

Talkback Amplifier



Model TBA-15

Features

- Hands-free reply from loudspeakers
- Electronic switching, no relays
- 25V or 70V balanced line output
- Adjustable sensitivity for smooth conversational flow
- Safe Operating Area (SOA) and thermal protection for reliability

Description

The Bogen TBA-15 is a fifteen-watt paging/talkback amplifier approved under Part 68 of FCC rules. The unit permits two-way conversation between a telephone handset, and one or more remote loudspeakers. When used with optional Bogen accessories, paging to zones of loudspeakers is possible.

The TBA-15 senses and automatically switches the direction of conversation from telephone to loudspeaker without the use of relays or other moving parts. Control of speech direction is maintained at the telephone handset. Screwdriver-adjustable controls are provided to adjust the switching sensitivity, switching delay (release) time, and loudspeaker and handset volume levels.

The TBA-15 talkback frequency response is shaped for maximum intelligibility and background noise rejection. Attack time is less than 5ms. Switchback delay time is adjustable from less than 50ms. to greater than 0.5s to ensure an intelligible flow of conversation.

A power on LED and speaker volume control are located on the front panel. A recess in the panel, protected by a removable cover, houses a 600-ohm transformer-coupled telephone line input, 25V/70V constant-voltage outputs, and mute terminals (for unidirectional paging). Controls to adjust sensitivity, switching delay and talkback volume are also located within the panel recess.

The amplifier operates from a 120VAC, 60Hz source. A press-to-reset circuit breaker protects the unit from excessive current flow. Safe Operating Area (SOA) and thermal protection safeguard the output device. The unit is finished in black enamel and is easily installed on a wall backboard or in standard 19" equipment racks.

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General

FCC Registration Number, under Part 68 rules: CD272Q-17147-KX-N
Ringer Equivalence: 0.0B
Controls (screwdriver-adjustable): Loudspeaker Output Volume, Talkback Volume, Switching Sensitivity, Switching Delay
Circuit Overload Protection: Push-to-Reset circuit breaker, Safe Operating Area (SOA) and thermal protection for the output device
Unidirectional Operation: Terminals provided to defeat two-way function
Power Requirements: 120V, 60Hz AC, 0.7A
Temperature Range: 0 - 50°C (32 - 122°F)
Humidity Range: 0 - 95%, noncondensing
Enclosure: Sheet metal finished in black enamel
Dimensions: 5-1/4"H x 19"W x 2-7/8"D (13.3x48.2x7.3cm)
Weight: 7 lbs. (3.2kg)

Technical Specifications

Telephone to Loudspeaker

Rated Power Output: 15 Watts
Frequency Response: 200Hz to 10KHz
Input Sensitivity: -20dBm
Input Impedance: 600 ohms, balanced
Distortion (@RPO): Less than 3% (150mV input signal)
Signal-to-Noise Ratio: -50dB (20Hz to 20KHz)
Voice Activated Switching: Sensitivity -46dBm; Attack Time – Less than 5ms. (3ms., typ.); Switching Delay Time – adjustable from 50ms. to greater than 0.5sec.
Constant Output Voltage: 25V or 70V balanced line

Loudspeaker to Telephone

Frequency Response: 1500Hz to 20KHz
Distortion: Less than 2%
Signal-to-Noise Ratio: -40dB
Output Level: Processed to meet FCC Part 68

Architects and Engineers Specifications

The paging/talkback amplifier shall be a Bogen TBA-15, approved under part 68 of FCC rules. The unit shall provide two-way communication between a telephone and remote loudspeakers. It shall be all solid-state in design and shall provide automatic electronic switching of the direction of conversation, without the use of relays or other moving parts. Talkback amplifiers which use relays or other mechanical devices, or which are not all solid-state in design shall not be considered.

The amplifier shall have a rated power output of 15 watts. The frequency response shall be shaped for maximum intelligibility and background noise rejection. Distortion shall be less than 3% at rated power. Attack time for the voice activated circuit shall be less than 5ms. (3ms., typ.). Switching delay time shall be adjustable from less than 50ms. to greater than 0.5 sec. Screwdriver-adjustable controls shall be provided to adjust switching sensitivity, switching delay, and loudspeaker and handset volume levels.

Terminals shall be provided for connection of a 600-ohm transformer-coupled telephone input

line, and 25V/70V constant-voltage outputs. Mute terminals shall be provided to defeat the talkback function. Terminals shall be housed within a panel recess and protected by a removable cover.

The amplifier shall operate from a 120VAC, 60Hz source. Circuit safeguards shall include a press-to-reset AC circuit breaker, safe operating area (SOA) and thermal protection. A red pilot lamp shall be provided on the front panel.

The amplifier enclosure shall be constructed of sheet metal and finished in black enamel. Overall dimensions shall be 5-1/4"H x 19"W x 2-7/8"D. Keyhole slots and machine-screw holes shall be provided for wall- or rack-mounted installation.

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