Lissajous Display of Stereo Audio Signals
Display with LED of Stereo Polarity Discrimination

PAT.PEND

5835 STEREO AUDIO MONITOR

●GENERAL

The 5835 is a Stereo Audio Monitor that provides a lissajous pattern display of stereo audio signal on a CRT screen, enabling monitoring of the phase and level of the signal.
The lissajous pattern display of the stereo signal is provided with the left and right axes inclined at 45 degrees, enabling a good visual presentation of audio effects such as broadening and apparent position.
The 5835 features a stereo polarity discrimination function, a spot killer, and two Cannon-type inputs, making it ideal for use in not only program editing. but in checking of transmission equipment as well. All this makes the 5835 a useful stereo audio monitor for broadcast studio, production studio. and recording studio or remote pickup applications as well.

■ 5835 REAR PANEL

●FEATURES

- **The left and right channels are inclined at 45 degrees on the CRT display, not only enabling monitoring of level and phase, but providing a visual display of such audio signal phenomena as spread and positioning.**
- **Instant calibration of centering, rotation, and gain, using cross calibration (patent pending).**
- **Parallel-connected male and female type XLR Cannon connectors are provided as standard for the balanced input configuration, enabling direct monitoring of the lines required in broadcast studio, production studio, recording studio, and remote pickup application.**
- **A LED monitor has been used to implement a stereo phase display, thereby simplifying the task of checking the phase of a stereo signal during editing of commercial tapes, and When monitoring a broadcast output signal. When the voice signal goes out of phase, a yellow LED lights and remains lighted for at least 5 seconds, even if the voice signal is short.**
- **The Model 5835 is housed in an standard EIA half-rack size cabinet, simplifying rack mounting and use in systems in combination with other equipment.**
- **A 150 mm post-acceleration (12-kV/2-kV) type CRT ensure a bright display.**
- **A spot killer blanks the trace with no signal applied to prevent burn-in of the CRT phosphor.**
- **The scale-illumination lamp can be replaced easily from the top front panel.**

●SPECIFICATIONS 5835

CRT Display

Type: 6-inch, Rectangular
Accelerating Potential: 12 kV/2 kV (Post accelerator)
Scale Illumination: Provided
Beam Rotation: Adjustable from the front panel
Scales: External

X and Y-Axis

Display modes: Sum/difference
Y axis: (L+R)
X axis: (L-R)
(X-Y display is possible using an internal switch, with left and right assigned to the Y and X axes, respectively.)

Input 1

Balanced input: Double left and double right inputs
Cannon connectors: XLR-3-31
XLR-3-32
(1:ground, 2:hot, 3:cold)
(2:cold, 3:hot connection is possible by changing an internal connector.)

Input impedance: 20 kΩ min. (changeable to 600 Ω by means of an internal switch)

Input withstand Voltage: 50 V(p-p + DC) (with respect to pin 1 ground)
Caution: With a 600-Ω termination, do not apply inputs exceeding +15 dBm(4.5 Vrms).

Input 2

Unbalanced input: Double left and double right inputs (RCA-type connector)

Input impedance: 20 kΩ min.

Input withstand Voltage: 50 V(p-p + DC)

Gain adjustment: Range: -20 dB, 0 dB, +10 dB
Variable: Continuously variable approx. ±10 dB

Full-scale input: With 775 mVrms applied to left and right channels, a full-scale screen display is seen (with VARIABLE set to CAL'D and RANGE set to 0 dB).

Calibration accuracy: ±3 %

Frequency response: 20 Hz to 20 kHz: ±0.5 dB

Phase flatness: 20 Hz to 20 kHz: ±1 °

Stereo polarity: When the stereo signal goes out of phase, a yellow LED lights to indicate the "incorrect" condition.

LED hold time: Approx. 5 s min.

Operating frequency: 200 Hz to 500 Hz(when the screen display amplitude is greater than approximately 1.5 divisions).

External output: Open-collector configuration
Max:35 V, 50 mA, 200 mW
On for reversed polarity (rear-panel BNC connector)

Calibration: 775 mVrms(0 dB), 1 kHz
With the RANGE set to CAL, a 1-kHz sinusoidal signal is applied to both left and right channels, enabling ROTATION and POSITION adjustment and checking of the gain.

Z Axis

Spot killer: When no signal in input, the spot is blanked (operates at below a displayed amplitude of approximately 1 division).

Environmental Conditions

Operating Temperature: 0 to 40 °C
Operating Humidity: ≤ 90 % RH (without condensation)
Operating Environment: Indoor use
Operating Altitude: up to 2000 m
Overvoltage Category: II
Pollution Degree: 2

Power Requirements: 100/120/220/240 VAC (selected by an internal tap)

Power Consumption: 35 Wmax.

Dimensions: 215 (W)×132 (H)×429 (D) mm

Weight: Approx. 7 kg

Accessories:
Scale filter (for X-Y) 1
Spare illumination lamps 2
rack mounting screws 2
Power cord 1
Cover/Inlet stopper 1
Instruction manual 1