

# CARVIN

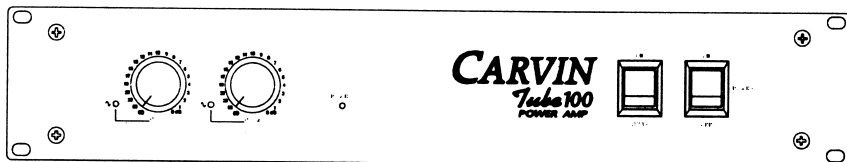
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## **TUBE 100** STEREO TUBE POWER AMPLIFIER



### **OPERATION MANUAL**

Manual No. 96-10101

Revision 1.0

Jan 1993

**Made in USA**

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## **CARVIN**

1155 Industrial Ave. Escondido, CA 92029  
(800)854-2235

## **QUICK SET UP**

If you are like most new owners, you're probably in a hurry to plug in your TUBE 100 and use it. Here are some brief instructions to get you going quickly.

### **CONNECTING AC POWER**

Check to see that the setting of the AC Line Voltage Switch on the rear panel matches your local line voltage. If this is set correctly proceed to connect the modular line cord to the units AC connector, and into a grounded (3 prong) power outlet.

### **INPUT CONNECTIONS**

Connect the output from line level balanced or non-balanced sources into the XLR or 1/4 phone plug inputs marked "CH 1 IN" and "CH 2 IN". If you have a stereo source set the input selector switch to stereo. If you have a mono input and wish to have it "Y" into both amps (CH1 & 2), then set the input selector switch to mono.

### **CONNECTING SPEAKERS STEREO**

Use the 1/4" speaker jacks marked "CH 1 OUT" and "CH 2 OUT" to connect the amp to your speaker cabinets. Set the "IMP" switches for the proper impedance of your cabinets. Set the "STEREO/BRIDGE" switch to the STEREO position.

### **CONNECTING SPEAKERS BRIDGE MODE**

Use the 1/4" speaker jacks marked "BRIDGE" to connect the amp to your speaker cabinets. Set both the "IMP" switches to half the impedance of your cabinets. Set the "STEREO/BRIDGE" switch to the bridge position.

### **TURNING YOUR AMP ON**

First apply power to the equipment that will be feeding the power amp (pre-amp, signal processors, etc.). Set the level controls on the TUBE 100 all the way down ( $\infty$ ). Turn the amp's "POWER" switch to the "ON" position and give the amp a moment to warm-up (about 15 seconds). Turn the "STANDBY" switch to the "ON" position and slowly raise the level controls to the desired setting.

## **RECEIVING INSPECTION**

INSPECT YOUR TUBE 100 FOR ANY DAMAGE which may have occurred during shipping. If any damage is found, notify the shipping company and call CARVIN immediately.

SAVE THE CARTON & ALL PACKING MATERIALS. In the event you have to reship your amp, always use the original carton and packing material. This will provide the best possible protection for your unit during shipment. CARVIN and the shipping company are not liable for any damage caused by improper packing.

SAVE YOUR INVOICE. It will be required for warranty servicing of your unit. Always check your invoice against the items you have received.

SHIPMENT SHORTAGE. If you find items missing, it may be that they were shipped separately. Please allow several days for the rest of your order to arrive before inquiring. If you determine (after allowing an appropriate amount of time) you have not received all the items you ordered, please call CARVIN.

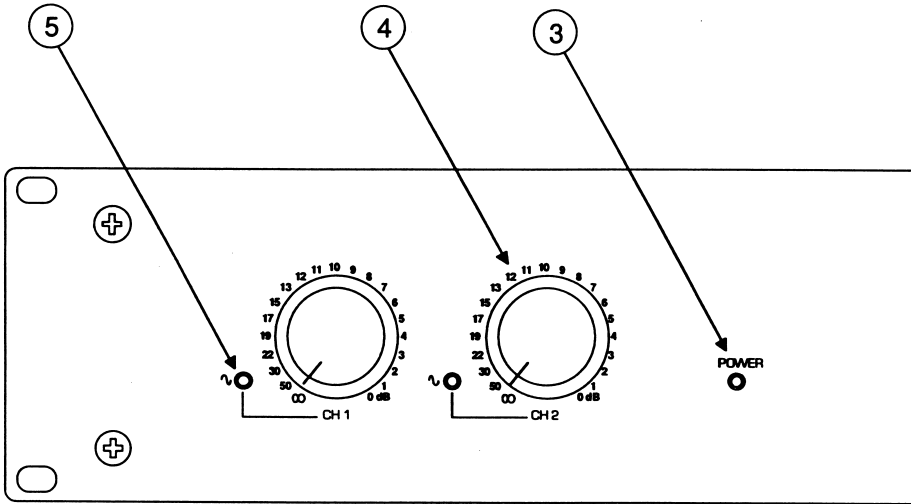
## **FOR THE NEW OWNER**

### **OVERVIEW**

The Carvin TUBE 100 represents the latest technology in tube amplifier designs. Inside this compact two rack-space unit are four EL34 power tubes, capable of delivering 100 watts of warm tube sound. The dual high power 50 watt amps contain a host of features found in only the best of professional audio equipment. These features include balanced XLR and 1/4" inputs, selectable speaker outputs: 4 $\Omega$ , 8 $\Omega$  & 16 $\Omega$ , dual presence controls, bridged output capability, mono input selector, forced air cooling and 120/240VAC operation just to name a few.

**Carvin's USA toll free number: 800-854-2235**

# FRONT PANEL FEATURES



## 1. POWER SWITCH

Push this switch vertically to the "on" position to apply power to the unit. The power indicator LED will light to show that the amp is powered.

## 2. STANDBY SWITCH

The standby switch must be pushed vertically to the "ON" position in order to operate the amp. Placing the amp in the STBY (standby) mode removes the plate voltage from the tubes while leaving the filaments on so that no warm up period is necessary. We recommend that the standby switch be used whenever you wish to shut the amp off for short periods of time, as this will extend the life of the tubes.

## 3. POWER INDICATOR

This LED illuminates when power is applied to the unit.

## 4. LEVEL CONTROLS

Precision 41 step input level attenuators are used to adjust the output level of the unit. For normal operation set the level controls at -10dB (knob marker straight up), and adjust your pre-amps output to achieve the desired sound level.

## 5. SIGNAL INDICATORS

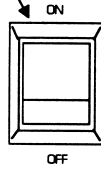
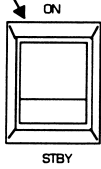
The green "Signal" LEDs monitor the strength of the input signal post the level controls, a lit LED indicates that a -30 dB signal is present at the output.

# CARVIN

*Tube 100*  
POWER AMP

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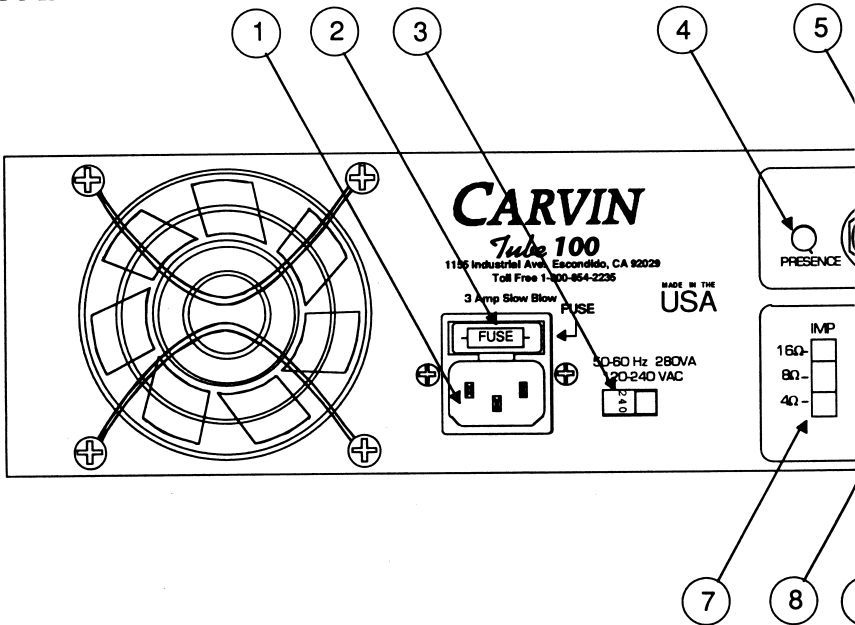
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POWER



# REAR PANEL FEATURES



## 1. LINE CORD

The TUBE 100 is supplied with a detachable three conductor line cord. Never defeat the grounding pin of the AC line cord as this is for your own protection. If you must plug into a two prong outlet use a quality 3 to 2 prong grounded adapter.

## 2. FUSE

The TUBE 100 will accommodate both 110 and 220 VAC sources. The 3 amp slow-blow fuse supplied with the unit is designed to protect your unit against damage from either voltage source. To remove the fuse, disconnect the AC line cord and pry out the plastic fuse retainer with a small slotted screwdriver. Replace the blown fuse with a 3 amp slow blow 5 x 20mm fuse. Radio Shack part #270-1173. Note: a spare fuse can be inserted into the tunnel portion of the cap.

## 3. 110/220 V

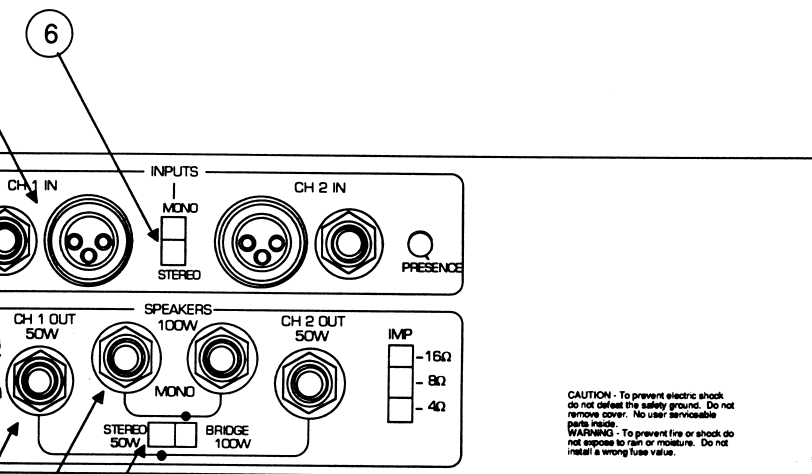
This switch is located next to the AC line cord connector. Be sure that this switch is set to correspond to your local line voltage before you apply power to the amplifier. Should you need to change the line voltage setting, insert a small standard screwdriver through the opening in the chassis and push the selector switch to the appropriate side.

## 4. PRESENCE CONTROLS

The presence controls allow you to reduce the electronic feedback from the EL34 power tubes to the output transformers in order to achieve a high frequency boost. Rotate the presence control shaft clockwise for maximum presence (brightness) and counterclockwise to defeat the presence control. The normal off position is fully counter clockwise.

## 5. INPUT CONNECTORS

The TUBE 100 will accept a balanced line input at the XLR connector or a non-balanced input from the 1/4" phone jack. The XLR connectors conform to standard wiring procedures; Pin 1 to ground, Pin 2 to positive balance, and Pin 3 to negative balance. The balanced input of the TUBE 100 uses a differential amplifier to accept balanced or unbalanced input signals from low impedance sources. Using the balanced XLR input can reduce cable hum, and will give 6dB more gain when used with other discrete balanced components. The 1/4" phone jack input is of the non-balanced type.



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## 6. MONO/STEREO INPUT SWITCH

This switch allows you to configure your input into either the MONO or STEREO mode. In The MONO mode the two channels of the amp will be driven from one input. The channels are driven with similar polarity i.e. "in phase".

## 7. IMPEDANCE SELECTORS

There are two impedance selectors switches (one for each channel) that must be set prior to operating the TUBE 100. These allow you to use your amp with many different speaker cabinet configurations. The outputs can be set for either 4Ω, 8Ω or 16Ω. Be sure that this switch is properly selected or you can lose power because the speakers are mismatched to the output transformers. NOTE: impedances are doubled when in bridged mode.

## 8. CHANNEL SPEAKER OUTPUT JACKS

There are two 1/4" channel speaker jacks (one for each channel) available to connect to your cabinets when using the tube 100 in the stereo mode.

## 9. MONO (BRIDGED) SPEAKER OUTPUT JACKS

There are two 1/4" mono speaker jacks (wired in parallel) which are to be used when operating your amp in the bridged mode. It is important to remember that the minimum cabinet impedance available in the bridged mode is 8Ω.

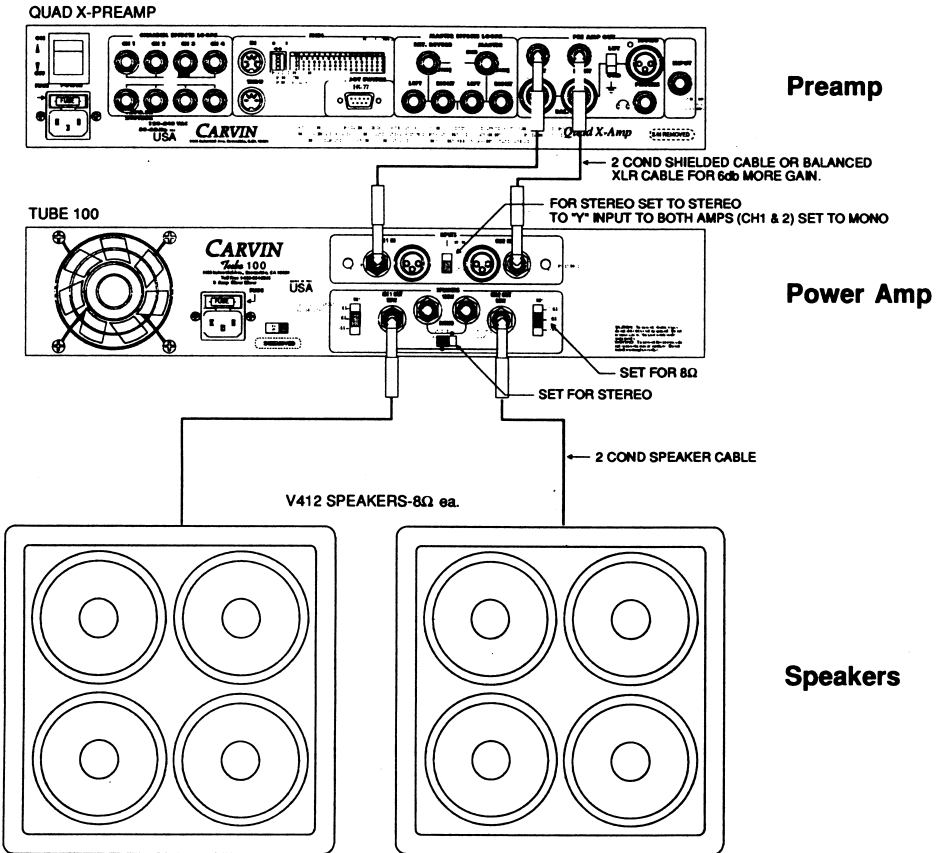
## 10. MONO BRIDGE MODE SELECTOR

The TUBE 100 can be switched to Mono Bridge mode to allow the two channels to operate as one power amplifier. When switched to bridged mode the TUBE 100 can deliver 100 watts of power to the mono output jacks.

# INTERCONNECTING THE SYSTEM

Once you have selected your preamp and speakers the interconnect is straightforward. Start with all the gear turned off. Connect the outputs of your preamp to the inputs of the TUBE 100. Although you can use either the 1/4" or the XLR connectors, for the lowest noise we recommend using the balanced XLR connections both at the preamp output and at the TUBE 100 input.

Next connect the TUBE 100's left and right outputs to the inputs of the left and right speakers. Make sure you use heavy gauge wire for all your speaker connections, no lighter than 16 gauge.



## A Typical TUBE 100 Hookup



