HORITA PR-232
USER MANUAL

Portable SMPTE Time Code-to-RS-232 Translator
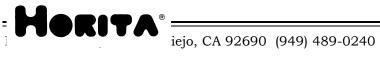
with

HORITA PC-LOG and TC-TRN Software Programs

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1 GENERAL

1.1 Introduction

This manual provides instructions for operating the HORITA PR-232 Portable Time code-to-RS232 reader/translator, as well as instructions for operating the PC-LOG(tm) video tape logging program and TC-TRN(tm) LOG-to-EDL translation program.

1.2 Features

Intended for portable use in the field, the HORITA PR-232 is a low cost, palm sized, battery operated, miniature SMPTE time code-to-RS232 reader/translator.

∗ Operates from power supplied from the computer RS232 serial port, or from a 9 Volt battery

∗ LED indicator flashes on and off as time code is being read

∗ Reads LTC at speeds from 1/30-to-3X play speed

∗ Outputs RS232 data in HORITA HSIP (Horita Standard Interface Protocol) format

∗ Includes both HORITA PC-LOG video tape logging program, and TC-TRN program which translates PC-LOG files into CMX format EDL files

∗ Includes cable from PR-232 to computer and DB9-to-DB25 adapter.

2 CONNECTING and OPERATING

2.1 Installing and Removing the Battery

NOTE:

The PR-232 normally operates from power supplied by the RS232 port of your computer. Battery operation is intended only for those occasions in which the computer RS232 port cannot power the PR-232 properly.

Slide open and remove the battery compartment cover and install a new 9 Volt battery. Be sure to observe battery polarity.

NOTE:

If the battery is installed with the polarity reversed, the PR-232 will not operate, but no damage will be done.

Install the battery terminal-end first, pushing the battery against the battery clips and case until the battery snaps into the compartment. Install the cover.

To remove the battery, remove the cover and use a small screwdriver or other object to pry the battery out of the compartment, terminal-end first.

You can also tap the PR-232 against a flat surface until the battery comes out. This can usually be done with a single, sharp rap.

2.2 Connecting Time Code IN

Connect an RCA cable from the time code output of your camcorder, VCR, or other device, to the PR-232 TC input. The PR-232 can work with input levels ranging from 0.5 volts P-P to 10 volts P-P.

If your system uses BNC or XLR connectors for the time code, you will have to use BNC-to-RCA or XLR-to-RCA adapters. These are available at most electronic supply stores, such as Radio Shack.

2.3 Connecting SERIAL OUT

Connect the DB9 end of the cable supplied with your PR-232 to the serial port of your computer.

Plug the 3.5MM miniature phone plug end of the serial cable into the PR-232 SERIAL OUT connector.

2.4 Operating the PR-232

Follow the instructions for installing and operating the PC-LOG program.

NOTE:

If a battery is not used with the PR-232, the PC-LOG program must be operating in order for the PR-232 to operate because it sets up the serial port to supply power to the PR-232.

Switch the PR-232 POWER switch to ON and apply time code. The PR-232 flashes the LED as it reads time code. If the LED does not flash, check the connections to the PR-232, and verify that time code is actually being output from your device.

2.5 Interfacing the PR-232 to a USB Port

The PR-232 can be connected to a USB port via use of an RE-232 to USB adapter. These adapters are available from computer stores, such as "Best Buy" as well as online. Belkin is a well known manufacturer of these adapters.

However it should be noted that not every adapter works on every computer with every Windows operating system, such as XP, 7, 8, Vista, etc. It may be necessary to try more than one adapter or computer until correct operation, the reading of time code, is achieved.

3 SOFTWARE PROGRAM INSTALLATION AND STARTUP

The following paragraphs provide instructions for installation and operation of legacy MS-DOS software and MS Windows software originally written for logging time coded video tapes. The software can still be used for that purpose or in situations where it is desired to capture and comment on the occurrence of an event in terms of its SMPTE time code time.

Because this is legacy software, it is no longer maintained and the documentation has been left in it's original state, with references to floppy discs, parallel printers, etc.

The PC-LOG and TC-TRN MS-DOS software programs for the PR-232 will generally operate from the "DOS prompt" in a typical MS Windows XP environment but have not been tested with later versions of Windows OS's.

The PC-LOG program is also provided in an MS-Windows implementation that will operate as a standard MS-Windows program.

PC-LOG and TC-TRN, as well as a variety of other Horita programs for various Horita products are included on a CD. User selection of which programs to install, if any, is automatically displayed on a setup menu if the Horita CD is inserted into the computer's CD drive. No software is automatically installed if the CD is inserted, only a menu and instructions are displayed.

When an MS-DOS program is selected for installation, nothing is really "installed" on the computer, only a folder is made and the selected Horita program file(s) is copied into it.

When an MS Windows program is selected for installation, then installation instructions typical for a windows program are provided.

The following legacy installation instructions in this section are for reference only and do not apply when using the Horita software CD.

3.1 Introduction

Installation of the HORITA PC-LOG & TC-TRN programs is straightforward and simple. When loaded, each program automatically configures itself for the type of video display monitor used with your computer, and sets up your computer's serial port for compatibility with the HORITA PR-232.

3.2 Computer System Requirements

- Compatible with PC, XT, AT type desktop or laptop personal computers with at least 256K of RAM memory to run a single program. DOS 2.0 or above.

- Must have standard COM1, 2, 3 or 4 serial ports for time code input from the PR-232. No additional PC cards required.

- Compatible with monochrome, CGA, EGA, or VGA computer displays.

The programs are supplied on a standard 720K 3-1/2" diskette which contains the following files:

PC-LOG.EXE
TC-TRN.EXE
SAMPLE.LOG

The master disk supplied by HORITA should not be used to run any of the programs, they should first be copied to another floppy disk or hard disk, and then the master disks should be filed for safekeeping.

PC-LOG & TC-TRN are individual programs which can be separately copied onto a floppy disk and used as required, or they can all be copied together onto your hard disk.

For example, if you just want to do tape logging on a laptop computer while in the field, you may want to copy only PC-LOG onto a single floppy, leaving plenty of room on the floppy for log files.

3.3 Installation on a Hard Disk

There are many ways your hard disk can be organized to work with the programs. In general, if the programs are going to be copied to your hard disk, they should all be in the same directory, and the directory should be included in the "PATH" statement in your DOS AUTOEXEC.BAT file.

This basic method of installation is described in more detail in the following paragraphs.

To install the programs onto a hard disk, first make a subdirectory for the programs, for example PC-LOG:

Type: CD \   <Enter>
         MD PC-LOG   <Enter>
         CD PC-LOG   <Enter>

Copy the programs from the HORITA floppy disk to the hard drive using the DOS "Copy" command. Copy all of the files from the master floppy disks to the PC-LOG subdirectory.

Type: COPY A:*.*

Next, if you have an AUTOEXEC.BAT file in your root directory, edit it to add the PC-LOG subdirectory to the DOS "PATH" statement.

3.4 Program Startup from the DOS Prompt

PC-LOG and TC-TRN can be started by typing in its name at the DOS prompt (command line), then keying <Enter>.

NOTE:

The first screen you see after a program is started is the copyright notice screen. The names PC-LOG and TC-TRN are trademarks (tm) of HORITA company. The display screens are copyright (C) 1989-1996.

NOTE:

All of the HORITA software described in this document is furnished under a license agreement. You may use and copy the software only within the terms of the agreement.

After reading the copyright screen, key <Enter> to proceed.

4 COMMON PROGRAM OPERATIONS AND FUNCTIONS

4.1 Introduction

Except where noted the PC-LOG and TC-TRN programs have common or similar methods of data entry, accessing help, loading and saving files, exiting to DOS, etc.

Because of this commonality, these operations are described in detail in the following paragraphs, and apply to both of the

programs as noted.

4.2 What the "<>" Symbols Mean

The "<>" symbols (greater than/less than) are used to indicate the name of a key that is to be pressed, rather than typing in the key name. For example, <CTRL> means the control key.

4.3 Answering "Y/N" Questions

Sometimes a field requires a "Yes" or "No" answer to enable or disable a certain operation. When this is required, it's only necessary to type "y" or "n", or <Enter> for the default choice.

4.4 Keyboard Data Entry and Editing

Keyboard data entry and editing is divided into entering data into time code fields and entering data into non-time code fields.

Non-time code fields, such as "TITLE", "FILENAME" etc,. are usually for entering alpha-numeric (alphabet and numbers) setup information, comments, etc. In most cases, except for a DOS filename, just about anything is permitted to be entered.

Time code fields are provided for entering time code numbers such as TC LOCATION, DURATION, etc. Time code fields accept only legitimate time code numbers and there are a few special editing operations that make it easier to enter and edit time code numbers. However, except for this, entering data into and editing the two different type fields is quite similar.

Entering Data into Non-Time Code Fields

Type data as required, then:

<Enter>
Moves curser to next "logical" field.

<Ins>
Toggles between insert and overtype modes.

<Del>
Deletes character under cursor.

<Backspace>
Deletes character to left of cursor.

LEFT and RIGHT Arrows
Move cursor one character within field.

<Home> and <End>
Move cursor to beginning or end of field.
Or, when editing Line/File.

<Tab> and <Shift/Tab>
Move cursor horizontally from field to field.

UP and DOWN Arrows
Move cursor vertically from field to field.

<Ctrl> U Undo
When typing new data into a field, and before <Enter> is keyed, keying <Ctrl> U restores the field to what it was before it was modified.

<Esc> Escape
The <Esc> key is used to escape out of particular operations. If a help screen is displayed, <Esc> is the same as keying <F1> to exit help. If an error message is displayed, it is the same as keying <Enter>. If a "Yes/No" question is asked, it is the same as answering "No".

Entering Data into Time Code Fields

The following paragraphs describe how to enter data into time code fields and applies to both PC-LOG and TC-TRN. The entry method for PC-LOG is slightly different because the time code field can also be a field of user bits. This is covered in later paragraphs for operating the PC-LOG program.

Time Code Field Format

Before proceeding on to time code data entry, a brief description of the "time code field" is provided. A time code field holds 8 digits of time code in a 24-hour "military time" type of format. This consists of two digits each for hours, minutes, seconds, and frames. The digits are separated by colon characters. There are 30 video frames in one second, numbered from frame 00 to frame 29. The time code value goes from 00:00:00:00 up to a maximum of 23:59:59:29 (23 hours, 59 minutes, 59 seconds, and 29 frames).

Initial Time Code Entry

When initially entering data into a time code field, the cursor starts at the frame's position at the far right of the field. As the time code number is typed, the digits scroll horizontally from right to left. If more than 8 digits are typed, digits at the far left are pushed off and lost.

Use of Left and Right Arrow Keys

If the left or right arrow key is used to position the cursor to a specific time code character, data entry from then on proceeds like entering non-time code data, with the cursor moving to the right as digits are typed. This action continues until the cursor reaches the far right character position, at which time operation reverts back to that as previously described.

<Del> and <Backspace> Keys

With the exception of <Del> and <Backspace>, which are described in the following paragraph, the other editing keys operate the same as previously described for entering non-time code data.

In a time code field, keying <Backspace> inserts a zero and moves the cursor to the left. Keying <Del> deletes a character at the cursor position and pulls the entry from right to left, filling in the left with zeros.

Clearing the Time Code Entry

The entire time code field is cleared to zero by keying "C".

Selecting Drop frame/Non-drop frame Time Code

At any time when entering data in a time code field, typing <D> or <;> (semicolon) sets the time code to drop frame, typing <N> or <:> (colon) sets the time code to non-drop frame.

Time Code Entry Errors

When the time code entry is invalid, an "E" is displayed to the right of the field, next to the frames. This is a normal occurrence as a time code number is being typed in. For example, when keying in a time value of 35 seconds, an "E" is temporarily displayed at various times as the entry is entered. This is illustrated below:

Digit Entered	Time Code Display	Comment
3	00:00:00:03	OK
5	00:00:00:35 E	Frames bad
0	00:00:03:50 E	Frames bad
0	00:00:35:00	OK

As shown above, the entry error was only temporary as the time code number was entered. However, if an erroneous time code number is actually entered, the error must first be corrected, either by re-entering the correct number or clearing the field, before another field can be selected.

4.5 Function Keys

Although the <F1> through <F10> function keys are assigned to specific operations for the PC-LOG and TC-TRN programs, in many cases they perform an identical or very similar function for each. This is described in detail in the following paragraphs.

F1 Help

Except in response to a Yes/No question, <F1> can generally be keyed at any time to display one or more help screens. When more than one help screen is available, use the <PgUp> and <PgDn> keys to select between the help screens. From the help screen a function key can be pressed to select that function.

F2 Setup

<F2> is used for entering data into the setup area of a program screen. The programs prompt the user with "Save current setup- Yes/No" when they are exited, if certain setup information has changed. For example, if the comment area tab settings are changed in PC-LOG. Answer "y" if you wish to keep the new setup.

F3 Start

<F3> is not actually named Start, but is generally used to initiate the main function of the program. For example Log, Translate, etc.

F4 Edit

<F4> is used for entering a screen edit mode to edit the PC-LOG log or TC-TRK EDL files.

F5 Get, F6 Save

The Get and Save functions perform disk I/O of program data files. The Get function loads a specified disk file of data into the program. The Save function saves program data onto a disk under a specified file name.

Filename and File Window

Whenever the Get function is requested, the named file is highlighted in a file window (if the file exists). If <Enter> is keyed, the file will be retrieved. If a filename extension is not included, a default extension is appended before the file window operation is performed.

If <Esc> is keyed, a highlight bar is placed at the "Filename" field so that a filename can be entered.

Filename Wildcards and the File Window

When getting a file, DOS wildcards (* and ?) may be used to call up the File Window which displays all files whose filenames match the wildcards. The highlight bar can then be positioned to a filename and <Enter> keyed to select that file.

When saving a file, if the file already exists, the program asks if the file is to be overwritten. If the answer is "No", the save operation is stopped.

F7 Review

PC-LOG uses incoming time code to scroll through a logged file as the corresponding tape is searched.

F8 New

When <F8> is keyed the PC-LOG and TC-TRN clear their respective Setup and File edit/view areas. NEW is used to clear out all data in preparation for starting a new operation. For example, after logging a particular tape, saving the log on disk, and getting a printout, keying NEW prepares PC-LOG for logging another tape.

F9 Print

When <F9> is keyed, PC-LOG prints its log and TC-TRN prints its EDL created from a translated log file..

If the printer is off line or not ready, an error message along with a Yes/No question is displayed asking whether or not printing should continue.

Stopping a Printout

To stop printing, key <ESC> and answer "Y" to the "Stop Printing" question.

Double Space Printing and Print Range

Files can be printed with double spacing between lines and the range of the printout can be entered in terms of the line number. These options are selected from the printer menu displayed after <F9> Print is keyed.

F10 Find

When <F10> Find is keyed, PC-LOG enters the "Find" mode which enables searching through logs for key words and generating a search report.

5 OPERATING PC-LOG

5.1 Introduction

PC-LOG is an easy to use and accurate time code based videotape logging program for documenting and commenting videotapes according to their SMPTE time code.

5.2 Features

- Captures SMPTE time code times or user bit information while the HORITA PR-232 is reading time code.

- Provides simple, single key commands for titling, logging, editing, reviewing, printing, storing and retrieving the log from disk

- Powerful "Find" command with wildcard characters and logical operators searches logs for matching setup information and/or comment area key words to generate a report file which can be saved to disk and/or printed

- Macro keys for inserting text strings with just a single key stroke

- Log in the field using a portable computer

- Holds up to 750 lines of log information

- Generates pure ASCII file which can be imported into other programs

- Calculates and displays duration

- TAB settings for comment area

5.3 The PC-LOG Screen

The PC-LOG screen is divided into a setup area and a log area. The setup area is a fixed form that allows entry of various information about the log. The log area contains the time code times, durations and comments.

Generally, the setup area is filled in first and then the tape is logged. The log can be printed out and saved to disk at any time.

The PC-LOG "Find" function, which allows searching of logs for specific information, also uses the PC-LOG setup area and log area screens layout for entering and displaying search information and reports.

5.4 Function Keys

The <F1> thru <F10> function keys are used to select the various operational modes and functions of the PC-LOG program. The operation of each key is described in the following paragraphs.

F2 Setup

Keying <F2> selects the setup mode which allows the setup area to be filled in.

The setup area is divided into five main parts; PRODUCTION, SHOOT, TAPE, LOG, and a general setup and information area. Each of these parts then have headings where information can be filled in. Although mostly self-explanatory, these headings are briefly described as follows:

PRODUCTION

Title:
The title or name of the production.

Number:
A number can be assigned to the production if desired. For convenience, this number or a portion of it can be used as part of the tape and/or disk numbers. For example, the production may be numbered 1234 and then both the tape and its associated log disk numbered 1234-01 (01 for reel number 1).

Producer:
The name or names of the producer or producers.

Note:
Additional production information as desired.

SHOOT

Date:
The date of the shoot.

Location:
The location of the shoot.

Crew:
The crew on the shoot.

Note:
Additional shoot information as desired.

TAPE

Reel #:
The tape reel number. For example: 1, 2, 3, 1A, 2A, 3A, 011, 012, etc. Sometimes the hours value of the time code or selected digits of the user bits. Also see paragraph 4.7.

Tape #:
A special number can be assigned to the tape if desired. This number can be used to physically identify or label the tape. For convenience, this number or a portion of it can be used as part of the production and/or disk numbers. For example, the production may be numbered 1234, and then both the tape and its associated log disk numbered 1234-01 (01 for reel number 1).

Format:
The format of the tape. For example, 3/4", Beta SP, 1", S-VHS, etc.

Length:
The length of the tape. For example 20-min, 1/2 hr, KCA-20, etc.

LOG

Date:
The date the log was made.

By:
The person or persons logging the tape.

Disk #:
A special number can be assigned to the floppy disk on which the log is stored. This number can be used to physically identify or label the disk. For convenience, this number or a portion of it can be used as part of the production and/or tape numbers. For example, the production may be numbered 1234, and then both the tape and its associated log disk

numbered 1234-01 (01 for reel number 1).

File:
The name of the log as it is to be stored and retrieved from disk. This name must conform to MS-DOS requirements. It cannot have more than eight (8) characters, a period, then three more characters.

NOTE:

When storing the log on disk, PC-LOG will append a ".LOG" extension to the filename if the period and last three characters are not entered. A filename must always be entered to store or retrieve information from disk.

TIME CODE

The remainder of the setup area provides for selection of the COM port and time code or user bits, displays the input time code, running duration, and various PC-LOG messages, and identifies the various columns for the log information.

COM1-4
Allows selection of the COM1-4 serial port for time code input. The cursor is positioned to the "COM" field using the UP/DOWN arrow keys. Key "1" to select COM1, "2" to select COM2, etc. The COM setup can be saved when PC-LOG is exited.

Messages
Displays the mode selected, as well as various PC-LOG messages, such as "Are you sure? (y/n):" when storing the log on disk.

LINE
Column heading. When logging, a sequential line number is automatically assigned to each entry line for reference.

TC LOCATION, UB LOCATION
Column heading. The time code number displayed above "TC LOCATION" is the time code or user bit input to the PC serial port from the HORITA PR-232. The TC or UB setup can be saved when PC-LOG is exited.

The time code number displayed below "TC LOCATION" is the time code number captured for the tape log.

Selecting Time Code or User Bits
When the cursor has been positioned to the "TC" field using the UP/DOWN arrow keys, keying "T" selects time code, keying "U" selects user bits for input.

DURATION
Column heading. The time number displayed above "DURATION" is the running time difference between a captured or logged time and the current time displayed above TC LOCATION.

COMMENTS
Column heading. Identifies the area below as the comment entry area of the tape log.

FCM: DROP FRAME, NON-DROP FRAME
Indicates that the time code is drop frame or non-drop frame format.

Tabs
The tab line, "Tabs", located directly under "Comments", allows entry of tab settings for convenient placement of comments in columns for IN or OUT times, shot types, etc. A tab stop is indicated by inserting an upper case "T" in the tab line. Any other character is ignored. The tab settings can be saved when PC-LOG is exited.

Logs: Lines:
Used in the F10 Find mode in place of the serial port COM information to show counts of the number of matching log files found and the number of lines of matching comments.

Key Word:
Used in the F10 Find mode in place of the "Tabs" line to show the search criteria used for matching in the PC-LOG

comment field.

F3 LOG

Keying <F3> selects the log mode. After the log mode is selected, keying either <Spacebar> or <Enter> captures the time code, starts the running duration, and moves the cursor to the comment area.

After a comment is typed in, keying <Enter> ends the line, advances the log to the next line number, and positions the cursor to the start of the new line.

Keying <Spacebar> or <Enter> again captures the new time code, starts the running duration, moves the cursor to the comment area and, in addition, copies the prior running duration into the duration column of the previous line number.

Wordwrap

Typing in comments longer than a single line causes automatic entry of another line without capturing time code. A word started on the previous line is moved to next line if it doesn't fit on that line.

Adding Additional Comment or Blank Lines

Keying TAB positions the cursor to the comment area without capturing time code and allows more comments to be entered.

Macro Keys

After keying F3 Log and entering the log mode, keying <Alt> selects "macro key" logging which changes keys F1 thru F9 from function keys into keys that enter text strings into the log.

When macro key logging is selected, the setup area changes from its normal display into the macro key setup area which identifies the specific macro keys and their associated text strings.

Key <Alt> again and the cursor highlights the last selected macro key message field for editing or entry of a string of text up to 34 characters long. Use the up and down arrows and <Tab> keys to move to the various message fields. To return to macro key logging key <Esc>, to exit the macro key mode and return to the normal PC-LOG setup screen, key <Esc> again.

When a macro key is used with the cursor positioned at the TC LOCATION field, the macro key first captures the time code and duration, then enters the text string into the comment field, then returns the cursor to the start of the next line.

When a macro key is used with the cursor already positioned in the comment field, just the macro key text string is entered, the cursor does not return to the next line.

Thus, you can use a macro key as a single "hot" key to quickly capture the time that an event occurs and label that event, or you can use the macro key simply to insert frequently used text strings into the comment area.

IN, OUT and SCENE/TAKE Macro Keys

The F8 thru F10 macro keys are prelabeled IN, OUT, and SCENE/TAKE respectively and perform additional special functions related to logging video tapes for later editing.

The SCENE/TAKE macro key inserts its text plus a six digit scene number and a three digit take number. The scene and take numbers can be preset to an initial value when editing the macro key messages. Whenever the scene number is changed, the take number is automatically reset to 001 when the scene number field is exited. This automatic action is prevented if the take number is manually set either before or after setting the scene number.

When the SCENE/TAKE macro key is used, the SCENE/TAKE text and numbers are entered as comments and the cursor is left on the comment line. If used again, the scene number is repeated, but the take number is incremented.

The IN macro key operates the same as the other macro keys, unless it is used after using the SCENE/TAKE macro key but before <Enter> is keyed (that is, the cursor is still in the comment area). In this case, the IN macro key starts a new line and captures a new time code, enters the IN text on the comment line, and remains with the cursor positioned following IN to permit entry of additional information.

The OUT macro key operates the same as the other macro keys but it also inserts an extra blank line. In addition, if it is used after using the SCENE/TAKE macro key but before keying <Enter>, it also captures a new time code, enters the OUT text on the comment line, increments the take number, enters a blank line, then ends with the cursor positioned at the start of the next line.

Typical uses of the SCENE/TAKE, IN, and OUT keys are: IN, OUT (the extra blank line groups the IN and OUT times into two; SCENE/TAKE, IN, additional text, OUT; IN, SCENE/TAKE, additional text, OUT.

Note that the F8 and F9 IN and OUT text can be changed to any other text string, for example START/FINISH, HEAD/TAIL, BEGIN/END, etc., but operation of the F8, F9 and F10 keys remain the same.

Using PC-LOG to Capture Edit IN and OUT Times

PC-LOG is generally used to document all of the material on a particular reel of tape. However, PC-LOG can also be used to very accurately mark edit IN and OUT times, if desired.

First locate the desired IN point on the tape, then key macro key F8 to automatically capture the time code and insert IN in the comment field.

Next, locate the desired OUT point and repeat the above procedure, using macro key F9. Using F9 visually breaks up the entry into IN and OUT times. The PC-LOG log file can later be translated into a CMX EDL file by use of the TC-TRN program, and TC-TRN can be set up to translate only those lines that start with "IN" and "OUT". If you want to add additional text to a line, key <Spacebar> or <Enter> first, then the macro key, then add your text.

Restarting a Line

Keying <Shift> TAB deletes times and comments and moves the cursor back to the start of the line number. This allows a line to be restarted.

F4 EDIT

Keying <F4> allows the log area to be edited in much the same manner as editing the setup area.

When in F4 Edit mode, log lines can be added to or deleted from the log. A comment line can be added to a time code/duration entry, or a time code/duration value can be added to a comment line that doesn't have one. Time code times can quickly and easily be added to a previously commented PC-LOG or word processor file that does not have any time code times present. When a time code is added to a comment line, the duration is automatically calculated when the cursor is moved from the time code field.

To see how line insert and delete operates, you might get the sample log   file "SAMPLE.LOG", save it under a different name, for example "TEST.LOG", and then try out line insert and delete operations using the TEST.LOG file.

Insert Line

Key <ENTER> to start a new line.

Cursor in comment field:

Old line is terminated at character in front of cursor, new comment line is started with cursor positioned at first character of new line. For example, if comment is:

<div align="center">123456789ABCDEFG</div>

then keying <Enter> with cursor positioned at "A" produces two comment lines:

<div align="center">123456789
ABCDEFG</div>

with the cursor positioned at "A"

Cursor in TC or duration field:

The line containing the cursor is pushed down, TC LOCATION from above line is copied to new line and cursor is positioned in TC field in preparation for manually entering or changing TC number.

<div align="center">14</div>

Delete Line

Key <Ctrl D> to delete a single line. To help prevent accidentally deleting time code times, the line delete function operates such that you can't hold down a key and continuously delete time code lines. You have to individually "tab" over to them, then perform the line delete operation.

Cursor in comment field:

Comment field of current entry is deleted. If cursor is at start of comment line, subsequent comment line(s) are "pulled up" until a new TC duration line immediately follows the current line. If cursor is not at start of comment line, deletion starts from current cursor position until end of that line only, subsequent comment lines are not pulled up.

Cursor in TC or duration field:

Deletes TC and duration, and moves cursor to comment field.

<Del> Key

Cursor in comment field:

Keying <Del> deletes single characters to right and, if there is no time code on next line, pulls text up from lower line until there is no more text. Text is pulled up a single character at a time.

Cursor in TC or duration field:

Keying <Del> deletes characters in the TC and Duration fields.

Editing or Adding New Time Code Times

Although not a usual requirement because the times are from off tape, these fields can be modified if necessary. Key <Shift>TAB to move the cursor to the DURATION or TC LOCATION fields. Modification of a field does not affect any other time code times, but a new duration is calculated when this cursor is moved from the time code field. Valid characters are 0-9 and A-F. There are no range or validity checks of time code entries.

If there is no current TC LOCATION field for the line, a temporary field of all zeros will be displayed. A new time code value can be keyed into the field from the keyboard or can be entered from the off-tape time code. Simply key "L". Once a new time is entered, you can key <Tab> to add or change the comments.

Adding Times to a Previously Commented PC-LOG or Word Processor Text File

In some applications it may be desirable to enter the comment text first and then log the time code times later. The initial text file of comments can be prepared using either PC-LOG or your word processor, and the tape times can quickly be added later using PC-LOG in the log Edit mode.

If using PC-LOG, enter the F4 Edit mode and create and save the   desired text field consisting of comments only. If using a word processor, first use PC-LOG to save a log file having a single line consisting of TC LOCATION, DURATION, and a filled up comment line. Load this into your word processor and use it as a reference for setting up tab spacing for the comment line. Set the margins to OFF or to minimum. Fill in the setup area in the overtype mode, then add comments as desired.

Most importantly, be sure to save the file as a DOS text file or ASCII file so that it does not have any word processor control characters for fonts, tabs, etc. This will permit it to be loaded back into PC-LOG to add the time codes.

When the file is loaded into PC-LOG, enter the Edit mode, back tab into the TC LOCATION field, and either manually key in the desired time code numbers, or key "L" to capture the off tape time code location.

F7 Review

Review mode scrolls the log such that it follows the time code input from the PR-232. For example, if a log is retrieved from disk and its corresponding tape is searched, the line number, times, and comments associated with that tape-time are highlighted in the center of the log area. This highlighted center line continuously follows movement of the tape.

The time displayed above the DURATION column is a rolling value which advances towards the duration time of the highlighted entry line when the tape is going forward. When tape motion is in reverse, the rolling duration starts at the value of the highlighted duration and advances towards zero.

Except for "F10 Find", which is described at the end of this section, the remainder of the function keys operate as described in Chapter 4,

"COMMON PROGRAM OPERATIONS AND FUNCTIONS". Refer to that section for more detail on the following function keys:

F1 Help	Display help screen(s)
F5 Get	Get file from disk
F6 Save	Save file to disk
F8 New	New screen
F9 Print	Make hardcopy

5.5 General Tape Logging Procedures

1. Connect the PR-232 to your video system and computer.

2. Load up PC-LOG.

3. Key <F2> and fill in the setup information.

4. Key <F3> to enter the log mode.

5. Place the tape player into play or search mode as desired.

6. The PC-LOG TC LOCATION should show the time code coming from the PR-232.

7. To be the most accurate, the tape log should document everything on the tape. Key the <Spacebar> or <Enter> at the start of the first scene on the tape.

8. Add comments to the line.

9. Key <Enter> to advance to the next line.
. Watch the tape and wait until the current scene ends and the next one starts, then key <Enter> and repeat the above logging steps.

11. If you want to group entries, for example, into groups of two to show IN and OUT times, key TAB, then ENTER to insert a blank line, or use the F8 and F9 macro keys.

12. To correct an erroneous start time:

    a. Stop the tape.

    b. Search the tape in reverse and stop at the desired point or slightly in front of it.

    c. Key <shift>TAB to erase the entry time, the previous duration, and re-position the cursor   to the start of the current line.

    d. Continue normal logging as before.

13. It's usually best to first complete logging, then use the <F4> EDIT mode to go back and correct any spelling or other typing errors.

14. Key <F6> and save the log.

15. Key <F9> and print the log.

16. Key <F8> to start a new log or <Esc> to exit to DOS.

5.6 F10 Find

Keying <F10> enters the PC-LOG "Find" mode. The Find mode allows PC-LOG log files to be searched for matching setup information and/or key words in the comment area. A report is generated which can then be viewed, saved to disk, or printed.

The following paragraphs first provide a general description of the terms and concepts used for the Find mode, followed by

a description of each of the Find mode function keys, and conclude with a description of a typical Find mode search operation.

General Terms & Concepts, Search Criteria and Matching

The information that must be "matched", or "found", in the log files is called the "search criteria". You enter separate search criteria for the setup and comment areas of the PC-LOG files. Any letters, numbers, or symbols, as well as wildcard characters and logical operators, can be used as part of the search criteria.

By treating the setup and comment areas separately, you can search for matching setup information only, or for matching setup information and key words in the comments, or for just comment area key word matching.

For example, by searching only for matching setup information, you can get a report on all of the production titles and tape reel numbers on which a certain person was the producer.

By entering additional comment area search criteria, only those logs that also had comments about aircraft, birds, or whatever matches the comment area search criteria, are entered into the search report.

By entering search criteria for the log comment area only, you find all of the tape logs that have matching comments, regardless of the setup information.

In this case, when the comment area match is found, all of the setup area information for that log file is saved in the search report.

As explained later in the "F7 Tag/Untag" description, in the preceding example, if desired, only those "tagged" setup area fields can be saved in the report, rather than the entire setup area.

Setup Area Search Criteria

Search criteria for the setup area is entered in the same manner as when entering normal logging setup information, except that now this information is what must be found in the setup area of the all of the logs that are searched.

Comment Area Search Criteria

Search criteria for the comment area is entered into the PC-LOG "Tabs" line, which changes to the "Key Word" line when Find mode is selected.

Wildcard Characters and Logical Operators

To make the search operation more powerful and flexible when specific names, spellings, word combinations, etc., are not known, or when you want to limit the search to certain word combinations, "wildcard" characters and logical operators can be entered as part of the search criteria.

The wildcard characters and logical operators can be entered for either or both the setup and comment area search criteria. When used for matching in the comment area, their action applies to up to a maximum of 20 comment lines of 50 characters each, for single comment entry.

Wildcard Characters

Wildcard characters offer flexibility when exact word spellings or abbreviations are not known because they substitute an "anything goes" criteria in place of specific characters or sequences of characters in a word that must be matched.

The wildcard characters used by PC-LOG are the familiar asterisk (*) and question mark (?). The asterisk matches any character zero or more times. For example, "1*3" finds a match with "13", "123", "1a3", "1223", "1abcd3", etc., but not with "12", "23", "1abcd2", etc.

The question mark character matches any character once. For example, "1?3" finds a match with "123", "1a3", 133, etc., but not with "12", "23", "1b2", "1223", "1abcd3", etc. This is summarized in the following table:

Search Criteria	Match	No Match
1*3	13, 123, 1a3	12, 23, 1abcd2
	1223, 1abcd3	
1?3	123, 1a3, 133	12, 23, 1b2
		1223, 1abcd3

Logical Operators

Logical operators offer "word search" flexibility, because they permit limiting the search to only certain combinations or occurrences of words. The logical operators used by PC-LOG are "AND" and "OR". These operators are identified by using the ampersand symbol "&" for "AND" and the vertical bar symbol "|" for "OR". The actual words "AND" or "OR" can also be used.

"AND" means both word "A" AND word "B" must be found for a match to occur. For example, entering "Cat & Dog" as Key Word search criteria for the comment area finds only comment lines with the words "cat.........dog" and "dog..........cat" in them.

"OR" means either word "A" OR word "B" must be found for a match to occur. For example, entering "Cat | Dog" in the preceding example finds all comment lines with the words "Cat" or "Dog" in them.

When a wildcard or logical operator character is to be part of the search criteria itself, precede it with a backslash. For example, to find the phrase "Cat & Dog", rather than the logical "Cat & Dog, the search criteria is entered as "Cat \& Dog". \\ matches one backslash. Only one logical operator can be used at a time. This means you can't enter search criteria such as "cats | dogs | animals" or "cats & dogs|pets".

The following table provides examples of search criteria matching using wildcards and logical operators:

Search Criteria	Matches Comments Like These	No Match
sharks |fish	sharks eat people fish eat melons	shorks eat fush eat
one & two	one and two two and one	one and three two and three
sh*k or f*h	shorks is unknown go fish fooooooooooh shk fh	sharkkks vicious fishes
sh?rk	shark shork shirk	sharks shaark
question\?	question?	questionA questionB
this\\that	this\that	this\\that

The Search Report

The search report consists of a list containing every TC LOCATION time, duration and comment line that matched all of the search criteria. The associated PC-LOG setup area is also included in the report as a "header" preceding all of the matching log lines. Optionally, instead of the entire setup area, the header can be limited to only those fields of the setup area that were previously "tagged", such as Production Title, Tape, Reel#, etc.

The comment lines from different log files are separated in the log view area by a dashed line. In addition to separating the PC-LOG files on the screen, this dashed line contains the complete DOS path and filename for each individual log file whose comments are included in the comment area.

When there are multiple lines of comments in the log for a single time code time, all of the lines are included in the report when a key word is matched.

By using specific names and/or wildcard characters for the "filename" when entering the setup area search criteria, the report can be limited to a single PC-LOG log file, or can encompass all log files in a single directory, all log files in multiple directories, etc.

Specifying the Search "Path" for the Log Files

The DOS search path is defined in the setup area "File:" field, and can include wildcard characters. Searching for log files always proceeds from the current directory outward, to all subdirectories, until all logs have been found and searched. The path entered in the "File:" field is just the starting point for the log search path.

The default path, "*.LOG", causes searching of all PC-LOG log files in the current DOS directory. Entering **.LOG searches the current directory and all subdirectories of the current directory.

Entering \A*.LOG searches all ".LOG" files in subdirectory A. \A**.LOG searches all log files in subdirectory A and in all subdirectories of A. To search all logs on an entire disk, the path would be entered as "**.log". This starts the search path at the root directory and proceeds outward from there.

Display and Printing of the Search Path

The search report also contains the entire path for each matching log file found and put into the report. This log path information is located at the start of the "dashed line" which separates and groups the comments found for each of the logs that are in the report. This log path information is displayed as the report is viewed and is also printed out as part of the report.

NOTE:

When only setup area search criteria is entered, the log area displays only the dashed line with the path information for that log. No "comment" lines are in the log area.

Find Mode Function Keys Description

Entering the Find Mode

When F10 Find is first keyed to enter the Find mode, the word "FIND" is displayed, in place of "LOG", in the upper left of the display, and some new functions, specifically for searching logs, are assigned to the function keys. These new functions are described as follows:

F2 Setup

Keying <F2> allows search criteria to be entered into the PC-LOG setup area. Information entered here must be found in the log's setup area before the comment area of the PC-LOG file is checked for matching Key Words.

F3 Search

Keying <F3> starts the search operation and generation of the search report. When the search operation starts, individual PC-LOG files found in the DOS path, as defined in the "File:" field, are sequentially opened and their setup area information is checked to see if it matches that of the setup area search criteria.

When a setup area match is found, the setup information is immediately placed into the search report, but only if there was no Key Word search criteria entered for the comment area. If no comment area search criteria is entered, then only the setup area is being matched to get a report on producers, titles, reel #'s, etc.

If Key Word search criteria was entered for the comment area, then each log line comment field is checked for a Key Word match. When the first match is found, both the setup information and the matching comment is placed into the search report. Following this, the remainder of the comment lines are checked, and those matching the search criteria are placed into the search report.

Each time a setup and/or comment area match is found, associated running total "Logs:" and "Lines:" counters are counted up by one. These counters are displayed in place of the "COM1 00:00:00:00 00:00:00" display for the PR-232 serial time code input. This searching action continues until all of the PC-LOG log files in the Find mode "PATH" have been checked. During this time all function keys are inactive. However, <ESC> can be pressed to manually halt searching.

Manually Stopping the Search Operation

If <ESC> is keyed during the search operation, searching stops and the question "SEARCH: Stop searching (y/n)?" is asked. A "Yes" answer selects F4 View if matches were found, otherwise F2 Setup is selected. If "No" is answered, searching continues from where it left off.

F4 View

This key allows the search report to be viewed using the Up/Down, PgUp/PgDn, and the Home/End keys to scroll through the report.

The search report contains both the setup and the comment lines of the matching PC-LOG log files. When in View mode, the setup information from the matching PC-LOG file is displayed in the setup area portion of the screen, and the associated matching comment lines are displayed in the PC-LOG comment area portion of the screen, with a single highlighted comment line.

The setup information always corresponds to that for the highlighted line in the view area. When the report is scrolled and different PC-LOG log files are encountered, the setup information changes to that associated with the highlighted comment.

You can key <F2> Setup at any time to see the search criteria, then switch back to <F4> View.

F5 Get

Operates the same as when logging. File window is displayed if a name is entered that contains DOS wildcards. The default extension for getting a report is ".RPT".

NOTE:

Reports saved with tagged fields using F7 Tag/Untag, rather than the entire setup area, cannot be reloaded into PC-LOG for viewing.

F6 Save

When <F6> Save is keyed, the highlight bar is positioned to "File:" to allow entry of a filename under which the report is to be saved. When the report is saved, a "snapshot" of the setup area containing the search criteria is placed at the top of the file. The default extension for saving a report is ".RPT".

Saving the Search Criteria

If F6 Save is keyed after only the search criteria is entered, then just the search criteria is saved. The F5 Get function can then be used at any time to reload the search criteria.

F7 Tag/Untag

Keying F7 Tag/Untag alternately selects and un-selects the specific setup area fields that are to be saved or printed in the search report if it's desired to not have all of the setup area information in the search report.

When in F2 Setup mode and the highlight bar is positioned to one of the fields of the setup area, such as Producer, Title, etc., keying F7 Tag/Untag toggles the background of the field name on and off to indicate if the field is tagged or not.

If there are any tagged fields when the F6 Save or F9 Print functions are selected, then only those tagged fields are saved/printed. Otherwise the entire setup area is saved and printed.

NOTE:

Reports saved with tagged fields using F7 Tag/Untag, rather than the entire setup area, cannot be reloaded into PC-LOG for viewing.

F8 New

Clears out everything, except which fields are tagged, in preparation for entering new search criteria and performing another search.

F9 Print

Keying F9 Print starts printing of the search report. For later reference, a "snapshot" of the setup area containing the search criteria is printed at the top of the report.

General Log Searching Procedures

1. From the PC-LOG screen, Key <F10> Find.

2. Key <F2> Setup and enter the setup area search criteria as desired. If no setup area search criteria is entered, then only the comment area search criteria is checked for a match. You can also use the <F7> Tag/Untag key to select only certain fields of the setup area to be included in the report.

3. Use the arrow keys to position the highlight bar to the "Key Word" entry area and type in any Key Word search criteria for the comment lines.

4. Move to the "File:" field and enter the search path. If no path is entered, the default value of "*.LOG" is used.

5. Key <F3> to start the searching operation. You can use <ESC> and then <Enter> (answering "No") or <ESC> again to start and stop the search operation as desired.

6. When searching is finished, use the <F4> View mode to look through the report. View is automatically selected when searching stops if there is anything to view.

7. Key <F6> to save the report.

8. Key <F9> to print the report.

9. Key <F8> to start a new report or <ESC> to exit back to logging. If you exit back to logging with a report on the screen, that report is reloaded if <F10> Find is again keyed.

Field Sizes

The following table lists the size of each PC-LOG field:

Field Name	Size	Field Name	Size

Setup Area

Production		Shoot	
Title	31	Date	33
Number	30	Location	29
Producer	28	Crew	33
Note	32	Note	33

Tape		Log	
Reel #	12	Date	9
Tape #	12	By	19
Format	9	Disk #	7
Length	9	File	17

Log Area

LINE	3
TC LOCATION	11
DURATION	8
COMMENTS	50

6 OPERATING TC-TRN

6.1 Introduction

TC-TRN is used to translate the PC-LOG files into industry standard CMX-340 EDL format for loading into editing systems or into edit decision list processing programs. The list can then be edited, manipulated, sorted, and combined with other EDLs.

6.2 Features

· Translates any PC-LOG file into standard CMX-340 EDL   format.

· Translated EDL can include comments from PC-LOG, if desired.

· Automatically pulls appropriate matching fields from PC-LOG setup area for use in CMX EDL title if no data entered by user.

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- EDL holds up to 1500 lines, allowing for translation of a 750 line log.

- User preset of Record start time, drop or non-drop frame, EDL mode, and starting event #.

6.3 The TC-TRN Screen

The TC-TRN screen is divided into a setup area and a LOG/EDL data area. There are separate setup areas for the PC-LOG input and the CMX EDL output files and a common area for the PC-LOG or EDL data.

The SETUP area is a fixed form that allows entry of various information about the log and EDL. Before translation, the LOG/EDL data area contains the PC-LOG log file with the time code times, durations, and comments. After translation, the log/EDL data area contains the translated CMX EDL.

General operation is that the PC-LOG file is loaded, the EDL setup area is filled in, then the log is translated. The EDL can be printed out and saved to disk at any time.

Each PC-LOG log line containing a time and duration is translated into an edit decision. The first PC-LOG log time becomes the first SRC IN time. After that, the SRC IN time plus duration becomes the SRC OUT time. The REC IN time starts at the setup value and is incremented by the duration of each edit to produce the REC OUT times.

Entering Data into Time Code Fields

The following paragraphs describe how to enter data into time code fields and applies to the TC-TRN program. The entry method for PC-LOG is different because the time code field can also be a field of user bits. This exception is covered in the description of operating the PC-LOG program.

Time Code Field Format
Before proceeding on to time code data entry, a brief description of the "time code field" is provided. A time code field holds 8 digits of time code in a 24-hour "military time" type of format. This consists of two digits each for hours, minutes, seconds, and frames. The digits are separated by colon characters. There are 30 video frames in one second, numbered from frame 00 to frame 29. The time code value goes from 00:00:00:00 up to a maximum of 23:59:59:29 (23 hours, 59 minutes, 59 seconds, and 29 frames).

Initial Time Code Entry
When initially entering data into a time code field, the cursor starts at the frame's position at the far right of the field. As the time code number is typed, the digits scroll horizontally from right to left. If more than 8 digits are typed, digits at the far left are pushed off and lost.

Use of Left and Right Arrow Keys
If the left or right arrow key is used to position the cursor to a specific time code character, data entry from then on proceeds like entering non-time code data, with the cursor moving to the right as digits are typed. This action continues until the cursor reaches the far right character position, at which time operation reverts back to that as previously described.

\<Del\> and \<Backspace\> Keys
With the exception of \<Del\> and \<Backspace\>, which are described in the following paragraph, the other editing keys operate the same as previously described for entering non-time code data.

In a time code field, keying \<Backspace\> inserts a zero and moves the cursor to the left. Keying \<Del\> deletes a character at the cursor position and pulls the entry from right to left, filling in the left with zeros.

Clearing the Time Code Entry
The entire time code field is cleared to zero by keying "C".

Selecting Drop frame/Non-drop frame Time Code
At any time when entering data in a time code field, typing \<D\> or \<;\> (semicolon) sets the time code to drop frame, typing \<N\> or \<:\> (colon) sets the time code to non-drop frame.

Time Code Entry Errors
When the time code entry is invalid, an "E" is displayed to the right of the field, next to the frames. This is a normal occurrence as a time code number is being typed in. For example, when keying in a time value of 35 seconds, an "E" is temporarily displayed at various times as the entry is entered. This is illustrated below:

Digit Entered	Time Code Display	Comment
3	00:00:00:03	OK

5	00:00:00:35 E	Frames bad
0	00:00:03:50 E	Frames bad
0	00:00:35:00	OK

As shown above, the entry error was only temporary as the time code number was entered. However, if an erroneous time code number is actually entered, the error must first be corrected, either by re-entering the correct number or clearing the field, before another field can be selected.

6.4 Function Keys

The <F1> thru <F9> function keys are used to select various operational modes and functions of the TC-TRN program, as needed. The operation of each key is described in the following paragraphs.

F2 Setup

Keying F2 selects the setup mode which allows the PC-LOG and EDL setup areas to be filled in.

The setup area is divided into two main parts; PC-LOG SETUP, and EDL SETUP. Each of these parts then has fields where information can be filled in. Although mostly self-explanatory, these fields are briefly described as follows:

PC-LOG SETUP

Filename:
The name of the PC-LOG file as it is stored on the disk.

NOTE:
"Filename" above is the only line of the PC-LOG SETUP area in which data can be entered. The other lines described below are fixed from the PC-LOG file and cannot be modified.

Title:
Title from PC-LOG file.

Reel#:
Reel number from PC-LOG file.

FCM:
Frame Code Mode from PC-LOG file.

Disk #:
Disk number from PC-LOG file.

Date:
Date from PC-LOG file.

Producer:
Producer from PC-LOG file.

EDL SETUP

Filename:
Defaults to PC-LOG filename but extension is changed from .LOG to .EDL.

Title:
Value in this field is used for title in translated CMX EDL. Defaults to PC-LOG title.

Reel#:
Value in this field is used for reel number of every edit. Defaults to first four characters from PC-LOG Reel #. A warning is issued if EDL SETUP reel number is not a valid CMX-340 reel number.

EV#:
Three digit numeric value for initial EDL event number.

MODE:
Audio/video MODE setup. When this field is selected, a window is displayed with selections of V, A, B, A2, A2/V, AA, and AA/V.

   V=video, A=audio, 2=audio channel-2, B=both audio
   channel-1 and video, AA=both audio channels.

This value is placed into the MODE field of the EDL.

FCM:
Drop frame or non-drop frame FCM of recorder time code. Initial FCM statement in EDL is based on this value.

Format: CMX:
Not user changeable.

IN/OUT Only ?:
Allows selection of translating all PC-LOG lines or only those whose comment begins with "IN" or "OUT".

Record In Start: 00:00:00:00:
Start time for recorder.

Include Comments?:
"Yes"- Each log line containing a comment is prefixed by an asterisk (*) character and copied into the EDL as each line of the LOG is translated.

"No" - Comments are not included.

Messages:
Displays the mode selected as well as various TC-TRN messages, such as "Are you sure? (y/n):" when storing the log on disk.

F3 Trans

Keying <F3> causes the PC-LOG file to be translated into a standard CMX-340 EDL. If not manually entered, Filename, Title, Reel# and FCM information from the PC-LOG file are automatically entered into the associated EDL fields.

Translating IN And OUT Times Only

PC-LOG files can be translated such that only those log lines that start with an upper case IN and OUT are translated, rather than all lines. This permits translating the log more as an EDL than simply as a tape log. To select this operation, answer "Y" to the "IN/OUT Only" question in the EDL setup field.

F4 View

Alternate keying of <F4> allows viewing of either the PC-LOG file or, after translation, the EDL file. When viewing, the Up and Down Arrows, <PgUp> and <PgDn>, and <Home> and <End> keys are active to move the displayed data.

When viewing a PC-LOG file, the heading of the line directly below "Messages" is titled LOG and the column headings below LOG are for PC-LOG files as follows:

<div align="center">LOG</div>

LINE
PC-LOG column heading for line number.

TC LOCATION, UB LOCATION
PC-LOG column heading for time code or user bits.

DURATION
PC-LOG column heading for duration.

COMMENTS
PC-LOG column heading. Identifies the area below as the comment entry area for the tape log.

<div align="center">EDL</div>

When viewing an EDL file, the heading of the line directly below "Messages" changes from LOG to EDL and the column headings below this also change for the EDL as follows:

EV#
Event number.

REEL
Reel number.

MODE
Set to selected value.

TYPE
Set to "C" for a cut type of edit.

DUR
Effect duration. Set to blank.

SRC IN
Source IN time, from PC-LOG file.

SRC OUT
Source OUT time, from PC-LOG file.

REC IN
Record IN time, calculated from FCM and SRC duration.

REC OUT
Record OUT time, calculated from FCM and SRC duration.

6.5 General PC-LOG to CMX EDL Translation   Procedures

1. Load up TC-TRN by typing "TC-TRN", <Enter>

2. Key <F5> Get

3. Key <Enter> to load selected PC-LOG file

4. Key <F3> Trans. If default values from PC-LOG file are OK for EDL, answer "Y" to question "Is EDL Setup OK?". Otherwise correct EDL setup and re-key <F3> Trans

5. Key <Enter> to translate the PC-LOG log into the CMX EDL file

6. Key <F4> View to highlight and view the translated EDL using the <PgUp>, <PgDn>, <Home>, <End> and Up and Down arrow keys

7. Use other previously described function keys to save the EDL, print it, etc.

6.6 Field Sizes
The following table lists the size of each TC-TRN field:

FIELD NAME	SIZE
Filename	29
PC-LOG	29
EDL	29
Title	31
EV#	3
Mode	4
Reel #	4
Record In	11

7 SERVICE AND TROUBLESHOOTING

7.1 Service
Do not attempt to disassemble your unit to service it. There are no user-serviceable parts inside. You can return your unit to HORITA for service or repair. Please contact HORITA first before returning your unit.

7.2 Troubleshooting
The following provides a list of the most common items to check if you are having trouble with your unit.

    a. Check all cables in signal paths for opens or shorts.

    b. If using XLR-to-RCA adapters, apply the time code from the RCA connector to an audio monitor and listen for the "raspy" time code sound. If no time code is present, it may be necessary to disassemble the adapter and switch the wiring between pins 2 and 3.

    c. Make sure that the PC-LOG program is loaded and operating in your computer. The program version must be V1.61 or greater to operate the PR-232 without a battery. V1.60 and earlier versions will operate the PR-232, but require a battery be installed.

8 SPECIFICATIONS

Power
Operation	RS232 Serial port or 9 volts DC

Time Code
Input
Level	0.5 to 10 volts p-p
Impedance	10K Ohms
Connectors	RCA

RS232
Format	HORITA HSIP
Connector	3.5MM mini phone jack

Switches And Indicators
Power	ON/OFF switch, red LED

Environment
Operating	5°C to 40°C (41°F to 104°F)
Storage	-10°C to 60°C (14°F to 140°F)

Dimensions
1" H, 2.4" W, 4.75" D

Weight
5 oz, including battery.

Specifications subject to change without notice

HORITA SERIAL INTERFACE PROTOCOL (HSIP) REV-F 11-04-98

Comm Data Format
RS-232, 9600 baud, 1 start bit, 8 data bits, 1 stop bit, LSB first.

SERIAL OUTPUT

Byte Structure
Time code: Packed BCD; Tens |Units
User bits: Packed HEX; MSN | LSN

Message Structure
Continuously sent data stream of 10 bytes per video frame, requiring approximately 10mS of real time, leaving about 23mS of frame time remaining for NTSC video, 30mS for PAL. Five byte time code packet is output during video Field-1, five byte user bit packet is output during video Field-2, as follows:

Field-1; Time code: | TC ID | T/U Frm | T/U Sec | T/U Min | T/U Hrs |
Field-2; User bits: | UB ID | UB 21 | UB 43 | UB 65 | UB 87 |

ID Bytes
The start of the time code and user bit packets are preceded by a special "ID" byte. The time code ID byte can have one of four values, the user bit ID byte has one value.

Time code ID Byte
The time code ID byte is binary 111100XX, which in HEX is F0, F1, F2, or F3. The significance of the "X" bits of the time code ID byte is as follows:

Byte bits   7 6 5 4 3 2 1 0
Binary value   1 1 1 1 0 0 X X   Bit Significance
                                  0   0 = Reverse direction time code
                                                     = VITC field-1 data (optional)
                                  1   1 = Forward direction time code
                                                     = VITC field-2 data (optional)
                              0   0 = Non-drop frame time code
                              1   1 = Drop frame time code

User bit ID Byte
The user bit ID character is binary 11111111, or HEX FF

SERIAL INPUT

Byte Structure
Time code: Packed BCD; Tens |Units
User bits: Packed HEX; MSN | LSN

Message Structure
NUL byte of all zeros followed by either a single command byte or by a command byte and four additional bytes of time code or user-bit preset information.

Command Bytes
Note that some HORITA PC units do not support all commands

Binary Bit Value
Bit-   7 6 5 4 3 2 1 0   Hex Value   Command Action
Standard commands for TRG-50PC

7	6	5	4	3	2	1	0	Hex Value	Command Action
0	0	0	0	0	0	0	0	00(NUL)	Stop time code generator
0	0	0	0	0	0	0	1	01	Start/select time code generator
0	0	0	0	0	0	1	0	02	Preset drop frame time code
0	0	0	0	0	1	0	0	04	Preset non-drop frame time code
0	0	0	0	1	0	0	0	08	Preset user bits
0	0	0	1	0	0	0	0	10	Turn display OFF
0	0	1	0	0	0	0	0	20	Turn display ON

Additional commands for enhanced TRG-50PC and standard VLR-100PC

7	6	5	4	3	2	1	0	Hex Value	Command Action
0	1	0	0	0	0	0	0	40	Start/select time code reader
0	1	0	0	0	0	0	1	41	Display time code
0	1	0	0	0	0	2	0	42	Display user bits

Additional VLR-100PC commands

7	6	5	4	3	2	1	0	Hex Value	Command Action
0	1	0	1	0	0	0	0	50	Read LTC
0	1	0	1	0	0	0	1	51	Auto read LTC/VITC
0	1	0	1	0	0	1	0	52	Read VITC
0	1	0	1	0	0	1	1	53	Translate VITC-to-LTC
0	1	0	1	0	1	0	0	54	Display hold
0	1	0	1	0	1	0	1	55	Display run

Preset Data
Time code preset: | T/U Frm | T/U Sec | T/U Min | T/U Hrs|
User bits preset: | UB 21 | UB 43 | UB 65 | UB 87 |