

# CARR AMPLIFIERS



*Impala*

OWNER'S MANUAL

*January 2013*



## **Impala Instructions**

Thank you for purchasing a Carr Impala amplifier.

The Impala takes inspiration from a central 1960s workhorse, The Blackface Bassman. We harnessed the guttural, clean vibe then expanded this stalwart with all Tube Reverb, a super usable Master Volume, and The Carr Voice. The result is a new amplifier, full of life and determination – The Impala.

Please take time to familiarize yourself with this manual.

**Volume** – Adjusts the loudness and drive of the amplifier. The Impala has an extended range volume control and you will find you can sweep from sweet and clean to very distorted.

**Treble** – Varies the top end from dark to bright.

**Mid** – Varies the midrange frequencies and is very interactive with the Treble control. For a 60s American tone, set the Mid to the ‘68’. The tone becomes more aggressive as you advance the Mid past 1 o’clock. When the Mid is set near full, the Treble control’s effect is more subtle.

**Bass** – Varies the low end from lean to full. To retain clarity, turn the Bass down at higher volumes.

**Reverb** – Controls the amount of reverb sound from none to deep and lush. The Impala uses an audio taper pot for reverb. The effect is very subtle till you hit 12 o’clock on the dial allowing great control over the amount of reverb.

**Master** – The interface between the pre amp and the power amp on the Impala. For the cleanest sound, set the Master to Full and set the Volume control low. For thicker clean tones, set the Master to 11 o’clock and the Volume to 12 o’clock. For overdriven tones, set the Volume to 3 o’clock or higher and set the Master to the desired listening level. Higher Master settings will bring in more output section overdrive when the Volume is set high.

**Standby** – Set the amp to Standby (switch baton *down*) before turning on the power switch (see *On-Off-On* below). After 1 minute of warm up, switch the Standby baton *up*. The amp is ready to be played. Using the Standby switch every time the amp is turned on will prolong tube life. **Note:** the Impala uses a very large pre amp power supply capacitor – it will take about 45 seconds for the pre amp to come up to full volume once Standby is in Play.

**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 Impala is protected by a 2 Amp slow blow fuse for 120v and 100v (North America and Japan) models or a 1 Amp slow blow fuse for 220v and 240v (Europe and Asia) models. Please consult us or a qualified tech for assistance in the event of a fuse blowing. The fuse is located on the bottom of the chassis by the power cord.

**Speaker output jack** – The speaker output jack is located between the power tubes on the back of the chassis (see *Chassis Diagram*). The Impala is designed to drive an 8 ohm load. Maximum power and tone will be realized when connected to an 8 ohm speaker or cabinet. The speakers in Impala combos and extension cabinets are configured to provide the amplifier with an 8 ohm load.

The Impala will work with a 16 ohm or 4 ohm cabinet with the following caveat - you will lose a little power from the impedance mismatch and the power tubes will have to work a bit harder and thus age faster. This effect though is minimal.

To run an external cabinet, turn the Impala OFF, unplug the internal speaker (combo amps) and plug in the external cabinet's speaker cord. Alternatively, a "Y" speaker cord can be used to run an 8 ohm external cabinet along with the internal speaker(s) of a combo amp without damage to the amp (the total impedance or speaker load in this case will be 4 ohms – see the previous paragraph).

Damage will result from operating the Impala without a speaker load.

## **Biasing Your Impala**

The Impala is a Fixed Bias amplifier and requires a Bias adjustment any time the power tubes are replaced. The Impala is designed around the 6L6GC family of tubes. 6L6GC, 5881, and 7581A are all compatible.

To adjust bias you will need a Volt Ohm Meter. These are readily available for as little as \$10 from any electronics supply store.

Look at the amp from the back. You will find two test points on the bottom of the chassis to the right of the power tubes. Insert the red meter probe into the red test point and the black probe into the black test point. Set the meter to Volts DC. Turn the amp on, let it warm up in the standby position then turn the amp to play.

You will see the meter read the voltage over a 1-ohm resistor in the power tube cathode circuit. On the back of the chassis between pre amp tubes 3 and 4 you will note the shaft of a potentiometer sticking out – this is the bias pot and what you will turn to vary the bias. As

you turn it one way the meter will read more voltage and as you turn it the other way you will see the voltage decrease.

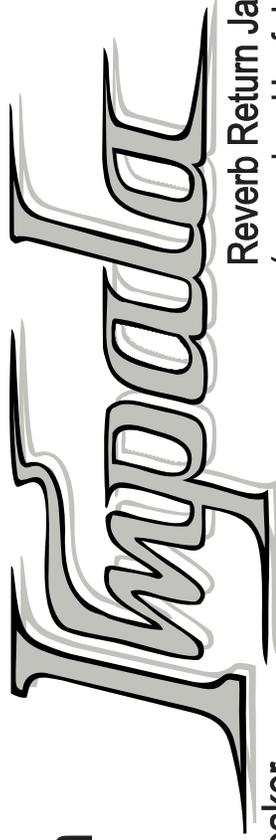
We recommend setting the bias to .065Vdc. The factory bias point is .065Vdc with 120Vac on the mains line (wall voltage). **NOTE:** *The bias pot can be inadvertently turned if you are reaching up into the back of the cabinet. If you think you may have turned the bias pot by mistake simply follow the above directions to rebias the Impala.*

**If you are uncomfortable with the above instructions please see a qualified electronics tech 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).*

Drivers Ed	Volume	Treble	Mid	Bass	Reverb	Master
Spanky Clean						
Atmosphere						
Quiet Crunch						
Eviction Overdrive						

# CARR AMPLIFIERS CHASSIS DIAGRAM



Power Connection  
150W Max

Fuse

Speaker  
- Jack -  
8 ohms

Reverb Return Jack  
(on speaker side of chassis)

Bias Pot

Set To 65 mv

Reverb Send Jack  
(on speaker side of chassis)

P2

P1

V4

V3

V2

V1

6L6GC

6L6GC

Bias  
Test  
Points

12AT7

5751

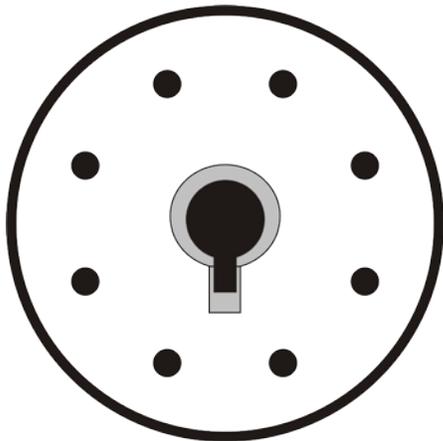
12AX7  
Sub OK

12AT7

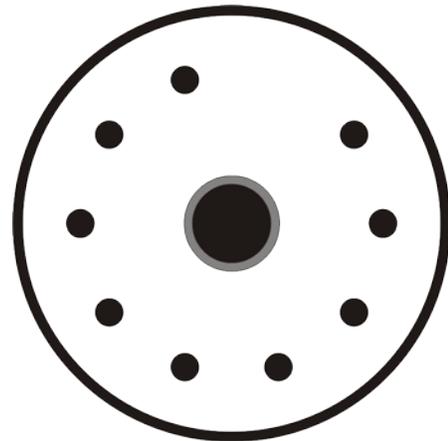
12AX7

# Important Reminders

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



*Do not insert power tubes with missing or damaged keys or pins.*



*Do not insert preamp tubes with missing or damaged pins.*

- 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:**

Carr Amplifiers  
23 Rectory St., Suite E  
Pittsboro, NC 27312

**Mailing address:**

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

**Tel:** 919-545-0747

**Fax:** 919-545-0739

[www.carramps.com](http://www.carramps.com)  
[info@carramps.com](mailto:info@carramps.com)

# Carr Amplifiers Owner's Registration

To validate your warranty, please mail the **completed form** and a **copy of your original sales receipt** within 30 days of purchase to:

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

*We do not sell, give away, or otherwise share customer information with third-parties.*

**MODEL:** \_\_\_\_\_

**SERIAL NUMBER** (located on the tube chart sticker and the bottom or back panel of the chassis): \_\_\_\_\_

**PURCHASED FROM:** \_\_\_\_\_

**DATE OF PURCHASE:** \_\_\_\_\_

**OWNER'S NAME:** \_\_\_\_\_

**OWNER'S ADDRESS:** \_\_\_\_\_

**OWNER'S E-MAIL:** \_\_\_\_\_

**TYPE OF MUSIC YOU USUALLY PLAY:** \_\_\_\_\_

**HOW YOU FIRST HEARD ABOUT CARR AMPLIFIERS:** \_\_\_\_\_

**YOUR ADDITIONAL COMMENTS ARE INVITED:** \_\_\_\_\_

**I have read and understand the terms and conditions of the warranty agreement as set forth in the owner's manual.**

**Signed:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**The above must be signed and dated to validate the warranty.**

**With your completed registration form you are eligible for a complimentary Carr Amplifiers t-shirt!**

**Please specify your size:**

- \_\_\_\_\_ **Small**
- \_\_\_\_\_ **Medium**
- \_\_\_\_\_ **Large**
- \_\_\_\_\_ **X-Large**
- \_\_\_\_\_ **XX-Large**