OVATION AMPLIFIERS

OWNER'S MANUAL
PVMS I, II, & III
PUBLIC ADDRESS SYSTEMS

You are the owner of the finest audio amplification equipment made in the world today. It is a solid-state, modular unit designed specifically to provide maximum power and flexibility throughout the audio range. This equipment offers a versatility of music amplification and performance not found in any other equipment.

The purpose of this manual is to acquaint you with the design and operating features of your new Ovation equipment. Read this manual carefully. Knowing how and when to operate the various controls will permit you to derive the greatest satisfaction and optimum performance from your Ovation equipment.

DESCRIPTION

Ovation's PVMS I, II, & III Public Address Systems each contain the following components:

COMPONENT	MODEL	QUANTITY
Pre-amp/Power Amp	K6427	1
Speaker Column (Powered)	K6185	1
Speaker Column (Unpowered)	K7185	1
Foot Switch	K9604	1
Control Panel Stand	K9610	1
Dolly	K9760	1

The PVMS II System only, also contains two horns, model K7131. The PVMS III System only, contains two Quad horns, model K6117.

A separate cabinet contains two solid-state modules, a six-channel pre-amplifier at the front and a power amplifier at the rear. Each pre-amplifier channel is equipped with individual bass, volume, reverberation, and treble controls. The control panel also has master bass, volume, and treble controls for adjusting the volume and tone of the complete pre-amp to compensate for the acoustics of the area.

In addition, ANTI-FEEDBACK controls are provided to eliminate any undesireable "ring" (high frequency feedback) and (low frequency feedback) that may be encountered. Remote control of reverb is possible through a foot switch jack on the front panel.

Each channel of your Ovation unit is also equipped with DUAL ACTION VOLUME CONTROL to eliminate low-level distortion by lowering input sensitivity as the volume control is lowered. This feature improves upon the out-moded practice of curbing low-level distortion with different loudness levels on two inputs of the same channel. (Low-level distortion usually occurs when the pre-amplifier is turned down and the instrument is turned up).

The pre-amp and power amp both operate with Ovation's FAILSAFE circuit that prevents damage to the system should an overload or other malfunction occur. The circuit operates in microseconds when the full-rated power limits are exceeded. An easily reset circuit breaker replaces old-fashioned fuses.

An input jack in each channel allows more than one instrument to be played with the system. Also, an echo unit may be connected to the pre-amp through jacks on the front panel if this audio effect is desired. An OUTPUT jack on the rear of the pre-amp/power amp is required for normal operation with the unpowered enclosures and an INPUT jack permits hook-up of the powered enclosures. Additional jacks are available on the speaker columns, horns, and the quad horns if other audio effects are desired.

This power amp supplies 100 watts rms into a 4-ohm load (225 watts of music power.) Frequency response is 20 to 20,000 cycles $\pm$ 1 db, with a noise level better than -60 db at full rated power.

Unpowered speaker column K7185 contains one high frequency driver and horn in addition to four 12-inch speakers. Four jacks at the rear of the cabinet permit the speaker column to be connected to the pre-amp/power amp and to other unpowered enclosures.

Speaker column K6185 and both quad horn enclosures K6117 are equipped with a power amplifier providing individual volume control of these enclosures and additional jacks for connection of powered and unpowered enclosures, should they be desired. Each of these amplifiers is equipped with a FAILSAFE circuit identical to the one in the pre-amp/power amp. Each of these power amp supplies 200 watts rms into a 4-ohm load (225 watts of music power). Frequency response is 20 to 20,000 cycles $\pm$ 1 db, with a noise level better than -60 db at full-rated power.

OPERATING INSTRUCTIONS

Procedures for operating your Ovation amplifier system are provided in this section with supplementary information included in the Control and Indicators section of this manual. Refer to figures 1 through 6 for location of controls and components.

SETUP & ADJUSTMENT

1. Place the pre-amp/power amp on its stand in a position so that there is SUFFICIENT AIR SPACE AROUND THE HEAT SINK TO ALLOW GOOD VENTILATION.
2. Set the following pre-amp/power amp controls to the position indicated:

CONTROL	POSITION
POWER	OFF
MASTER BASS	5
MASTER VOLUME	0
MASTER TREBLE	5
REVERB	0
ATTENUATION*	10
BASS**	5
VOLUME**	0
TREBLE**	5

*Two Controls
**One Control in Each Channel

3. Set the following controls on powered speaker column K6185 and each quad (PVMS III only) to positions indicated:

CONTROL	SPEAKER COLUMN POSITION	QUAD POSITION
POWER	OFF	OFF
VOLUME	10	0

4. Connect system components (speaker columns, horns, and quads) to jacks on rear of pre-amp/power amp cabinet. Refer to information in Controls and Indicators section of this manual. OBSERVE CAUTIONS applicable to red OUTPUT jack and green INPUT jack.
5. Set the volume control on each horn (PVMS II only) to fully counterclockwise position.
6. Connect power cords on pre-amp/power amp, speaker column K6185, and each quad (PVMS III only) to 117-volt, 60-cycle electric outlets.
7. Connect your electric instrument(s) into the desired channel INPUT jack (s).
8. If additional external powered enclosures are to be used, connect into **green** INPUT jacks on rear of speaker column K6185 and quads (PVMS III only) according to information in Controls and Indicators section. OBSERVE CAUTION.
9. If additional external unpowered ecnlosures are to be used, connect into **red** OUTPUT jacks on rear of speaker columns and quads (PVMS III only) according to information in Controls and Indicators section. OBSERVE CAUTION.
10. Set the POWER switch on pre-amp/power amp to either ON position that gives the least amount of power hum in the components. Indicator light on front of amplifier will come on.
11. Slowly adjust the BASS, VOLUME, TREBLE, and REVERB controls (MASTER and channel) on pre-amp/power amp to achieve the desired audio effects. Adjust according to information in Controls and Indicators section. (Make certain that the MASTER VOLUME setting is higher than that of any channel VOLUME setting).
12. Slowly adjust volume control on each horn (PVMS II only) to achieve the desired effect. Adjust according to information in Controls and Indicators section.
13. Set the POWER switch on each quad (PVMS III only) to either ON position (POLARITY 1 or POLARITY 2). Select the position that gives the least amount of power hum in each quad.
14. Slowly adjust VOLUME control on each quad (PVMS III only) to achieve desired volume level. Adjust according to information in Controls and Indicators section.
15. Set the power switch on speaker column K6185 to either ON position (POLARITY 1 or POLARITY 2). Select the position that gives the least amount of hum in the speakers.
16. Slowly adjust the VOLUME control on speaker column K6185 to achieve desired volume level. Adjust according to information in Controls and Indicators section.
17. Connect foot switch plug into FOOT SWITCH jack, if the foot switch is to be used.

STOPPING

1. Set all POWER swtiches to OFF. Indicator light on pre-amp/power amp will go off at this time.
2. Disconnect your instrument(s) from input jack(s).
3. Disconnect foot switch from FOOT SWITCH jack.
4. Disconnect all power cords from 117-volt, 60-cycle electric outlets.
5. Disconnect all system and external components from all INPUT and OUTPUT jacks.

RESETTING

A FAILSAFE circuit is designed into the pre-amp/power amp, speaker column K6185, and the quads (PVMS III only) to protect the circuitry of your Ovation system and individual components from serious damage should an overload or other malfunction occur in the system. When an overload occurs, a circuit breaker in the affected area will open causing the system (or component) to turn off. An indicator light on the front of the pre-amp/power amp will also go off when that unit is affected.

To reapply power to the system (or component), just press and release the red reset pushbutton on the rear of the unit (all units if system is affected). Since an overload is frequently the result of operating at too high a volume level (too loud), it may also be necessary to decrease the VOLUME control settings. Should the overload condition persist, turn the system (or component) off and contact your local dealer for service.

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE BACK COVERS. NO USER-SERVICABLE PARTS INSIDE. REFER TO QUALIFIED SERVICE PERSONNEL.

CONTROLS and INDICATORS

FRONT PANEL OF PRE-AMP/POWER AMP (See Figure 1)

A. INPUT JACK – Each channel is equipped with one INPUT jack to permit one instrument to be played simultaneously through each channel. Each input jack has the same sensitivity at all levels. Use a standard 1/4-inch phone plug with shielded cord to connect electric instruments.

B. BASS CONTROL – The BASS control in each channel varies the low frequency response of the channel. When the BASS control is turned left from 5 (counterclockwise), the bass notes are de-emphasized. Turning the BASS control to the right from 5 (clockwise) will accentuate the bass tones.

C. TREBLE CONTROL – The TREBLE control in each channel varies the high frequency response of the channel. When the TREBLE knob is turned left from 5 (counterclockwise), the treble tones are de-emphasized. Turning the TREBLE control right from 5 (clockwise) will accentuate the treble tones.

D. VOLUME CONTROL – The VOLUME control in each channel regulates the loudness (the amount of gain) of the channel. Volume will increase when the VOLUME control is turned right from 0 (clockwise). Pulling the VOLUME control out will turn on the reverb effect for the channel.

E. ANTI-FEEDBACK ATTENUATION CONTROLS – The ANTI-FEEDBACK ATTENUATION controls adjust the suppression of any feedback that may be occuring in the system at the frequencies selected by the ANTI-FEEDBACK FREQUENCY controls. Turning the ATTENUATION from 0 (clockwise) will reduce feedback. Use the left-hand ATTENUATION control with the left-hand FREQUENCY control; the right-hand ATTENUATION control with the right-hand FREQUENCY control.

F. ANTI-FEEDBACK FREQUENCY CONTROLS – The ANTI-FEEDBACK FREQUENCY controls select the frequency, or frequencies, at which feedback is occurring in the system. The frequency is isolated by turning ATTENUATION control full (clockwise #10) and rotating the FREQUENCY control until the feedback is eliminated.

G. REVERB CONTROL – The REVERB control varies the intensity of the reverb effect in the selected channel or channels. When the REVERB control is turned right from 0 (clockwise), reverb intensity will increase.

H. FOOTSWITCH JACK – The FOOT SWITCH jack accepts the plug on the Ovation model K9604 foot switch for turning reverb on and off. The foot switch is not required for operation of the pre-amp; however, it provides remote control of the pre-set reverb effect.

To use the foot switch to your best advantage: first select the setting desired for reverb and tremolo; then plug the foot switch into the FOOT SWITCH jack.

The single switch on the foot switch labeled REVERB is a sequential type; that is, each time the switch is pushed in, it will alternately turn the desired effect on or off.

I. ECHO JACKS – The ECHO jacks permit an echo unit to be connected to the pre-amp/power amp if the additional effect is desired. To make these connections, first connect the TO ECHO jack with the input jack on the echo unit. Next connect the FROM ECHO jack with the output jack on the echo unit. Use standard 1/4-inch phone plugs with heavy shielded cords for these connections.

J. MASTER BASS CONTROL – The MASTER BASS control varies the low frequency response of the mixed outputs of all six channels. When the MASTER BASS control is turned left from 5 (counterclockwise), the bass notes are de-emphasized. Turning the MASTER BASS control right from 5 (clockwise), will accentuate the bass tones.

K. MASTER VOLUME CONTROL – The MASTER VOLUME control regulates the loudness (the amount of gain) of the mixed outputs of all six channels. Volume will increase when the MASTER VOLUME control is turned right from 0 (clockwise). The MASTER VOLUME control setting should be higher than the setting of any channel VOLUME control.

L. MASTER TREBLE CONTROL – The MASTER TREBLE control varies the high frequency response of the mixed outputs of all six channels. When the MASTER TREBLE knob is turned left from 5 (counterclockwise), the treble tones are de-emphasized. Turning the MASTER TREBLE control right from 5 (clockwise) will accentuate the treble tones.

M. INDICATOR LIGHT – The green light will come on when power is applied to the pre-amp/power amp and the circuit breaker is closed. If an overload opens the circuit breaker, this light will go off.

N. POWER SWITCH – The POWER switch is a three-position toggle switch. One position of this switch is OFF. The two ON positions of this switch reverse the line connections. Select the ON position that gives the least power hum in the speakers.

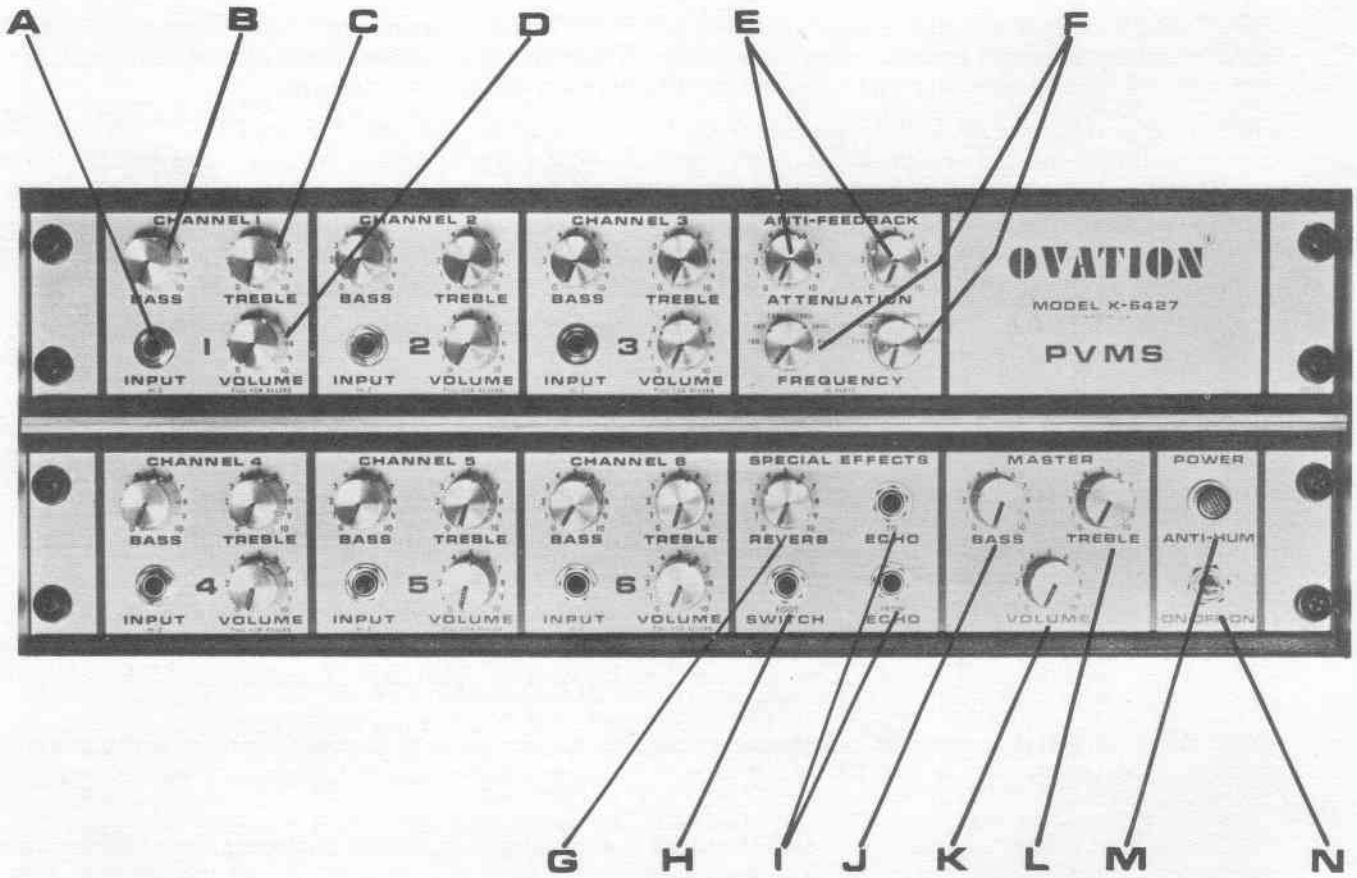

Figure 1. Controls and Indicators on Front Panel of Pre-amp&Power Amp

REAR PANEL OF PRE-AMP/POWER AMP (See Figure 2.)

O. CIRCUIT BREAKER – The CIRCUIT BREAKER is used to open the circuit should an overload or other malfunction occur in the system. This type of circuit breaker requires no cooling off period and may be reset immediately. To reapply power to the system, just press and release the red reset push-button. No fuses are required with any Ovation equipment.

P. POWER CORD – The POWER cord is equipped with a standard two-prong plug for use in a 117-volt, 60-cycle electric outlet only. This amplifier requires 200 watts or 1.7 amps.

Q. INPUT JACKS **(GREEN)** – The green INPUT jack allows more than one external powered enclosure to be connected in parallel (with standard 1/4-inch phone plugs and shielded cords) for increased output. To make these connections, first connect the amplifier INPUT jack (green) to the green INPUT jack of the first external powered enclosure as shown in figure 3. If a second external powered enclosure is to be connected, make a connection from the remaining green INPUT jack of the first external enclosure to the green INPUT jack of the second enclosure. Connections to additional powered enclosures can be made by repeating this sequence. A 1-volt input signal will develop a full 100-watt rms output from the K6428 amplifier.

CAUTION

TO AVOID DAMAGE TO YOUR EQUIPMENT WHEN PLACING ADDITIONAL POWERED ENCLOSURES IN THE SYSTEM, BE SURE THAT YOU MAKE ALL CONNECTIONS FROM THE GREEN INPUT JACKS TO THE GREEN INPUT JACKS. THE RED OUTPUT JACKS ARE NEVER TO BE USED FOR CONNECTIONS BETWEEN POWERED ENCLOSURES.

R. OUTPUT JACKS **(RED)** – The red OUTPUT jack can be used to drive any unamplified speakers, horns, or Ovation Freq-Lites (see figure 3). The red OUTPUT jack will accept a standard 1/4 inch phone plug with heavy, unshielded cord.

CAUTION

TO AVOID DAMAGE TO YOUR EQUIPMENT, THE RED OUTPUT JACK IS NOT TO BE USED FOR CONNECTING POWERED ENCLOSURES. POWERED ENCLOSURES ARE TO BE CONNCETED ONLY FROM GREEN INPUT TO GREEN INPUT. THE ONLY SPEAKER UNITS THAT ARE TO BE CONNECTED TO THE RED OUTPUT JACK MUST BE UNPOWERED ENCLOSURES.

S. HEAT SINK – The finned heat sink provides safe transistor operation under prolonged high output usage. To receive maximum life of the amplifier components, BE SURE THERE IS SUFFICIENT AIR SPACE AROUND THE HEAT SINK TO ALLOW GOOD VENTILATION.

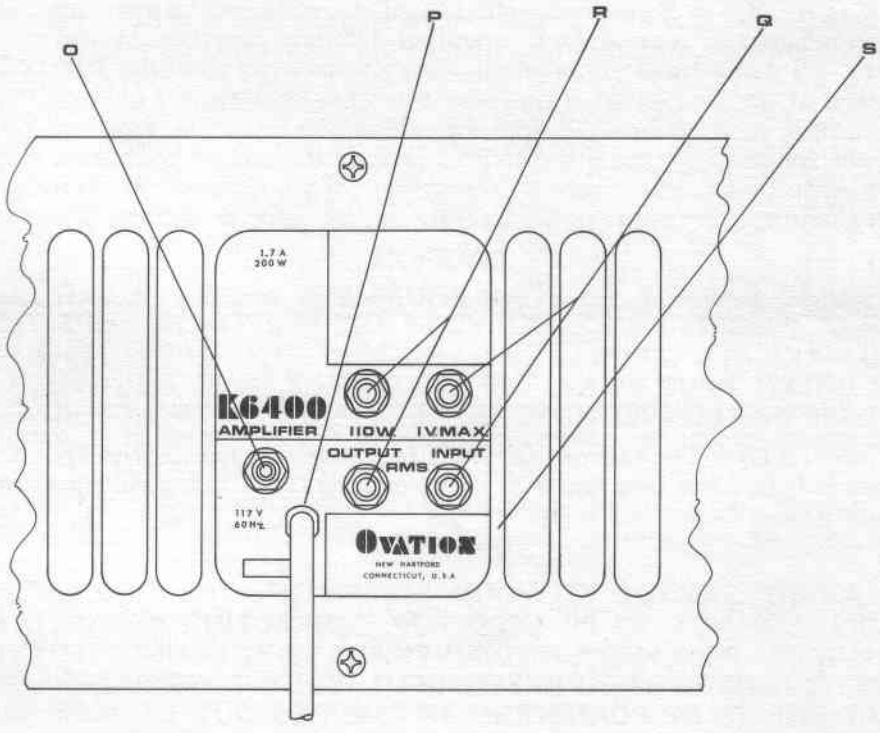

Figure 2. Controls and Indicators on Rear Panel of Pre-amp/Power Amp

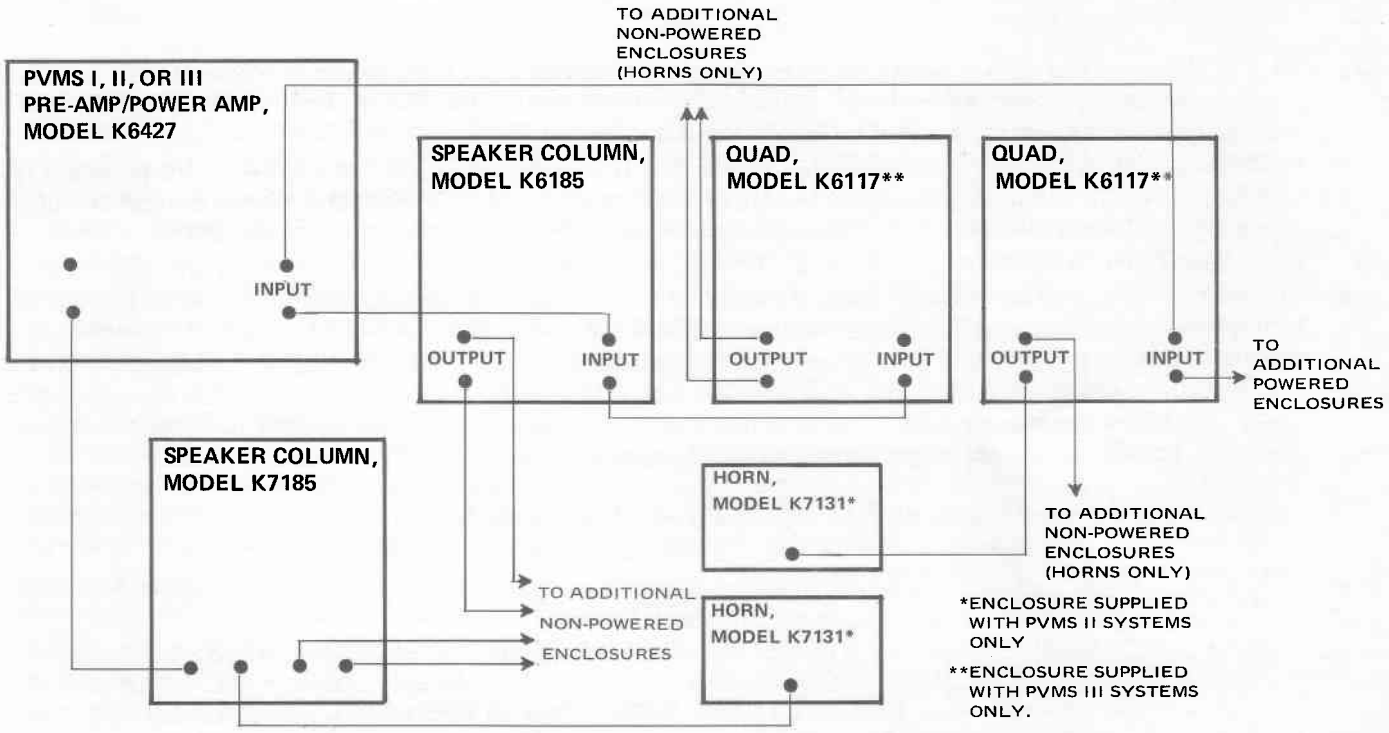

Figure 3. Typical Connections of PVMS I, II, or III System Components with External Enclosures

SPEAKER COLUMN, MODEL K6185, AND QUAD, MODEL K6117 (See Figure 4.)

T. CIRCUIT BREAKER – The CIRCUIT BREAKER is used to open the circuit should an overload or other malfunction occur in the system. This type of circuit breaker requires no cooling off period and may be reset immediately. To reapply power to the system, just press and release the red reset pushbutton. No fuses are required with any Ovation equipment.

U. POWER CORD – The power cord is equipped with a standard two-prong plug for use in a 117-volt, 60-cycle electric outlet only. This power amp requires 200 watts or 1.7 amps.

V. INPUT JACKS **(GREEN)** – Two green INPUT JACKS allow more than one external powered enclosure to be connected in parallel (with standard 1/4-inch phone plugs and shielded cords) for increased output. To make these connections, first connect the amplifier INPUT jack (green) to the green INPUT jack of the first external powered enclosure as shown in figure 3. If a second external powered enclosure is to be connected, make a connection from the remaining green INPUT jack of the first external enclosure to the green INPUT jack of the second enclosure. Connections to additional powered enclosures can be made by repeating this sequence. A 1-volt input signal will develop a full 100-watt rms output from the power amplifier in the speaker column or the quad.

CAUTION

TO AVOID DAMAGE TO YOUR EQUIPMENT WHEN PLACING ADDITIONAL POWERED ENCLOSURES IN THE SYSTEM, BE SURE THAT YOU MAKE ALL CONNECTIONS FROM THE GREEN INPUT JACKS TO THE GREEN INPUT JACKS. THE RED OUTPUT JACKS ARE NEVER TO BE USED FOR CONNECTIONS BETWEEN POWERED ENCLOSURES.

W. OUTPUT JACKS **(RED)** – The two red OUTPUT jacks can be used to drive any unamplified speakers, horns, or Ovation Freq-Lites (see figure 3). The red OUTPUT jacks will accept a standard 1/4-inch phone plug with heavy, unshielded cord.

CAUTION

TO AVOID DAMAGE TO YOUR EQUIPMENT, THE RED OUTPUT JACKS ARE NOT TO BE USED FOR CONNECTING POWERED ENCLOSURES. POWERED ENCLOSURES ARE TO BE CONNECTED ONLY FROM GREEN INPUT TO GREEN INPUT. THE ONLY SPEAKER UNITS THAT ARE TO BE CONNECTED TO THE RED OUTPUT JACK MUST BE UNPOWERED ENCLOSURES.

X. HEAT SINK – The finned heat sink provides safe transistor operation under prolonged high output usage. To receive maximum life of the amplifier components, BE SURE THERE IS SUFFICIENT AIR SPACE AROUND THE HEAT SINK TO ALLOW GOOD VENTILATION.

Y. POWER SWITCH – The power switch is a three-position rocker switch. One position of this switch is POWER OFF. The two ON positions (POLARITY 1 and POLARITY 2) of this switch reverse the line connections. Select the on position that gives the least power hum in the speakers or quads.

Z. VOLUME CONTROL – The VOLUME control regulates the loudness (the amount of gain) of the speakers or quad horns. Initial VOLUME control setting on speaker column should be at 10 to prevent overloading; initial setting of quad VOLUME control should be at 0. After power is turned on and pre-amp/power amp cabinet controls are adjusted, volume settings on speaker column and quads can be adjusted to desired level.

Volume will increase when VOLUME control is turned right from 0 (clockwise), and will decrease when VOLUME control is turned left from 10 (counterclockwise).

HORN, MODEL K7131 (See Figure 5.)

AA. VOLUME CONTROL – The VOLUME CONTROL on the front of the enclosure regulates the loudness of the horn. Volume increases as the control knob is turned clockwise.

AB. OUTPUT JACK **(RED)** – One red OUTPUT JACK is provided on the rear of the cabinet. The jack is used to connect the horn enclosure to the red OUTPUT jack of either a powered or unpowered enclosure as shown in figure 4. Use a standard 1/4-inch phone plug with heavy, unshielded cord to make connections.

CAUTION

TO AVOID DAMAGE TO YOUR EQUIPMENT, THE RED OUTPUT JACK MUST BE CONNECTED EITHER TO THE RED OUTPUT JACK OF AN UNPOWERED ENCLOSURE OR TO THE RED OUTPUT JACK OF A POWERED ENCLOSURE. POWERED ENCLOSURES ARE TO BE CONNECTED ONLY FROM GREEN INPUT TO GREEN INPUT.

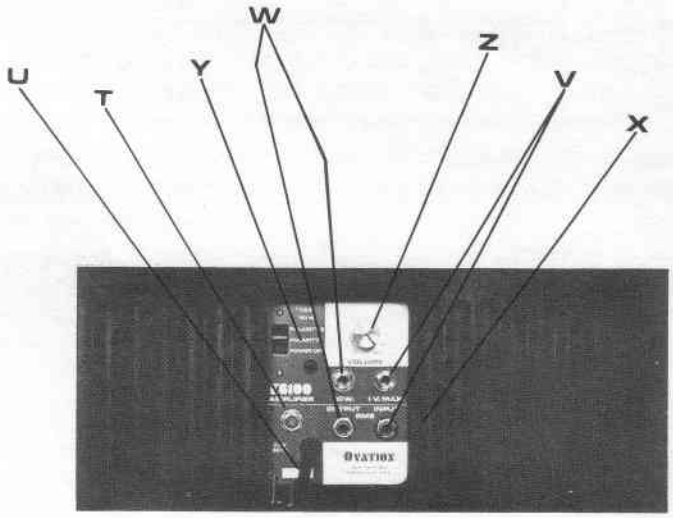

Figure 4. Speaker Column, Model K6185, and Quad, Model K6117, Controls and Indicators

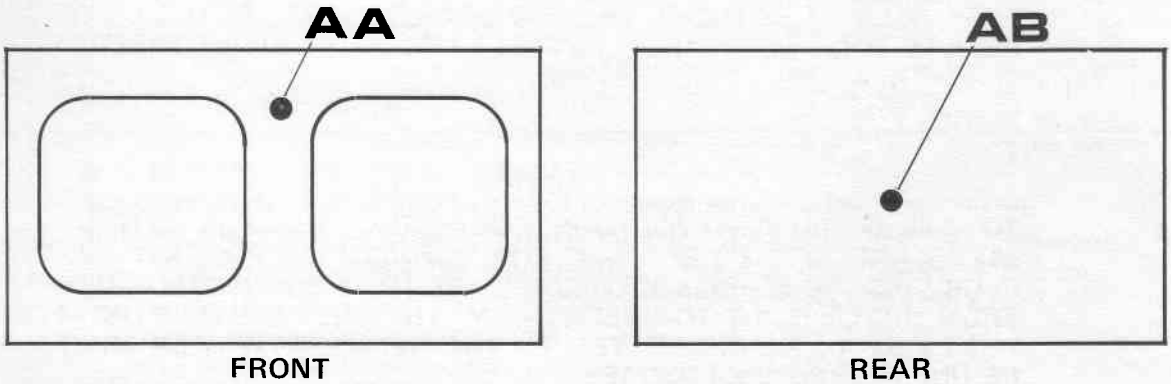

Figure 5. Horn, Model K7131, Controls

SPEAKER COLUMN, MODEL K7185 (See Figure 6.)

AD. OUTPUT JACKS (RED) — Four red OUTPUT JACKS are provided on the rear of the cabinet for connections with the red OUTPUT jack on a powered enclosure, and with any additional external unpowered enclosures as shown in figure 3. To make these connections, first connect the power amplifier OUTPUT jack (red) to the red output jack of the speaker column. To connect the second unpowered enclosure, make a connection from one of the remaining red output jacks on the speaker column to one of the red output jacks of the second enclosure. Connections to additional unpowered enclosures can be made by repeating this sequence. Use a standard 1/4-inch phone plug with heavy, unshielded cord to make connections.

CAUTION

TO AVOID DAMAGE TO YOUR EQUIPMENT, THE RED OUTPUT JACK IS NOT TO BE USED FOR CONNECTING POWERED ENCLOSURES. POWERED ENCLOSURES ARE TO BE CONNECTED ONLY FROM GREEN INPUT TO GREEN INPUT. THE ONLY SPEAKER UNITS THAT ARE TO BE CONNECTED TO THE RED OUTPUT JACK MUST BE UNPOWERED ENCLOSURES.

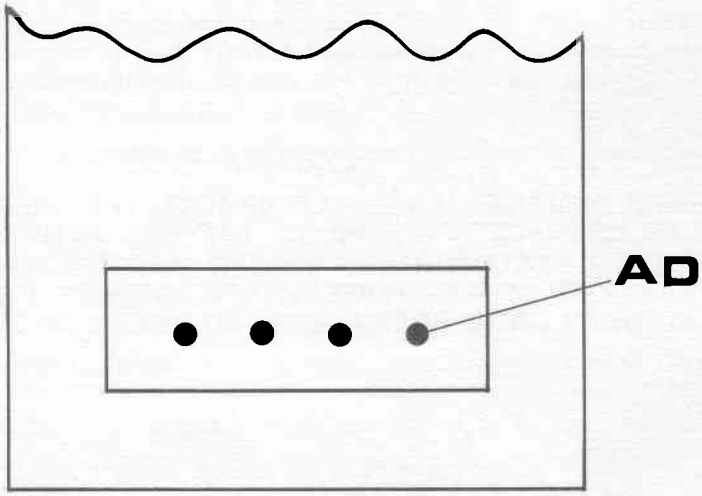

Figure 6. Speaker Column, Model K7185, Jack Plate

Should any questions arise regarding the use of this equipment, contact your local dealer or write to the Ovation Customer Service Department for additional information. Be sure to include the equipment model number and your return address in all correspondence.

CUSTOMER SERVICE DEPARTMENT
OVATION INSTRUMENTS
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