



Television Audio System TVA Series

In television, the video is routed, enhanced, delayed, split, and taken through a myriad of other processes to achieve many desirable effects. Audio, being **apparently** much simpler, often takes second chair . . . until now. The Hallikainen & Friends TVA series audio system is designed and intended for television applications. Rather than modifying a radio board, or tinkering with locally constructed equipment, a TV studio can use our rack-mount modules and assemble a flexible system for present and future requirements. The H&F TVA series features audio-follow-video connections as well as manual control, with no customer-modification needed. The system is expandable to 36 balanced inputs, with individual faders and in groups of six, and offers balanced audition, program, cue, and two monitor outputs.

Audio Output Module TVA 131

The TVA 131 is packaged in a 3½ inch rack mount cabinet and provides line level outputs to feed transmitter chains, video tape machines, or a microwave link. It offers metering on the program and audition outputs with wide accurate VU meters. Three DA outputs on the audition and program channels can provide multiple feeds with no additional equipment. One TVA 131 module can, when used with one to six TVA 141 mixer modules, provide two separate feeds with metering. This can be very useful in operations where one program is "on-air" and another is to be simultaneously recorded, such as a network news feed. The 131 meters, feeds, and monitors both while the 141 affords individual level control and tally indication to show what is going where. The TVA 131, a versatile part of the H&F television audio concept.

Audio Mixer Module TVA 141

The TVA 141 is packaged in a 3½ inch rack mount cabinet and is the mixing stage of the H&F television audio system. Each 141 has six balanced audio inputs with individual gain controls. Audio routing to either the program or audition outputs is controlled manually or with the audio-follow-video feature. In the AFV mode, the video switcher, through ground switching, activates a noiseless control circuit sending audio to program or audition, or both. Front panel LED indicators show the status of each channel and manual override of the AFV is easily accomplished with a premium grade lever switch above each channel gain knob. The TVA 141 provides three separate audio outputs, audition and program to feed a line and cue for local use. It can be used as a stand alone mixer, although the combination of a TVA 131 output module with one or more TVA 141 mixer modules is the system we know is best.

Microphone Module TVA 151

The TVA 151 is also packaged in a 3½ inch rack cabinet and provides preamplification for six microphone level inputs. Input impedance is 150 ohms balanced for microphone applications, but can be strapped for bridging line input to afford more gain from a low level source. Each channel has adjustable gain and an individual output — mixing does not occur in the 151. The six channels of line level audio are intended to be fed to a TVA 141 mixer module. By mixing with line level inputs, any source can be patched to any mixer input, increasing the versatility of the system.

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TECHNICAL SPECIFICATIONS

Output Module TVA 131

Number of inputs	36 maximum, in units of 6 each
Number of outputs	3 Program DA outputs 3 Audition DA outputs 1 Cue output 1 Monitor 1 1 Monitor 2
Monitor inputs	Program, Audition, Cue, Air, Aux.
Meters	2 large VU meters for program and audition, 0 VU, internally adjustable for 0 dBm to +8dBm line out
Output levels	+8dBm, Pgm, Aud, Cue, MON1, MON2
Distortion, Noise, Response,	See corresponding specs in TVA 141 Head-
room, power, size.	

Mixer Module TVA 141

Input sensitivity	-10dB
Input impedance	10K bridging
Output level	+8dBm
Output impedance	600 ohms Balanced
Maximum undistorted output	+22 dBm
3% Distortion level	+23 dBm
Distortion, @8 dBm	0.025%
Distortion, @22 dBm	0.025%
Noise, unweighted	-70 dBm
Signal to noise, unweighted	78 dB
Signal to noise, ANSI A wtd.	Better than 100 dB (noise and S/N measurements made with one input at full gain)
Gain response at 8 dBm	+ or - 1/2 dB 20 Hz to 20 kHz.
Off Channel attenuation below +8dBm output	1 kHz -82dB 10 kHz -64 20 kHz -58

Unless otherwise specified, all specifications and measurements are referenced to 1 kHz, 9 dB = 0.775v, +8dBm output level.

AC power requirements	100 to 130 VAC, 1/2 amp, 60 Hz 220 volt 50 Hz available
Number of inputs	6
Number of outputs	1 each Program, Audition, Cue
Audio follow control	Ground switched, 12 ma 12 volts open circuit
Control output (Tally)	Ground switched, 28 vdc 500 ma max. open collector transistor
Size	Standard EIA 3 1/2 inch (88.1mm) Rack panel, chassis, 10 3/4 inch (273mm) deep, clear anodized aluminum
Indicators	Long life LED status indicators
Automatic Control	Automatically follows video switcher — each mixer input able to feed program & audition (preview) simultaneously.