



# Instruction Kit

**BX 15**

**BX 30**



## INTEGRATED AMPLIFIER

**GROMMES-PRECISION**  
**1-800-SINCE-46**  
[www.grommesprecision.com](http://www.grommesprecision.com)

*Thank you for purchasing from Grommes~Precision!*

*Grommes~Precision and its commercial audio division, Precision Electronics, has been designing, engineering, and manufacturing quality sound equipment in the United States since it started operation in March of 1946. Quality, service, and flexibility as “Your Personal Manufacturer” have made us one of the last American audio manufacturers. If you have any questions with this or any one of our other fine products, give us a call. When you talk with a member of the Grommes~Precision team you’ll be speaking with someone who had a hand in concept, design, production, or testing of our products.*

### **INSPECTION**

This unit was carefully checked and packed before leaving the factory. However, it is always a good idea to inspect the shipping container and unit for indication of improper handling. If the unit has been damaged, make an immediate claim to the dealer or distributor from whom it was purchased. If the unit was shipped to you, notify the transportation company without delay, saving all packing materials, in order to process the claim.

### **INITIAL PERFORMANCE CHECK**

Continue the inspection by running a performance check. Connect a test speaker to the 4-8 ohm direct output terminals (see page 6) and a tuner, tape deck, or CD player to the auxiliary input and set the controls for operation. CAUTION: TO PROTECT THE SPEAKER FROM DAMAGE, DO NOT TURN THE UNIT ON UNTIL ALL CONNECTIONS HAVE BEEN MADE. IN ADDITION, MAKE SURE THE UNIT IS GROUNDED BEFORE TESTING. If the unit should be inoperable and no damage is noted, please notify the factory at 1-847-599-1799 and ask for Technical Support.

### **RACK MOUNTING**

For best results use a 10-32 class UNF-2B or 12-24 class UNC-2B rack and 5/8 inch machine screws (metric: M5X8-6H or M6X1-6H, 15.88mm). We recommend using a Phillips head screwdriver in order to protect the finish from unnecessary scratches. Also recommended are nylon or plastic washers which will not only help protect the finish but also aid in retaining the screws.

### **CONVECTION, FAN COOLING, AND VENTILATION**

This unit is cooled via convection and therefore designed for continuous operation. Do not block the unit's heat sink fins or vent holes located in the cover. If the unit is rack mounted, you must utilize a cooling fan that is capable of exhausting not less than 300CFM. The fan must be mounted to the inside top of the rack above the amplifier.

**TECHNICAL SUPPORT**

A troubleshooting chart is located at the end of this manual for your convenience. If you are in need of further assistance, you can reach our design engineers at 1-847-599-1799. Grommes~Precision is based in Gurnee, Illinois and is on Central Standard Time. Our hours of operation are Monday - Friday from 7:00am to 3:30pm. Troubleshooting information can also be found at our website [www.grommesprecision.com](http://www.grommesprecision.com).

**GENERAL INSTALLATION**

DO NOT run microphone cables near A/C lines, data, telephone or 70V line cables.

DO NOT run outputs line cable near data, telephone or other low voltage cables.

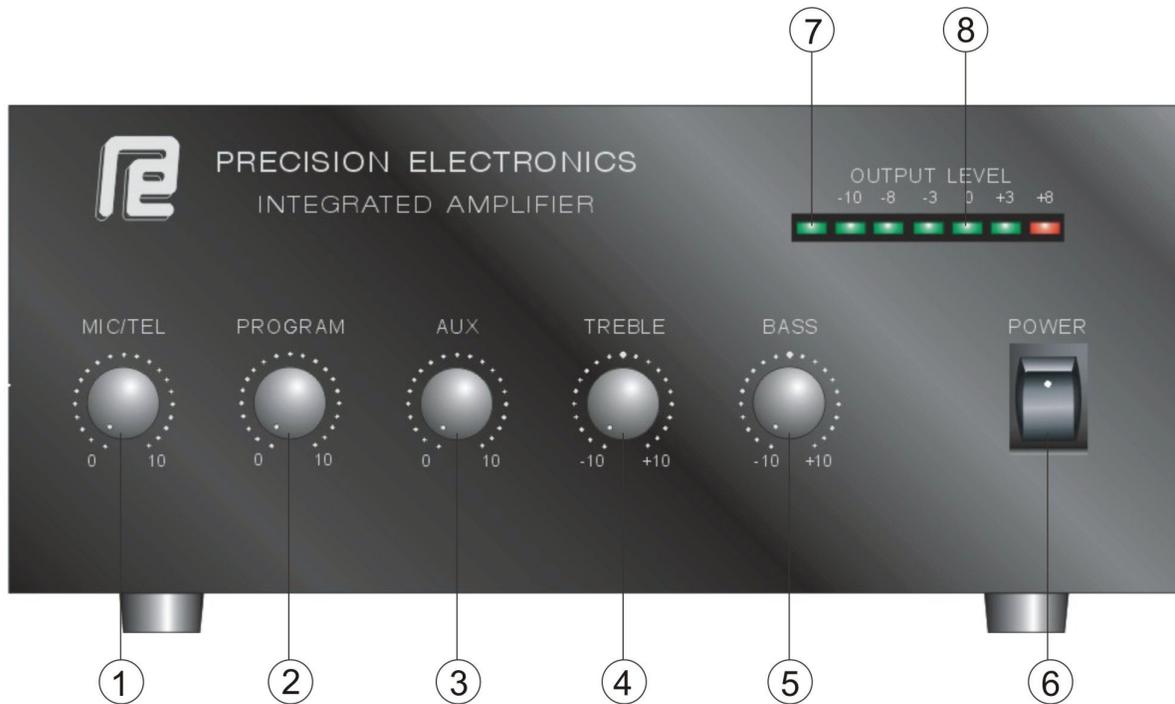
ENSURE that all loudspeakers are in-phase.

ENSURE that there are no short circuits on the loudspeaker line before connecting to the amplifier.

**GENERAL DESCRIPTION**

Grommes~Precision BX 15 and BX 30 are mixer/power amplifiers, and can mix up to three signals. Rated at 15 watts (BX 15) and 30 watts (BX 30), these amplifiers are ideal for applications that require small sound reinforcement systems. Any microphone with impedance of less than 600  $\Omega$  can be connected. Setting the Mic /Tel selector switch to the "TEL" position allows the BX 15 (BX 30) to function as an amplifier for paging made from the telephone. Because the Program input is 10 k $\Omega$  in impedance and is of electrically-balanced type, it can be connected to both balanced and unbalanced type of equipment. The amplifiers also come with independent bass and treble controls for the program and AUX input, which increase and decrease specific frequencies.

Transformer-isolated output terminals are provided for connection of 4 $\Omega$  speakers or for 25V or 70V line applications. The BX 15 (BX 30) can be mounted in an equipment rack using the optional Rack Mounting kit.

**PANEL DESCRIPTION****1. Mic/Tel input volume control**

Adjusts the gain of the microphone or telephone paging. The gain, increases as the control is turned clockwise.

**2. Program input volume control**

Adjusts the gain of the Program input. The gain, increase as the control is turned clockwise.

**3. Aux input volume control**

Adjusts the gain of the AUX input. Clockwise rotation increases the gain.

**4. Treble control**

Increases the high frequency response when turned clockwise, and decreases the response when turned counter-clockwise. The center position provides the flat response.

**5. Bass control**

Increases the low frequency response when turned clockwise, and decreases the response when turned counter-clockwise. The center position provides the flat response.

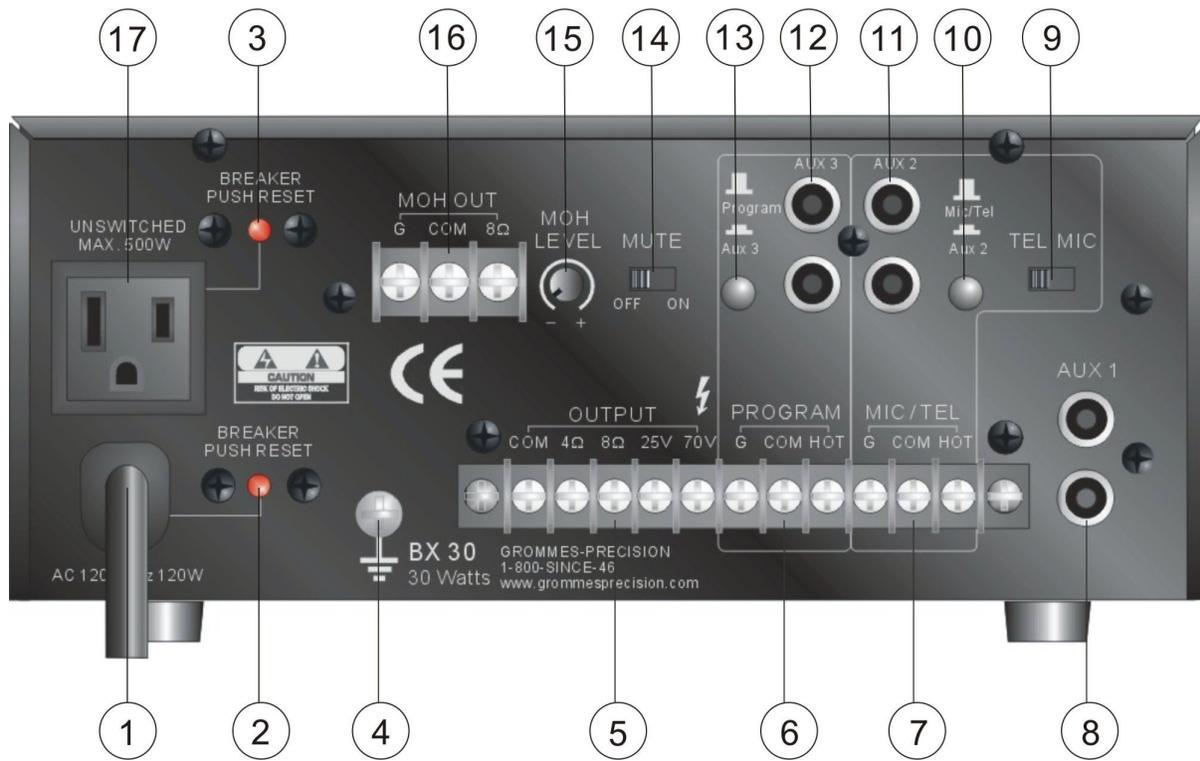
**6. Power Switch**

Power is switched on and off with each depression of this switch.

**7. Power Indicator-LED**

Lights green when the power is switched on.

**8. Output Level indicator**

**REAR PANEL DESCRIPTION**

- |   |  |
|---|--|
| 1. AC power cord                            | 10. Mic/Tel / Aux 2 Selector Switch*                   |
| 2. Circuit Breaker – For Amplifier          | 11. Aux 2 Input (RCA Jack)                             |
| 3. Circuit Breaker – For Convenience Outlet | 12. Aux 3 Input (RCA Jack)                             |
| 4. Earth Ground Connection Screw            | 13. Program /Aux 3 Selector Switch*                    |
| 5. Speaker Output Terminals                 | 14. Mute Switch  |
| 6. Program Input Terminals                  | 15. MOH volume control                                 |
| 7. Mic/Tel input Terminals                  | 16. MOH output terminals (transformer-isolated output) |
| 8. Aux 1 Input (RCA Jack)                   | 17. Convenience Outlet                                 |
| 9. Mic/Tel selector switch                  |  |

\* Switch selects between RCA Line inputs and Microphone level.

**POWER SOURCE****VAC**

The supply transformer has been designed for use on 115V, 60Hz,

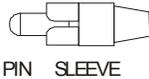
**MUTING**

Announcements made using the Mic/Tel input take precedence, decreasing the sound volume of all current broadcasts from equipment connected to the Program or AUX input. The interrupted broadcasts are automatically restored gradually after Mic/Tel input announcement completion

**LINE (Aux) CONNECTION**

The equipment provides an auxiliary input which may be used for connecting other signal sources such as a Radio Tuner, CD or Cassette player. A push switch is located on the rear panel for selection of, Mic1→Aux2, Program→Aux3, Aux1 single channel ,etc. The Aux input is a dual RCA phono jack and has a stereo to mono converter for each channel

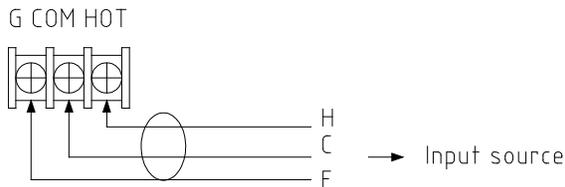
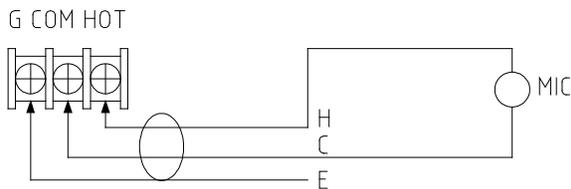
RCA Phono plug connection



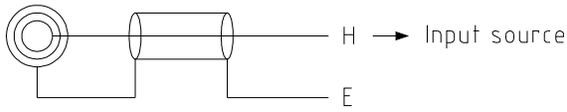
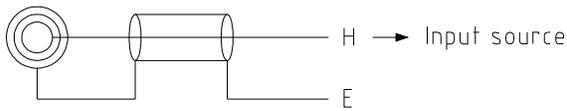
Sleeve-Shield  
Pin- Signal

**INPUT CONNECTION**

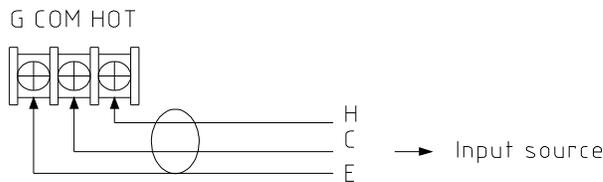
□ Mic /Tel AUX2 input connections



□AUX1 input connections



□AUX3 Program input connection



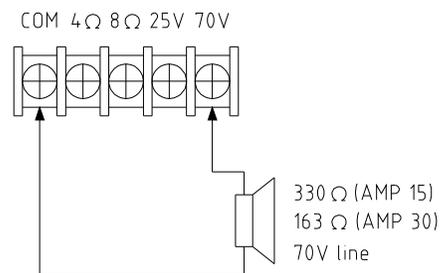
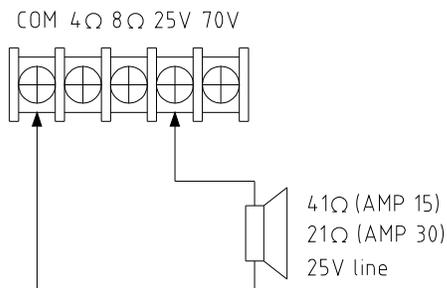
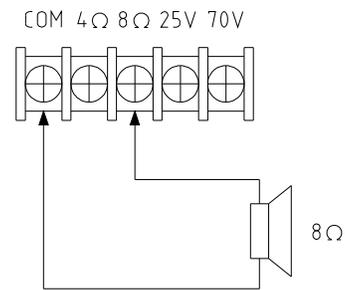
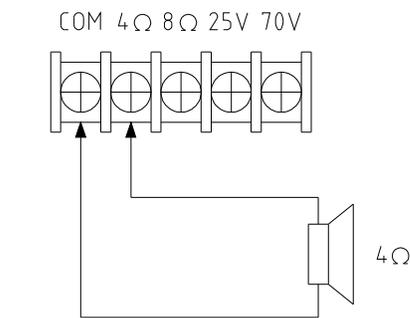
**OUTPUT CONNECTIONS**

□Output terminals

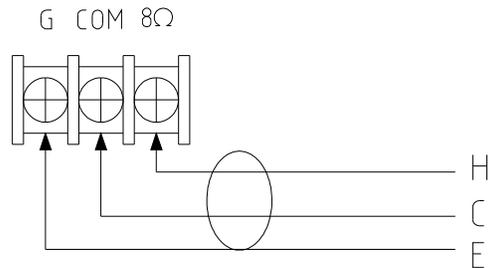
The amplifier has three speaker outputs: 4Ω, 8Ω, 25V and 70V. Use only one of these outputs for connection.

Class 2 wiring

Note: The impedance in the figure below represents the total impedance of the speaker system.



- MOH output terminals
- The amplifier's MOH output is 1w/8Ω



### **LOUDSPEAKER CONNECTION**

Use only 70.7V or 25V line loudspeakers.

### **LOW IMPEDANCE** 8Ω or (4Ω):

This output allows connection of standard low impedance loudspeakers. The minimum impedance must be 4Ω. When two or more loudspeakers are in use, ensure that they are wired in such a way that the impedance load is between 4Ω and 16Ω.

### **BX 15 and BX 30 Technical Specifications**

Type	Mixer Amplifier	
Model	BX 15	BX 30
Supply	AC 120V 60 Hz ± 10%	
Output Power:	15W	30W
Outputs	Speaker outputs: 4Ω, 8Ω, 25V, 70.7V MOH, 1W @ 8Ω	
Inputs	Terminal (balanced) Mic: 1mV, 600Ω Telephone: 100mV @ 10KΩ Program: 100mV @ 10KΩ RCA JACK (unbalanced) Aux 1~3: 150mV, @ 10K	
Frequency response	50Hz ~ 20KHz ± 3dB	
Total harmonic distortion	Less than 1% @ 1KHz, rated power	
Signal to noise ratio	80dB	
Tone Controls	Bass: ± 10dB at 100Hz Treble: ± 10dB at 10KHz	
Indicators	Output level	
AC power consumption	50W @ RATED POWER	90W @ RATED POWER
Dimensions (mm)	212(W) x 88(H) x 275(D)	
Weight	3.3 KGS	4 KGS
Color	Black	
Mounting options	Free standing or 19" rack mountable	

<p><b>IMPORTANT</b></p> <p>The wires in the mains lead are colored In accordance with the following code:</p> <p>Green and Yellow: Earth (E)</p> <p>Blue: Neutral (N)</p> <p>Brown: Live (L)</p>	<p>As the colors of the wires in the mains lead of this apparatus may not correspond with the colored markings identifying the terminals in your plug proceed as follows:</p> <p>The wire, which is colored green and yellow, must be connected to the terminal, which is marked with the letter N or colored black. The wire, which is marked with the letter L or colored red.</p> <p>If a 13 Amp (B.S.1363) plug or any other type of plug is used, a 5 Amp fuse must be fitted either in the plug or at the distribution board.</p>
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### SAFETY PRECAUTIONS

- Be sure to read the instructions in this section carefully before use.
- Make sure to observe the instructions in this manual as the conventions of safety symbols and messages regarded as very important precautions are included.
- We also recommend you keep this instruction manual handy for future reference.

### Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operation your product, read this manual first so you are thoroughly aware of the potential safety hazards as well as understand the safety symbols and messages.

### WARNING

#### When installing the Unit

- Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects – including the unit itself – on the power cord, as doing so may result in fire or electric shock.
- Be sure to replace the unit's terminal cover after connection completion. Because the voltage of up to 70V is applied to the high impedance speaker terminals, never touch these terminals to avoid electric shock.
- Be sure to ground to the safety ground (earth) terminal to avoid electric shock.
- Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down and causing personal injury and/or property damage.

- The AC power output is specified on the AC outlet of the unit. Never exceed the specified wattage on the unit when connecting equipment. Doing so may cause fire or property damage.

**When the Unit is in Use:**

- Should the following irregularity be found during use, immediately switch off the power, disconnect the power supply plug from the AC outlet and contact your nearest GROMMES~PRECISION dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.

If you detect smoke or a strange smell coming from the unit

If water or any metallic object gets into the unit

If the unit falls, or the unit case breaks

If the power supply cord is damaged (exposure of the core, disconnection, etc)

If it is malfunctioning (no tone sounds)

- To prevent a fire or electric shock, never open nor remove the unit chassis as there are high voltage components inside the unit. Refer all servicing to your nearest GROMMES~PRECISION dealer.
- Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not insert nor drop metallic objects or flammable materials in the ventilation slots of the unit's cover, as this may result in fire or electric shock.
- Do not touch a power supply plug during thunder and lightning, as this may result in electric shock.

**CAUTION****When Installing the Unit**

- Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.
- When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.
- When moving the unit, be sure to remove its power supply cord from the wall outlet. Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock. When removing the power cord, be sure to hold its plug to pull.
- Do not block the upper panel ventilation slots in the unit's cover. Doing so may cause heat to build up inside the unit and result in fire.
- Avoid installing the unit in humid or dusty locations, in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.

**When the Unit is in Use**

- Do not place heavy objects on the unit as this may cause it to fall or break which may result in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.
- Make sure that the volume control is set to minimum position before power is switched on. Loud noise produced at high volume when power is switched on can impair hearing.

- Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.
- Contact your Grommes~Precision dealer as to the cleaning. If dust is allowed to accumulate in the unit over a long period of time, a fire or damage to the unit may result.
- If dust accumulated on the power supply plug or in the wall AC outlet, a fire may result. Clean it periodically. In addition, insert the plug in the wall outlet securely.
- Switch off the power, and unplug the power supply plug from the AC outlet for safety purposes when cleaning or leaving the unit unused for 10 days or more. A fire or electric shock may result.

**WARNING: THIS UNIT MUST BE EARTH GROUNDED**

