CA30D
Acoustic Amplifier

User’s Guide
Table of Contents:

Introduction .......................................................... 3
The Front Panel ....................................................... 4
Connecting to the Insert jack ....................................... 5
“Chaining” Amplifiers ................................................ 5
The DSP Section ....................................................... 6
The Tilt Back Feature ................................................ 7
System Block Diagram............................................... 7
Technical Specifications ........................................... back cover
Introduction:

Congratulations!

You are now the proud owner of one of Crate’s latest contributions to the world of acoustic amplification, the CA30D. This compact amplifier delivers a strong 30 watts of clear musical power and incorporates two inputs (each with a gain control), three bands of equalization, plus Crate’s Contour control for added tonal flexibility. The CA30D features Crate’s DSP digital reverb and effects, a front panel Insert (effects loop), and a Line Out jack. An 8” Polypropylene cone coaxial speaker delivers smooth clear sound with excellent projection and fidelity.

The CA30D features a flip-out locking bar underneath the cabinet which allows you to tilt the amplifier back for increased coverage and projection.

Your CA30D was designed by musicians and built using only the best components. Extensive testing at the hands (and ears) of skilled technicians and musicians insures you that this amplifier is the absolute best it can be.

In order to get the most out of your new amplifier, we strongly urge you to go over the information contained in this manual before you begin playing.

And thank you for choosing CRATE.

To keep this amplifier looking its best, avoid abrasive cleansers. Wipe the cabinet clean using a slightly dampened cloth. Never use brass cleaners on the hardware since they could damage their protective coatings.
CA30D Acoustic Amplifier

The Front Panel:

1: **Power.** Use this switch to apply power to the amplifier: the amp is on when the top of the switch is depressed, off when the bottom of the switch is depressed. The switch illuminates when the amp is on.

2: **Line Out.** Use this jack to connect a high impedance, unbalanced line level signal to a house sound board, a recording console or another amplifier.

3: **Insert.** Use this jack to add external effects to the signal. The ring = send (line out), tip = return (line in), sleeve = ground. This jack can also be used to “chain” multiple amplifiers together, since connecting to this jack does not interrupt the signal going to the amplifier. (See the illustrations on page 5 for more information.)

4: **Effects Level.** Use this control to adjust the amount of digital signal processing applied to the output signal.

5: **Effects Mode.** Use this control to select the type of digital signal processing applied to the output signal. (See the section entitled “The DSP Section” on page 6 for more information.)

6: **High.** This serves as the treble control for both channels. Adjust this control so your high notes and harmonic overtones are lively but not overpowering.

7: **Contour.** Use this control to set the center point of the mid control. This control should be set at the frequency which gives you the most natural midrange tones.

8: **Mid.** This serves as the midrange control for both channels. Adjust this control to get the best projection and midrange tones for your instrument. The center point of the mid control is chosen by the setting of the contour control (#7).

9: **Low.** This serves as the bass control for both channels. Adjust this control to get the best sounding bass response for your instrument. Excessive boost of the low control can cause an unnatural howling (acoustic feedback from your instrument) and should be avoided.

11, 13: **Input 2, Input 1.** The signal output from your acoustic instrument, tape player, rhythm machine, high-Z microphone or other source may be connected to either or both of these jacks by means of a shielded signal cable. Each of the input jacks is governed by its corresponding gain control (#10 for Input 2, #12 for Input 1). The signals from these two jacks are summed together after their gain stages.

10, 12: **Gain 2, Gain 1.** Use these controls to set the input gain level for the corresponding input jack. These controls set the level of the input signal and serve as the amplifier’s volume controls.

14: **AC Line Cord. (Rear panel, not shown)** The grounded power cord should only be plugged into a grounded power outlet that meets all applicable electrical codes and is compatible with the voltage, power, and frequency requirements stated on the rear panel. **Do not attempt to defeat the safety ground connection.**
CA30D Acoustic Amplifier

Connecting to the Insert Jack:

The Insert jack (#3) allows you to patch external effects into the amplifier just prior to its power amp stage. To connect the effect to the Insert jack use Crate's STP201, STP202, or STP203 stereo-to-mono Y-cord, or an adapter such as Crate's YPP117 and two shielded signal cables terminated with 1/4” tip/sleeve connectors as shown below.

For short runs, use Crate's STP201, STP202 or STP203 adapter to connect an effects device to the Insert jack:

For longer runs, use Crate's YPP117 stereo-to-mono 1/4” adapter and two mono 1/4” signal cables to connect an effects device to the Insert jack:

“Chaining” Amplifiers:

The Line Out jack (#2) on one CA30D can be connected to the Insert jack of another, to chain the amps together as shown below. (This frees up the Input jacks of the second amplifier.) Use a shielded cable terminated with 1/4” tip/sleeve connectors as shown.
The DSP Section:

The CA30D features Crate’s DSP Digital Signal Processing. Use the Effects Mode control (#5) to select which type of effect will be applied to the amp’s output signal. Use the Effects Level control (#4) to adjust the level of the effect.

<table>
<thead>
<tr>
<th>Effect Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bypass</td>
<td>Signal processing is turned off</td>
</tr>
<tr>
<td>Slap</td>
<td>Short slapback, without regeneration</td>
</tr>
<tr>
<td>Delay</td>
<td>Medium slapback, with regeneration</td>
</tr>
<tr>
<td>Echo</td>
<td>Long delay, with regeneration</td>
</tr>
<tr>
<td>Chorus</td>
<td>Light chorus effect - medium-slow speed</td>
</tr>
<tr>
<td>Rotary</td>
<td>Simulated “Leslie Speaker” tremolo</td>
</tr>
<tr>
<td>Cho/Hall</td>
<td>Light chorus, with moderate reverberation</td>
</tr>
<tr>
<td>Room</td>
<td>Moderate reverberation</td>
</tr>
<tr>
<td>Hall</td>
<td>Heavy reverberation</td>
</tr>
</tbody>
</table>
The Tilt Back Feature:

There are instances when you may need to tilt the amplifier back to better project its sound towards your ears (as a near-field monitor) or towards your audience (for better coverage). The CA15 features a tilt back device underneath its cabinet for this purpose. To utilize this tilt back feature, refer to the illustration below and follow these simple steps:

1. Carefully lean the cabinet back - until the front of the cabinet is several inches off the floor.
2. Pull the tilt back bar down (to unlock it from its holder) and swing it forward until it locks into place.
3. Lower the front of the amplifier until it rests on the tilt back bar.
(To return the bar to its traveling position, reverse these steps)

CAUTIONS:
Avoid trapping your hand under the tilt back bar.
Always make sure the bar is securely locked in place before lowering the amplifier.
Do not sit on or rest your foot on the amplifier when it is in the tilt back position.

System Block Diagram:
Specifications and information in this manual are subject to change without notice.

Output Power Rating: 30 watts RMS @ 1% distortion
  High: +/-15dB @ 10kHz
  Mid: +/-15dB @ 400–1.2kHz (Contour)
  Low: +/-15dB @ 80Hz

Input Impedance: 1.5M ohm
Input Sensitivity: 20mV RMS
Sens. to Line out: 20mV
Max Input Signal: 10v RMS (28v peak to peak)
Insert Jack: Line Out .7v RMS, Line In .7v RMS
Insert Jack Input Impedance: 44k ohm
Insert Jack Output Impedance: 2.2k ohm
Line Out Output Impedance: 2.2k ohm (Lo-Z), 2.2k ohm (Hi-Z)
Internal Speaker: 8” Poly cone coaxial with dome tweeter;
  4 ohms; 50 watts; 1” voice coil

Power Requirements:
  120VAC, 60Hz, 50VA
  100/115VAC, 50/60Hz, 50VA
  230VAC, 50/60Hz, 50VA

Size and Weight: 13”H x 15”W x 12”D, 30 lbs.

Specifications and information in this manual are subject to change without notice.