SX SERIES  Classic Tube Emulation, awesome digital effects, rich black vinyl covering and the brass red jewel light continue to make the AMERICAN MADE SX Series one of the hottest amps on the market today!

EMULATION OR MODELING?  Unlike other “modeling” amps, the SX doesn’t just copy the sounds of other amplifiers – it actually emulates 12AX7 tube circuitry.  The SX waveforms successfully “emulates” real tube waveforms that breathe and express warmth from a mild soft-clip to a full power soaked sustain.  Pro players and industry gurus have stated that the SX Tube Emulator actually sounds better than many tube amps!

THREE CHANNELS – Ch1 LEAD with high gain switch, Ch2 LEAD with BLUES switch and Ch3 CLEAN. Each channel has its own independent volume control for setting up equal levels quickly and easily.

ACTIVE TONE CONTROLS  All models feature BASS, MID, TREBLE controls and a PRESENCE switch on all channels.

24-BIT EFFECTS  Once you have your tone, add in just the right amount of lush REVERBS, rich CHORUSES, thick textured FLANGING or pristine ECHOES using fully adjustable parameters for damping, decay, depth, speed, and regeneration–up to 256 24-BIT effects. There is also a second digital processor dedicated to creating a lush, concert-hall reverb at the push of a button.

POWER  The SX300C and SX300H feature a full 100 watts RMS. The SX300C features two 12” heavy-duty 100w Celestion SEVENTY 80 speakers that provide awesome guitar reproduction – from clean to blues to scream’n metal. The SX300H head can be paired with either a 4x12 half stack or 8x12 full stack. The SX300R rackmount pre amp can be paired with the amp of your choice.

REAR PANEL CONNECTIONS  All back panels feature a voiced LINE OUT for recording or running a slave amp, HEADPHONE jack, EXTENSION SPEAKER jack and a FOOT SWITCH jack for the optional FS44 for remotely changing channels and turning on/off the effects. (The extra dedicated reverb on the SX300C, SX300H and SX300R is controlled by a front panel switch.) The SX300C & SX300H also adds SEND/RETURN jacks for your own external effects. A 4, 8, 16Ω impedance switch is featured for optimizing the amp for the extension speakers.

RUGGED CONSTRUCTION  SMT surface mount electronics ensure consistent, reliable performance, which is impervious to bumps and vibrations. Strong, lightweight plywood cabinet (not particle board), aluminum chassis, steel grille and corners deliver one of the lightest, yet most rugged amps available.

RECEIVING INSPECTION—read before getting started
INSPECT YOUR AMP FOR ANY DAMAGE which may have occurred during shipping. If any 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.

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SX SERIES SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Speakers</th>
<th>SX300C Two Celestion SEVENTY 80 100w 8Ω speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS Power</td>
<td>SX300C/SX300H 100 watts @ 4, 8, 16Ω</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>4-16 ohms switchable</td>
</tr>
<tr>
<td>Power Amp</td>
<td>THD: Less than 1%</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>100k ohms</td>
</tr>
<tr>
<td>Channels</td>
<td>3—switching</td>
</tr>
</tbody>
</table>
| Tone Controls  | Ch 1 and 2  
| Ch 3           | BASS: 80Hz                                       |
|                | MID: 600Hz                                       |
|                | TREBLE: 8k Hz                                    |
|                | PRESENCE: 11k Hz                                 |
| Ch 1 + 2 Sensitivity | 1mV for clipping, dynamic range 72dB         |
| Ch 3 Sensitivity | 75mV for full output                             |
| Line Out       | 1.5 VAC @ full power                             |
| Power          | 120V or 240V model                               |
| Fuse           | 5 amp 250V internal                              |
| Size           | SX300C: 26W x 10.25D x 17.5”H                    |
|                | SX300H: 24.5W x 9.5D x 10.5”H                    |
|                | SX300R: 19W x 8D x 1.75”H                        |
| Cabinet        | Plywood-no particle board                        |
| Net Weight     | SX300C: 44 lbs, SX300H: 24 lbs, SX300R: 5 lbs    |
| Warranty       | One Year                                         |
| Options        | FS44 footswitch,                                 |
|                | CV3212 cover SX300                              |
|                | CV3230 cover SX300H                             |
|                | VE212 extension cabinet, two GT12 200w 8Ω speakers |

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

Serial No._____________________  Invoice Date_______________

For your records, you may wish to record the following information.
SX300C, SX300H AND SX300R FRONT & REAR PANEL CONTROLS

GETTING STARTED QUICKLY

If you are like most players, you probably want to plug in your new amp and get started playing 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 SX 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 overdrive controls off and set tone controls at their mid-center position. If you have purchased the FS44 foot switch, plug it into the rear foot switch jack for switching the channels and effects. Now, turn the POWER SWITCH ON. Gradually raise the volume and overdrive controls. Check the BLUES SWITCH and HI GAIN switch setting before adjusting the tone controls.

FRONT PANEL

1. INPUT
Connect a 1/4" guitar cable to this input. Use a professional quality 1/4" plug shielded guitar cord (Carvin SH25) no longer than 25 feet. A longer cable will reduce the overall treble response from your pickups.

2. CHANNEL SELECT
Select the desired channel using front panel switches or FS44 foot switch at any time. The LED’s will let you see which channel is functioning. Use CH1 for overdrive/lead, CH2 for lead/blues, and CH3 for clean playing.

CHANNEL 1 AND 2 DRIVE

3. CHANNEL INDICATOR
When channel 1 is selected, its RED LED will be illuminated. When channel 2 is selected its YELLOW LED indicator is illuminated. Notice when the channel indicator is illuminated, the Effects indicator (14) matches the selected channel’s color. This indicates the stored effects setting when that channel is on.

4. CHANNEL VOLUME
The volume of the drive channels are to be used as a master level controls. For partial clean output, set the VOLUME control to nearly 10 and turn the DRIVE nearly off.

5. CHANNEL DRIVE
The channel drive delivers 12AX7 tube saturation and EL34 power tube compression. This channel incorporates a dual section lead DRIVE control with 72 dB of dynamic range. So you can go from shimmering clean to fabulous blues soft clipping to full blown overdrive with total tube warmth. For mild 12AX7 tube emulation, set the DRIVE control between 2 & 3. For some of the best saturation, set the control between 4 & 6. For full blown drive, set the control between 6 and 10 (your guitar volume should be turned all the way up). Because the SX AMP has a lot of gain in the DRIVE control, you can get guitar feedback. If feedback is a problem, reduce the amount of DRIVE or move the guitar away from the speakers.

6. CHANNEL 1 HI-GAIN SWITCH
The Hi-Gain switch adds extreme gain and super scooped mids. This setting allows for very long sustained notes and heavily over driven power chords.

7. CHANNEL 2 BLUES SWITCH
The exclusive BLUES SWITCH adds the critical mid tones in the 525 Hz range that are so important to great sounding blues-rock tone. However, when the BLUES SWITCH is not used (OUT), the SX delivers a great “scooped” sound for hard rock metal players. It is important that you pre-select this switch for your style of playing before adjusting the tone controls.

8. CHANNEL BASS, MID & TREBLE
These active tone controls develop the heart of your sound. It is important that you start at the mid point (5) on each control. The total range of these controls are a substantial 20 dB (±10 dB) with a center frequency at 80 Hz for BASS, 600 Hz for MIDS and 8k Hz for the TREBLE. These controls are very powerful in their effect, so take time to adjust each control for your ultimate sound.

9. CHANNEL PRESENCE SWITCH
The PRESENCE switch frequency range is at the very high end of the guitar spectrum (11k Hz) for shimmering, glassy harmonics. If your sound is too dull, try the presence switch for more highs.

CHANNEL 3 CLEAN

10. CHANNEL 3 INDICATOR
When channel 3 is selected its GREEN LED indicator is illuminated.

11. CHANNEL 3 VOLUME
Channel switching from the Drive channels into CHANNEL 3 gives you instant crisp, clean sounds. Thanks to special mud-cutting circuits that work between the frequencies of 550 and 700 Hz, your guitar tones will be full and vibrant.

12. CHANNEL 3 BASS, MID & TREBLE CONTROLS
To start, set the BASS, MIDS & TREBLE controls at their center (5) position. These controls are most likely to be set according to the type of pickups used (dual or single coil). Most musicians like to reduce the MIDS deeper bass and crisper highs.

13. CHANNEL 3 PRESENCE SWITCH
For added clarity, the CH 3 PRESENCE control increases the highest guitar harmonics in the 8-11k Hz range. A normal bright switch works only in the 3-5k Hz range leaving your sound somewhat flat. Single or dual coil pickups will determine the use of this control.

DSP EFFECTS SECTION

14. SMART EFFECTS™ ADJUST [PARAMETER] CONTROLS
The 24-BIT processor provides a host of great sounding effects including FLANGE, REVERB, ECHO, & CHORUS. Turn up the LEVEL control to get the desired effect. Move the EFFECT SELECT and the EFFECT ADJUST controls to get the desired effect for each channel. Each channel now has its own effects. Smart Effects™ will automatically store your last selected effect settings for each channel and will recall them when you switch between channels. As you select each channel, notice that the LED next to the LEVEL control changes color to match the channel LED color to indicate that the effects has been changed. The settings are stored in memory even when the amp has been turned off.
15. EFFECT PARAMETERS

Each of the four effects has two variable parameters that can be easily adjusted. The SELECT and ADJUST parameters are described below.

A) ECHO: SELECT is the amount of the regeneration (repeating). The ADJUST controls the delay time between the original signal and the echo.

B) CHORUS: SELECT is the amount of presence (high frequencies) in the reverb. The ADJUST is the decay time or length of reverb.

C) FLANGE: SELECT is the level of background reverb with your chorus. The ADJUST control increases the depth.

D) REVERB: SELECT is the amount of reverb (as opposed to the alternate reverb). The ADJUST controls the depth of reverb.

16. SX300C & SX300H ALTERNATE REVERB SYSTEM

The REVERB SWITCH is an alternate reverb system that is independent from the Smart Effects™ system. By pushing in the REVERB SWITCH, a small amount of reverb is added to enhance your sound. The FS44 footswitch does not externally control this reverb, which allows you to have reverb on at all times. With Smart Effects™ are on or off.

17. EFFECTS OUTPUT LEVEL CONTROL

The effect LEVEL control is used to set the amount of effects you want blended into your guitar. This control affects the overall effect levels including the alternate reverb system.

Note: The effects level is not controlled by the Smart Effects™ memory so you must manually change it if you need different levels between channels.

18. POWER ON/OFF SWITCH & PILOT LIGHT (SX300C/H only)

The front power switch will turn on the power to the amplifier. The brass jeweled red pilot light illuminates when the amp is powered on.

19. INPUT B (SX300R only)

This input is the same as the front panel input. The front panel input when used will over ride the back panel input. This back panel input is great in a rack mount situation where other rack mounted gear is used in front of the SX300R such as wireless units, external effects, and tuners.

20. FS44 FOOTSWITCH JACK

This jack is NOT a MIDI jack. It is designed for the Carvin FS44 quad footswitch. The FS44 will give you remote control channel switching and Smart Effects muting.

21. HEADPHONE

The stereo HEADPHONE 1/4" jack is "CABINET VOICED" to prevent excessive highs. This greatly reduces ear fatigue. Use on the SX300R the +4/-10dB switch affects headphone level.

22. CABINET VOICED LINE OUT/OUTPUT

The voice 1/4" LINE OUT gives the same response as if you were micing the speaker. Special equalization reduces the harsh highs that are normally associated with a line out signal. IMPORTANT: TO INSURE THAT THE SX300C DOES NOT SHUT OFF (PROTECTION MODE), PLEASE SELECTED THE PROPER SPEAKER IMPEDANCE ON THE REAR. IF YOUR SX300C/H TURNS OFF DURING A PERFORMANCE, SET THE IMPEDANCE TO 4Ω.

Speaker Switch Setting
1x 8Ω - 4Ω
2x 8Ω - 8Ω
1x 16Ω - 8Ω
1x 16Ω - 16Ω

The following are settings to be used with Carvin cabinets loaded with Celestion speakers.

Note: these settings may not be suitable for cabinets with different speakers.

23. SPEAKER OUTPUTS (SX300C/H only)

Both units have two 1/4" speaker output jacks and an impedance matching switch. The SX300C combo uses one of these jacks for the internal two Celestion speakers. Be sure to set this switch to the correct impedance setting when plugging in external speakers on the SX300C.

24. EFFECTS LOOP (SEND & RETURN) (SX300C/H only)

Although the SX300C has built-in effects, you may want to use its separate effects loop. For the lowest noise from a pedal effect, use this 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.

25. AC POWER & FUSE

The SX300R is designed to operate from 90-250VAC (50 or 60 Hz). The SX300C combo and SX300H head come in 120VAC and 230VAC models for best power amp performance. All models should be plugged into a grounded "3 prong" outlet. No attempt should be made to defeat or use the amp without the ground connected. The internal FUSE is located inside the chassis. This is not user serviceable. Contact Carvin’s Service Department at 800-854-2235 or carvin.com.

26. SX300R SPEAKER EMULATOR OUTPUT DIRECT

The speaker Emulator outputs are for D.I. (Direct) connections to a PA system. These outputs are custom shaped using 4 stages of filtering to emulate a speaker cabinet that has been mic’d. Both unbalanced 1/4” and balanced XLR are provided for any situation. The +4/-10dB switch provides final output level adjustment. Use the +4dB setting for line level and -10dB setting for instrument level.

27. SX300R MAIN OUTPUT SECTION

These jacks are for going to the main power amplifier that is running guitar specific speakers. This output should NOT be used to go to a PA system or other system with cabinet effect speaker cabinets. Both unbalanced 1/4” and balanced XLR are provided for any situation. If you are using an amplifier (like the Carvin DCM series), it is best to use the XLR connector for the best level and lowest noise to the amplifier. The +4dB setting is for line level and the -10dB setting is for instrument level.
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.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PROFESSIONAL.

LIMITED WARRANTY
Your Carvin amplifier is guaranteed against failure for ONE YEAR unless otherwise stated. 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 800-854-2235 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 switches that may be turned off.

2) SX200/H AMP SHUTS OFF WHILE PLAYING
   Check the rear SPK RPM switch to make sure it is set properly. Switch to the 4x position if you are unsure where to set it. If the problem continues, contact our service technicians.

3) NO OUTPUT with POWER LIGHT ON
   Make sure that your speaker is functioning and not blown. Check input, cables & effects connected to the effects loop, and extension speaker cables for defects & connections.
   a) Also verify the effects loop is working by inserting a 1/4" stereo plug into the return jack and short the tip and ring. If the amp works by doing this, the effects loop jack is defective.

4) KEEP YOUR AMP LOOKING NEW
   Try to keep your amplifier free from dust and moisture. To clean, use a damp cloth to wipe the controls chassis panel and wipe the vinyl covering. Use a dry cloth to be sure the moisture is removed.

REPLACEMENT PARTS LIST

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>QTY/BILL U/M</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SX300C 1</td>
<td>EACH</td>
<td>SPADE CONNECT 16AWG BLK 254MM</td>
</tr>
<tr>
<td>SX300H 1</td>
<td>EACH</td>
<td>CABLE RIBBION 24A 4P 1/4&quot; W/HDR</td>
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<tr>
<td>SX300R 4</td>
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<td>NUT FOR POT 71-09252C</td>
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<tr>
<td>SX300C 1</td>
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<td>EACH</td>
<td>PANEL COVER TOPSIDE EQ/XC/XP</td>
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