

CARR AMPLIFIERS

SLANT
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OWNER'S MANUAL

Revised 15 Oct 2007

Slant 6V Instructions

Thank you for purchasing the Carr Slant 6V amplifier. The Slant 6V is our most versatile amp capable of yielding a huge array of tones. Our channel switching scheme uses a high quality, gold contact relay to organically select between the 100% discrete channels. The guitar signal does not have to go through any solid state devices in this style of channel switching. Our goal was to fully optimize each channel for its job without compromise. Cathode and fixed bias pairs of power tubes and a tube rectifier set the Slant 6V apart as a truly unique design. Please take time to familiarize yourself with this manual.

Clean Channel

Volume – Adjusts the loudness of the clean channel.

Treble – Varies the top end from dark to bright.

Middle – Varies the mid frequencies and is very influential in taking the tone from a 60's blackface sound (minimum to 11 o'clock) to a pushed tweed mid sound (11 o'clock to full).

Bass – Varies the low end from lean to full.

Reverb – Controls the amount of reverb from none to deep and lush.

Channel Selector Switch – Selects the active channel: clean (switch baton *left*), or overdrive (switch baton *right*). The switch is active only when the *Footswitch/Panel* switch on the back panel is in the *Panel* position. See *Footswitch* below for more information.

Overdrive Channel

Volume – Adjusts the amount of overdrive from slight (8 to 10 o'clock) to distorted (10 o'clock to full) with more and more grind and sustain.

Boost Switch – Increases the gain before the master volume control (see *Master* below) by a factor of 3. Though it does result in an increase in loudness, its main effect is to produce more overdrive and sustain. ON when the switch baton is *down*, OFF when the switch baton is *up*.

Master – Adjusts the overall loudness of the overdrive channel.

Treble – Varies the top end from balanced to forward.

Middle – Varies the mid frequencies and is very influential in taking the tone from dark to cutting.

Bass – Varies the low end from lean to full.

Standby – Set 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. Set the amp to standby when adjusting the *Impedance* and *Power* selectors (see below).

Back Panel

On – Off – On – Selects between two ON positions (one is wired in opposite phase of the other) and the OFF position. If you receive a shock from another piece of equipment such as a microphone or another amp, or hear line noise static, switch to the opposing ON position.

Mains Fuse – The Slant 6V is protected by a 2 Amp Slow Blow fuse for 120v and 100v (US and Japan) models, and a 1 Amp Slow Blow fuse for 230v-240v (Europe) models. Please consult us or a qualified tech for assistance in the event of the mains fuse blowing.

High Voltage Fuse – The Slant 6V is further protected against damage from tube failure by a 3/8 Amp fast blow fuse (all domestic and export models). If the high voltage fuse blows, one of the power tubes has most likely gone bad. Please consult us or a qualified tech for assistance in the event of the high voltage fuse blowing.

Bias Test Points – see *Biasing your Slant 6V* below

Power Selector – *When adjusting the Power selector, the amp should be set to standby.* The Power selector allows you to engage either pair of output tubes (half power) or all 4 at once (full power). Changing the power setting may require an adjustment of the impedance setting. See *Impedance Selector* below for the correct setting combinations.

Full Power: The full power setting brings the best from both the cathode and fixed bias pairs of output tubes. The snappy immediacy of the fixed bias pair is fleshed out with the more complex midrange of the cathode bias pair. The amp has added dimension with a more organic quality to its dynamics in full power. The full power setting has the most clean headroom.

Half Power,

Fixed Bias: This half power setting delivers a punchy attack, with more power than the cathode bias setting, for a tight, crisp sound.

Half Power,

Cathode Bias: This half power setting takes advantage of the power tubes inherent, natural compression, giving plentiful sustain and tasty harmonic distortion especially when pushed with the overdrive channel.

Footswitch – The footswitch included with the Slant 6V can be used to remotely switch between the clean and overdrive channels. Next to the footswitch jack is a switch that toggles control of the channel switching function between the footswitch and the front panel switch. To change channels using the footswitch, set the switch baton to *Footswitch*. To change channels using the front panel switch, set the switch baton to *Panel*.

Speaker Output Jacks – The Slant 6V has two speaker output jacks. When connecting just one speaker cabinet, you may plug into either of the two output jacks. The **total speaker load** is equal to the speaker load of the connected cabinet (4, 8, or 16 ohms). You will need to know your total speaker load in order to set the Impedance Selector correctly. The total speaker load of all Slant 6V combo cabinets is 8 ohms. Set the Impedance Selector according to the instructions below (see *Impedance Selector*).

When connecting two speaker cabinets at once, we recommend only using cabinets with matching speaker loads. For example, if you are already connected to one 8-ohm cabinet, the second cabinet you connect to should also be 8 ohms. When connected to two cabinets, the **total speaker load** is calculated by dividing the speaker load of the individual cabinets by 2. In the two 8-ohm cabinet example, the total speaker load would then be 4 ohms. If the two cabinets were each 16-ohm cabinets, the total speaker load would be 8 ohms. Use the calculated total speaker load to set the Impedance Selector according to the instructions below (see *Impedance Selector*).

Impedance Selector – *When adjusting the Impedance and Power selectors, the amp should be set to standby.* Correctly setting the Impedance selector depends on two factors: (1) Your Power Selector setting and (2) The **total speaker load** of your cabinet(s). Total speaker load is explained above in the *Speaker Output Jacks* section. Proper setting of the Impedance selector optimizes the amplifier's performance and produces a fuller, richer tone.

When the Power Selector is set to Full Power, set the Impedance Selector to match the total speaker load. For example, when connected to the stock 8-ohm Slant 6V cabinet, set the Impedance selector to 8 ohms.

When the Power Selector is set to one of the Half Power settings, set the Impedance Selector to *one half* of the total speaker load. For example, when connected to the stock 8-ohm Slant 6V cabinet, set the Impedance selector to 4 ohms.

Example speaker configurations and their impedance settings:

Speaker Configuration	Total Speaker Load	Impedance Selector setting when Power Selector is set to:		
		Full Power	Half Power, Fixed Bias	Half Power, Cathode Bias
Internal speaker(s)	8 ohms	8 ohms	4 ohms	4 ohms
Carr extension cabinet	8 ohms	8 ohms	4 ohms	4 ohms
Internal speaker(s) and Carr extension cabinet	4 ohms	4 ohms	<i>*See below</i>	<i>*See below</i>
Marshall-style 4x12 extension cabinet	16 ohms	16 ohms	8 ohms	8 ohms

**In this configuration, a 2-ohm setting of the Impedance Selector would be required in either of the half power modes. In this case, you should use the 4-ohm setting of the Impedance Selector. This will not harm the amplifier, but the power tubes will have to work harder and thus age faster.*

Mixing speakers and cabinets of differing loads is not recommended.

Effects Loop – The effects loop is a simple, unbuffered insertion point between the Slant 6V’s preamp and power amp sections. Connect a guitar cable from the Send jack to the input of your effects chain. Connect another guitar cable from the output of your effects chain to the Return jack. Set the *Loop/Bypass* switch to *Loop*.

The settings of the Slant 6V volume controls affect the level of the signal sent to the effects loop. If you are playing at high volume, the effects send signal level may be very high—high enough to overload some of the effects in your effects chain. Conversely, if you are playing at a very low volume, your effects may seem noisy because they aren’t getting enough signal from the effects send. Using buffered effects with input and output volume controls can correct these problems should they arise.

Many effects are designed to work best when connected between the guitar and the amp—experiment to find out what works for you.

When the effects loop is not in use, set the *Loop/Bypass* switch to *Bypass*.

Biasing your Slant 6V

The bias needs to be adjusted whenever the fixed-bias pair of 6V6s (inner pair of power tubes) are changed. This is easy to do with a voltmeter:

1. With the new tubes installed, set the amp for half power, fixed bias, and turn it on.
2. Set the voltmeter to Volts DC or Millivolts DC (0.001 Volt = 1 Millivolt).
3. Locate the bias test points on the back panel, and plug the red lead of the voltmeter into the red test point and the black lead into the black test point.
4. Locate the bias adjustment control on the bottom of the chassis near the power transformer (on the left and toward the front if you are looking at the back panel--see *Chassis Diagram*), and turn it left or right until the voltmeter reads 0.066 Volts or 66 Millivolts.

Please note the bias will vary a little bit as the amp warms up. Fluctuations in the AC line voltage can also cause the bias to fluctuate – this is normal and not to be of concern.

If you do not feel comfortable making the adjustment yourself, take the amp to a competent tech.

A note about changing power tubes: Replace power tubes with matched pairs of 6V6s. The fixed-bias pair (inner pair) should be a matched set, and the cathode-bias pair (outer pair) should be a matched set (see *Chassis Diagram*). A more foolproof option is to purchase a matched quad, which allows you to interchange tubes between cathode bias and fixed bias sockets without fear of a mismatch. The Slant 6V can only use 6V6 power tubes.

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

Clean Channel

Pickup	Sound	Volume	Treble	Middle	Bass	Reverb
Single coil	Warm 60s American					
Single coil	Surf					
Single coil	Atmosphere Neck					
Humbucker	Warm 60s American					
Humbucker	Bridge Bark					
Humbucker	Atmosphere Neck					

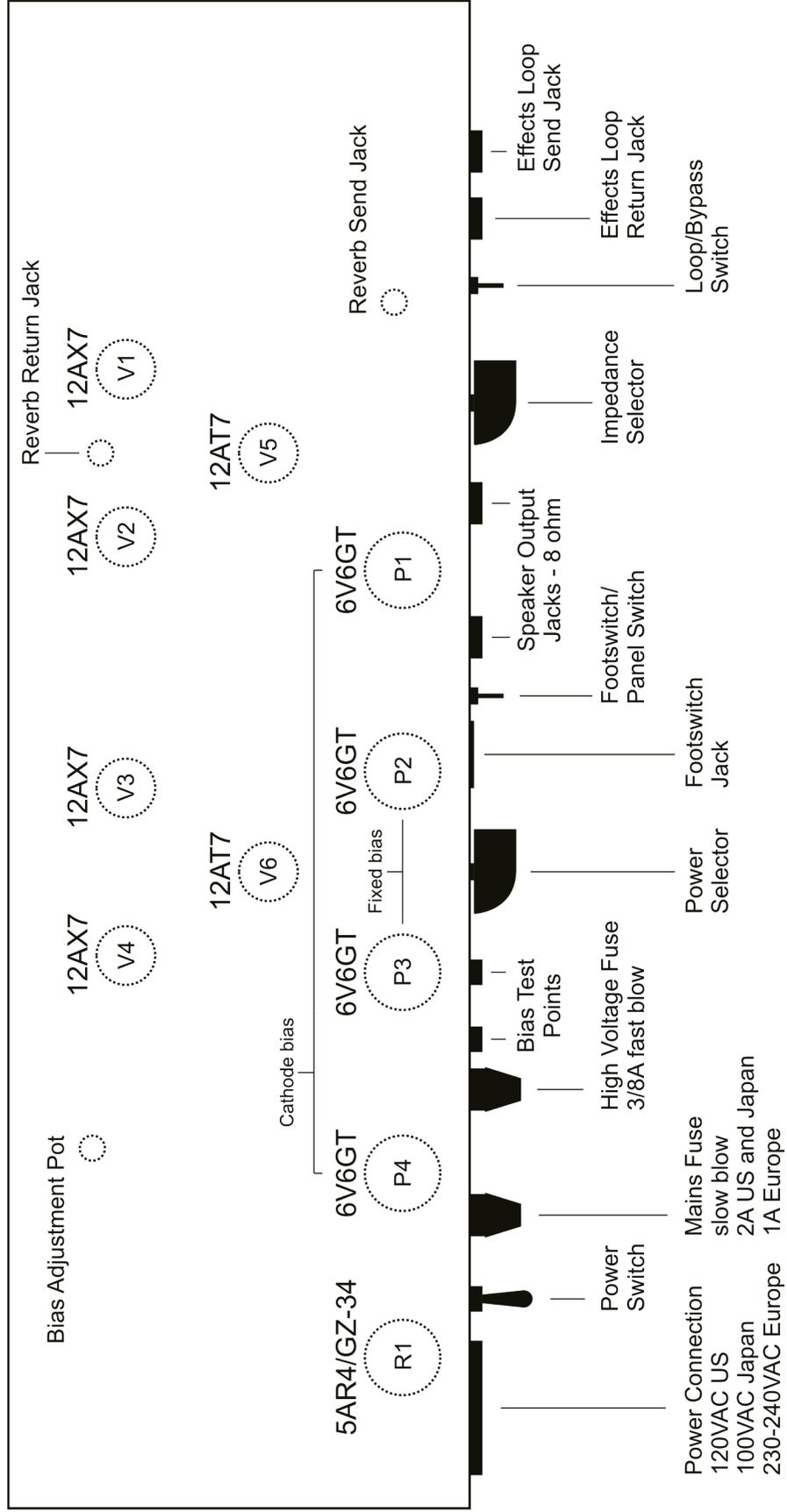
Overdrive Channel

Pickup	Sound	Volume	Boost	Master	Treble	Middle	Bass
Single coil	Texas Neck		Up				
Single coil	Brit AC Bridge		Up				
Single coil	73 Rock		Down				
Single coil	Neck Swell		Down				
Humbucker	1972 Punch		Up				
Humbucker	Clear Punch		Up				
Humbucker	Cutting Rock		Down				
Humbucker	Neck Bow		Down				



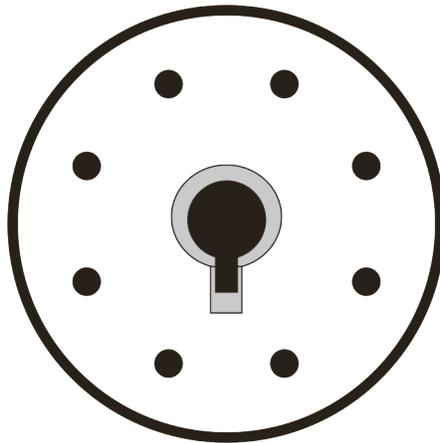
CARR AMPLIFIERS CHASSIS DIAGRAM

Items indicated by a dashed line are on the bottom of the chassis.



IMPORTANT REMINDERS

- Please keep the original packing materials in case your amp needs to be shipped for service. Ask your dealer if they did not provide them.
- When changing power tubes the power tube key must line up with the tube socket keyway.



Do not insert tubes with missing or damaged keys.

- 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.

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.

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

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