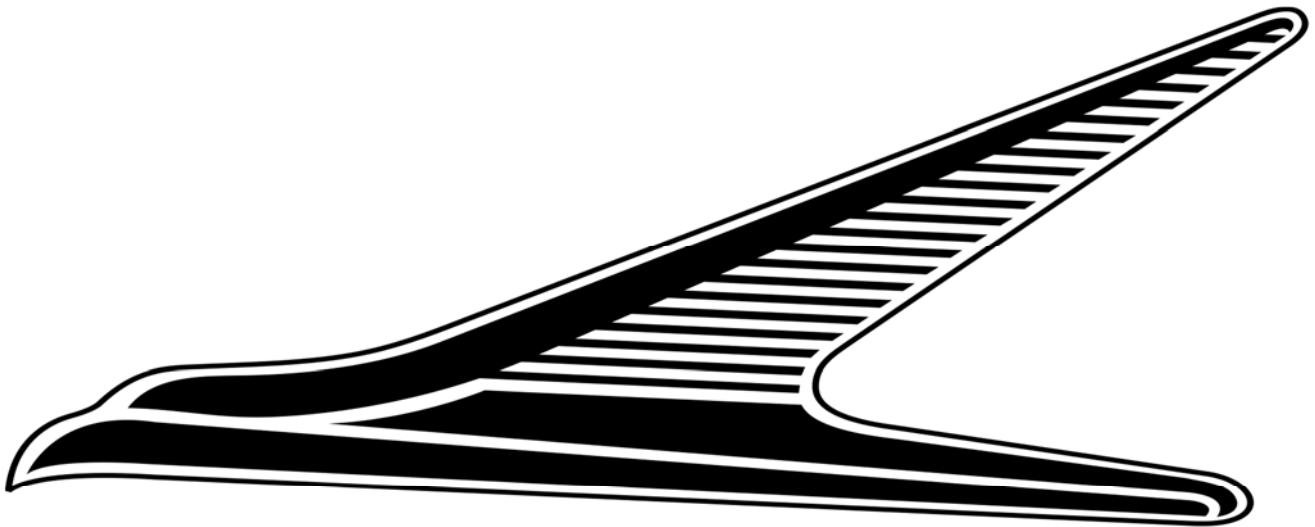


# CARR TELSTAR



***TELSTAR***

# OWNER'S MANUAL

*October 2018*

## Telstar Instructions

Thank you for purchasing a Carr Telstar amplifier!

The Telstar blends the sinewy harmonic assertion of EL84s with the deep full control of 6L6s in a new and unique push pull recipe. You may have a 6L6 amp or an EL84 amp but not an amp that uses both types in harmony for a new pallet of expression. The Telstar sound can easily range from haunting rich cleans to creamy overdrive. Our Lean/Lush switch tailors the body of the tone while the 53/58 switch changes the overall gain structure and the frequencies the Tone control emphasizes, sonically treading the years from early Fullerton 50s roundness thru late 50s proto British bite.

Plus, you get everything Carr is known for, in-house crafted light weight cabinets, bleeding edge power supply components mixed with Mid-Century signal elements, and true point to point wiring. Please take time to familiarize yourself with this manual.

### **17 Watts full output** - (*Double Digit Power*)

6L6 (stock) plus EL84 power tubes together in push pull class A - (*Unprecedented*)

Use any octal power tube with the EL84 without re-biasing - (*experimental*)

53/58 switch – round early 50s Fullerton to Proto British Hot Rod - (*Macho*)

Lean/Lush switch – tight to rich bass - (*elastic*)

All tube Reverb - (*Aquatic*)

Built-in variable attenuator 17 watts down to zero - (*Useful*)

Mid Century Midrange - (*confident*)

Extended range One Knob tone control - (*Less is More*)

Early 60s thin wall space age cabinet - (*Solid Tone*)

Custom Eminence ‘Valiant’ speaker – (*Sincere to Sinister*)

1) 6L6 (*EL34 and 6V6 compatible*) + 1) EL84 1) 6SL7 Octal 1) 12AX7 1) 12AT7

100% Point to Point wiring - Solen Aerospace Satellite power supply capacitors

Selected mixed resistor types – Jupiter Tone Caps - Custom Carr power/output transformers

- Local made saddle leather handles – Cabinets built in house

Carr Amplifiers began in 1998 with an irresistible passion for hand wired vacuum tube guitar amplifiers. We take inspiration from the classics of the 50s, 60s, 70s, and 80s then imagine new features, refinements in tone, reliability, and ease of operation. Essential tone with organic tactile feel is our signature.

**Man Made**

**Lean/Lush toggle** – The Lean/Lush switch lets you tailor the fullness of the low-end frequencies. When really pushing the amp or when you want a more astringent vibe Lean is where you want to be. For thick and deep bass especially at lower volumes Lush is best. As you crank the Volume you will find Lean can tighten up loose bass.

**Volume** – Adjusts the loudness and drive of the amplifier. Haunting clean tones are available from 0 to about noon on the dial depending on your guitar pickups output. As you advance the Volume above noon you will hear more and more distortion as the power section starts to overdrive. *Note – in '53 mode advancing the Tone control really adds to the heat!*

**Tone** – Mid-Century tone controls leave the midrange flat compared to the scooped sound of the 60s. The single knob has a surprising range from dark and mysterious at zero thru sweet and mellow as you advance to 12 o'clock on the dial then to barking forward drive in the 53 mode or glassy spank in 58. All of these vibes are fun, usable, and with great feel.

**Reverb** – Controls the amount of reverb sound from none to deep and spacious. *Note: the character of the Reverb changes slightly as you toggle from 53 to 58 modes.*

**53/58 toggle** – The 53/58 switch changes the frequencies the Tone control emphasizes plus the gain structure harking back to the evolution in circuitry thru the 1950s at Fullerton. In '53 mode the Tone control is working from the Midrange up so turning up the tone in 53 give you that early 50s bark and large curd overdrive. In '58 mode the frequencies the tone works on are higher in spectrum – almost to the black Face era of shimmer. You will find turning up the Tone in 58 yields a pleasing sharpness and glass to the tone. Also 58 Mode has more drive than the 53 setting echoing the increasing gain trend from early 50s thru late 50s Fullerton. The Tone control and 53/58 toggle are highly interactive. At extreme Volume and Tone settings the differences are minimized as the amp does not have the headroom to express them – this though is a wonderful sound!

**Attenuator** – When the knob is full clockwise the attenuator is out of the signal path and the amp delivers its full 17 watts to the speaker. When the knob is rotated counter clockwise the attenuator becomes active and you can continuously vary from 17 down to around 0 watts. *Note: The Attenuator is a power L-Pad and as such has a somewhat coarse feel and action. The tracking is linear, though at the very bottom of the track there is a slight jump from minimum power to zero. This is normal and is a result of high power wire wound L-Pad construction.*

**Standby – Off – Play** – The Toggle switch baton in the middle position is Power Off. To play set the amp to Standby (switch baton *down*). After 1 minute of warm up, switch the

Power baton *up* to Play. The amp is ready to be played. Using the Standby setting every time the amp is turned on will prolong tube life.

## **Bottom Panel**

**Fuse** – In the unlikely event that a tube fails, the Telstar is protected by a 1.5 Amp slow blow fuse for 120v and 100v (North America and Japan) models or a 0.75 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 third and fourth pre amp tubes on the chassis (see *Chassis Diagram*). The Telstar is designed to drive an 8 ohm load. Maximum tone will be realized when connected to an 8 ohm speaker or cabinet. The custom Valiant speaker in stock Telstar combos is an 8 ohm load.

To run an external cabinet, turn the Telstar 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 a 16 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 5.3 ohms – see the previous paragraph).

Damage will result from operating the Telstar without a speaker load or into a 4 ohm load. The Attenuator is designed to operated with an 8 ohm load only.

## **Biassing your Carr Telstar**

The Telstar is a partial cathode bias (self bias) amplifier and as such does not require a bias adjustment when changing tubes. Each power tube has its own self bias network.

Please refer to the Tube Chart on page 5 for tube locations.

*Note: V3 must be a 6SL7 dual triode octal pre amp type – this is not a power tube.*

Only EL84 types should be used in the ceramic 9 pin socket.

The last octal 8 pin socket (without a tube clip) to the left side of the amp as you look at the amp from the back is the other power tube location. The stock tube here is a 6L6 which we find the best all around match to the EL84. Any brand 6L6 will work. You may also use 6V6, KT66 or EL34 types in this location without rebasing the amp. Each of these has its own vibe and each will provide slightly different power outputs.

*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** (These give you a place to start – the Telstar has a huge range of possible tones – have fun experimenting and remember that guitar pickups vary a lot and you will need to tweak to your guitar and ear!) –



Sound	Lean/ Lush	Volume	Tone	Reverb	53/58	Atten
Deep Clean Dream	Lush				53	To Taste
Straight Talk	Lush				58	To Taste
Rope-a-Dope	Lean				53	To Taste
JTM&M	Lean				58	To Taste

**Power Connection**  
100 VAC - Japan  
120 VAC - North America  
220, 240 VAC - Europe & Asia

**Fuse - slow blow**  
1.5A - 100, 120 VAC models  
0.75A - 220, 240 VAC models



**TELSTAR**

**Carr Amps Man Made USA**

**Reverb Return Jack**  
(on speaker side of chassis)

**Reverb Send Jack**  
(on speaker side of chassis)

**Speaker Output Jack**  
-8 ohms

**P2**

**V3**

**P1**

**V2**

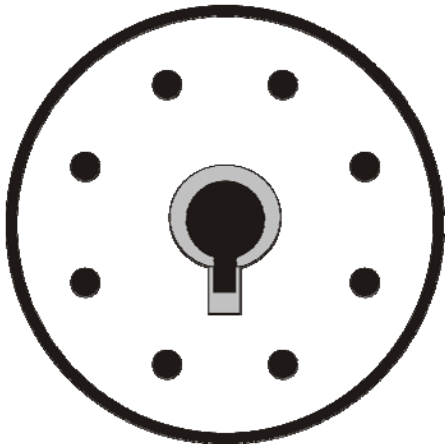
**V1**



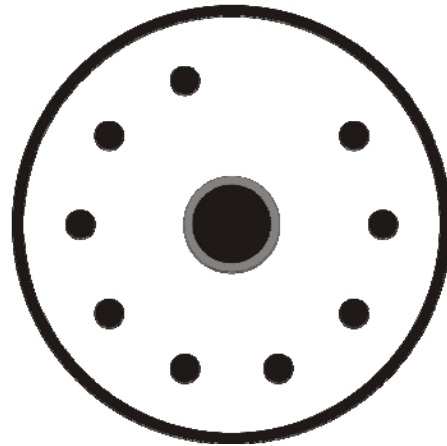
**6L6, EL34, 6V6**

# 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**