

#### AMPLIFIER FEATURES

**SMALL, LIGHT, EASY TO CARRY COMBINATION POWER AMPLIFIER,** volume pedal and variable distortion unit.

May be used with 4, 8 and 16 ohm speakers.

**TWENTY FIVE WATTS** of continuous super clean sinewave output or fifty watts of intermittent squarewave (hard fuzz) output into a four ohm speaker cabinet.

**VOLUME, TREBLE AND BASS CONTROLS** are within easy reach while playing. The volume control can be pre-set to achieve clean sound, mild distortion, or hard fuzz sound. The volume pedal acts as a master volume control, allowing loudness control without change of distortion level.

**TREBLE AND BASS BOOST FOOTSWITCHES** with indicator lamps. Treble and bass may be instantly boosted while playing.

**FOOT OPERABLE POWER SWITCH** and noiseless power switching. This feature allows the amplifier to be turned on or off at any time without embarrassing clicks, clacks, thumps or hum. A standby switch is therefore unnecessary.

**SHORT CIRCUIT PROTECTION FEATURE:** A protective circuit automatically limits power to the output transistors in the event of an accidental short circuit on the output line or in the speaker cabinet.

**CONTROLLED DISTORTION FEATURE:** As the volume control is advanced or as guitar output is increased to overdrive the input stages of the amplifier. The limiter first develops a soft subtle distortion which becomes harder as the control is further advanced. This distortion is independent of operation of the volume pedal so that low volume distortion may be achieved.

Additional distortion is added when the volume pedal is used to obtain output stage clipping. (See speaker cabinet and temperature indicating lamp.) A large variety of distortion effects may be achieved including hard fuzz and "tube type" distortion. The soft distortion of this amplifier will never produce the annoying, hard, high frequency distortion usually associated with transistor amplifiers even though full power capability remains at and beyond the highest audible frequency.

**LOW LEVEL OUTPUT JACK:** This enables the musician to run directly into a mixer for recording or to control an external amp.

**TEMPERATURE INDICATING LAMPS:** This amplifier is rated at 25 watts continuous sinewave power output into a four ohm load when operated in a normal temperature (80°F or below) environment. If however, the controls are adjusted for maximum output (hard fuzz) the average output may be substantially greater than the 25 watt rating. (Typically the squarewave output of the amplifier into a four ohm load is greater than 50 watts.)

A temperature indicating lamp feature is included to allow use of more than the continuous rated output for as long as possible without overheating. When the amplifier approaches excessive temperature from any combination of high output power, high room temperature, high line voltage and low speaker impedance, the temperature indicating lamp will turn on. At this time, the guitar volume control, the amplifier volume control and/or the amplifier volume pedal should be adjusted sufficiently to produce a clean undistorted output sound. In the event that the lamp does not go out in five minutes some abnormal operating condition exists and the amplifier should be allowed to cool as soon as practical. In no event should the lamp be allowed to remain on for more than 15 continuous minutes.

**SPEAKER CABINETS:** Any combination of loud speakers which present a four ohm load or higher to the amplifier may be used.

Examples are:

1. Single 4 ohm, 8 ohm or 16 ohm cabinets.
2. Two chained (connected in parallel) 8 ohm cabinets.
3. Two, three or four chained (connected in parallel) 16 ohm speakers.

Four ohm loud speakers should be rated at 70 watts or more although a 35 watt rating is sufficient for users who will always maintain the output below distortion. Eight ohm loud speakers should be rated at 40 watts or more; 16 ohm speakers should be rated at 25 watts or more and each rating may be reduced by one half if the user always operates the amplifier below distortion.

**SPEAKER CORDS:** Regardless of the convenience, standard shielded cable guitar cords are not recommended for this application especially when the speaker cabinet impedance is 4 ohms. These cords are not rated to carry the power that could be delivered by the amplifier. Loss of power and short cord life is to be expected from these cords. Cords made from ordinary 18 gauge zip cord (lamp cord) are recommended for lengths to 30 feet for 4 ohm speakers and to 60 feet for 8 ohm speakers (power loss 10% max.). 14 gauge cords are recommended for longer lengths. 14 gauge cords may be 2½ times longer than 18 gauge for the same loss of power.

**PILOT LAMP:** The lamp is the light source for the volume pedal's photo electric cell. The lamp must be lit for this feature. The lamp can be damaged by dropping the amplifier or hard impact especially when the lamp is lit. Replace damaged bulb with a type #387 or #327.