IF A RECORD AND ONE PLAYBACK MACHINE ARE RUNNING,
    TIME-CODES WILL BE LOADED FROM BOTH MACHINES
    SIMULTANEOUSLY INTO THE APPROPRIATE AREAS OF

CAN TIME-CODES BE LOADED-ON-THE-FLY FROM RUNNING
MACHINES? (CONT.)

    OF THE RECORD. IF MORE THAN ONE PLAYBACK
    MACHINE IS RUNNING AND THE REEL NUMBERS
    IN THE RECORDS MATCH THE REEL NUMBERS
    ASSIGNED IN THE SYSTEM AREA, TIME-CODES
    WILL BE LOADED FROM EACH ONE INTO THE
    CURRENT EDIT LINE SCENE RECORD AND THE
    3 PREVIOUS SCENE RECORDS (IF DISPLAYED).
    IF THE RECORD MACHINE IS ALSO RUNNING IN
    THIS LAST INSTANCE, ITS TIME-CODE WILL BE
    LOADED INTO THE CURRENT EDIT LINE SCENE
    RECORD.

CAN RECORDS IN A FILE BE MOVED AROUND?

YES. BY ENTERING THE REQUIRED INFORMATION
INTO A NEW RECORD AND THEN DELETING THE OLD
ONE OR MOVING ONE OR MORE RECORDS TO A
DIFFERENT AREA USING THE SHIFT OR COPY
COMMANDS DESCRIBED IN SECTION 7.

CAN MACHINES BE MANUALLY CONTROLLED FROM THE
SYSTEM CONTROL PANEL?

YES. TO MANUALLY CONTROL A MACHINE FROM THE
CONTROL PANEL, SEVERAL CONDITIONS HAVE TO BE
MET. WHEN THESE ARE MET THE OPERATOR HAS FULL
MANUAL CONTROL OVER THE ASSIGNED MACHINES
INCLUDING RECORD.

CAN OPEN-ENDED EDITS BE PERFORMED?

YES. IN A SINGLE EDIT SITUATION AN OPEN-ENDED
EDIT WILL BE PERFORMED WHEN NO PLAYBACK OR
RECORD-OUT TIMES ARE PROVIDED IN THE RECORD.
IN CONTINUOUS EDIT (AUTO ASSEMBLE) THE FOLLOW-
ING RECORD-IN TIME WILL BE USED AS A TERMINATOR.
IF THERE IS NO FOLLOWING RECORD-IN TIME AN
OPEN-ENDED EDIT WILL BE PERFORMED. PRESSING
MASTER RECORD AND REVIEW WILL CAUSE AN OUT
EDIT AND THE MACHINES WILL STOP. MASTER STOP
WILL NOT DO AN OUT EDIT.

IS IT POSSIBLE TO TAKE MANUAL CONTROL OF A MACHINE
BEING USED BY THE SYSTEM IN AN EDIT?

YES. CONTROL OF THE MACHINES MAY BE TAKEN AT
ANY TIME WITH VARYING RESULTS ON THE CURRENT
EDIT. HOWEVER, AS SOON AS THE SYSTEM MUST SEND
DATA OR A COMMAND TO THE MACHINE UNDER MANUAL
CONTROL, IT WILL HALT AND DISPLAY AN ERROR
MESSAGE.

IS IT POSSIBLE TO QUICKLY SCROLL THROUGH AND SEE
THE CORE FILE ON THE DISPLAY?

YES. THERE ARE 2 BUTTONS IN THE CURSOR CONTROL
GROUP OF KEYS (GROUP C) WHICH DO THIS. THEY ARE ↑
AND ↓. THESE CAUSE THE WHOLE FILE DISPLAY TO BE
MOVED UP OR DOWN RESPECTIVELY ONE LINE AT A TIME.
RECORDS ARE BROUGHT IN AT THE BOTTOM OR THE TOP
UNTIL THERE ARE NO MORE RECORDS TO ACCESS.

WHAT IS THE EDM-1?

IT IS A VERY MODERN DEVICE USED TO PERFORM
SOPHISTICATED AUDIO AND VIDEO TAPE EDITING
FUNCTIONS, WITH MAXIMUM TIME-SAVING CAPABILITIES
AND SAFETY FEATURES.

HOW MANY MACHINES CAN THE EDM-1 CONTROL?

IT CAN CONTROL SIMULTANEOUSLY 4 TIME-CODE
CONTROLLED VIDEO OR AUDIO TAPE MACHINES
FROM A CHOICE OF EIGHT OR IF EACH OF THESE
4 HAS ANOTHER MACHINE SLAVED TO IT, THE SYSTEM
CONTROLS 8 MACHINES. EACH SHARED MACHINE
MUST HAVE IDENTICALLY CODED TIME TO ITS
MASTER MACHINE.

HOW MANY RECORDS CAN THE EDM-1 STORE?

THIS SYSTEM CAN HOLD IN COMPUTER MEMORY 200
RECORDS AND 3200 ADDITIONAL RECORDS ON A
FLOPPY DISKETTE.

HOW MANY RECORDS CAN BE USED IN A CONT ASSEMBLY?

ANY NUMBER FROM 1 TO 3400, LIMITED ONLY BY THE
ACTUAL RECORD TAPE LENGTH.

WHAT OUTPUT DEVICES ARE USED TO SAVE RECORDS?

A LINE PRINTER OR TELETYPE FOR PRINTED OUTPUT,
PUNCHED PAPER TAPE, OR FLOPPY DISKETTE

IS THE SYSTEM SELF-SAVING IN THE CASE OF A POWER
FAILURE?

YES, THE SYSTEM WILL SAVE RELEVANT DATA AND
RESTART WHEN POWER RETURNS. NO FILE INFORMA-
TION WILL BE LOST BUT EDITING WILL HAVE TO BE
RESTARTED BY THE OPERATOR.

HOW IS DATA ENTERED INTO THE SYSTEM?

WITH FUNCTION-GROUPED KEYS, AN ALPHANUMERIC
KEYBOARD, DIRECTLY FROM THE VTR TIME CODE
TRACK OR FROM FILES ON DISKETTE OR PAPER TAPE.

DISPLAY/KEYBOARD/REAL-TIME CLOCK DIAGNOSTIC (KEY)

INTRODUCTION

THIS PROGRAM IS A STAND ALONE DIAGNOSTIC PROGRAM
OPERATED ESSENTIALLY FROM THE TELETYPE KEYBOARD
DISPLAY AND CONSOLE KEYBOARD. IT IS DESIGNED
TO ASSIST IN DETECTING AND ISOLATING POSSIBLE
MALFUNCTIONS IN THE EDM-1 DISPLAY/KEYBOARD
SYSTEM AND TO GENERATE VARIOUS SOFTWARE LOOPS
FOR USE IN HARDWARE TROUBLESHOOTING.

CONTROL KEYS INFORMATION

THE FUNCTIONS DESCRIBED BELOW ARE AVAILABLE
FOR USE AT THE TELETYPE KEYBOARD DURING THE
RUNNING OF THE DIAGNOSTIC.

IN ORDER TO ACTIVATE A FUNCTION, HOLD DOWN
THE KEYBOARD CTRL KEY WHILE AT THE SAME TIME
DEPRESSING THE KEY INDICATED.

KEY COMBINATION	FUNCTION	LEGAL USE
CTRL/R	RESTARTS THE PROGRAM	ANYTIME
CTRL/P	RETURN TO FBOS	ANYTIME
CTRL/X	TO DISABLE PRINT-ING ERROR MESSAGE	DURING A SCOPE LOOP

OPERATION

THE "KEY" DIAGNOSTIC TESTS THE REAL-TIME
CLOCK, KEYBOARD INPUT AND DATA DISPLAY.
UPON START-UP, THE PROGRAM ENABLES REAL-
TIME CLOCK INTERRUPTS AND CHECKS IF AN
INTERRUPT IS GENERATED CORRECTLY AT THE
PARTICULAR VECTOR.

IF AN INTERRUPT IS GENERATED AT THE RIGHT
VECTOR, THE FOLLOWING MESSAGE IS PRINTED ON
THE CONSOLE TERMINAL: "EDM-1 DISPLAY/
KEYBOARD/REAL-TIME CLOCK TEST""DISPLAY TEST".

IF THE INTERRUPT VECTORS TO ANOTHER ADDRESS,
THE INCORRECT VECTOR ADDRESS IS PRINTED ON
THE CONSOLE TERMINAL ALONG WITH THE FOLLOWING
MESSAGE:
  "INCORRECT VECTOR ADDRESS XXX"

DISPLAY TEST

IF THE INITIAL TESTING ON THE REGISTERS IS OKAY,
THE PROGRAM CONTINUES TO WRITE AND READ A SUBSET
OF ASCII CHARACTERS TO THE DISPLAY. IF THE
ATTEMPT TO WRITE TO DISPLAY FAILS, THE FOLLOW-
ING MESSAGE IS PRINTED ON THE CONSOLE TERMINAL:
  "CANNOT ACCESS DISPLAY MEMORY"
THEN IT KEEPS LOOPING TO WRITE AGAIN TO GENERATE
A SCOPE LOOPING FOR HARDWARE DEBUG. AT THIS TIME,
CTRL/X CAN BE USED TO ELIMINATE THE OUTPUT OF
ERROR MESSAGES.

IF A READ/WRITE FAULT OCCURS, THE OCTAL VALUE OF
THE BYTE WRITTEN TO THE SCREEN, THE OCTAL VALUE
READ AND MEMORY ADDRESS ARE TYPED ON THE CONSOLE
TERMINAL. THE PROGRAM CONTINUES TO WRITE AND
READ THIS LOCATION UNTIL A "SPACE BAR" IS PRESSED
ON THE CONSOLE TERMINAL. THIS PERMITS SCOPE
LOOPING AGAIN.

KEYBOARD TEST

IF THE WRITING AND READING TO THE DISPLAY IS
CARRIED OUT FOR A CERTAIN TIME WITHOUT ERRORS,
THE FOLLOWING MESSAGE WILL BE DISPLAYED ON THE
SCREEN:
    "NO DISPLAY ERRORS"
THEN IT STARTS THE KEYBOARD TEST AND THE FOLLOW-
ING MESSAGE IS DISPLAYED.
    "PRESS ANY KEY: KEY CODE IS"
THE OCTAL VALUE AND KEY REPRESENTATION ARE
DISPLAYED IF ANY KEY IS PRESSED ON THE EDM-1
KEYBOARD.

EDM-1 SWITCHER DIAGNOSTIC (SWT)

1.0 INTRODUCTION

THIS PROGRAM IS A STAND-ALONE DIAGNOSTIC PROGRAM
OPERATED FROM THE EDM-1 CONSOLE KEYBOARD. IT
IS DESIGNED TO PINPOINT MALFUNCTIONS IN THE
SWITCHER AND SWITCHER INTERFACE. THE DIAGNOSTIC
CONSISTS OF TWO TESTS:

TEST	DESCRIPTION
1	SWITCH RELIABILITY TEST
2	SEQUENCE LEARN/REVIEW TEST

THE FUNCTIONS DESCRIBED BELOW ARE AVAILABLE FOR
USE AT ANY TIME DURING THE EXECUTION OF THE
DIAGNOSTIC. IN ORDER TO ACTIVATE A FUNCTION
HOLD DOWN THE CTRL KEY WHILE SIMULTANEOUSLY
DEPRESSING THE APPROPRIATE FUNCTION KEY.
FUNCTIONS AVAILABLE ARE:

KEY COMBINATION	FUNCTION
CTRL/R	RESTART DIAGNOSTIC
CTRL/P	RETURN TO BOS
CTRL/X	DISABLE HARD COPY. ERROR PRINT OUT.

NOTE THAT THESE FUNCTIONS ARE AVAILABLE FROM BOTH
THE EDM-1 KEYBOARD AND THE MAINTENANCE PRINTER
KEYBOARD.

2.0 INITIAL CHECKS

ON ACTIVATION SWT PERFORMS THREE INITIAL INTER-
FACE CHECKS:
A) THE CONTROL/STATUS REGISTERS ARE READ TO
   DETERMINE WHETHER OR NOT THEY ARE ACCESSIBLE
   TO THE SOFTWARE. IF NOT, AN ERROR MESSAGE IS
   TYPED AND A SCOPE LOOP IS SET UP.
B) AN OUTPUT STACK INTERRUPT IS GENERATED AND
   THE ADDRESS OF THE ASSOCIATED VECTOR IS
   CHECKED. IF INCORRECT, AN ERROR MESSAGE
   IS TYPED AND A SCOPE LOOP OCCURS.
C) THE OPERATOR IS REQUESTED TO SELECT ANY
   CROSSPOINT. ON DETECTING AN INTERRUPT A
   CHECK IS MADE THAT THE INPUT STACK VECTOR
   ADDRESS IS CORRECT. IF NOT, AN ERROR MESSAGE
   IS TYPED AND A SCOPE LOOP OCCURS.
IF THE HARDWARE PASSES THESE THREE CHECKS, THE
DIAGNOSTIC HEADING AND TEST DESCRIPTIONS ARE
OUTPUT TO THE EDM-1 DISPLAY AND PRINTER. SWT NOW
REQUESTS THE OPERATOR TO SELECT THE TEST HE
WISHES TO RUN BY DISPLAYING THE QUESTION:
                    WHICH TEST?
THE OPERATOR SHOULD SELECT "1" OR "2" ON THE
EDM-1 KEYBOARD.

3.0 TEST 1

THIS IS A SWITCHER CROSSPOINT AND ANALOGUE
CONTROL RELIABILITY TEST. HAVING DISPLAYED
THE TEST HEADING, SWT WRITES TO EACH DEVICE
IN TURN ITS FULL RANGE OF VALID VALUES AND
THEN READS EACH DEVICE TO COMPARE THE VALUES
WRITTEN AND READ. ANY DISCREPANCY CAUSES AN
ERROR MESSAGE TO BE OUTPUT AND THE OPERATION
TO BE REPEATED. TO BYPASS A PARTICULAR
ERROR AND CONTINUE WITH THE NEXT VALUE, DEPRESS
THE EDM-1 CONSOLE SPACE BAR. ON COMPLETION
OF THIS TEST SWT REPEATS THE "WHICH TEST?"
QUESTION.

4.0 TEST 2

THIS TEST ENABLES SWT TO "LEARN" AND SUBSEQUENTLY
RECALL FOR REVIEW A SWITCHER SEQUENCE MANUALLS
INPUT BY THE OPERATOR. ALL SELECTIONS AND
TIMINGS ARE PLAYED BACK JUST AS THEY WERE
INPUT SO THAT ANY DISCREPANCY BETWEEN INPUT
AND OUTPUT INDICATES A SWITCHER FAULT. ON
ACTIVATION OF THIS TEST THE OPERATOR IS
INVITED TO INPUT A SEQUENCE AND PRESS MSTOP.
WHILE THE SEQUENCE IS BEING LEARNED THE
DISPLAY INDICATES WHICH DEVICES AND VALUES
ARE BEING SELECTED. AT TERMINATION OF THE
SEQUENCE (I.E. WHEN MSTOP IS RECOGNIZED)
THE OPERATOR IS INVITED TO PRESS REVW
TO REVIEW HIS SEQUENCE.

4.0 TEST 2 (CONT.)

WHILE THE SEQUENCE IS BEING REVIEWED ONCE
AGAIN DEVICES AND VALUES ARE DISPLAYED. AT
COMPLETION OF THE REVIEW THE OPERATOR MAY
NOW RUN IT ONCE MORE BE PRESSING REVW ONCE
AGAIN OR HE MAY WISH TO LEARN A DIFFERENT
SEQUENCE BE PRESSING LEARN.

NOTE THAT SINCE THE LEARN SEQUENCE IS STORED
IN COMPUTER MEMORY THERE IS AN UPPER LIMIT
ON THE AMOUNT OF INFORMATION THAT CAN BE
STORED. THEREFORE, IF IT IS ATTEMPTED TO
INPUT TOO LENGTHY A SEQUENCE A PREMATURE
TERMINATION IS FORCED.

NOTE THAT EITHER TEST MAY BE TERMINATED AT
ANY STAGE BY PRESSING CTRL/R. THIS RESTARTS
THE DIAGNOSTIC AT THE "WHICH TEST?" STEP.

EDM-1 TRANSPORT DIAGNOSTIC (TXT)

1.0 INTRODUCTION

THIS PROGRAM IS A STAND-ALONE DIAGNOSTIC PROGRAM
OPERATED FROM THE EDM-1 CONSOLE KEYBOARD IN CON-
JUNCTION WITH THE MAINTENANCE PRINTER KEYBOARD.
IT IS DESIGNED TO LOCATE MALFUNCTIONS IN THE VTR
TRANSPORT INTERFACE AND COMMUNICATIONS LINKS
WITH THE MACHINES. THE DIAGNOSTIC CONSISTS OF
THREE TESTS:

TEST	DESCRIPTION
1	REPEATED CHARACTER TRANSMISSION
2	SINGLE MESSAGE TRANSMISSION
3	REPEATED MESSAGE TRANSMISSION

THE FUNCTIONS DESCRIBED BELOW ARE AVAILABLE FOR USE
AT ANY TIME DURING THE EXECUTION OF THE DIAGNOSTIC.
IN ORDER TO ACTIVATE A FUNCTION HOLD DOWN THE
CTRL KEY WHILE SIMULTANEOUSLY DEPRESSING THE
APPROPRIATE FUNCTION KEY. FUNCTIONS AVAILABLE ARE:

KEY COMBINATION	FUNCTION
CTRL/R	RESTART DIAGNOSTIC
CTRL/P	RETURN TO BOS
CTRL/X	DISABLE HARD COPY ERROR PRINT OUT

NOTE THAT THESE FUNCTIONS ARE AVAILABLE FROM BOTH
THE EDM-1 KEYBOARD AND THE MAINTENANCE PRINTER KEYBOARD.

2.0 INITIAL CHECKS

ON ACTIVATION TXT PERFORMS TWO INITIAL INTERFACE
CHECKS:
A) THE CONTROL/STATUS REGISTERS ARE READ TO
   DETERMINE WHETHER OR NOT THEY ARE ACCESSIBLE
   TO THE SOFTWARE. IF NOT, AN ERROR MESSAGE
   IS TYPED AND A SCOPE LOOP IS SET UP.
B) AN INTERRUPT IS GENERATED AND THE ADDRESS
   OF THE ASSOCIATED VECTOR IS CHECKED. IF
   INCORRECT, AN ERROR MESSAGE IS TYPED AND
   A SCOPE LOOP OCCURS.
IF THE HARDWARE PASSES THESE THREE CHECKS THE
DIAGNOSTIC HEADING AND TEST DESCRIPTIONS ARE
OUTPUT TO THE EDM-1 DISPLAY AND PRINTER. TXT
NOW REQUESTS THE OPERATOR TO SELECT THE TEST
HE WISHES TO RUN BY DISPLAYING THE QUESTION:
                    WHICH TEST?
THE OPERATOR SHOULD SELECT "1", "2" OR "3" ON
THE EDM-1 KEYBOARD.

3.0 TEST 1

THIS TEST REPEATEDLY SENDS A SINGLE CHARACTER
TO THE TRANSPORT INTERFACE. ON ACTIVATION
THE OPERATOR IS REQUESTED TO TYPE A CHARACTER
WHICH IS ECHOED TO THE EDM-1 DISPLAY. THIS
CHARACTER IS THEN OUTPUT ONCE FOR EACH REAL-
TIME CLOCK INTERRUPT.

4.0 TEST 2

THIS TEST SENDS A SINGLE MESSAGE TO THE TRANSPORT
INTERFACE. THE OPERATOR IS REQUESTED TO TYPE A
MESSAGE WHICH IS ECHOED TO THE EDM-1 DISPLAY.
THIS MESSAGE IS THEN SENT TO THE INTERFACE AT
THE NEXT REAL-TIME CLOCK INTERRUPT. DUE REGARD
IS GIVEN TO INTER-CHARACTER TIMING CONSIDERATIONS.
IF A REPLY IS APPROPRIATE FROM A MACHINE THIS
ALSO IS ECHOED TO THE DISPLAY. EACH MESSAGE
INPUT IS CHECKED AGAINST THE RANGE OF VALID
EDM-1 TRANSPORT INTERFACE MESSAGES. IF THE
MESSAGE IS INVALID THIS IS INDICATED BY AN
ERROR DISPLAY OTHERWISE THE MESSAGE IS TRANS-
MITTED, ANY REPLY IS DISPLAYED AND THE OPERATOR
IS INVITED TO TYPE ONCE MORE.

5.0 TEST 3

THIS TEST OPERATES IN AN IDENTICAL MANNER TO
TEST 2 EXCEPT THAT THE MESSAGE IS REPEATED
CONTINUOUSLY. AS BEFORE, THE OPERATOR IS
REQUESTED TO TYPE A MESSAGE. THIS IS CHECKED
FOR VALIDITY AND TRANSMITTED AT THE NEXT
REAL-TIME CLOCK INTERRUPT. THE REPLY IS
ECHOED TO THE DISPLAY AND THEN THE PROCESS
REPEATS.

NOTE THAT ANY TEST MAY BE TERMINATED AT ANY
STAGE BE PRESSING CTRL/R. THIS RESTARTS THE
DIAGNOSTIC AT THE "WHICH TEST?" STEP.

EDM-1 PRICING

GROUP	DESCRIPTION	PRICE
A	BASIC SYSTEM 525 OR 625	$95,000
B	AVR-1 INTERFACE	7,900
	AVR-2 INTERFACE	7,900
	VR-2000 INTERFACE	7,900
	VR-1200 INTERFACE	7,900
	VPR-1 INTERFACE	7,900
	TR-600 INTERFACE	7,900
	TR-70 INTERFACE	7,900
	HS-100 INTERFACE	BY QUOTATION
	RA-4000 INTERFACE	10,200
	MM-1100 INTERFACE	7,900
	MM-1200 INTERFACE	7,900
	VPR-8300 3/4" CASSETTE RECORDER WITH INTERFACE	BY QUOTATION
	AUTOLEARN SWITCHER OPTION	6,950
	COLORIZED BORDER KEY OPTION, 525/625	3,200
	EXTENDED FILE MANAGEMENT, 525/625 (NOTE 1)	5,800
	HIGH SPEED TAPE READER/ PUNCH, 525/625	6,240

GROUP	DESCRIPTION	PRICE
B	HIGH SPEED PRINTER, 525/625	2,540
	ASR-33 TELETYPE WITH	
	PAPER TAPE I/O, 525/625	3,500
	FLOPPY DISC (BLANK)	10
	EDM-1 OPERATION PROGRAM	
	ON FLOPPY DISC	400
	EDM-1 DIAGNOSTICS ON	
	FLOPPY DISC WITH USER	
	MANUAL & TEST PROGRAM	400
	ENCODED CHROMA KEYER,	
	525/625	3,590
	"B" LEVEL SPARES KIT (NOTE 2)	1,500
	"B" LEVEL SPARES KIT FOR	
	PDP-11-05-SC, SD	2,450

NOTE 1: INCLUDES SECOND FLOPPY DISC UNIT, 8K
CORE MEMORY AND ADDITIONAL SOFTWARE.

NOTE 2: "B" LEVEL SPARES NOT INCLUDED FOR
PDP-11-05-SC. FOR COMPLETE "B"
LEVEL SPARES, BOTH "B" LEVEL KITS
SHOULD BE INCLUDED.

AMPEX REPUTATION:

ASSURES QUALITY PRODUCTS AND
FULL SUPPORT WORLDWIDE