

WALRUSAUDIO
MAKO  **SERIES**



The [ACS1][™] is an amplifier and speaker cab simulator delivering the sound and feel of world-class amplifiers, complimentary speaker cabinets created by Tone Factor, and controllable room size. With the ACS1, players have expansive options to deliver their tone whether it's on stage, in the studio, or practicing at home. Simple controls, stereo in and out, onboard presets, and MIDI support make the ACS1 an immeasurable tool in any guitarist's arsenal.



9 volt DC, Center Negative · 300mA min*

*The use of an isolated power supply is recommended for powering all Walrus Audio Pedals. Daisy chain power supplies are not recommended.

Got questions or need a repair?

Email help@walrusaudio.com to talk with a real live human about your Walrus gear!

This product comes with a limited lifetime warranty.

[Click Here](#) for more info.



AMP MODELS

Amp Switch (Fullerton | London | Dartford) - The Amp switch selects between one of three classic amp models built into the ACS1.

Designed from the ground up using a detailed physical modeling-based simulation of the original circuitry, each of the cascading triode/filtering stages have been faithfully replicated creating complex tones, rich with even harmonics and subtle intercomponent asymmetries/inconsistencies. The power amp staging has been highly biased to retain plenty of dynamic warmth and headroom during Class A behavior at low gains, shifting into an increased sensitivity and overdrive in Class AB saturation through to complete Valve breakup at maximum.



Fullerton: Inspired by the classically snappy and clear Fender® Deluxe Reverb. Clean headroom that blooms into the fat, rich breakup that players have come to love over the years.



London: Inspired by a 1962 Marshall® Bluesbreaker with a harmonically rich, valve-driven breakup. Perfect for sustained lead notes with tons of gain on tap and a punchy mid-ranged voicing.



Dartford: Inspired by the legendary and jangly tones from a 1960s Vox® AC30 with all the bite and chime from the British Invasion. Higher gain settings offer up plenty of saturation that represent the loudness and punch of the original amp cranked.

CABS

The cabs are broken into two groups of three. The “front” three are accessed by simply moving the Cab toggle switch to the desired position. The “back” three are accessed by holding down the bypass switch while moving the Cab toggle. To help make this more intuitive, we have laid these out based on the amp we like using them with, but there is no right or wrong. Mix and match however you like!



The ACS1 includes six IRs custom engineered by David Hislop and Kenyon Reed at Tone Factor. Each IR has been created with vintage amps to deliver the best tonal representation possible.

The IRs that are included in this update are based on a 90's UK-made AC30 6TB with Blue Alnicos, a Marshall JTM50 Tremolo Bluesbreaker 2x12 combo with UK-made 6402-cone G12M Greenbacks (16ohm versions that come in Marshall cabs, which are brighter than the 8ohm versions in Vox cabs), and a Vintage 1966 Fender Deluxe Reverb with it's original Jensen C12NA. [Visit tonefactor.co/ACS1](https://tonefactor.co/ACS1) to explore their new XR IR Collection and see all of the complete IR packs with more microphones and placement options.

Front Cabs

- A: '66 Fender® Deluxe Replication / SM57
- B: Marshall® JTM50 Bluesbreaker Replication / SM57
- C: Vox® AC30 6TB Replication / SM57

Back Cabs

- A: '66 Fender® Deluxe Replication / Royer 121
- B: Marshall® JTM50 Bluesbreaker Replication / Royer 121
- C: Vox® AC30 6TB Replication / Royer 121



CONTROLS

L + R Switch - The L+R switch is an important control as it selects which channel the controls will affect. For setting up the ACS1 with similar sounds on both left and right channels, set this switch to the “+” position. Any changes made to a control will sync that parameter across both channels. Select an amp and it will be applied to both sides. Dial in the tone stack, and it will match on both sides and so on.

Use the outer switch positions, “L” and “R”, for crafting different amp sounds on the left and right channels. Set the switch to the “L” position and use the controls to dial in the desired sound for the left channel. Similarly, set the switch to the “R” position and use the controls to dial in the desired sound for the right channel. You can use this process for things like selecting different cabs for each channel all the way to dialing in a totally different amp and cab combo on the left and right side.

Use the Volume knob on each side to balance the overall level of each amp when crafting unique sounds on the left and right channels.



CONTROLS

Bass - The Bass knob shapes the low-end tone stack of the selected amp model. Turn up for a thicker sound and down to help tame muddy pickups.

Mid - The Mid knob shapes the mid-range tone stack of the selected amp model. Try this control above noon for punchy raw mid-range tones and below noon for more classic scooped sounds.

Treble - The Treble knob shapes the high-frequency section of the tone stack on the selected amp model. Turn up for adding sparkle and down for taming harsh pickups.

A good starting point for each knob is around noon. The tone stack changes with each amp model and has been carefully recreated to emulate an iconic tone.

Volume - The Volume knob controls the overall output level of the pedal. It also controls the volume of the headphone out.

Gain - The Gain knob controls the amount of gain through the amp "circuit" within each model. The amount gain and character changes with each amp. The Gain knob also affects the overall volume just like a real amp so you may want to increase the Volume knob at lower gain settings.

Room - The Room knob engages a tight room reverb meant to give the impression of your amp being mic'd up in various size rooms. Turn it all the way down to disengage and turn it up to add a sense of space to your sound.

A | B | C Cab Switch - The Cab switch lets you select one of six on-board cabinet impulse responses (IRs) to accompany the selected amp model. The ACS1 ships with six cab IRs carefully captured in collaboration with **Tone Factor** to complement our amp models. Users are also able to upload their own favorite IRs to the ACS1 via walrusaudio.io.



BOOST

Boost Switch - The boosted gain control goes from the non-boosted gain value at minimum to the maximum possible gain available with an additional +4db of gain. The boosted volume control provides a scaled operation over the entire range allowing for a matched output level between modes.

To set the boost amount, press the boost switch. The LED light will flash showing that the boost is on. Turning the Gain knob to zero is now equal to where the unboosted level is set. Use the Volume and Gain knobs to set boost levels to your liking. Note that the Volume knob can be set to lower the volume amount if needed. While in Boost mode, setting the Volume knob to noon is the mid point. Turn left to lower volume or right to increase volume. Once you have dialed in your boost amount, press the Boost switch again to confirm the settings. To apply your new boost settings to your preset, press and hold down Bypass and Boost until both LEDs flash to confirm your new settings are saved.

Preset/Boost LED - The Preset LED lights up the color of the selected preset - Red, Green, or Blue. When a knob is turned, this LED turns purple to indicate the preset has been modified. When that knob crosses its saved position, the LED changes back to the color of the currently selected preset to let you know its last saved position. This is helpful when you want to tweak a parameter on a preset but cannot remember where a knob was last saved.

PRESETS

The ACS1 includes 128 total preset slots. The first three presets are accessible from the pedal using both stomp switches.



All 128 are accessible via MIDI Program Change messages which are outlined in the MIDI section.

- **To recall a preset:** Simply press both stomp switches at the same time to scroll through the three on-board presets - red, green, and blue then back to red.

- **To save a preset:**

1. Navigate to the preset in which you want to save a new sound.
2. Using the knobs and switches, dial in the desired sound. The preset LED will turn purple indicating the preset has been modified.
3. To save, hold down the Bypass and Tap switches until the LEDs stop blinking. The preset is now saved.



RED PRESET

All knob settings refer to clock face positions

Fullerton Amp

Cab - Front, A slot

EQ - Bass - 2 / Mid - noon / Treble - 1

Gain - 1

Volume - 1

Room - 9

Boost - Volume and Gain 2



GREEN PRESET

London Amp

Cab - Front, B slot

EQ - Bass - 11 / Mid, Treble - noon

Gain - 1

Volume - 1

Room - 9

Boost - Volume and Gain 2



BLUE PRESET

Dartford Amp

Cab - Front, C slot

EQ - Bass - 1 / Mid - 11 / Treble - 2

Gain - 1

Volume - 1

Room - 9

Boost - Gain 2

GUITAR INPUTS AND OUTPUTS

The ACS1 offers multiple input and output configurations and features true bypass circuitry.

- Mono In / Mono Out
- Mono In / Stereo Out
- Stereo In / Stereo Out

Headphone Jack - The ACS1 features an on-board headphone output for quiet practicing. Simply connect your headphones and adjust the Volume knob to raise and lower the headphone volume.

Micro-USB Port - Used to load IR files and update firmware via computer via walrusaudio.io.



MIDI

The ACS1 can be controlled via standard MIDI messages. Simply connect your MIDI controller to the ACS1 MIDI "IN". Downstream MIDI devices can be connected to the MIDI "THRU" which simply lets all incoming MIDI messages pass through to your other MIDI devices. The ACS1 ships with the MIDI channel set to 1 by default.



o To assign the MIDI device channel:

1. Hold down both stomp switches at power up then release once the LEDs begin flashing white.
2. Now send a MIDI Program Change message on the desired MIDI channel for the pedal.
3. The LEDs will flash green momentarily, and the pedal will save that MIDI channel and only respond to messages on that channel until the user changes it again.

- o **MIDI In** - Connect upstream MIDI devices or your MIDI controller to the ACS1 MIDI "IN".
- o **MIDI Thru** - Connect downstream MIDI devices to the ACS1 MIDI "THRU".
- o **MIDI PC** - Presets on the ACS1 are able to be recalled via MIDI program change messages. Simply send a program change message corresponding to the desired preset to be recalled on the ACS1 MIDI channel. See the table on the next page for a list of ACS1 presets and how they map to program change messages.

MIDI commands and parameters continued on next page.



GLOBAL PREFERENCES

Factory Reset - Use the following procedure to restore the pedal to its factory settings.

1. Hold both stomp switches while applying power.
2. Continue holding both stomp switches for longer than 10 seconds. Initially, both LED's will flash white. Keep holding both stomp switches until the bypass LED turns solid blue and the boost LED blinks blue.
3. Release both stomp switches and wait for the normal LED startup sequence to begin. Once your pedal is back to normal with the bypass LED off and the boost LED red, your pedal is then set back to factory reset.
4. Note that performing a factory reset will cause any custom stored IR's and presets to be erased back to the factory default.



WALRUSAUDIO.IO

Walrusaudio.io is a simple interface to update your pedal's firmware and load your own cabinet IRs. Connect a Micro-B, USB cable to your ACS1 to access firmware updates and upload IR's using your computer.

*Note - Connecting a Micro-B, USB cable to your ACS1 allows you to access firmware updates and upload IR's using your computer to log on to walrusaudio.io via a Chrome-based web browser. Ensure that the USB cable you are using allows data transmission and is not just for charging devices.

To upload your own speaker IRs:

1. Connect the USB cable to the ACS1 and power on the pedal.
2. Click on the ACS1 pedal image.
3. Click on IR Manager.
4. Find the slot that you wish to change and click edit.
5. Click Choose IR file to upload your IR. Note the ACS1 accepts 24-bit 48kHz .wav IR files.



WalrusAudio.io

MAKO ACS1 DETAILS

MAKO ACS1

IR MANAGER

FRONT IR	
A SLOT	TF 66 DR 1X12 JENSN C12NA 57 3 edit
B SLOT	TF MARSH BREAKER 2X12 GREEN 57 3 edit
C SLOT	TF AC 2X12 BLUE ALNICO 57 3 edit

The default IRs have been meticulously designed and tone matched by David Heilig and Kenyon Reed at Tone Factor. Captured with vintage and era specific amps matching the ACS1's amp models. The front default IRs were captured with S40's and the back IRs were captured with a Royer 121 ribbon mic.

BACK IR	
A SLOT	TF 66 DR 1X12 JENSN C12NA 121 2 edit
B SLOT	TF MARSH BREAKER 2X12 GREEN 121 2 edit
C SLOT	TF AC 2X12 BLUE ALNICO 121 2 edit

Visit tonefactor.io to explore more IR packs with more microphones and placement options.



TECHNICAL INFO

Frequency Response: 20Hz To 20kHz

Inputs: 2, 1/4" unbalanced TS

Outputs: 2, 1/4" unbalanced TS

USB Type Micro-B: For firmware updates and IR loading via walrusaudio.io

Power Requirement: Isolated 9VDC, center-negative, 300mA minimum

Size Including Knobs/Jacks:

Height: 2.48" / 63.15mm

Width: 2.9" / 74.33mm

Depth: 4.89" / 124.37mm

Weight: .8 lbs

