

# Telephone Paging Amplifiers

**Models**  
**TPU35B, TPU60B,**  
**TPU100B & TPU250**



## Description

Bogen models TPU35B, TPU60B, TPU100B, and TPU250 are wall-mounted telephone paging amplifiers rated at 35, 60, 100, and 250 watts, respectively. The TPU250 can also be rack-mounted. This group of TPU amplifiers permits paging from telephone and/or microphone. Music input through an RCA jack or screw terminals. Voice-activated, variable level, music mute with fade back after page. All the TPU amps in this group include a night ringer which sends an electronic ringing tone signal through all speakers, alerting personnel of incoming calls during non-business hours. Jacks are also provided to bridge two TPU amplifiers to double the number of inputs and outputs.

## Features

- 35, 60, 100, and 250-watt models
- Inputs for 600-ohm balanced telephone line, LO-Z balanced microphone, and background music
- Music input (RCA jack or screw terminals)
- Integral automatic level control (ALC) circuit for controlling pages made by persons with varying voice levels and paging techniques
- Page from telephone and/or microphone
- Signal-activated paging channel automatically mutes background music
- Adjustable background music muting level during a page
- Music gradually returns to its normal level after a page
- Aphex® Aural Exciter increases intelligibility, improves perceived loudness (with no increase in power), and reduces listener fatigue
- Separate controls for page volume, music volume, night ringer, music mute, and Aphex® Aural Exciter
- Bass and treble controls
- Built-in night ringer activated by contact closure or by 90V ring signal
- Balanced or unbalanced 16-ohm, 25V, 25VCT, and 70V outputs are available for the TPU35B/60B/100B models; 25V and 70V outputs are available on the TPU250
- VOX sensitivity level control eliminates transmission of background noise when paging from a telephone
- Thermal and electronic overload protection
- Jacks provided for bridging additional TPU amplifiers
- Brackets are attached for easy wall mounting; TPU250 can be rack-mounted
- TPU-B models can be rack-mounted with RPK82 kit
- Peak level indicator lights when amplifier is driven into clipping
- 120V AC, 60Hz power source
- UL and CSA listed

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## Technical Specifications

<b>Power Output:</b>	<i>TPU35B</i> : 35W RMS; <i>TPU60B</i> : 60W RMS; <i>TPU100B</i> : 100W RMS; <i>TPU250</i> : 250W RMS
<b>Frequency Response:</b>	70Hz to 15kHz $\pm$ 1dB
<b>Distortion:</b>	Less than 1%
<b>Hum &amp; Noise:</b>	(20Hz to 20kHz) <i>MUSIC</i> : -70dB; <i>TEL</i> : -70dB; <i>MIC</i> : -55dB
<b>Sensitivity:</b>	<i>MUSIC</i> : 85mV; <i>TEL</i> : -20dBm (77mV); <i>MIC</i> : 600 $\mu$ V
<b>Tone Control:</b>	<i>BASS</i> : $\pm$ 9dB @ 100Hz; <i>TREBLE</i> : $\pm$ 9dB @ 10kHz
<b>Regulation:</b>	2dB
<b>Inputs:</b>	<i>TEL</i> : 600-ohm balanced line, transformer-isolated <i>MUSIC</i> : Hi-Z source, RCA jacks or screw terminals <i>MIC</i> : LO-Z balanced, screw terminal connection <i>MUSIC MUTE</i> : Mutes music during a microphone page <i>CONTACT RING</i> : Sounds night ringer tone when customer-supplied dry contacts are closed <i>TEL RING</i> : Sounds night ringer in response to 90V ring signal <i>BRIDGING</i> : Permits bridging of two amplifiers
<b>Outputs:</b>	25V, 25VCT, and 70V, 16 ohms balanced or unbalanced for 35/60/100-watt models; 25V and 70V for <i>TPU250</i> . Provision for WMT1A line-matching transformer
<b>Controls &amp; Indicators:</b>	POWER & PEAK LEVEL LED indicators. APHEX, TREBLE, BASS, VOX SENS, RINGER VOLUME, MUSIC MUTE, MUSIC VOLUME, MIC VOLUME, TEL VOLUME, ALC controls (screwdriver-adjustable)
<b>Overload Protection:</b>	All models have thermal and electronic overload protection. <i>TPU35B</i> : 1.0A, 120V AC circuit breaker; <i>TPU60B</i> : 1.6A, 120V AC circuit breaker; <i>TPU100B</i> : 2.5A, 120V AC circuit breaker; <i>TPU250</i> : 6.0A slow blo fuse
<b>Power Requirements:</b>	(120V AC, 60Hz) <i>TPU35B</i> : 0.75A; <i>TPU60B</i> : 1.5A; <i>TPU100B</i> : 2A; <i>TPU250</i> : 5A
<b>Operating Temperature:</b>	-4°F (-20°C) to 131°F (+55°C)
<b>Finish:</b>	Black with silver lettering
<b>Dimensions:</b>	<i>TPU35/60/100B</i> models: 14-3/16" W x 8-3/8" H x 3-5/8" D <i>TPU250</i> : 19" W x 10-1/2" H x 3-13/16" D
<b>Shipping Weight:</b>	<i>TPU35B</i> : 16 lbs.; <i>TPU60B</i> : 17 lbs.; <i>TPU100B</i> : 21 lbs.; <i>TPU250</i> : 31 lbs.

## Architects and Engineers Specifications

The telephone paging amplifier shall be a Bogen Model \_\_\_\_, with a full power rating of \_\_\_\_ watts. (Specify: *TPU35B*/35 watts, *TPU60B*/60 watts, *TPU100B*/100 watts, *TPU250*/250 watts.) The amplifier shall provide a frequency response of  $\pm$ 1dB from 70Hz to 15kHz, and shall deliver rated power at less than 1% distortion.

The amplifier shall permit paging from telephone and/or microphone. The signal-activated paging channel shall automatically mute background music during a telephone page, eliminating the need for manual activation of switches and the use of external relays. Provision shall be included to set to mute the level of background music during a page. Music level shall be returned to its normal level after a page.

The telephone paging channel shall have a VOX sensitivity adjustment to eliminate transmission of background noise, and automatic output leveling (ALC) to compensate for varying voice levels and paging techniques of persons using the system.

An Aphex® Aural Exciter circuit shall be included to regenerate the harmonics lost during the amplification process. A control shall be provided to set the level of the Aphex effect.

A night ringer shall be included to alert personnel of incoming calls during non-business hours. The night ringer shall be activated by a contact closure or by 90-volt ring signal from the telephone line.

Input terminals shall be furnished for a telephone line and LO-Z balanced microphone. A choice of RCA jack or screw

terminals shall be provided for the music source. Terminals shall also be provided to control music muting during a mic page, and for contact closure or ring signal activation of the night ringer. Bridging jacks shall be provided to bridge two TPU-series amplifiers.

Balanced or unbalanced outputs shall be provided for 16-ohm, 25V, 25VCT, and 70V speaker lines. Provision shall be included to feed a 600-ohm telephone line, LO-Z input or balanced microphone input of another amplifier, using an accessory line-matching transformer (Model WMT1A).

Individual controls shall be provided to set the telephone and mic page volume, music volume, night ringer volume, VOX sensitivity, and music mute level. Bass and treble controls shall permit tonal adjustments. An automatic level control (ALC) and VOX sensitivity controls shall be included. A peak level indicator shall illuminate when the amplifier is driven into clipping. A power indicator shall also be provided. The amplifier shall operate from a 120V AC, 60Hz source, and shall be equipped with a resettable circuit breaker and thermal and electronic overload protection (*TPU250* has a 6A slow-blo fuse).

Installation shall be facilitated by flanges with keyhole slots for mounting on a suitable backboard. Dimensions for the 35, 60, and 100 models shall be 14-3/16" W x 8-3/8" H x 3-5/8" D. Dimensions for the *TPU250* shall be 19" W x 10-1/2" H x 3-13/16" D.

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