

TELEPHONE PAGING AMPLIFIERS

TPU250



TPU35B, TPU60B, TPU100B



TPU100B shown

TPU15A



Bogen's **TPU-Series** of amplifiers are the ideal choice within the telephone paging industry. With five models to choose from, ranging in power from 15 watts to 250 watts, each model provides signal-activated, automatic muting of background music during a telephone page, and gradual return of music following a page.

Product Features:

- 15-, 35-, 60-, 100- and 250-watt models specially designed for telephone paging systems
- 3 inputs on TPU250 and TPU-B models: 1 TEL, 1 MIC (Lo-Z), 1 AUX (Hi-Z)
- 2 inputs on TPU15A: 1 TEL, 1 AUX (Hi-Z)
- 600-ohm balanced TEL input for direct connection to page ports and adapters
- TEL input has Automatic Level Control (ALC) for constant page announcement level
- Separate MIC input for a low-impedance push-to-talk microphone (excluding TPU15A model)
- Audio enhancement circuitry (excluding TPU15A model)
- Music input – mutable by external contact closure (excluding TPU15A model) or activity on TEL input
- Separate volume controls for mic, paging, background music, and night ringer
- Built-in night ringer can be activated from 90V ring signal (excluding TPU15A model) or external contact closure
- 25V and 70V constant-voltage outputs, balanced and unbalanced; also 8-ohm on TPU15A
- Wall-mount design provides minimum protrusion from backboard
- TPU-B models may be rack-mounted using RPK82 rack mounting kit (sold separately)
- TPU250 designed to rack mount directly, no kit necessary
- Easily accessible, recessed front-panel controls (excluding TPU15A model) for setting volume, muting, music, etc.
- RCA jacks provided to allow amplifier bridging to double the number of amplifier inputs and outputs (excluding TPU15A model); a TPU250 can only be bridged with one other TPU250
- Thermal and electronic overload protection (excluding TPU15A model), resettable circuit breaker (except TPU250), Slo-Blo fuse on TPU250
- Listed to UL Standard 60065 for US and Canada

Model	Output Power (Watts)	Inputs			Adjustable Mute Threshold	Automatic Level Control	Bass/Treble Controls	Peak Level LED	Adjustable Mute Level	Fade Back From Mute	Audio Enhancement	Night Ringer		Outputs						
		Telephone	Music	Microphone								90V Activation	Contact Closure	70V	25V	25VCT	8 Ohms	16 Ohms		
TPU250	250	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TPU100B	100	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TPU60B	60	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TPU35B	35	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TPU15A	15	●	●		●		*	●					●	●	●		●			

* Treble Cut only

Technical Specifications, Dimensions, and Weights can be found on Page 79

Specialized Telephone Input

The TPU-Series' 600-ohm transformer balanced input is perfectly suited to connect to paging ports and paging adapters such as Bogen's TAMB2. Here are a few specially designed features:

- The background music will mute whenever paging activity is present on the telephone input, even if control contacts are not available. (Separate mute control contacts are also available.)
- To avoid problems with noise on the lines falsely muting the background music, a built-in VOX threshold control (not on TPU15A) lets you decide what's a real signal and what's noise.
- Because not everyone speaks at the same level, the Automatic Level Control feature keeps loud voices from booming out of the paging system's speakers.

Audio Enhancement

Crisp, clean, intelligible sound is the goal of every paging system. The audio enhancement circuit adds back the high frequency harmonics that are lost through the handsets and speakers. With one simple control, you can adjust the amount of high frequency content the audio enhancement circuit adds back until optimum intelligibility is reached.

Variable Music Mute

Add some polish to announcements by using the TPU's built-in variable mute feature. Variable mute allows you to control the level of the music heard in the background during a page. It's fully adjustable from no muting of music to full suppression of music. The TPU also gracefully fades the muted music back in after the page is finished for a smooth, professional sound (not available on TPU15A).

Bridging

Bridging two TPU amplifiers permits them to be used in tandem with one another to increase the total output power of the system, thereby permitting additional speakers to be added. For example, when two 250-watt amplifiers are bridged, the total output capacity of the system is 500 watts. Also, both amplifiers will receive the same input signal, amplify it, and deliver it to the speaker loads connected to each amplifier (not available on TPU15A).

Accessories



WMT1A
Line-Matching
Transformer



RPK82
Rack Mounting Kit
(TPU-Bs only)

AMPLIFIER FEATURES CHART

Amplifier Output Power Rating/Channel	Model Numbers	Amp Channels	Input Types						Signal Processing						Music Muting				Night Ringer	Remote Volume	Output Meter	Mounting			Page Number						
			TEL Input* 600-ohm Balanced	MC Input* Lo-Z Balanced	AUX Input* Hi-Z Unbalanced	Balanced Inputs Hi-Z	Modular Inputs	Audio Enhancement	Loudness Contour	ALC	EQ	Bass/Treble	Tone Control	Variable Mute	Auto Mute	Manual Mute	Wall Mount	Shelf Mount				Rack Mount									
1.5W	GA2	1		1	1																										42
5W	GAG	1		1	1																										42
10W	C10	1	1	2 (1)	0 (1)																										42
15W	TPU15A	1	1	1	1																										43
20W	C20	1	1	2 (1)	0 (1)																										42
35W	C35	1	1	2 (1)	1 (2)																										42
35W	GS35	1	0 (1)	6 (4)	1 (2)																										41
35W	TPU35B	1	1	1	1																										43
35W	V35	1	1	1	1	8																									38
60W	BPA60	1																													46
60W	C60	1	1	2 (1)	1 (2)																										42
60W	GS60	1	0 (1)	6 (4)	1 (2)																										41
60W	TPU60B	1	1	1	1																										43
60W	V60	1	1	1	1	8																									38
100W	C100	1	1	2 (1)	1 (2)																										42
100W	GS100	1	0 (1)	6 (4)	1 (2)																										41
100W/60W/20W	PM3180	3	0 (1)	2 (1)	4																										47
100W	TPU100B	1	1	1	1																										43
100W	V100	1	1	1	1	8																									38
100W	WV100	1	1	1	1	8																									40
125W	HTA125A	1	1	1	1																										46
150W	GS150	1	0 (1)	6 (4)	1 (2)																										41
150W	V150	1	1	1	1	8																									38
150W	WV150	1	1	1	1	8																									40
250W	GS250	1	0 (1)	6 (4)	1 (2)																										41
250W	HTA250A	1	1	1	1																										46
250W	TPU250	1	1	1	1																										43
250W	V250	1	1	1	1	8																									38
250W	WV250	1	1	1	1	8																									40
300/600W	M300	2/1	1	1	1	2																									45
300W	X300	2																													44
450/900W	M450	2/1	1	1	1	2																									45
450W	X450	2																													44
600/1200W	M600	2/1	1	1	1	2																									45
600W	X600	2																													44

- Feature Included
 - Features determined by type of module installed
 - Balanced input available with accessory plug-in transformer (TL100 or TL600)
 - Accessory kit required for mounting
 - Contact closure activation only
- * Some inputs are switch selectable. The number in parentheses shows the maximum number of inputs when switched.
- † BALSZ balanced input module included standard; uses one modular input bay.

Specifications subject to change without notice.

AMPLIFIER SPECS CHART

Model Numbers	Output Power Rating/Channel	Channels	Frequency Response*	Distortion**	Speaker Outputs	AC Line Draw***	Dimensions	Product Weight
BP460	60W	1	20 Hz to 20 kHz	2% Max	8-ohm/25V, 16-ohm, 25VCT, 70V	180W	15-1/4" W x 3-1/2" H x 8-1/4" D	17 lb.
C10	10W	1	70 Hz to 16 kHz	1% Max	70V, 25V, 16-ohm, 8-ohm, 4-ohm	38W	11-3/8" W x 2-7/8" H x 7-3/8" D	5 lb.
C20	20W	1	70 Hz to 16 kHz	1% Max	70V, 25V, 16-ohm, 8-ohm, 4-ohm	50W	11-3/8" W x 2-7/8" H x 7-3/8" D	6 lb.
C35	35W	1	70 Hz to 16 kHz - Transformer; 20 Hz to 20 kHz - Direct	1% Max	70V, 25V, 16-ohm, 4-ohm direct	85W	14-1/2" W x 3-3/4" H x 11" D	15 lb.
C60	60W	1	70 Hz to 16 kHz - Transformer; 20 Hz to 20 kHz - Direct	1% Max	8-ohm on C35 and C60	148W	14-1/2" W x 3-3/4" H x 11" D	17 lb.
C100	100W	1	200 Hz to 15 kHz	2% Max	8- & 600-ohm	220W	5-1/2" W x 4-1/8" H x 2-1/4" D	19 lb.
GA2	1.5W	1	30 Hz to 12 kHz	2% Max	70V, 25V, 8-ohm	4W	8-1/2" W x 2-3/4" H x 6" D	2 lb.
GA6A	6W	1	30 Hz to 12 kHz	2% Max	70V, 25V, 8-ohm	16W	8-1/2" W x 2-3/4" H x 6" D	5 lb.
GS35	35W	1	65 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% Max	70V, 25V, 25VCT, 8-ohm, 4-ohm direct	0.9A	16-1/2" W x 3-1/2" H x 13-1/2" D	17 lb.
GS60	60W	1	65 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% Max	70V, 25V, 25VCT, 8-ohm, 4-ohm direct	1.3A	16-1/2" W x 3-1/2" H x 13-1/2" D	20 lb.
GS100	100W	1	65 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% Max	70V, 25V, 25VCT, 8-ohm, 4-ohm direct	2.2A	16-1/2" W x 3-1/2" H x 13-1/2" D	23 lb.
GS150	150W	1	65 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% Max	70V, 25V, 25VCT, 8-ohm, 4-ohm direct	3.0A	16-1/2" W x 3-1/2" H x 13-1/2" D	29 lb.
GS250	250W	1	65 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% Max	70V, 25V, 25VCT, 8-ohm, 4-ohm direct	5.0A	16-1/2" W x 3-1/2" H x 13-1/2" D	30 lb.
HTA125A	125W	1	20 Hz to 20 kHz	0.5% Max	70V, 25VCT, 25V, 8-ohm, 4-ohm	260W	19" W x 5-1/4" H x 11" D	36 lb.
HTA250A	250W	1	20 Hz to 20 kHz	0.5% Max	70V, 25VCT, 25V, 8-ohm, 4-ohm	520W	19" W x 5-1/4" H x 11" D	50 lb.
M300	300/600W	2	20 Hz to 20 kHz	0.5% Max	4- to 8-ohm (2 channel mode); 70V (1 channel mode)	12A	17" W x 3-1/2" H x 18-1/2" D (not including brackets)	41 lb.
M450	450/900W	or 1	20 Hz to 20 kHz	0.5% Max	4- to 8-ohm (2 channel mode); 70V (1 channel mode)	15A	17" W x 3-1/2" H x 18-1/2" D (not including brackets)	44 lb.
M600	600/1200W	1	20 Hz to 20 kHz	0.5% Max	4- to 8-ohm (2 channel mode); 70V (1 channel mode)	20A	17" W x 3-1/2" H x 18-1/2" D (not including brackets)	46 lb.
PMS180	100W 60W 20W	3	70 Hz to 20 kHz - Trans (Amp 1 & 2); 70 Hz to 15 kHz - Trans (Amp 3); 20 Hz to 20 kHz - Direct (Amp 1 & 2); 20 Hz to 15 kHz - Direct (Amp 3)	0.5% - Amp 1 & 2; 1% - Amp 3 (Max)	70V, 25V, 8-ohm, 4-ohm direct	430W	17" W x 5-1/2" H x 12-1/2" D	38 lb.
TPU15A	15W	1	70 Hz to 12 kHz	2% Max	70V, 25V, 8-ohm	0.5A	11" W x 2-3/4" H x 2-3/8" D	4 lb.
TPU35B	35W	1	70 Hz to 12 kHz	2% Max	70V, 25V, 8-ohm	0.75A	11" W x 2-3/4" H x 2-3/8" D	12 lb.
TPU60B	60W	1	70 Hz to 15 kHz	1% Max	70V, 25V, 25VCT, 16-ohm	1.5A	14-1/4" W x 8-3/8" H x 3-5/8" D	15 lb.
TPU100B	100W	1	70 Hz to 15 kHz	1% Max	70V, 25V, 25VCT, 16-ohm	2A	14-1/4" W x 8-3/8" H x 3-5/8" D	18 lb.
TPU250	250W	1	70 Hz to 15 kHz	1% Max	70V, 25V	5A	19" W x 10-1/2" H x 3-7/8" D	28 lb.
V35	35W	1	45 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% - Transformer; 0.1% - Direct (Max)	70V, 25V, 8-ohm, 4-ohm direct	0.6A	17" W x 3-1/2" H x 14-3/4" D	22 lb.
V60	60W	1	45 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% - Transformer; 0.1% - Direct (Max)	70V, 25V, 8-ohm, 4-ohm direct	1.3A	17" W x 3-1/2" H x 14-3/4" D	26 lb.
V100	100W	1	45 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% - Transformer; 0.1% - Direct (Max)	70V, 25V, 8-ohm, 4-ohm direct	2.0A	17" W x 3-1/2" H x 14-3/4" D	28 lb.
V150	150W	1	45 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% - Transformer; 0.1% - Direct (Max)	70V, 25V, 8-ohm, 4-ohm direct	3.5A	17" W x 3-1/2" H x 14-3/4" D	31 lb.
V250	250W	1	45 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% - Transformer; 0.1% - Direct (Max)	70V, 25V, 8-ohm, 4-ohm direct	5.5A	17" W x 3-1/2" H x 14-3/4" D	32 lb.
WV100	100W	1	20 Hz to 20 kHz	0.5% Max	70V direct	2.0A	14-1/8" W x 21" H	27 lb.
WV150	150W	1	20 Hz to 20 kHz	0.5% Max	70V direct	3.5A	14-1/8" W x 21" H	29 lb.
WV250	250W	1	20 Hz to 20 kHz	0.5% Max	70V direct	5.5A	14-1/8" W x 21" H	28 lb.
X300	300W	2	20 Hz to 20 kHz	0.5% Max	70V direct	12A	17" W x 3-1/2" H x 18-1/4" D (not including brackets)	41 lb.
X450	450W	2	20 Hz to 20 kHz	0.5% Max	70V direct	15A	17" W x 3-1/2" H x 18-1/4" D (not including brackets)	44 lb.
X600	600W	2	20 Hz to 20 kHz	0.5% Max	70V direct	20A	17" W x 3-1/2" H x 18-1/4" D (not including brackets)	46 lb.

* @ -20dB FRP Transformer output;
@ FRP for Direct outputs

** Bandwidth limited to frequency response

*** FRP @ 120V AC line voltage

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