Congratulations on your purchase of the MTS3200 all tube amplifier. Carvin has been building tube guitar amplifiers since 1949. They have been used by top professionals like; Frank Zappa, Steve Vai, Craig Chaquico, Allan Holdsworth, Larry Carlton, Chet Atkins and other great musicians. You will discover that these amplifiers represent a significant sound improvement over conventional tube amplifiers. Spend time with your new MTS3200 head or your MTS3212 combo and get to know it’s many features.

TECHNICAL DESIGN OF THE MTS3200

The MTS3200 design criteria was to build an all-tube guitar amp that sounded better than anything else on the market. This meant that the MTS3200 was going to be totally new from the ground up and that it was going to be an all tube design with no IC’s or transistors.

HIGH IMPEDANCE GUITAR INPUT

Carvin has long known about the effects of miss-loading a guitar pickup which can cause high frequency loss. The MTS3200 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 OVERDRIVE CHANNELS

The equalization of the clean and overdrive channel is designed to offer clarity to your instrument. Special mud-cutting circuits eliminate the unwanted sounds in the 500 to 700 Hz range which normally take away the tone definition of your instrument. You will also take notice of the clean channels PRESENCE switch which adds acoustic voicing to your instrument. This switch boosts only the guitars very high-harmonics which are in the 10K Hz range instead of the normal 3K Hz of a bright switch. The PRESENCE control on the lead channel is designed to adjust the “edge” on your sound. It’s dynamic range allows for super-smooth sounds or an edge for your lead channel to reach out.

DYNAMIC 5881 POWER TUBES

Your amp is equipped with 5881 power tubes because of their smooth distortion, responsive sound and reliability. The compression characteristics of these “soft clip” power tubes respond to the dynamic range of lead guitar playing. These tubes react even to the most subtle touch—if you play soft, the tubes remain clean and if you increase your attack they respond accordingly.

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 you sound best. Your sound may not be at center 0 on the dial. These controls will not affect or color your sound when set at extreme settings, nor do they interact with each other. 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 500 Hz. The treble control is set at a very high 11K Hz giving the MTS3200 its dynamic highs.

REVERB

The FS22 footswitch for the long tailed REVERB system in the MTS3200 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 all tube reverb system offers vibrant clarity with full depth reminiscent of the sixties tube amps. Guitar Player magazine rated this system as one of the best they have heard.

MODEL MTS3200 HEAD SPECS:

- RMS Power: 50 or 100 watts
- Channel 1 Sensitivity: 1mV for clipping
- Channel 2 Sensitivity: 16mV for full output
- Input Impedance: 100,000 ohms
- Output Impedance: 4, 8 & 16Ω

MODEL MTS3212 COMBO SPECS:

- RMS Power: 50 or 100 watts
- Channel 1 Sensitivity: 16mV for full output
- Channel 2 Sensitivity: 1mV for clipping
- Input Impedance: 100,000 ohms
- Output Impedance: 4, 8 & 16Ω

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

Serial No._____________________  Invoice Date_______________
76-32000B  07/05
GETTING STARTED QUICKLY
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. In order to get started you will need your MTS3200 amp, a 120 or 230 AC grounded power outlet, your instrument and a standard guitar cord. With the amp turned off, you may now plug it into the proper AC voltage.

Now turn all the volume and drive controls off and set tone controls at their mid position. If you have purchased the FS22 foot switch plug into the rear foot switch jack for switching the channels and reverb. Note: The channel SELECT button must be in the OUT position (CH 1) for the FS22 to function (a hum will be heard if it’s in the wrong position).

Now, turn the power switch and standby switch ON. Allow 60 seconds for the tubes to warm up. Gradually raise the volume controls and re-adjust the tone controls and your ready to go. The brass knobs can feel hot after the amp has been on awhile. This is normal because brass conducts heat while plastic does not. This will not cause a problem for the controls. Please call if you feel your amp is malfunctioning. Occasionally tubes are damaged in shipping.

FRONT PANEL
1. GUITAR INPUT
A standard 1/4” input jack feeds both channels through using the SELECT 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. The LED’s next to the volume controls will let you see what channel is functioning. Use channel 2 for clean playing. Use channel 1 for overdrive/sustain. For the FS22 foot switch to function, set the channel SELECT to the “OUT” channel 1 position.

LEAD CHANNEL 1
3. LEAD CHANNEL INDICATOR
The red LED will illuminate when the LEAD channel is selected.

4. LEAD VOLUME
The volume of the lead channel is to be used as a master level control. For partial clean output, set the VOLUME control to 10 and turn the DRIVE nearly off—under 1. By reducing the guitar volume, you can use this channel as an alternate clean channel.

5. LEAD DRIVE
For mild tube saturation, set the DRIVE control between 1 & 2. For some of the best saturation, set the control between 4 & 6. For full blown overdrive, set the control between 6 and 10 (your guitar volume should be turned all the way up). Because the MTS3200 has been “Hot Rodded” with so much gain in the DRIVE control, you will have an abundance of guitar feedback. However, if feedback is a problem, reduce the amount of DRIVE or move the guitar to the side or away from the speaker(s).

6. LEAD—BASS, MID & TREBLE
To start off with, set the BASS, MID & TREBLE controls at their center (5) position. These controls are to be set according to the type of pickups used (dual or single coil). It’s normal to decrease the BASS at higher playing levels. Try the PRESENCE control also when adjusting the treble.

7. LEAD PRESENCE
Channel 1 features it’s own LEAD PRESENCE control for added clarity. It’s frequency range is set at the mid range of the tonal spectrum. Careful adjustment with the TREBLE control will make this feature very useful.

CLEAN CHANNEL 2
8. CLEAN CHANNEL INDICATOR
The red LED will illuminate when the CLEAN channel is selected.

9. CLEAN VOLUME
Channel switching from the Lead channel into Channel 2 gives you crisp, 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.

10. CLEAN PRESENCE
For added clarity, the CH 2 PRESENCE switch increases only the highest guitar harmonics in the 8-10kHz range which is ideal for acoustic guitars. A normal bright switch works only in the 3k Hz range leaving your sound somewhat flat. Single or dual coil pickups will determine the need for this switch.

11. 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 normalize (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 crispier highs. If your sound is too bright with single coil pickups, you may want to keep the PRESENCE switch off.

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

13. STANDBY SWITCH
Use the 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.

14. POWER SWITCH & INDICATOR
The power switch is to be utilized as the master ON/OFF switch. As the amp is turned on, the RED portion of the power switch will illuminate as your ON indicator.
REAR PANEL

15. SPEAKER JACKS
Two 1/4” SPEAKER JACKS are featured to operate several speaker systems at the same time. Calculate the total speaker impedance based on parallel wiring as both speaker jacks are wired in parallel. Select the IMPEDANCE SWITCH for the correct impedance.

16. SPEAKER IMPEDANCE SWITCH
The IMPEDANCE SWITCH offers the selection of 4, 8 or 16 ohms to match your speaker system. The correct setting for two 16Ω speakers or cabinets would be 8 ohms. Select the proper impedance. The impedance of the MTS3212 combo amp is 8 ohms. In the case of adding another 8 ohm extension cabinet, keep the switch at 8 ohms.

17. 4 TUBE 100 WATT OR 2 TUBE 50 WATT OPERATION
For maximum output power, be sure the power tube selector switch is selected for 4 TUBE operation. For lower overall levels and early power amp clipping, move this switch to the 2 TUBE operation. The volume reduction will only be 3 dB.

18. POWER TUBE BIAS SWITCH
If you desire to change from 5881 (6L6GC) to EL34 power tubes, you may do so by selecting the external BIAS switch to the EL34 position on the rear panel. Be sure that this switch is selected to the proper position or excessive heat will damage your tubes. The internal P11 bias trim control can be set by a qualified technician. To set the bias, measure the current across the terminals of the STAND BY switch (set this switch to the off position when the amp is on). Set the idle current to 100 mA for all tube types.

19. 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 100 watts output at 8 ohms) is more than adequate to drive any professional mixer or power amp.

20. 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 the “OUT” channel 1 position 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 (this will not harm the amp).

21. 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’s 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.

22. AC POWER & FUSE
The detachable AC POWER CORD supplied is designed to operate with one type of voltage (the European 230V export model uses a GEE-7 plug cord set). Check the rear power cord label for the proper voltage and fuse value. 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 (some models have circuit breakers) 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 5 x 20mm rated at 3A for 120V & 1.5A for 230V models. Do not use fast acting fuse, only a SLOW BLOW (SB) type fuse will work.

HELP SECTION

a) FEEDBACK FROM THE LEAD CHANNEL
The MTS3200 will feedback when the LEAD volume, DRIVE, TREBLE and PRESENCE are turned all the way up. Like other highly modified tube amps, this is normal. To help reduce feedback and noise, keep the DRIVE control set around 5 to 7 on the dial. Some of the best lead saturation will be at around 5—not 10. Sometimes replacing V1 (12AX7A) can help reduce feedback.

b) TUBE REPLACEMENT GUIDE
It is not uncommon for tubes to malfunction during shipping. If your amp is not working properly, please call or refer to the following replacement guide.

1) The 12AX7A preamp tubes are located in the following order on your chassis: V1, V2, V3, V4, V5. To start with, V1 is located next to the outside of your chassis behind the output transformer. It is recommended to turn your amp upside down to replace tubes. Replacing V1 will help reduce feedback in channel 1. Replacing V2 and V3 can also help but V1 is the main tube to replace. Replacing V4 will correct problems with the reverb system unless there is a defective reverb tank or tank cables. If the power amp is not functioning, check or replace the 5881 power tubes and V5 by inserting a signal into the Effects RETURN jack. All tubes are keyed in the same direction.

2) The 5881 power tubes are located in the following order on your chassis: V6, V7, V8, V9. Normally you’ll want to replace these tubes as a set. Please call for our latest prices. 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 they have cooled down, remove by pushing the retainers on the base of the tubes down and rock the tubes in a circular motion while pulling them out. 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 power tubes along with several 12AX7A preamp tubes.

Guitarist Magazine, England

MTS3212 Combo Review—By Simon Bradley

“Actually, the MTS3212 is a more versatile beast than I at first assumed, because, in the process of turning the drive control all the way up, there are some excellent crunch tones along the way.

Maybe it’s the British Series (BR12) speakers, or the simple fact that the amp bristles with glowing tubes of loveliness, but these mid-driven sounds are of that responsive type that you just can’t beat. It’s warm, of course, but vibrant enough to cut through, and the tone’s dynamic qualities would seem to offer musical assistance to all but the most colourless of blues players.

However, I would argue that it’s at high gains that this Carvin comes into its own. In this situation, it’s one of the most satisfying amps I have played in a long time. EAH was once quoted as saying that you know when you have a good sound when the guitar seems to play itself, and if Sir Edward of Van plugged into this combo, he would be more than happy with the brown-nose of the tone.

High octane rock sounds? No problem. Is mid-s科普 threshold of angst-core your bag? Just step this way, Sir. The EQ is simple because it has no reason to be anything else, such as the efficiency of both the amp section and speakers to kick out a tone full of ballsy clout and high end shimmer. Putting it through a 2 x 12 extension cab merely enhances the tone further.

Just when you thought it was safe to think ‘so…it’s like a Peavey 5150’ (yes, the overdrives really are that good), a flick to Clean 2 will see you reaching for a Strat and switching to position 4. An amp’s clean sound is, if anything, a more subjective affair than its dirty compadre, but I would say that the MTS3212 has the best clean sound I’ve ever heard from a 100w combo. Others might prefer a black-faced Fender Twin or even a Roland JC120, but the bass end available here is nothing short of incredible. It has the potential to turn the sound of a single coil solid into something akin to that of a monstrous f-hole jazz beast (should you so desire). Those in-between Strat tones are well served, as is the neck position of a Gibson ES335, and the fact that the combo can handle such diverse sounds with equal aplomb is a major feat.

Conclusion
Whatever styles of music you play, I have a feeling that you may well be blown away by this Carvin. The price tag represents excellent value, and it could give other amplifiers costing twice as much a serious run for their money.”
**SAFETY INSTRUCTIONS (EUROPEAN)**

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

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

**GROUNDING OR POLARIZATION:** Precautions should be taken so that the grounding or polariza-
tion means of the appliance are 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.

**SERVICE INSTRUCTIONS:** If service or repair work is needed, this should be done by qualified service
personnel only.

**FUSING:** If your unit is equipped with a fuse receptacle, replace only with the same type fuse.
Refer to replacement text on the unit for correct fuse type.

**REPLACEMENT PARTS LIST (for circuit cards)**

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**LIMTED 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 cus-
tomer providing the unit is under warranty. Shipping costs are the responsibility of the customer.

**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.

**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.