Congratulations on your purchase of the VINTAGE TUBE SERIES all tube amplifier. Carvin has been building tube guitar amplifiers since 1949. They have been used by top professionals like; Joe Walsh, Chet Atkins, Jeff Beck, James Burton, Jorma Kaukonen, and many other great musicians. You will discover that these amplifiers represent a significant sound improvement over conventional tube amplifiers. Spend time with your new amp and get to know it's many sounds.

TECHNICAL DESIGN OF THE VINTAGE TUBE SERIES

The VINTAGE TUBE SERIES has a 100% tube signal path - no IC's, FET's or transistors. The design criteria was to build an all-tube guitar amp that sounded better than anything else on the market. This meant that the VINTAGE TUBE SERIES was going to be totally new from the ground up and that it was going to be an all tube design.

DYNAMIC EL84 POWER TUBES

Premium EL84 power tubes are selected for their excellent saturation and power soak characteristics. EL84's are used for their ideal transconductance delivering a tight bottom and soft drive with superior definition.

HIGH IMPEDANCE GUITAR INPUT

Carvin has long known about the effects of miss-loading a guitar pickup which can cause high frequency loss. The VINTAGE TUBE SERIES guards against this loss with its ultra high input impedance. Also, we considered the capacitance of the average shielded guitar cable which can reduce the high frequency response of your guitar pickups. Unlike other amplifiers, we purposely avoided adding capacitance anywhere in the preamp to control high frequency oscillations. Instead, we controlled oscillations through careful component layout and lead placement allowing its shimmering highs to be reproduced.

CLEAN AND SOAK CHANNELS

The equalization of the clean and soak channels is designed to offer clarity to your instrument. Special mud-cutting circuits reduce levels in the 500 to 700 Hz range which normally cause loss of tone defintion. You will also take notice of the clean channel rear PRESENCE control (50w models) which adds acoustic voicing to your instrument. This control boosts only the guitar's very highest harmonics which are in the 10kHz range instead of the normal 3K Hz of a bright switch.

For your records, you may wish to record the following information.

Serial No._____ Invoice Date_____

76-10302E 0811

TONE CONTROLS

The T-Bridge passive BASS, MID and TREBLE tone controls offer a wide range of tone settings. Take full advantage by setting them where they sound best. Your sound may not be at center (5 on the dial). Instead, the treble and bass may need to be at 10 while the mid control at 0 (or) the treble at 1 and the bass at 10 depending dual or single coil pickups. The greater range of these controls comes from the high impedance 1 meg sealed pots (most guitar amps use 250k pots). The frequency of the bass control is set at 80 Hz while the mid control is set at 650 Hz. The treble control is set at a very high 11k Hz giving the VINTAGE TUBE SERIES it's dynamic highs.

REVERB

The FS22 footswitch for the long tailed REVERB system in the VINTAGE TUBE SERIES switches only the reverb send leaving the tail of the reverb to decay naturally, the way it's done in the studio. A special pre filter eliminates the spring "boing" normally heard in other systems, giving it a lush sound. The reverb system offers vibrant clarity with full depth reminiscent of the sixties tube amps. (Switching function on 50 watt models only.)

RECEIVING INSPECTION—read before getting started

INSPECT YOUR AMP FOR DAMAGE which may have occurred during shipping. If damage is found, please notify the shipping company and CARVIN immediately.

SAVE THE CARTON & ALL PACKING MATERIALS. In the event you have to re-ship your unit, always use the original carton and packing material. This will provide the best possible protection 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 service if needed in the future.

SHIPMENT SHORTAGE. If you find items missing, they may have been shipped separately. Please allow several days for the rest of your order to arrive before inquiring.

RECORD THE SERIAL NUMBER on the enclosed warranty card or below on this manual for your records. Keep your portion of the card and return the portion with your name and comments to us.

GETTING STARTED QUICKLY

FIRST, SET THE REAR 120V/240V AC SWITCH FOR THE PROPER AC VOLTAGE.

If you are like most players, you probably want to plug in your new amp and get started playing it right away. You can read the rest of the manual later to learn the finer points of operating your amp. To get started you will need your VINTAGE TUBE SERIES amp, a 120 or 240 AC grounded power outlet, your instrument and a standard guitar cord. If you have the VT16 or VT50 head, you will also need a speaker and speaker cable. Set the Speaker Ohms switch for the speaker you are using.

After checking the rear AC VOLTAGE switch, set Power and Standby switches to OFF and plug into an AC voltage source.

Now turn all Volume controls to "0" and set Drive and Tone controls to the "5" center position. If you have the FS22 foot switch (50-watt models), plug it into the rear foot switch jack for switching the channels and reverb. Note: The channel SELECT switch must be selected for channel 1 for the FS22 to function.

Now, turn the POWER switch ON and allow a few minutes for the tubes to warm up. For 50-watt models, turn on the STANDBY switch. Gradually raise the Volume control, adjust the Drive and Tone controls and you are ready to go. If you feel your amp is malfunctioning turn the Power OFF and check all connections and settings. Occasionally tubes are damaged or loosened in shipping.

VT16, VINTAGE16 SPECS:

RMS Power:	16/5 watts
Output Imp:	8 ohm, 16 ohm, or Silent Mode
Input Imp:	100,000 ohms
Tone Controls:	BASS: 80Hz MID: 600-700Hz TREBLE: 11kHz
Sensitivity:	16mV for full output
Voiced Line Out:	approx -23dB from Speaker Out
Preamp Tubes:	2 - 12AX7's (dual stage)
Power Tubes:	2 - EL84's
AC Power:	120/240VAC, 60VA, 50-60Hz
Fuse:	1A 250V slow blow, 5 x 20mm
VT16 head:	16W x 8.25H x 8.5"D, 18 lbs. 406 x 200 x 235mm, 8.2 kg.
Vintage16 (112):	16W x 18H x 8.5"D, 34 lbs. 406 x 447 x 235mm, 15.4 kg.
Combo Speaker:	One 12" **Carvin GT12** or optional **Celestion™ Vintage 30**
Cabinet:	7-ply hardwood, open back
Warranty:	One Year
Options:	**CV3MC** cover (combo) **112E** 1x12" Extention Speaker **212E** 2x12" Extention Speaker **Custom Vinyl Coverings**

VT50, NOMAD & BELAIR SPECS:

RMS Power:	50 watts
Output Imp:	4, 8 or 16 ohm
Input Imp:	100,000 ohms
Tone Controls:	BASS: 80Hz
Both Channels	MID: 600-700Hz TREBLE: 11kHz
Channels:	2 - switching
Ch 1 Sensitivity:	1mV for clipping
Ch 2 Sensitivity:	16mV for full output
Voiced Line Out:	approx -23dB from Speaker Out
Preamp Tubes:	4 - 12AX7's (dual stage)
Power Tubes:	4 - EL84's
AC Power:	120/240VAC, 210VA, 50-60Hz
Fuse:	3A 250V slow blow, 5 x 20mm
VT50 head:	22.5W x 9.5H x 10.25"D, 28 lbs. 571 x 248 x 260mm, 12.7 kg.
Nomad 112:	19.5W x 17.75H x 10.25"D, 42 lbs. 495 x 447 x 260 mm, 19 kg.
BelAir 212:	26W x 17.75H x 10.25"D, 55 lbs. 660 x 447 x 260 mm, 25 kg.
Combo Speakers:	One or Two 12" **Carvin GT12** or optional **Celestion™ Vintage 30**
Cabinet:	7-ply hardwood, open back
Warranty:	One Year
Options:	**CV3200, CV211, CV3212** covers **FS22** footswitch **112E** 1x12" Extention Speaker **212E** 2x12" Extention Speaker

CARVIN
12340 World Trade Drive, San Diego, CA 92128
800.854.2235 carvin.com

VINTAGE TUBE SERIES FRONT & REAR PANEL CONTROLS

FRONT PANEL

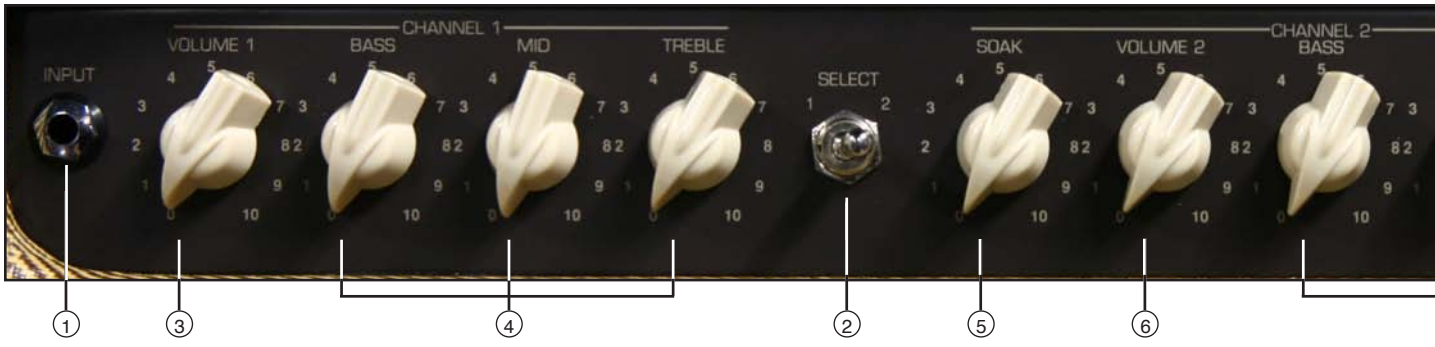
1. GUITAR INPUT

A standard 1/4" input jack feeds both channels through using the SELECT channel switch. Use a professional quality guitar cord no longer than 25 feet. Typical cable capacitance should be under 50pf - the longer the cord, the greater the capacitance (you can measure this with a capacitance meter). A long cable with high capacitance will reduce the overall treble response from your pickups.

2. CHANNEL SELECT

Set the channel SELECT switch to the desired channel. Channel 1 is designed for clean playing while channel 2 is designed for overdrive/sustain. For the FS22 foot switch to function, set the channel 2 SELECT switch to the channel 1 position.

VT50, BEL AIR & NOMAD



Set AC Voltage switch before plugging in.

CLEAN CHANNEL 1

3. CLEAN VOLUME 1

Use channel 1 for clean playing. Thanks to special mud-cutting circuits that work between the frequencies of 500 and 700 Hz, your guitar tones will be full and vibrant.

4. CLEAN - BASS, MID & TREBLE CONTROLS

You can start at 5 on the dial for each of the tone controls. However, these settings do not represent a normalized (flat) sound. You need to set them where they sound best! Most musicians like to reduce the MID'S between 1 and 4 for deeper bass and crisper highs. If your sound is too bright with single coil pickups, you may want to keep the rear PRESENCE control off.

LEAD CHANNEL 2

5. SOAK & 6. LEAD VOLUME 2

To get the Vintage overdrive, keep the VOLUME 2 (VOLUME for Vintage 16™) down until you have determined your final gain level - think of this control as a master volume. Turn the SOAK control up until you get the amount of overdrive you're looking for. The setting will vary for the same amount of overdrive depending on the pickups used - single or dual coil and the setting of your guitar. The Vintage 16™ low wattage allows you to turn up both controls to get different distortions.

7. LEAD - BASS, MID & TREBLE

To start off with, set the BASS, MID & TREBLE controls at their center (5) position. These controls can set to personal taste or according to the type of pickups used (dual or single coil). It is normal to decrease the BASS at higher playing levels.

MASTER SECTION

8. MASTER REVERB

Set the REVERB control for the desired amount (this works in both channels).

9. POWER INDICATOR LIGHT

As the amp is turned on, the red pilot light will illuminate.

REAR PANEL

10. AC POWER & 120/240 VAC SWITCH

IT IS VERY IMPORTANT TO VERIFY THE PROPER SETTING BEFORE PLUGGING IN THE AMP. The rear 120VAC / 240VAC switch must be set for the voltage in your area. An improper setting may cause a blown fuse or irreversible damage.

Make sure the cord is securely inserted into the back of the unit. Plug the cord into a grounded "3 prong" power source. No attempt should ever be made to defeat or use the amp without the ground connected.

The fuse is located within the AC power cord receptacle. To check or replace the fuse, remove the power cord, place a screwdriver under the "FUSE" cap and pull the fuse holder out. The fuse type is a 250V Slow Blow SB 5x20mm rated at 3A for 50W models and 1A for 16W models. Do not use fast acting fuses, only a SLOW BLOW (SB) type fuse will work.

11. POWER SWITCH

The POWER SWITCH is to be utilized as the master ON/OFF switch. The front panel jewel light will illuminate when the amp is switched on. (The power switch is on the front of the Vintage 16™.)

12. STANDBY SWITCH

Use the rear STANDBY SWITCH If you are taking a break. This turns the high voltage off, increasing the life of your power tubes while keeping the power and preamp tube filaments on for immediate use.

13. ACOUSTIC PRESENCE

The rear ACOUSTIC PRESENCE control adds a sibilance to the high frequencies of your guitar. Most presence controls work in the 3k to 4k range. However, the VINTAGE TUBE's presence starts at a very high 8k Hz delivering 10 dB at 12k Hz and continues to 20k Hz which extends all the upper harmonics of your guitar. The amount of sibilance will depend on the speakers used. To keep both channels totally independent, the ACOUSTIC PRESENCE is switched by relay only into clean channel 1. The effect of the ACOUSTIC PRESENCE will seem ever so slight, however, the result is added sibilance only to the ultra-high frequencies.

14. EFFECTS LOOP

For the lowest possible noise from an effects processor, use the effects loop instead of plugging the guitar into the effects and then into the amp. To use the EFFECTS LOOP, plug the INPUT of your effects into the SEND jack and the OUTPUT of your effects into the RETURN jack. Use shielded cables, not speaker cables. It is normal to have a slight gain reduction of several dB with some effects units. However, the amp has plenty of gain to overcome any loss.

15. FS22 FOOTSWITCH

Most foot pedals with 2 switches, a stereo cord and plug will work. However, Carvin's FS22 is recommended because of the correct identification label on the foot switch. First, the channel SELECT switch on the front panel must be selected to channel 1 before the footswitch will work. Now that you are connected correctly, the channels and reverb can be switched remotely. If a hum is heard in the speakers, the select switch is in the wrong position.

16. VOICED LINE OUT

The LINE OUT 1/4" jack is "CABINET VOICED" to prevent excessive bass or highs going to your mixer. This greatly aids in sound quality because you do not have to move your mixer EQ setting to the extreme. The 1.5 VAC output (reference to 50 watts output at 8 ohms) is more than adequate to drive any professional mixer or power amp.

17. SPEAKER IMPEDANCE SWITCH

The IMPEDANCE SWITCH offers the selection of 4, 8 or 16 ohms to match your speaker system. On the VT16 and Vintage16 the selection is 8 or 16 ohms, or Silent Mode.

For the Nomad or Bel Air combos the standard setting is 8 ohms. In the case of adding an extension cabinet, set the impedance switch to 4 ohms.

The SILENT MODE setting on the VT16 and Vintage 16 allows you to operate your tube amp without connnecting a speaker. To hear your Vintage Tube sound, connect the LINE OUT jack to a mixer for controlled live sound or recording.

18. SPEAKER JACKS

Two 1/4" SPEAKER JACKS are featured to operate several speaker systems at the same time. Move the IMPEDANCE SWITCH to the correct setting.

19. POWER MODE (Vintage 16™ only)

Shut the amp OFF before switching between NORMAL (pentode) 16W and TRIODE 5W modes. The TRIODE 5W mode will allow more harmonics to be produced by the power amp and acheive saturation at lower levels.

HELP SECTION

a) FEEDBACK FROM THE LEAD CHANNEL

The VINTAGE TUBE SERIES may feedback if the VOLUME, SOAK, TREBLE and PRESENCE are turned all the way up. Like other high gain tube amps, this is normal. To help reduce feedback and noise, lower the SOAK control to around 5 or 7 on the dial. Some of the best lead saturation may be found at around 6 instead of 10. Sometimes replacing V1 (12AX7A) can help reduce micrphonics.

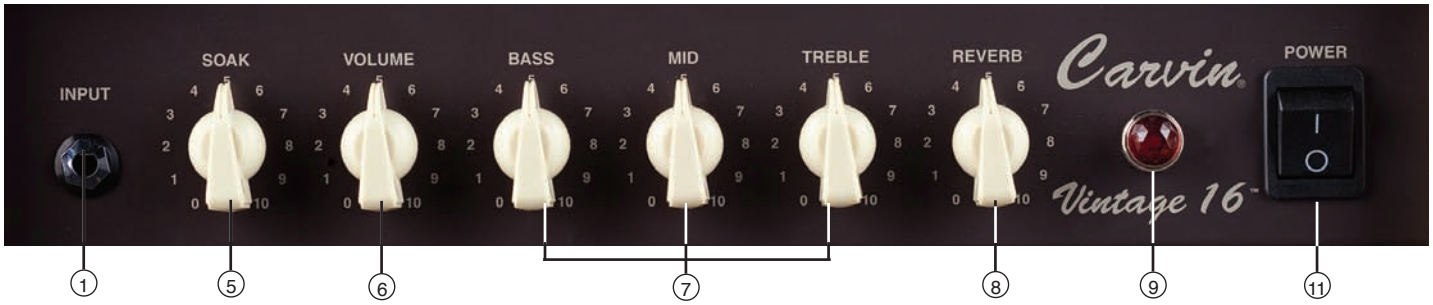
b) TUBE REPLACEMENT GUIDE

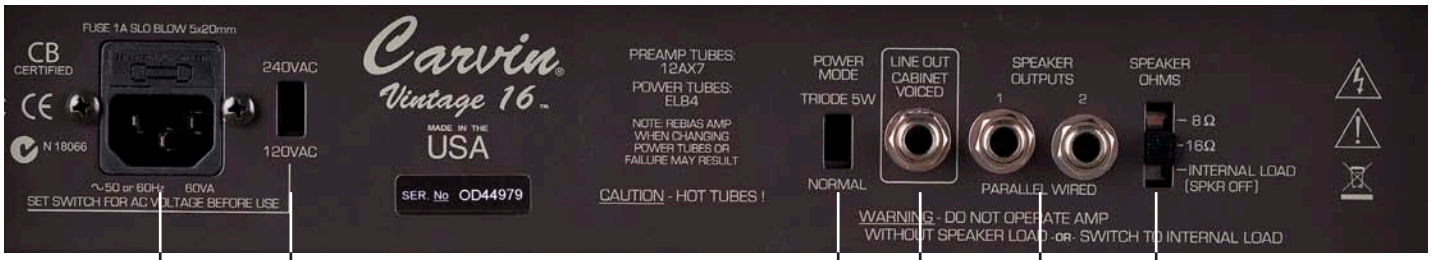
It is not uncommon for tubes to malfunction during shipping. If your amp is not working properly first check all connections and settings, and refer to the following tube replacement guide.

1) The 12AX7A preamp tubes are the smaller of the 2 types, and are located in the following order on 50w models: V1, V2, V3, V4. On 16w models these are V1 and V2.
   To start with, V1 is located closest to the input jack. It is recommended to turn your amp upside down to replace tubes. All tubes are keyed in the same direction.
   Replacing V1 (and/or V2 on 50w models) may help reduce feedback due to microphonics.
   If the power amp is not functioning, check or replace the power amp driver (16w models = V2, 50w models = V4) Check V4 by inserting a signal into the Effects RETURN jack. If the power amp still does not work, replace the EL84 power tubes.

2) The EL84 power tubes are located in the following order on 50w models: V5, V6, V7, V8.
   On 16w models, these are V3 and V4. Normally you'll want to replace these tubes as a set. Sometimes you can spot defective power tubes when they are glowing red-hot along with an audible hum in the speaker when the amp is idling. If this happens, shut the amp down immediately. After the tubes have cooled down, carefully pull straight out to remove. It is recommended to turn your amp upside down to replace tubes. All tubes are keyed in the same direction. Running defective power tubes could damage the amp. It is recommended that you have a spare set of EL84 power tubes along with several 12AX7A preamp tubes.

VT16 and VINTAGE 16





Set AC Voltage switch before plugging in.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CE

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accom-

IMPORTANT! FOR YOUR PROTECTION, PLEASE READ THE FOLLOWING:

WATER AND MOISTURE: Appliance should not be used near water (near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

POWER SOURCES: The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

GROUNDING OR POLARIZATION: Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

POWER CORD PROTECTION: Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

SERVICING: The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

SAFETY INSTRUCTIONS (EUROPEAN)

The conductors in the AC power cord are colored in accordance with the following code.

GREEN & YELLOW—Earth BLUE—Neutral BROWN—Live

U.K. MAIN PLUG WARNING: A molded main plug that has been cut off from the cord is unsafe. NEVER UNDER ANY CIRCUMSTANCES SHOULD YOU INSERT A DAMAGED OR CUT MAIN PLUG INTO A POWER SOCKET.

LIMITED WARRANTY

Your Carvin product is guaranteed against failure for ONE YEAR unless otherwise stated. Vacuum tubes are guaranteed for 90 days. Carvin will service and supply all parts at no charge to the customer providing the unit is under warranty. Shipping costs are the responsibility of the customer. CARVIN DOES NOT PAY FOR PARTS OR SERVICING OTHER THAN OUR OWN. A COPY OF THE ORIGINAL INVOICE IS REQUIRED TO VERIFY YOUR WARRANTY. Carvin assumes no responsibility for horn drivers or speakers damaged by this unit. This warranty does not cover, and no liability is assumed, for damage due to: natural disasters, accidents, abuse, loss of parts, lack of reasonable care, incorrect use, or failure to follow instructions. This warranty is in lieu of all other warranties, expressed or implied. No representative or person is authorized to represent or assume for Carvin any liability in connection with the sale or servicing of Carvin products. CARVIN SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

When RETURNING merchandise to the factory, you may call for a return authorization number. Describe in writing each problem. If your unit is out of warranty, you will be charged the current FLAT RATE for parts and labor to bring your unit up to factory specifications.

HELP SECTION

1) AMP WILL NOT TURN ON
   Check the power to the amp. Check for tripped circuit breakers, unplugged extension cords or power-strip switches that may be turned off. Check the fuse. If a dark brownish color or no wire can be seen within the glass tube, then replace. The amp may be perfectly fine but occasionally a fuse may blow because of high AC voltage surges. After the fuse has been replaced with the proper Slow Blow value and if the fuse fails again, the amp will require servicing.

2) NO OUTPUT with POWER LIGHT ON
   Tubes damaged in shipping will be the primary reason for your amp to not function properly. Please give us a call to help guide you through this simple repair.

3) KEEP YOUR AMP LOOKING NEW
   Use a damp cloth to wipe the controls on the front & rear chassis panels. Wipe the black vinyl covering with a damp cloth.

CAUTION

RISK OF ELECTRIC SHOCK

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL! THIS UNIT CONTAINS HIGH VOLTAGE INSIDE!