

# BOGEN<sup>®</sup>

COMMUNICATIONS, INC.

TELEPHONE PAGING AMPLIFIERS

TPU-35A, TPU-60A, TPU-100A

## INSTALLATION INSTRUCTIONS

### CAUTION

Connect only to PBX system incorporating isolation from telecom network.

### ATTENTION

Raccorder seulement a un systeme PBX independant du reseau de telecommunication.

### UNPACKING

The amplifier was carefully checked before leaving the factory; inspect the shipping container and unit closely for improper handling. If the unit has been damaged, make an immediate claim to the distributor from whom it was purchased. If the unit was shipped directly to you, save all packing material, notify the carrier immediately and place a claim.

### WARNING

The following installation instructions are for use by qualified service personnel only. To avoid an electric shock hazard, do not perform any functions requiring removal of the cover of the amplifier unless you are qualified to do so. To prevent fire or shock hazard, do not expose this unit to rain or moisture.

### POWER AND GROUNDING

The AC line cord has a three-prong plug which should be plugged into a three-wire, grounded 120VAC, 60Hz outlet. It is important to ground the unit. If a three-wire outlet is not available, use an adaptor and connect the grounding pigtail to the screw securing the wall plate. If the wall plate screw is not grounded, connect a wire from the ground terminal of the amplifier to a suitable earth ground.

### MOUNTING

The TPU-35A/60A/100A amplifiers are designed for surface wall mounting. When mounting the unit, consider the proximity to heat sources. Allow space for terminal wiring, access to controls, and adequate air flow for chassis heat dissipation. Where possible, secure the unit to wall studs or a suitable back brace. Use self-fastening or molly-type hardware on plasterboard and other thin materials.

Four #6 x 3/4" screws are provided with the unit. Locate the top two screws in position (13-1/2" apart) and secure them to the wall, allowing the screw heads to protrude 1/8" to 1/4". Fit the chassis over the screw heads and position the two bottom screws. Complete the mounting of the amplifier by tightening all screws securely.

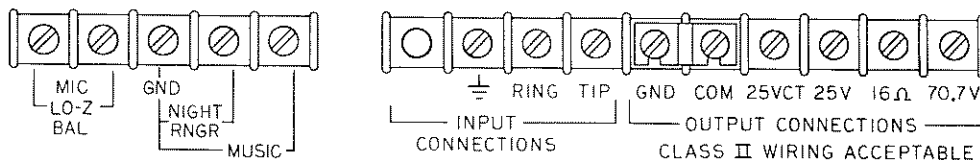
### INPUT CONNECTIONS

#### TELEPHONE PAGING

A balanced isolating transformer input for a telephone line is provided. A 600-ohm telephone line may be connected to the terminals marked TIP and RING. If two-conductor shielded wire is used, connect the shield to the adjacent ground terminal, which is to the left of the RING terminal.

#### LO-Z BALANCED MICROPHONE

A low-impedance balanced microphone can be connected to the two screw terminals (on the auxiliary barrier strip) marked MIC LO-Z BAL. Use two-conductor shielded wire and connect the shield to the adjacent GND terminal.



74-6222-01

Figure 1 — Barrier Strips for Input and Output Connections

## INPUT OVERDRIVE PROTECTION

Under certain circumstances, the signal from the PBX or other source may overdrive the page input channel. A built-in resistor pad (providing -15dBm) may be included in the circuit by placing the switch labelled S1 PAGE (on the printed circuit board) in the -15dBm position (The amplifier is shipped with this switch in the 0dBm position).

## MUSIC

An unbalanced high-impedance auxiliary input is provided. Make connections to the terminals marked MUSIC and GND on the auxiliary circuit board.

## NIGHT RINGER

An electronic ringing tone can be transmitted through the public address system by connecting the NIGHT RINGER and the adjacent GND terminals on the amplifier to a pair of normally-open dry contacts. These contacts are customer-supplied and installed in the telephone system. The tone is usually used as a night bell to alert personnel, such as security guards, to incoming phone calls.

As shipped, a steady ringing tone will be heard as long as the dry contacts remain closed; however, if the telephone system provides for intermittent closure, a pulse tone will be heard. To produce a pulse tone where the telephone system does not have this provision, it is necessary to remove the cover and remove the jumper located at J1 on the auxiliary printed circuit board.

For controls and adjustments, see OPERATING & ADJUSTMENT INSTRUCTIONS supplied with this amplifier.

## OUTPUT CONNECTIONS

### SPEAKERS

The amplifier provides 16-ohm, 25VCT, 25V, and 70.7V outputs, balanced or unbalanced.

Units are shipped for use with unbalanced systems. Connect one lead to the terminal corresponding to the impedance of the speaker system and the other to the COM terminal.

For balanced systems, remove the link between the COM and OUTPUT GND terminals.

### ADDITIONAL POWER AMPLIFIER

An external power amplifier can be used with the TPU-35A, TPU-60A and TPU-100A, if desired. Modify the output circuitry of the telephone amplifier by adding the resistor network, as illustrated in Figure 2. Connect a patchcord to the high-level/high-impedance input of the booster amplifier.

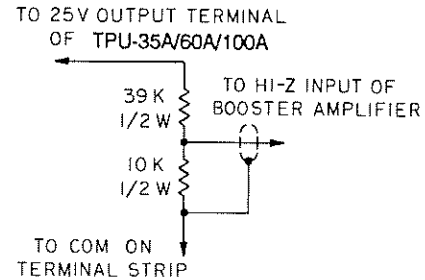
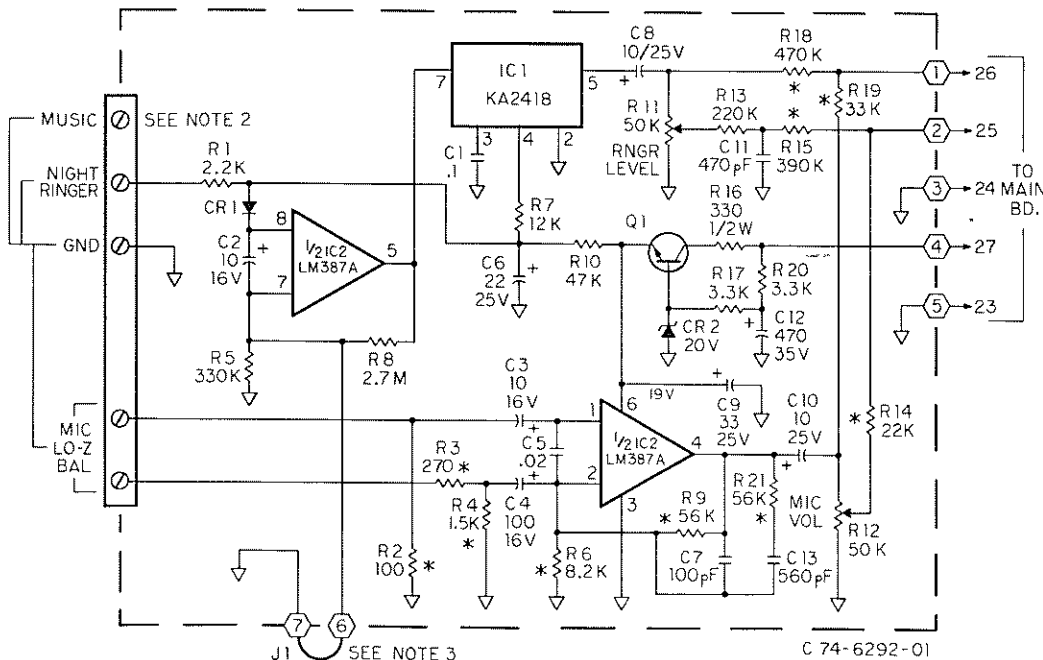


Figure 2 — Connecting an Additional Power Amplifier



### NOTES

1. UNLESS OTHERWISE SPECIFIED: ALL RESISTORS ARE 1/4W, ±5%; CAPACITORS ARE IN MFD.
2. THIS TERMINAL CONNECTS TO MUSIC INPUT ON MAIN BOARD.
3. REMOVE JUMPER TO CHANGE CONTINUOUS RINGER TONE TO TONE BURSTS.
4. "\*" DENOTES LOW NOISE (METAL FILM) RESISTORS.

Figure 3 — Schematic Diagram, Auxiliary Printed Circuit Board

