

# Acoustic Image<sup>®</sup>

Uniquely musical.

## S4plus



Ten2



Coda  
Corus



Clarus

## Owner's Manual

### PAY ATTENTION TO THESE SYMBOLS:



The exclamation point triangle is used to alert the user to important operating or maintenance instructions. The lightning bolt triangle is used to alert the user to the risk of electric shock.

### IMPORTANT SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water, do not expose to dripping or splashing water, do not place objects filled with liquid on apparatus.
- 6) **WARNING:** to reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
- 7) Clean only with a dry cloth.
- 8) Do not block any ventilation openings. Install in accordance with manufacturer's instructions.
- 9) Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
- 10) This apparatus shall be connected to a mains outlet socket with a positive grounding connection. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 11) Protect the power cord from being walked on pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 12) Use only attachments/accessories specified by the manufacturer.
- 13) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
- 14) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 15) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.



To prevent electric shock, do not remove the top cover. No user serviceable parts inside. Refer servicing to qualified service personnel.



To completely disconnect this equipment from the AC mains, disconnect the power supply cord from the AC receptacle.

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# Welcome to Acoustic Image!

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*You have purchased a state-of-the-art musical instrument amplifier system, combining purity, power and portability in a package that sets a new standard in high fidelity amplification.*

*Each of our designs is engineered to accurately reproduce the sound of acoustic and electric instruments, delivering flat frequency response across the entire musical spectrum; extended, tight, well-controlled bass; and complete clarity of sound reproduction.*

*This manual provides operating information for your Acoustic Image Series 4plus Clarus head, Coda, Corus and Ten2 combo; and Coda EX, Corus EX and Ten2 EX extension cabinet.*

## The Basics

Our Series 4plus product line consists of a two channel amp head and three speaker cabinets. The head mounts in the cabinets using our exclusive Cabrio Docking System to form three different combo amps. The Clarus amp head uses a class-D power amplifier with a switch mode power supply and a sophisticated, sensitive two channel preamplifier. The speaker cabinets have a 1x10 or 2x10 speaker configuration. The features of the speaker configuration define the specific combo model. The Coda combo has a 1x10 speaker configuration with a poly cone woofer. The Corus combo has a 1x10 speaker configuration with a paper cone woofer. Both have a 5 inch extended range driver with presence control in addition to the woofer. The Ten2 combo uses a 2x10 speaker configuration (one downfiring, one front firing) with poly cone woofers in conjunction with a 2.5 inch tweeter. Each cabinet type is also available as an extension speaker in either a "Cabrio-ready" configuration or as a fixed extension cabinet (Coda EX, Corus EX or Ten2 EX).

The features of the S4plus Clarus amp head are:

- Extended frequency range, high fidelity sound
- Light weight (<4 lbs.), small size (10.2 x 8.2 x 3.5)
- Unique, slanted front chassis
- Capable of being mounted in our Coda, Corus or Ten2 speaker cabinets
- Separate XLR and 1/4 inch inputs per channel
- 48V phantom power and 10 dB gain select for mic input
- Input level control per channel
- Four band EQ per channel
- Selectable phase reverse and sweepable low cut filter per channel (phase reverse can be converted to low pass speaker emulation filter with internal jumper option)
- Effects loop per channel
- Selectable reverb and delay effects with level and rate controls and pseudo stereo output
- Direct out with selectable 10 dB pad, pre/post switch and ground lift

- Headphone output
- Switchable limiter
- Mute switch
- Mono or stereo output from the preamp section
- Selectable internal jumper options for gain and stereo operation
- High fidelity, low noise operation: 110 dB SNR at direct out
- Automatic voltage switching for universal AC mains operation
- 650 Watt output at 4 ohms (music power)
- Dual speaker outputs with speakon connectors
- Comes with padded case and speakon to 1/4 inch adapter

The features of the S4plus combo amps are:

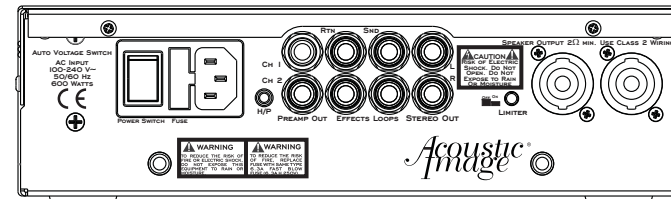
- Clarus amp docks in cabinet using our exclusive Cabrio Docking System
- Sealed two-way speaker system
- Coda:
  - Lightweight (22 lbs) structural foam cabinet
  - 10 inch poly cone woofer + 5 inch extended range midrange with level switch
- Corus:
  - Lightweight (22 lbs) structural foam cabinet
  - 10 inch paper cone woofer + 5 inch extended range midrange with level switch
- Ten2
  - Lightweight (34 lbs) structural foam cabinet
  - Downfiring + forward firing poly cone 10 inch drivers + 2.5 inch tweeter with level control
  - Exclusive Room Coupling Control for DF woofer
- All combos come with a fitted slip cover

While our combos and speakers are designed to play loudly—and clearly—enough so that you can be heard in most gigging situations, they are not suited to playing at extreme volumes. Generating high SPLs may require an extension cabinet like the Coda EX, Corus EX, Ten2 EX or augmentation by a larger house system.

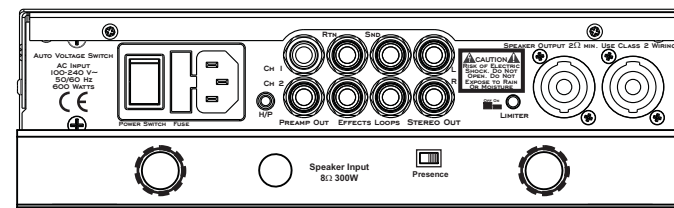
The instructions that follow apply to all of the S4plus products due to the many common elements in the different units. Where there are specific differences that are unique to one or more units, those differences are described. The Clarus amp head is described first followed by the common elements of the combo amps (docking system, tilt mechanism, cabinet placement, etc). The specifics of each cabinet type are then described followed by detailed specifications of all of the models.

## Operation--Clarus Head

### Power



Clarus Rear Panel



Coda, Corus and Ten2 Rear Panel  
(shown in the docked position)

Plug the detachable AC power cord into the receptacle on the back of the amp and into a wall receptacle. A power switch next to the AC input turns on power to the pre- and power amps, illuminating a “power on” indicator on the front panel of the amp. **A 6.3-amp fast blow fuse is mounted in the drawer marked with the fuse symbol that is part of the AC receptacle. To replace the fuse, turn off the amp, remove the AC cord and use a small screwdriver to pry the drawer out of the receptacle. Remove and replace the fuse.** Note that a spare fuse is mounted inside the drawer.

Our amps and combos all operate with AC voltages between 100V and 240V, 50/60 Hz. An internal switch automatically selects the correct mode of operation for that voltage range. No user action is required to set the unit to operate with different AC voltages. Note that the correct AC power cord must be used for connection to the appropriate wall plug. If you do not have the right cord, you can buy one from an electronics or computer store.

Note that when the power switch is off and the power indicator is off, power is not completely removed from the amp. To completely remove power, disconnect the power cord. Always leave the power cord accessible so that you can easily disconnect power from the unit.

**Note that there is a 5 to 10 second delay after the power has been turned before the amp becomes operational. This is done so that “start up” noises are not heard.**

### Preamp

Refer to the signal flow and the control panel diagrams (page 9).


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Note that all of the push button switches illuminate when they are in the “on” position. So, a quick glance at the preamp will tell you which functions have been engaged.

Also note that there are a few internal jumper options that can be accessed when the front panel is removed. These options are intended for the advanced user. They are available to add additional functionality and are referenced in the description below. The jumper locations are shown on page 11 and are noted on the signal flow diagram.

### Inputs

Separate 1/4 inch and XLR jacks are used for the inputs to each channel of the preamp. The 1/4 inch input has a 1 megohm input impedance that is optimized to get the best sound from piezo pickups. It will also work well with magnetic pickups. The XLR input is a low impedance balanced input with sufficient gain to allow microphones to be plugged into it. There is a switchable 10 dB gain to accommodate mics that need more gain. Phantom power is available through the connector for powering a mic or outboard preamp and can be activated using the push button switch located next to the connector.

 **To avoid an audible “pop”, set the input level control all the way off when switching on the phantom power.** The input jacks are separately buffered so both can be used at the same time. Each channel is identical and can be blended to mix two instruments, 2 microphones or a mic and an instrument thereby performing much like a small PA system.

### Controls

The Clarus preamp has the following controls in each channel: input level, Low, Lo Mid, Hi Mid and High tone controls. In addition, there is a variable frequency low cut filter and a phase reverse switch in each channel and a master level control that affects both channels.

### Level

The input level controls the level of the signal at the input stage of the preamp. The master volume controls the level of the signal at the output of the preamp (at the input of the power amp). Set the master control at “12 o’clock” and the input level at zero. The input level should then be used to control the overall output of the unit. The two controls are provided to allow independent control of “house” volume and “stage” volume when the unit is used as a stage monitor with a connection to a house PA. See the discussion under “Direct Out” below.

If you have an instrument with a particularly “hot” output such as an active bass guitar and you find that the front end of the preamp is clipping or being overdriven, a 6 dB gain reduction option is available

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via a jumper on the preamp control printed circuit board. How do access and utilize this option is described in “Jumper Options” section found on page 11.

### Tone

Each tone control has a center detent at the flat position. Experiment with settings to achieve the frequency balance that sounds best to you. In general, small values of boost and cut are best. The Clarus preamp is designed with flat frequency response so only minor corrections should be required to compensate for room effects or “peaky” pickups in order to maintain the balanced response desired for acoustic instrument amplification. To minimize electronic noise, avoid operating all controls simultaneously at their maximum settings. The Low control is a shelving-type that affects frequencies below 150 Hz and with a maximum boost/cut of 12 dB. The Lo Mid control affects frequencies between 70 Hz and 700 Hz (peak at 250 Hz) and has a maximum boost/cut of 12 dB. The Hi Mid control affects frequencies between 700 Hz and 3000 Hz (peak at 1200 Hz) with a maximum boost/cut of 12 dB. The Hi control is also a shelving-type that affects frequencies above 3500 Hz with a maximum boost/cut of 12 dB.

### Low Cut Filter/Phase Reverse/Speaker Emulation Filter

The Clarus preamp has a sweepable low cut filter and phase reverse switch in each channel. The low cut filter is a variable frequency type that inserts a 12 dB per octave rolloff at frequencies between 30 and 150 Hz, depending on the position of the control. The low cut filter is used to reduce the bass output in cases where room location or instrument/pickup combination results in “boomy” sound. Press the on/off switch to turn on the filter circuit. Start with the frequency control fully counterclockwise and gradually turn it clockwise until the desired effect is achieved. The frequency range of the control is limited in order to give you more control in the critical low frequency range. As a result, the effect you hear in normal circumstances may be subtle, but, you will hear the effect in a boomy bass situation. Experiment with the position of the control to give you the sound you like best.

The phase reverse switch is used to reduce feedback and to control phase interactions between the two channels. If you are using two pickups or a mic and a pickup, you will find the phase reverse switch to come in handy. Phase related interactions between a mic and a pickup or two pickups can be cleared up by reversing the phase of one of the channels. Mic feedback can be reduced by reversing the phase of the signal. You should experiment with the phase reverse switch to see if the effect is one that you like.

If desired, the phase switch can be converted to a speaker emulation filter by moving a jumper on the rear of the preamp circuit board. How this is done is described in the section entitled “Jumper Options.” This can be done on either or both channels.

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The speaker emulation filter is a low pass filter that modifies the preamp output to sound like a single speaker guitar amp. It rolls the frequency off starting at 4 kHz. If you are a guitar player, you may find this to be a desirable sound, it will allow you to get a more “classic” jazz guitar sound.

### Effects Loop

The Clarus preamp has an output (“Send”) and input (“Return”) capability in each channel to allow you to use effects boxes. The effects loop for each channel is located on the rear panel of the unit. See page 3 for a diagram of the rear panel. The send output is affected by the input volume and tone controls and can also be used as a preamp output for driving other power amplifiers. Because the effects loop is a parallel type, plugging something into the send output does not interrupt the signal path. So, a tuner can be plugged into the send output without affecting the signal going through the amp.

The return input can also be used as an auxiliary input for connecting other line level signals such as a CD player.

### Direct Out

An XLR jack is provided for a Direct Out connection that allows the preamp output to be fed to mixing boards of house PA systems or recording studios. As a result, the instrument(s) connected to the unit can be recorded or further amplified by the house PA system. The direct out jack is located on the front panel of the Clarus preamp. The Direct Out signal is the combined output of the two channels.

A switch is provided to allow you to select whether the output from the Direct Out jack is affected by the tone controls (post EQ) or not (pre EQ). With the switch in either the pre or post EQ position, the input level control affects the level of the Direct Out signal, the master level does not. This allows independent adjustment of the “stage” volume (the volume coming from the combo amp) and the “house” volume (the volume in the house PA system) when the unit is used as a stage monitor. Once the level has been set for the house, if more volume is needed on stage, the master level can be increased. This will increase the stage volume but not the volume in the house PA.

A ground lift switch is available to “lift” the ground from the output of the direct out--reducing noise should a ground loop create hum when the unit is connected to a mixing board.

If the direct out signal is overdriving the mixing board, switch in the 10 dB pad to reduce the signal output level.

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### Mute Switch

A switch is provided to allow you to mute the output of the Clarus without having to turn the amp off. This will allow you to tune your instrument on stage without being heard. The amp output and direct out signals are both muted by the switch. The mute switch is on the front panel and when it is on, the switch is illuminated. **If you are not getting any sound out of the amp, check to make sure that the mute switch is off.**

### Preamp Output

There are 1/4 inch jacks labeled “Preamp Out” on the rear panel of the Clarus for accessing the output of the preamp.. When the Clarus preamp is in mono mode, the top jack, labeled “Ch 1” or “Mono” is the output to use.

### Stereo Operation

An internal jumper option is available to allow the Clarus preamp to operate in true stereo mode. The output of channel 2 can be disconnected from the jack labeled “mono” on the rear panel and connected to the channel 2 output jack by changing the position of a jumper on the backside of the preamp control board (see the “Jumper Options” section for details). When in the true stereo mode, the output of each channel is independently available from each preamp output jack.

Note that when in the stereo mode, channel 2 is no longer connected to the internal power amp, so it will not be heard through a speaker connected to the Clarus.

### Effects

The Clarus preamp has a high-quality, 24 bit digital effects processor. Three variable effects are available: a reverb with variable decay time, a reverb/delay with variable delay, and a delay with variable delay time. A four position switch selects the program (Off, Reverb, Delay/Reverb and Delay). There are illuminated switches to select which of the two channels is processed by the effects unit. Either channel can be connected to the effects unit. If both switches are engaged, the selected program appears in both channels. A level control affects the amount of effect that is heard in the signal (the “wet/dry” mix) and another control affects the rate of the effect (reverb decay time or delay time). For example, the rate control has enough range that the Reverb program can be varied from a large hall to a small room. You should experiment with both the program selection and the level and rate controls to find the sound that you prefer. When effects are not used (program switch in the off position), the switches for both channels should be off and the level control should be turned fully counterclockwise.



## Pseudo Stereo Operation

The effects processor in the Clarus preamp is a stereo unit. As a result, a single input can be converted to a stereo output as far as the effects are concerned. The 1/4 inch jacks labeled "Stereo Out" on the rear panel are where the pseudo stereo signals are accessed. To operate in pseudo stereo mode, plug an instrument into channel 2 (**only channel 2 has this feature, connecting to channel 1 won't work in this mode**) and connect a separate powered speaker (such as the Flex Cab) or power amp and speaker combination to each of the "Stereo Out" jacks located on rear panel. The effects level control affects the wet/dry mix and the input level control affects the overall level of the signal. The master level control has no effect. You should experiment with the operation of the pseudo stereo mode to find the sound you like best.

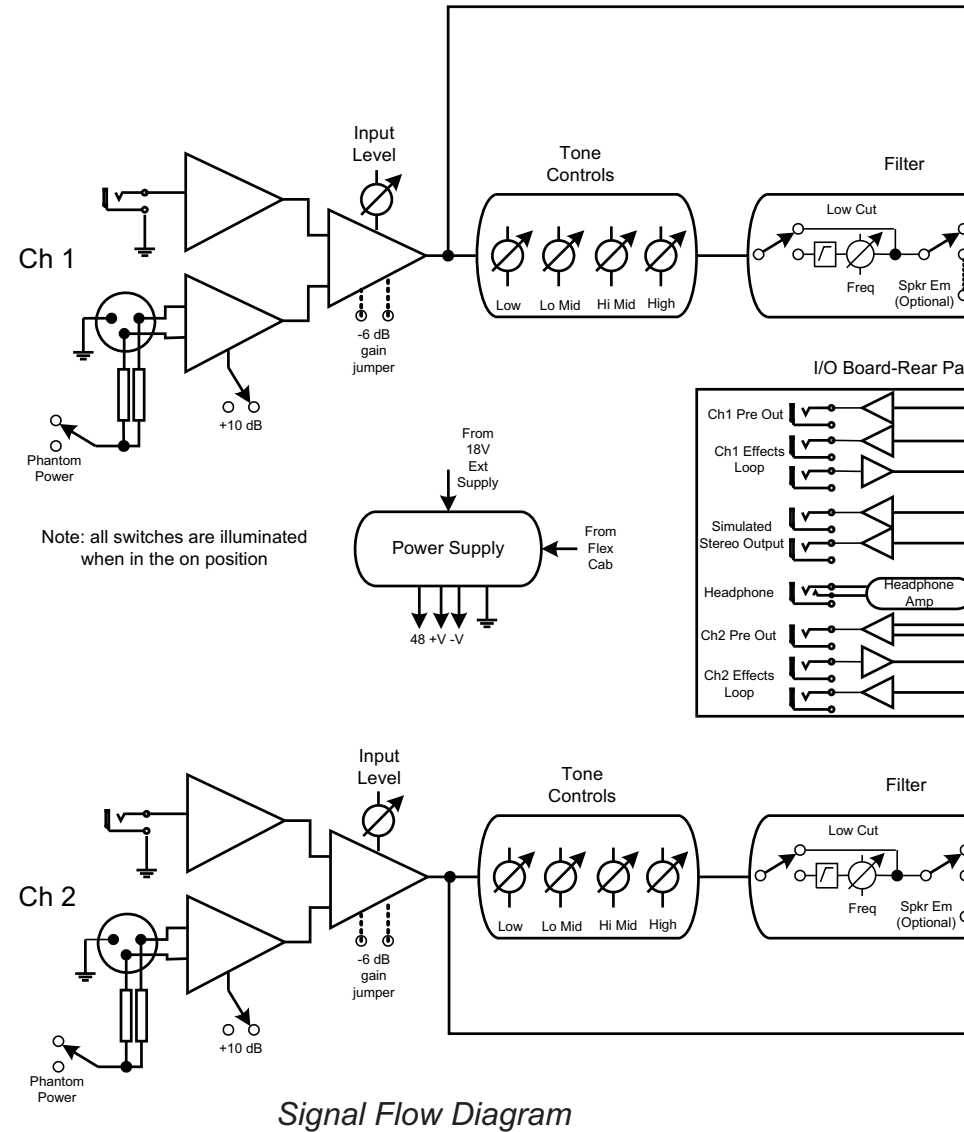
The pseudo stereo mode of operation requires a power amp to be connected to each rear panel output. It is not available using the internal power amp of the Clarus.

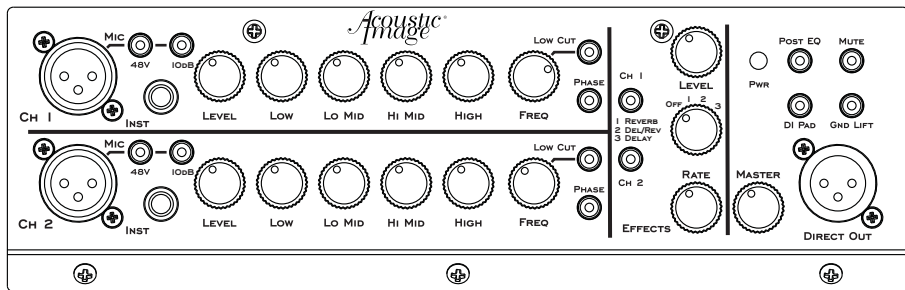
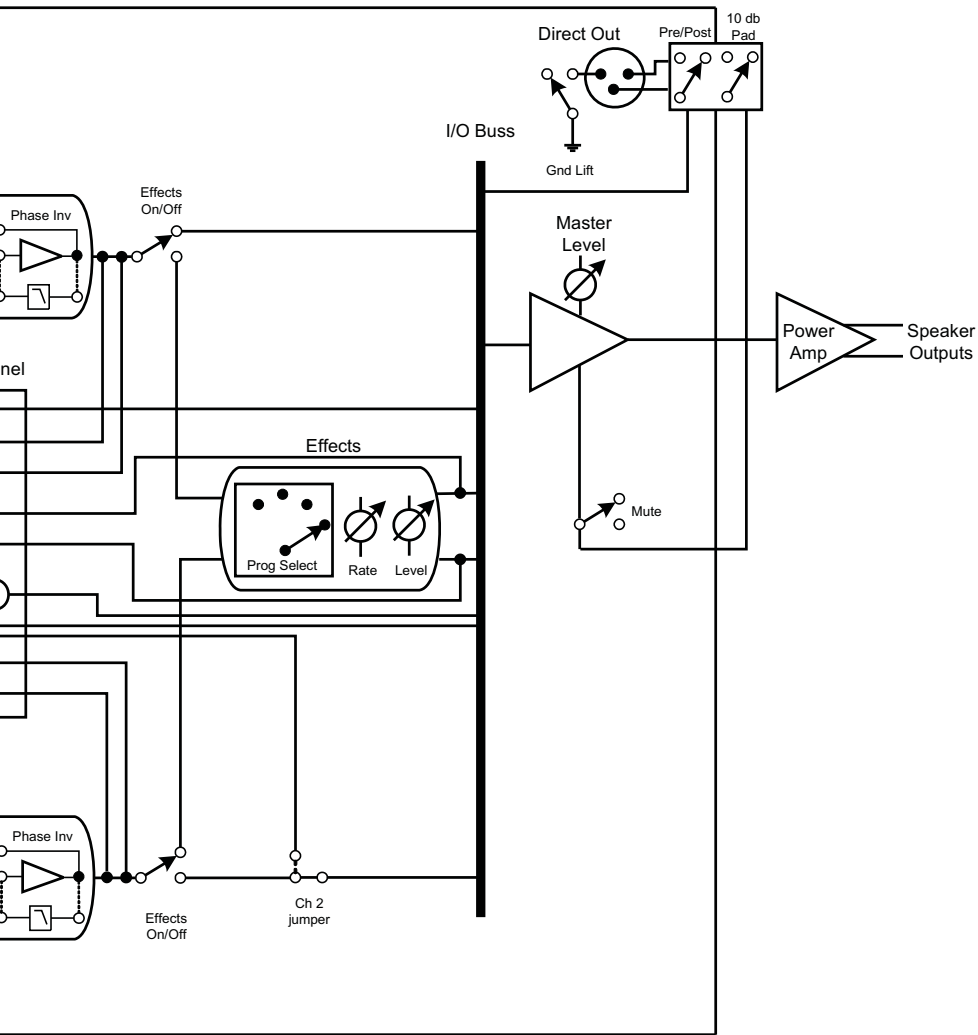
## Headphone Output

There is headphone output on the rear panel of the Clarus. You can plug a standard 1/8 inch stereo plug into this output to connect a headphone for private listening. If your headphone has a 1/4 inch plug, you can buy an adapter to allow you to use the 1/8 inch output jack.

When you plug into the jack, the preamp output is muted. Sound will only be heard through the headphones. The headphone is connected to the output of the preamp so all of the controls on the preamp, including effects, will be heard through the headphone. When the headphone plug is removed from the jack, the amp will come back on. Anytime anything is plugged into the headphone output jack, the amp will be muted so make sure that nothing is plugged into the jack when you want to use the amp normally.

**The headphone output is to be used only for connecting a headphone unit, do not use it as line out or to drive a low impedance speaker.**





Control Panel

### Limiter Switch

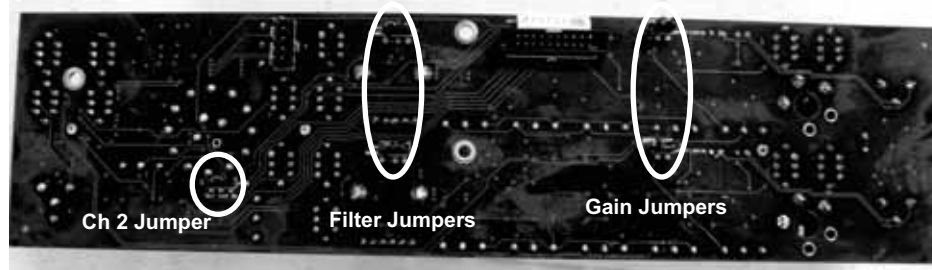
Under extreme playing conditions such as high volume or when driving a low impedance speaker load, the Clarus may be pushed beyond its limits. When that happens, you will hear high distortion and you may even cause the overcurrent protection circuit to operate resulting in an interruption of sound. The limiter switch, located on the rear panel of the amp head, is provided to allow the amp to operate under these conditions with lower distortion or without having the overcurrent circuit kick in. The limiter reduces the peak signal that is driving the power amp, thereby reducing its peak output with the result of lower distortion. If you find yourself having to play in extreme conditions that cause the amp to have too much distortion or even signal interruption, engage the limiter and see if that helps the situation.



### Internal Jumper Options

On the back side of the Clarus preamp control circuit board are several user-selectable options: one selects the gain level in the input stage, another selects between a phase reversal and a speaker emulation filter and the last disconnects channel 2 from the output buss and connects it to an output jack. To access the back side of the circuit board, remove the 5 screws that hold the front panel to the chassis and remove the panel and preamp from the chassis .

A photo of the back side of the circuit board is shown below:



Looking closely at the circuit board in the vicinity of the jumpers, you can see that each has a label that tells you the option that has been selected by the jumper. The Gain Jumper is labeled "Norm" or "-6 dB." If the shunt is under "Norm," the normal gain option is selected. The Filter Jumper is labeled "Invert" or "LP." If the shunt is under "LP," the low pass filter, or speaker emulator has been selected. As you can see, each channel has a jumper option, so you can select the same or a different option for each one. The Ch 2 Jumper is labeled "Out" or "In." If the "In" position is selected, channel 2 is disconnected from the output buss and is connected to the Ch 2 Preamp Out jack on the rear panel. (Hopefully that nomenclature is not too confusing.)

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Once you have made the jumper selections you want, reinstall the preamp in the chassis.

## Power Amp

### Connecting a Speaker

Speakers are connected via speakon connectors (“twist lock” type) located on the rear panel. These connectors are used because of their low contact resistance and non-shorting operation. The output of each Speakon connector is wired to pole “1”. Make sure the cables you use to connect a speaker (and the speakers themselves) are similarly wired. **Use Class 2 wiring for speaker cables.**

The power amplifier is capable of driving speaker loads as low as 2 ohms. Use a high quality speaker system in order to get the maximum performance from the amp. The Acoustic Image Coda EX, Corus EX or Ten2 EX are excellent choices. As mentioned above, the power amp is short circuit protected. If a short is connected to a speaker jack, the output signal will be interrupted until the short is removed. Note that when using a 1/4 inch type speaker plug, there is a momentary short that occurs when the plug is put into the jack. That short can cause a problem for the amp. **To be on the safe side, you should shut off the power to the amp before connecting or disconnecting speakers from the unit.**

### Operation Without a Speaker Connected

There may be times when you want to operate the amp without a speaker connected to it. For example, you may want to record using the Direct Out and don’t want the output of the amp to be heard through a speaker. In that case, set the master level to zero. By setting the master level to zero, the signal to the power amp is turned off and it is not driven without a speaker load which can damage the amp. **Be sure to set the master level to zero when a speaker load is not connected to the amp. Operating the amp with no load and the master level turned up can damage the amp.**

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## Operation--Speaker Cabinets

### Docking System

The amp head component of our combo amps can be removed and used as a stand-alone amplifier. To remove the head unit, first disconnect the speaker “pigtail” that connects the speaker cabinet to the amp, then unscrew the docking screws on the rear panel until they are loose. Grip the cabinet as shown and use the tips of your fingers to push the head unit out. The fit is quite snug so some force will be needed.



Once you have removed the head, you will notice the rubber feet stored in a compartment on the bottom. Remove the feet and screw them into the four positions on the bottom of the head. When you want to put the head back into the cabinet, you will have to remove the feet and put them back into the storage compartment.

To reinsert the head unit, grip the cabinet as shown and push it in with your thumbs. Again, the fit is snug so some force will be needed. Once the head unit is in place, tighten the docking screws to pull the head tight to the docking plate. Reconnect the speaker cable and the unit is ready to go.

### Speaker Placement (Combos or Extension Cabs)

The omnidirectional low frequency output of our speaker cabinets makes speaker placement relatively noncritical. You will easily be heard all over the bandstand no matter where one or more are located. However, best results are obtained when the cabinet is placed on the floor. Putting the unit on a shelf or stand will reduce bass frequencies. There may be circumstances where this is desirable. Feel free to experiment to find the sound that is best for you.

### Tilt Mechanism

In some settings, such as a hollow stage or small, “boomy” room, your amp or enclosure will produce too much bass. One way to cut unwanted bass output is to use the built in tilt back feature to lift the front of the cabinet, reducing the coupling to the floor. To do this, pull the stand into its forward position and set the combo in place on the floor. The stand is spring loaded so when you pick up the unit, the



stand will spring back into its storage position. You may want to use the tilt stand at all times in order to aim the high frequency output of the speaker toward your ear so that you can better hear the amp.

### Connecting An Extension Speaker

An extension speaker (ideally, one of our cabinets which is matched to the specific combo unit) can be connected to the amp to increase its output level using the jack provided on your amp's rear panel. Speakers are connected via speakon connectors ("twist lock" type). These connectors are used because of their low contact resistance and non-shorting operation. The output of each Speakon connector is wired to pole "1". Make sure the cables (and cabinets) you use to connect an external speaker are similarly wired. **Use Class 2 wiring for speaker cables.**



The combo amp has two outputs on the rear panel but one of them is used to connect to the internal speaker via the short jumper cable. So, one output is available for connecting an extension cabinet.

As mentioned earlier, the power amplifier in our combo amps is capable of driving speaker loads as low as 2 ohms. Use a high quality speaker system in order to get the maximum performance from the amp. The amp has a short circuit protection circuit that interrupts the signal if a short is connected to the speaker output. If you are getting no sound when an extension cabinet is attached, check to see if the extension has a short in it.

### Presence Switch (Coda and Corus)

A switch that controls the output level of the midrange driver is mounted on the docking panel of the Coda and Corus combo units. We call it the Presence switch. The switch allows the Coda to sound brighter and more forward, or in the case of the Corus amp, it can be used to make it sound less forward. Play through the combo and try the switch in each position to see which position sounds best to you. You will hear the relative level of the mid and high frequencies change as you flip the switch. You may find that the more forward sound is helpful when you are playing in noisy environments.

### Description of the Corus Combo

So, what's the difference between the Corus and the Coda? The preamp and power amp of the Corus are the same as those used in the Coda. The Corus uses a different woofer. It is more efficient and has slightly less bass response. When coupled with the other speaker in the two-way system and after the crossover is adjusted for the higher efficiency of the woofer, the result is still a flat response like the Coda but the low frequency 3 dB point is higher (60 Hz versus 40 Hz) and the overall efficiency of the system is higher (94 dB versus 90 dB). Thus the Corus is more optimized for non bass instruments than the other combos. In particular, guitar, keyboard and violin players will like the sound of the Corus. The higher efficiency gives it a more

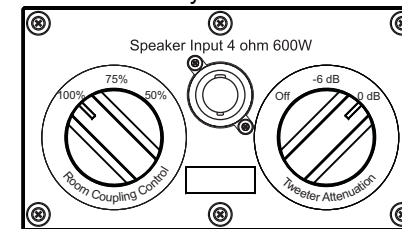


"forward" sound that these instrumentalists prefer. The slightly higher low frequency cut off is not noticeable with guitar.

The Corus EX has the same speaker components and the Corus combo and the perfect match to the combo when additional volume is needed. The Corus combo and Corus EX have a gray front grill so they look a little different and can be easily distinguished from the other combos.

### Tweeter Level Control (Ten2, Ten2 EX)

The tweeter level control is located on the rear panel of the speaker cabinet (see picture of the rear panel below). It is a three position switch with a selection of zero attenuation, 6 dB attenuation or off. The tweeter operates from 3000 Hz and up so it's effect on the sound will be audible. Under most circumstances, it should be operated with zero attenuation. Experiment with the control and pick the level of attenuation that sounds best to you.



Ten2 and Ten2 EX Rear Panel

### Room Coupling Control (Ten2, Ten2 EX)

The Room Coupling Control is also located on the rear panel of the Ten2 speaker cabinet. It is used to control the low frequency output of the downfiring woofer. It is useful in controlling "boominess" in difficult acoustic settings. It is a three position switch with settings of 100%, 75% and 50%. At the 100% setting, the downfiring woofer is operating at full output. At the 75% setting, it's output is reduced slightly. Use this setting when there is only moderate boominess in the room. At the 50% setting, the output is reduced even more. Use this setting for the most difficult situations. Experiment with the control so you can get a good idea of its effect on the sound.

### Description of the Ten2 EX

The Ten2 EX is the speaker cabinet portion of the Ten2 combo. It is about 3 inches shorter and about 7 pounds lighter than the Ten2 because the docking bay for the amplifier is not attached and the amp head is not provided. It has the same speakers and the same performance as the Ten2. It is the ideal extension cabinet for the Ten2 but it can also be used effectively with any of our other 1x10 combo amps. In fact, the other combos can be stacked on top of the Ten2 EX to create a compact 3x10 system.

# Specifications

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## System (all models)

Frequency Response	30 Hz-18 kHz (40-14 kHz $\pm$ 3 dB) 50 Hz-18 kHz (60-14 kHz $\pm$ 3 dB) Corus
Max SPL	>112 dB at 1 meter, >115 dB at 1 meter (Corus), >118 dB/m (Ten2)
AC Power	100V to 240V, 50/60 Hz, automatically switched
Size	12"Hx15"Wx13"D (Coda, Corus, EX) 17"Hx15"Wx13"D (Ten2), 14"H (EX) 10"x8"x3.5" (Clarus)
Weight	22 lbs (Coda, Corus, 19 lbs (EX) 32 lbs (Ten2), 25 lbs (EX) 4 lbs (Clarus)

## Amp Head

Frequency Response	20 Hz - 20 kHz ( $\pm$ 0.5 dB)
Signal to Noise Ratio	>110 dB at direct out

## Controls and Inputs

Mic Input	600 ohm balanced, XLR connector, switchable 10 dB gain
Phantom Power	48 volts, on/off switch w/LED indicator
Instrument Input	1 M $\Omega$ impedance, 1/4 inch jack
Direct Out	+4 dB, balanced, XLR, ground lift, pre/post EQ selector, switchable 10 dB pad
Effects Loop	Parallel type
Low Control	Shelving type, $\pm$ 12 dB at 50 Hz
Low Mid Control	$\pm$ 12 dB at 250 Hz
Hi Mid Control	$\pm$ 12 dB at 1200 Hz
Treble Control	Shelving type, $\pm$ 12 dB at 8 kHz
Low Cut Filter	-12 dB/octave sweepable from 30 to 150 Hz
Phase Reverse	Switchable 180 degree phase reverse
Speaker Emulator	(if selected) -12 dB/octave at 4 kHz

## Effects

Type	24 bit digital with 3 programs
Programs	Reverb with variable decay time, Delay/Reverb with variable delay time Delay with variable delay time All have variable wet/dry mix and "pseudo stereo" capability

## Power Amp

Topology	Class D (PWM)
Switching Frequency	500 kHz
Output Power 8 $\Omega$	300W rms continuous, 350W rms music (40% duty cycle), 500W peak transient
Output Power 4 $\Omega$	500W rms continuous, 650W rms music (40% duty cycle), 1000W peak transient
External Speaker Output	Speakon type (pole 1), 2 $\Omega$ min load including internal speakers, if connected

## Speaker System (Coda, Corus)

Woofer	10 inch, downfiring
Midrange	5 inch, forward firing with 2 position level control switch
Crossover	Passive, alignment corrected
Impedance	8 $\Omega$
Power rating	250W

## Speaker System (Ten2)

Woofer	Dual 10 inch, one downfiring with level control, one forward firing
Tweeter	2.5 inch forward firing with attenuation control
Crossover	Passive, alignment corrected
Impedance	4 $\Omega$
Power rating	500W

## Supplied Accessories

Fitted slip cover with cord storage pocket and shoulder strap (combo amps)  
Gig bag with shoulder strap, Speakon to 1/4 inch adapter (amp head)

## Available Accessories

Padded gig bag with shoulder strap made by Mooradian, kit to convert cabinet with head removed to an extension cab (adapter, filler panel, padded case for head)

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### Shoulder Strap

To use the shoulder strap to transport a combo amp, feed the strap through the handle opening on the speaker cabinet (both sides) and clip the end to the D-ring attached to the strap. The picture below illustrates how to attach the strap. The strap can be used either with the slip cover in place or not in place.



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### Care

Acoustic Image combos and cabinets are made from injection molded polymer materials. The amp heads are powder coated aluminum. A little care will keep yours looking new for years to come. Use a clean, dry cloth to clean the cabinet and metal parts of the amplifier.

### Warranty and Repair

We stand behind our products with a full warranty of five years from the date of purchase. Speaker components are warranted for 180 days. Should a problem arise, please call us before returning your amplifier or enclosure. Naturally, our warranty does not cover products that have been damaged through misuse. Be sure to check our web site regularly, we have an FAQ section and we post helpful information for getting the most out of your Acoustic Image product. Be sure to check out our YouTube channel which is accessible from our web site, we have a video version of this manual there.

### Warranty Information

Serial Number \_\_\_\_\_

Acoustic Image  
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Raleigh, NC 27617  
[www.acousticimg.com](http://www.acousticimg.com)

Phone: 919-785-1280  
Fax: 919-785-1281

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**FCC COMPLIANCE NOTICE**

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



**CLARUS**<sup>TM</sup>  
Series 4

**CODA**<sup>TM</sup>  
Series 4

**CODA EX**<sup>TM</sup>  
Series 4

**CORUS**<sup>TM</sup>  
Series 4

**CORUS EX**<sup>TM</sup>  
Series 4

**TEN2**<sup>TM</sup>  
Series 4

**TEN2 EX**<sup>TM</sup>  
Series 4

*Acoustic  
Image*<sup>®</sup> Uniquely musical.