

THE TRIPERBOLA has been adopted as the Hallikainen and Friends company logo. It is comprised of three hyperbolas which have been superimposed to form a combination of the letters H and F. These letters cannot be separated from the whole yet it is possible to identify them individually. This is symbolic of the Hallikainen and Friends organization.

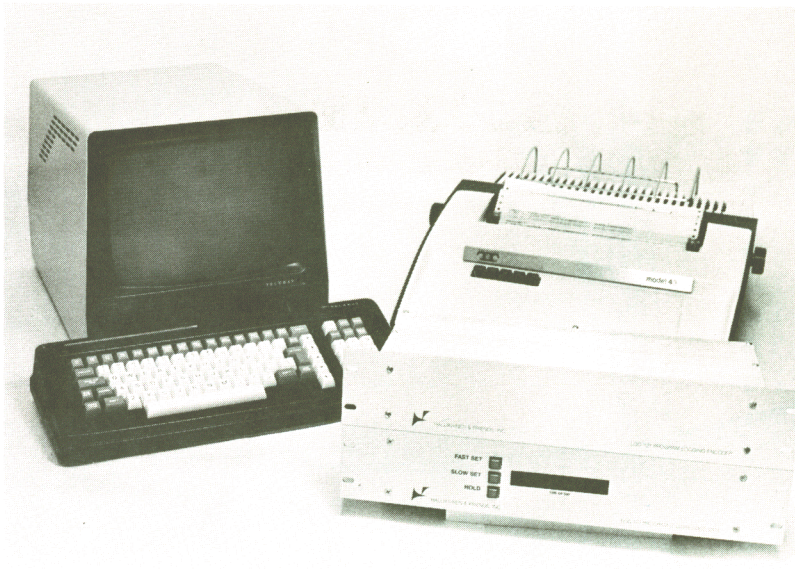
The geometric appearance of the triperbola is achieved by drawing its hyperbolas in a piece-wise linear manner. The lines are drawn tangent to the curve of the hyperbolas in sufficient detail to describe them.

Hallikainen & Friends

101 Suburban Road, San Luis Obispo, CA 93401 (805) 541-0200

PROGRAM LOGGING SYSTEM

Automatically keeps your Program Logs



- Full English Printout
- Logs are accurate and easily readable
- FCC Acceptable when signed
- Logs are printed as the programs run
- Affidavit flags and run dates can be included
- Logs Networks and other external sources
- Can be added to almost any automation system.

System Description

The logger consists of two separate systems: the encoder and the decoder.

The encoder takes the English message from a CRT data terminal and generates NAB standard AFSK (audio frequency shift keying) tones that are recorded on the cue track of the tape. The encoder generates the required timing and control signals for the recorder to insure that other control tones on the cue track are not disturbed. The encoder places the logging signal on the cue track parallel to the first few seconds of program. Tapes as short as ten seconds can be encoded with a full line of logging data.

The decoder receives the logging data during tape playback. Upon receiving the logging data, the decoder prints the time, any current alarm code, and the English message encoded on the cue track of the tape being aired. In this manner, the station receives a printout of exactly what was aired when.

System Specifications

Data Format: ASCII, 300 Baud EIA RS-232/C

Audio Format: FSK: 3.7 KHz mark, 3.3 KHz space: NAB standard

Audio Output Level: 0-5 VRMS adjustable; 0.5 VRMS typical

Audio Output Impedance: 0 ohms, unbalanced

Audio Input Level: 0.5 volts typical; 150 mV minimum

Audio Input Impedance: 10K, unbalanced

Tape Machine Control: Isolated contacts for drive start, cue record enable; O/C for cue record disable (TV)

Encoder Timing:

Dead Roll: 5 seconds (TV) — 0.5 seconds (Radio)

Encode verification: Encoded data displayed on CRT data terminal from tape playback

Audio Input: 10 unbalanced 10K inputs, 150 mV minimum

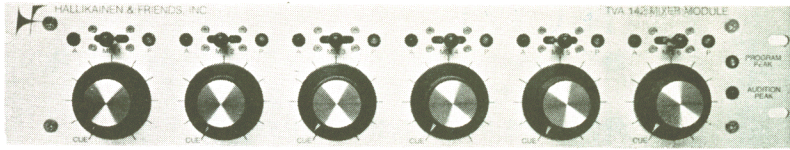
Alarm Inputs: 9 active low, 5 mA sink current, 5 V open circuit

Printer output: 4 EIA RS-232/C outputs

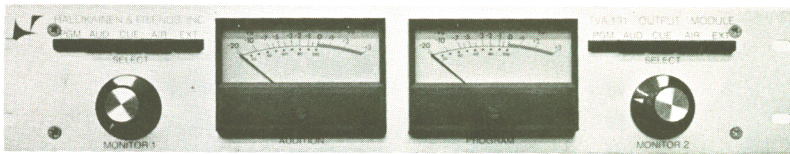
Internal Clock: 6 digit, 24 hour, 50/60 Hz time base

TVA SERIES AUDIO SYSTEMS

An expandable audio mixing system with AFV



TVA 142 Mixer Module



TVA 131 Output Module

- High quality audio
- Audio-Follow-Video (AFV) plus manual control
- Noiseless audio switching
- Mic & Line Mixing
- Expandable to 36 inputs
- Dual program and audition channels
- VU meters for program and audition
- Five monitor inputs
- Three outputs D.A.s on program and audition channels
- Plug-in controls and ICs

Applications in:

- | | | | | | | |
|-----------------|---|-----------------------|---|---|---|--------------|
| *Master Control | * | Production facilities | * | Remote trucks | * | News editing |
| Tape transfer | * | Post-production | * | Simultaneous broadcasting and recording | | |

System Description

The TVA 142 is the mixing stage of the audio system. Each TVA 142 Mixer Module has six mic or line inputs with individual gain controls. Audio routing to the program and audition channels is controlled either manually or by remote control switching (AFV). Front panel LED indicators show how each input has been assigned. Manual operation is easily accomplished with a lever switch above each input gain control. Audio levels are monitored with peak flashers. The TVA 142 provides program, audition, and cue outputs. The TVA 142 will serve as a stand alone mixer for many applications.

The TVA 131 Output Module provides for the expansion of the audio systems mixing capabilities. It also offers three distribution amplifier outputs for multiple program and audition feeds and separate VU meters for the program and audition channels. Three internal and two external monitor inputs are provided.

By combining a mixer module with an output module, a mixer console can be built capable of two separate audio mixes with metering and monitoring. Additional mixer modules, up to six total, can be added to the output module to expand the consoles input capability to a maximum of thirty-six inputs.

Component Specifications

TVA 142 Mixer Module

Inputs	
Number	6 balanced, mic or line level
Sensitivity	-10 dB line, -58dB mic
Impedance	10K bridging, 150 ohms mic
Output	
Number	1 each Pgm, Aud, and Cue
Levels	+22dBm Max, 600 ohm balanced
Distortion	0.25% or less to 22dBm
Response	±1 dB, 20Hz to 20Khz
Signal/Noise	75dB line 60dB mic, (ref. +8dBm)

Audio Follow Control
 Ground Switched, 12 volts open circuit
 Control Output (Tally)
 Ground Switched, 28vdc, 500mA max.

TVA 131 Output Module

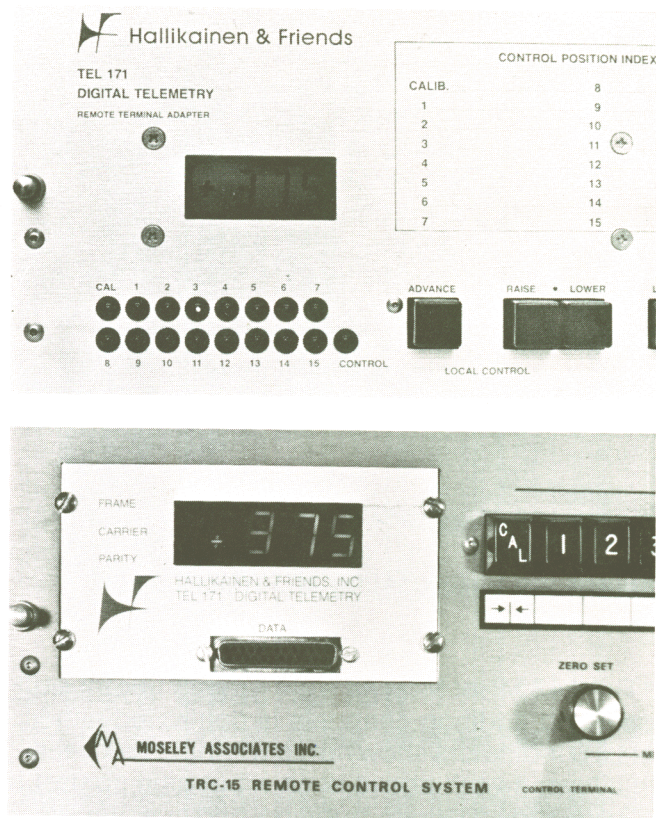
Inputs	
Number	36 maximum
Monitor	Pgm, Aud, Cue, Air, Aux
Outputs	
Number	(3)Pgm, (3)Aud, Cue, Mon 1, Mon 2
Levels	+22 dBm Max, 600 ohm balanced.
Meters	(2)VU meters, Pgm and Aud.

System Specifications

AC Power requirements
 100 to 130 vac, 1/2 amp, 60Hz
 Size
 Standard EIA 3 1/2 inch (88.1 mm) rack panel,
 chassis, 10 3/4 inch (273 mm) deep.

DIGITAL TELEMETRY

Converts Analog remote controls to Digital metering



TEL 171

- Converts your Moseley TRC-15AW or TRC-15AR to digital metering.
- Makes meter reading easy
- Eliminates offset and gain drift
- Local display at transmitter site permits one-man weekly meter calibration.
- 3½ digit (-1999 to +1999) displays
- Displays are updated twice a second
- Front panel diagnostic indicators
- Quick and simple field installation
- TEL 171 PC boards substitute directly for the audible metering generator, audible metering demodulator and analog meter
- TEL 171 boards use existing wiring harness and PC mounting hardware
- Local display includes replacement front panel and liquid crystal display board
- Automatically locates decimal point

TEL 171 Specifications

Accuracy: 0.5% of reading, ± 1 count, 0 to 50 degrees C
 Full Scale Sensitivity: 1.22 Volts for +1999 indication
 Bit Rate: 300 Baud
 Encoding: FSK, 1270 Hz Mark, 1070 Hz Space
 Output Level: +1 dBm into 600 ohms, adjustable (line), and 5 Vp-p open circuit.
 Minimum Receive Level: -40 dBm (7.7 mV)
 Studio Display: 3½ digit LED display with PROM programmed decimal points.
 Local Display: 3½ digit Liquid Crystal Display
 Power Requirements: All power derived from the Moseley TRC-15A.

TEL 172

- Converts your Moseley PBR-30AR or PBR-30AW to digital metering
- Provides operational and maintenance features like those listed for the TEL 171.
- Installation is even easier due to the use of plug-in printed circuit boards
- Telemetry tones have been optimized for PBR-30A users, 1270 Hz mark, 1070 Hz space.