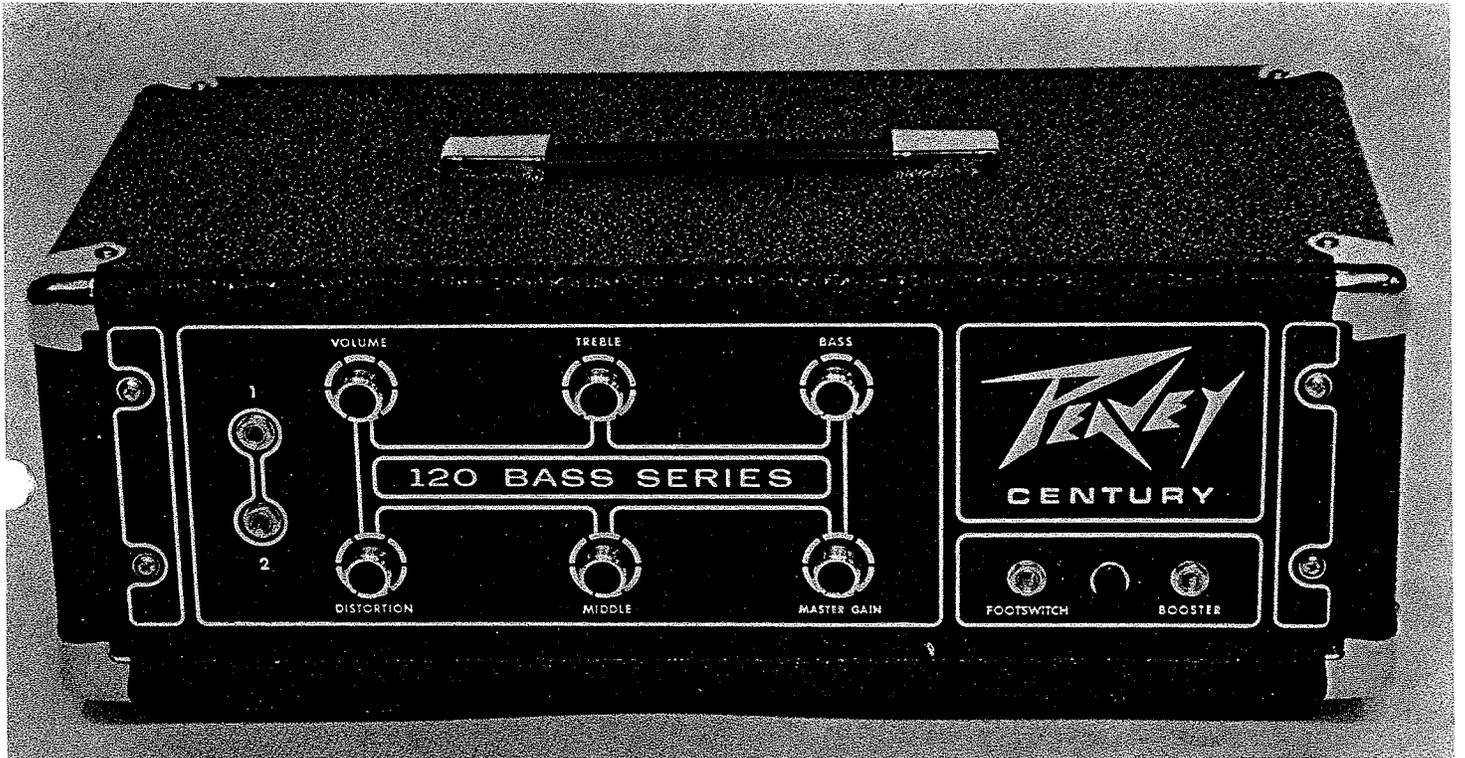


CENTURY

OWNER'S MANUAL



The new Century Amp is the latest in our series of amplifiers designed to fill a specific need in the musical market. The Century features our 120 power module which delivers 100 Watts RMS at 5% THD using four 15 amp power transistors. The preamp section of the Century has a full compliment of tone controls, plus the controlled distortion circuit that enables harmonic control at all volume levels.

The Century is available with several different speaker enclosures to enable the performer to choose the type of response he prefers. A popular configuration is the Century 115 which is the ideal studio or club bass amp. The 212 is the all-round amplifier that can be used for nearly all instruments since the 12" speakers have a very wide range. The massive 38 oz. magnets give these speakers tremendous punch and power handling ability.

1. The input jacks are arranged in a unique circuit that allows a wide range of input levels to be handled by the Century. Input one is the high gain input and should normally be used when plugging in your instrument. Input two is the low gain input and should be used if the signal from your instrument tends to overload (distort) the preamp. If two instruments are used and both jacks one and two are used, the circuit automatically balances the gain of the two inputs so that the sensitivity of both are identical.

2. The gain control serves to control the gain of the preamp. This preamp circuit makes possible exceptional gain and input impedance while allowing the amplifier to provide tremendous dynamic range.

3. The treble control is part of an electronic crossover and may be considered as a level control for treble frequencies. These variable feedback type tone controls are capable of providing a cut as well as a boost. Because the treble control is a volume control for treble frequencies, it is good practice to operate it close to fully clockwise for maximum benefit and volume. Experimentation will allow the musician to find the level that works best for his preference in tone.

4. The bass control is also part of an electronic crossover that forms the tone circuit and works as a level for the bass frequencies. The bass control provides for both a boost and a cut in bass response. Like the treble control, the bass should be run near its full clockwise position for maximum volume from the amp.

5. The distortion control allows the use of a new and unique circuit that applies a nonlinear feedback signal to the preamp to create a "natural distortion" in the output signal. Unlike some other harmonic control

systems, our distortion feature is usable at very low volume levels. The distortion effect is achieved by blending harmonics into the straight signal much as is done when a vacuum tube amp overloads. The harmonic structure of the distortion effect is very similar to a push-pull tube type amplifier being driven into overload. The amount of distortion in the output is determined by the settings of the distortion control. The musician can blend the desired amount of distortion by rotation of the control in the clockwise direction. This effect should NOT be confused with Fuzz since it is completely different in harmonic content. Soft distortion is obtained by use of the tone controls in conjunction with the distortion control. The distortion effect may be controlled remotely by use of the optional footswitch.

6. The middle control is of the cut type and allows the musician to tailor the critical midrange frequencies to suit each individual's taste. This is perhaps the most difficult control to design, but its importance in tonal settings made this extra effort necessary. Experimentation will illustrate the versatility of this control.

7. The master gain control is very useful for obtaining a number of effects. The most common use of this control is for obtaining overdrive and sustain at low sound levels. Another valuable use for this control is for controlling the response and noise of the amp in a recording studio.

The master gain control is the final gain determining element before the signal is fed into the output amplifier and could more accurately be called a "sensitivity" control. To obtain maximum overdrive and sustain, the channel gain control should be set near maximum, and the output of the system should be adjusted with the master gain control. You will discover that many different and pleasing harmonic effects can be obtained by trying different settings of the tone, gain, and master gain controls. It has been found that when operating the amp in the overdriven condition, lower settings of the treble control tend to give a smoother "natural distortion characteristic". The normal background noise (hiss, hum, etc.) can be very effectively controlled for recording studio applications by use of the master gain control. To reduce these noises, reduce the setting of the master gain control.

8. The Footswitch jack is provided to allow use of the optional footswitch for remotely controlling the distortion effect. Any standard footswitch that terminates with a standard phone plug (PL-55 type) may be used. It is NOT necessary to use a shielded type wire for this footswitch.

9. The pilot light indicates when power is applied to the amplifier.

10. The booster jack provides an output signal for driving additional booster power amplifiers. This is **NOT A SPEAKER OUTPUT**. This output is a low level signal of approximately one volt. Any booster amplifier can be used as long as its input will accept a one volt RMS signal and has input impedance of at least 10,000 ohms.

11. The fuse is located within the cap of the fuse holder and should be replaced with one of the proper value if it should fail. It is necessary that the proper value fuse be used to avoid damage to the equipment and to avoid voiding the warranty. Models that have circuit

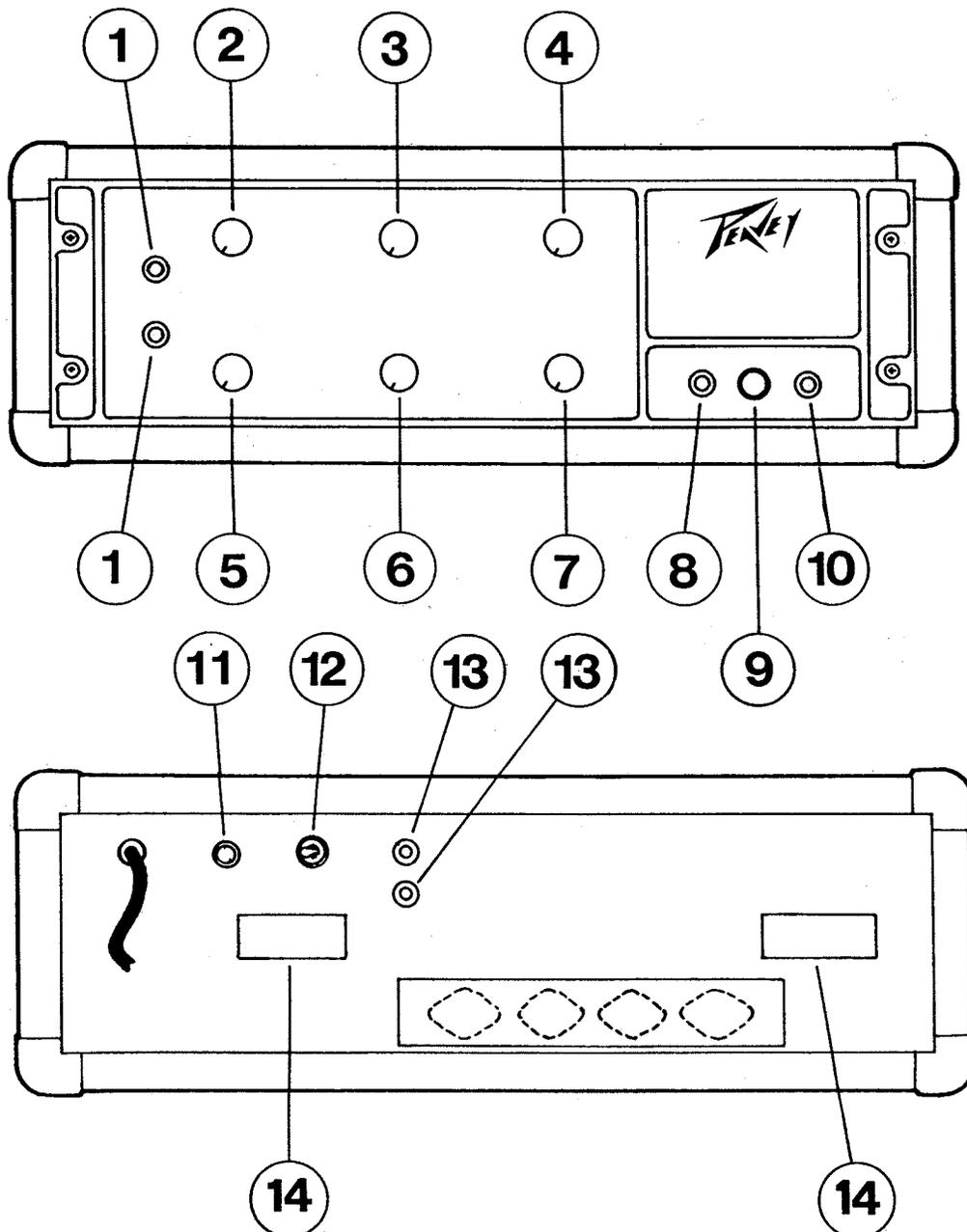
breakers can be reset by depressing the red button. If the breaker trips repeatedly, take the unit to a qualified service center for inspection.

12. The line power switch is of the three position type with the center position being **off**. The three position switch has two **on** positions which are used to ground the amplifier properly.

13. The speaker output jacks are designed to be used with a total load of **FOUR OHMS**. Speaker systems of higher impedance can be used with a slight loss in output power. Speaker systems with less than a total of four ohms can be used with the risk of overloading the power amplifier. Slightly less power will be delivered to lower impedances because of the unique limiting action of our integral protection system. The power amplifier is built on a large aluminum heatsink to cool the output

devices. A thermostat is connected to this heatsink to shut the system down in case of overheating. Low speaker impedances tend to cause the amp to run hotter than normal, and could cause the automatic cutoff to operate if the output stage becomes hot enough to endanger the output devices. The thermostat is self re-setting and normal operation will be restored when the unit reaches safe operating temperatures. If thermal shutdown is apparent then you are overloading the system and continued use in this manner will damage the system. Never use less than a 2 ohm total load on the 120 module. The output voltage available from this unit is approximately 20 VRMS into 4 ohms with proper line input.

14. The large line cord retainers on the rear panel are provided for your convenience in storing the AC line cord during transport of the unit.



I. POWER AMPLIFIER SECTION:

120 MODULE

A. Output Power @ 1 KHZ @ 117 VAC Line:

1. Rated Power: 100 W RMS @ Rated Load: 8 OHMS
2. Power vs. Distortion:

LOAD IMPEDANCE	8		4	OHMS
OUTPUT @ 1% THD	60		90	W
OUTPUT @ 5% THD	70		100	W

- B. Peak Output @ Rated Load: 7 AMPS & 28 VOLTS, 200 WATTS
- C. Music Power Output @ Rated Load: 130 WATTS RMS @ 1% THD
- D. Frequency Response: 3 DB Down @ 50 HZ & 15 KHZ
- E. Sensitivity @ Rated Power & Load: 300mV
- F. Input Impedance: 22 K OHMS

II. PRE-AMPLIFIER SECTION:

- A. Input Characteristics: (Tone Controls Flat, Volume @ 12:00)
 1. Sensitivity: 40 mV @ 1KHZ
 2. Input Impedance: 330 K OHMS
 3. Noise: 68 DB (Open CKT), 74 DB (50 K OHMS), 78 DB (Short CKT)*
- B. Distortion @ 1 KHZ @ Rated Output: Less Than 0.2% THD†
- C. Frequency Response: 3 DB Down @ 30 HZ & 30 KHZ
- D. Tone Controls: + 20 DB @ 50 HZ & 5 KHZ
- E. Middle Control: 20 DB Cut
- F. Distortion Control: Continuously Variable with Foot-switch Cut-Off
- G. Presence Control: 10 DB Boost @ 5 KHZ
- H. Booster Output Level: 1.0 VRMS into 10 K OHMS

* Signal-to-noise ratio in DB below rated output

† Measured with Distortion Control Full CCW

Specifications and schematics published in this manual are subject to change without notice.

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