

CARR AMPLIFIERS



OWNER'S MANUAL

Revised 23 Feb 2012

Raleigh Instructions

Thank you for purchasing a Carr Raleigh. The Raleigh is a versatile practice/studio amp designed to deliver both pristine clean and heavily overdriven tones at usable volumes. The Raleigh's styling pays homage to the funky practice amps of the late 50s and early 60s. We have taken great care with all component choices to ensure optimum sonics and reliability.

Please take time to familiarize yourself with this manual.

Volume – Adjusts the loudness of the amplifier in clean mode. In overdrive mode, the Volume control adjusts the amount of preamp gain, and the Master control is used to adjust the loudness of the amplifier.

Tone – Varies the tone of the amplifier from dark to bright. Interactive with the Master control in overdrive mode, the Tone control can provide more treble when the Master control is turned up.

Mode Switch – Selects clean or overdrive modes. When overdrive mode is selected (switch baton *down*), the Master control is activated. In clean mode (switch baton *up*), the Master control is not in the circuit.

Master – Adjusts the loudness of the amplifier when in overdrive mode. The Master control has no effect in clean mode.

On – Off – On – Selects between two ON positions and the OFF position (middle). The two ON's are wired in opposite phase of each other. If you receive a shock from another piece of equipment (a microphone or another amp) that is not properly grounded, or if you hear static, switching to the opposite ON may solve the problem. This is sometimes called "switching polarity".

Bottom Panel

Fuse – In the unlikely event that a tube fails, the amp is protected by a 1 Amp slow blow fuse for 120v and 100v (North America and Japan) models or a 0.5 Amp slow blow fuse for 220v and 240v (Europe and Asia) models. Please consult us or a qualified tech for further instruction or assistance in the event of a fuse blowing. The fuse is located on the bottom of the chassis by the power cord.

Bias Adjustment Pot – Varies the amount of bias current applied to the power tube. We recommend setting the bias current to 30 milliamps for the EL84 power tube. See *Biasing Your Raleigh* below.

Bias Test Points – Use with the test probes of a multimeter to measure bias current as voltage. See *Biasing Your Raleigh* below.

Speaker Output Jack – The Raleigh is designed for 8-ohm loads. Maximum power and tone will be realized when running into an 8-ohm speaker or cabinet.

Biassing Your Raleigh

The Raleigh is a fixed bias amplifier and requires a bias adjustment any time the EL84 power tube is replaced. The following power tube types are compatible with the Raleigh: EL84 and 6BQ5.

To adjust the bias you will need a multimeter to measure DC voltage. These are readily available for as little as \$10 from an electronics supply store. Looking at the amp from the back, you will find two test points on the bottom of the chassis to the left of the speaker output jack. Insert the red meter probe into the red test point and the black probe into the black test point. Set the meter to read DC millivolts or DC volts. Turn the amp on and allow it to warm up for about 5 minutes. As it warms up, the voltage shown on the multimeter will rise until it stabilizes—usually around 30 millivolts (0.030 volts). *Note: Once stabilized, the voltage may oscillate slowly up and down in very small increments due to fluctuations in your household voltage.* Once the amp is warmed up, you can begin to make adjustments. To the left of the bias test points is the shaft of a potentiometer. This is the bias adjustment control. Turn it one way to increase the voltage, turn it the other way to decrease the voltage. Adjust the bias control until the meter reads 30 millivolts (0.030 volts). Unplug the meter probes from the test points and your Raleigh is ready to play.

Measuring bias current directly can be too complicated and even dangerous for the average amp owner. The method described above is safe and easy. By measuring voltage across an internally mounted 1 ohm resistor, voltage and current are in one-to-one correspondence: 1 volt = 1 amp, therefore 30 millivolts = 30 milliamps of bias current.

Note: The bias pot can be inadvertently turned if you are reaching up into the back of the cabinet. If you think you may have turned the bias pot by mistake, simply follow the above directions to rebias the Raleigh.

If you are uncomfortable with the above instructions, please see a qualified electronics technician for bias adjustments.

Carr Amplifiers selects and tests the finest current production tubes specifically for each amplifier model. Caution should be used when buying replacement tubes from any dealer who does not have a return policy as all tubes can have problems (NOS tubes are susceptible to microphonics and failure too).

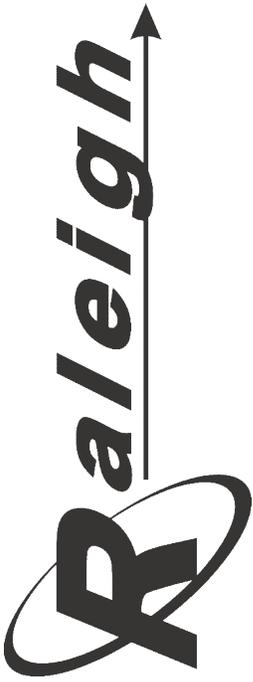
Recommended Settings

Single Coil

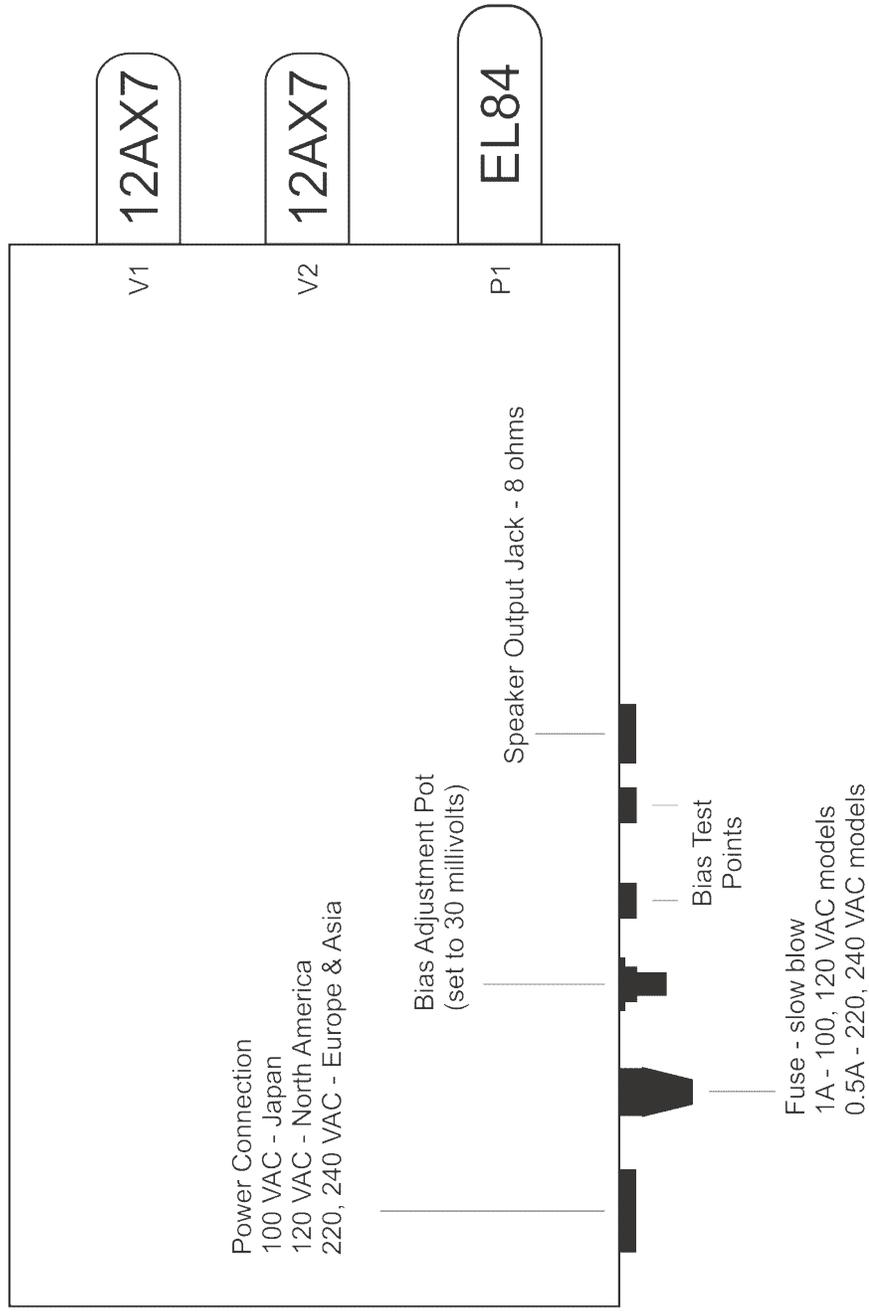
Pickup	Sound	Volume	Tone	Mode	Master
Neck	Clean			Up	N/A
Middle	Jazz			Up	N/A
Bridge	Snappy			Up	N/A
Bridge	Clean Crunch			Up	N/A
Neck	Dark Sustain			Down	
Bridge	Rock			Down	

Humbucker

Pickup	Sound	Volume	Tone	Mode	Master
Neck	Clean			Up	N/A
Middle	Clean			Up	N/A
Bridge	Grit			Up	N/A
Neck	Midnight Fripp			Down	
Bridge	Slow Ride			Down	

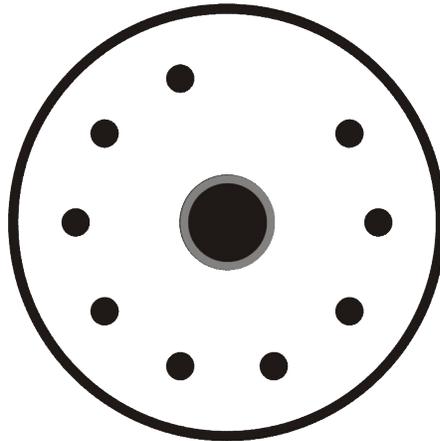


CARR AMPLIFIERS CHASSIS DIAGRAM



IMPORTANT REMINDERS

- Please keep the original packing materials in case your amp needs to be shipped for service.
- When inserting preamp tubes, the tube pins must line up with the tube socket holes.



Do not insert tubes with missing or damaged pins. Do not insert the EL84 into a 12AX7 socket or vice-versa. See the Chassis Diagram or Tube Chart sticker for the correct tube placement.

- To reduce the risk of electric shock, keep the unit away from excess moisture.
- No user serviceable parts inside.
- Potentially lethal voltage present.

CARR AMPLIFIERS WARRANTY

All Carr amplifiers are warranted to be free from defects in workmanship (solder joints, hardware assembly etc.) for the lifetime of the original owner, and free from defects in materials (including cabinet) for three years from the date of purchase by the original owner, provided that:

- The owner mails the signed warranty registration card (next page) and a copy of the original sales receipt to Carr Amplifiers within thirty days of purchase.
- Problems are not the result of misuse, abuse, tampering, circuit modification, improper tube installation (incorrect orientation of tubes can damage the amp), or spilled beverages, as these will void the warranty.
- The amplifier is shipped to Carr Amplifiers in the original packing materials with freight paid by the purchaser. We pay the return shipping after the warranty work is complete.

Tubes, speaker(s), and reverb tanks carry a ninety-day warranty, and are subject to the same terms and conditions as above.

Please call us at 919-545-0747 if you have a warranty claim. Be prepared to provide the model and serial number of your amp. We will issue a Return Merchandise Authorization number (RMA#) before the amplifier is shipped for service.

For customers outside of North America, warranty and repair service is provided through the dealer where the amp was purchased.

Shipping address:

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23 Rectory St., Suite E
Pittsboro, NC 27312

Mailing address:

Carr Amplifiers
433 W. Salisbury St.
Pittsboro, NC 27312

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