

Acoustic Imaging Blender **Aura™**



FISHMAN®

Warnings



Important Safety Instructions

To ensure your personal safety and the safety of others, operate this apparatus only after reading these instructions and heeding the warnings listed below.

- Before you operate the Aura, read the safety instructions below and keep them for reference.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with a dry cloth.
- Do not operate near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
- Unplug the apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as liquid spilled or objects fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Use only with the specified AC Adapter.

(USA) Federal Communications Commission Radio Frequency Interference Statement

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 instructions, may cause harmful interference to radio communications. However, there is no guarantee the 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 which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

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.

(Canada)

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

(EU Countries)

This product complies with the requirements of European Directive 89/336/EEC



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Input Requirements

- **Acoustic Guitar:** Use only an undersaddle pickup or a magnetic soundhole pickup.
- **Other Instruments:** Use only a bridge mounted pickup.
- If your pickup system has an onboard microphone, shut it off.
- If your pickup system has onboard EQ, set all the controls flat.

Get Your Feet Wet

- 1 Connect the Aura's ¼" **Output** or **XLR Output** to your amplifier or mixer input.
- 2 Connect your acoustic instrument to the **Input** jack on the rear panel.
- 3 Connect the recommended adapter to the **9VDC** input to power up the Aura (see *Controls and Connections, Rear Panel, 9VDC*). Keep the volume down on your amplifier or mixer to avoid a loud pop that could damage your speakers (or your ears!).
- 4 Play your instrument aggressively and adjust the **Input Level** until the adjacent LED (yellow) flickers regularly and the red LED does not light up at all.
- 5 Set **Edit/Play** switch to Play.
- 6 Raise the **Output Level** to a comfortable volume.

7 Browse Through The Different Sound Image / Pickup Mixes

Use the **Up** and **Down** footswitches or the **Data** control to scroll through programs 01-16 and find a Sound Image/pickup mix that matches well with your instrument.

The Aura comes with 16 factory-loaded digital "Sound Images" that correspond to a popular variety of acoustic guitars and microphone combinations. To help you identify the instrument, pickup and microphone associated with each program number, see to the Quick Reference Card included with this manual.


Jump In the Deep End

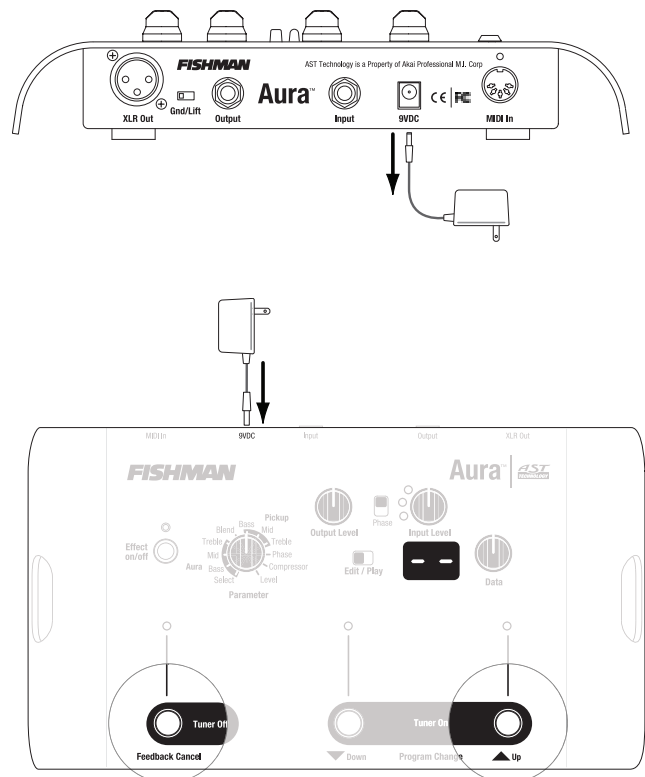
Once you find a Sound Image that you would like to use with your instrument, you can correct the phase, insert the Feedback Cancel circuit, blend the Sound Image with your pickup and apply equalization or compression. The changes you select can then be applied to the programs that reside in the Play mode.

- 1 Start with the **Edit/Play** switch in the Play position, and choose a Sound Image/pickup mix in one of the program locations (between 01 and 16). Make note of the program number in the display.
- 2 Flip the **Edit/Play** switch to Edit. Select the **Parameter** you'd like to change (example; Blend) and adjust it with the **Data** knob. You can make adjustments to any of the 11 Parameters, as long as you stay in the Edit mode.
Once you make your adjustments, simply flip the **Edit/Play** switch back to Play. You now have committed these changes to that program location. Additional tweaks can also be made at any time, by returning to this same program location and repeating the above directions.
- 3 Unless you want to start building duplicate programs in different locations, do not experiment with the **Select** parameter just yet. Please be patient, and read on

TIP: Always start with the Edit/Play switch in the Play position, and select your program number before you switch over to the Edit mode. This way you will avoid inadvertently altering a program that you've already set up.

RESET: If you get in too deep, too quickly, you can easily return all the programs to their original factory settings with these 3 easy steps:

- 1 Unplug the 9VDC adapter from the back of the Aura.
- 2 Hold down the two outside footswitches and insert the power plug into the unit.
- 3 Continue to hold down the outside footswitches until the  prompt appears in the LED display.



Product Registration

Please fill out the Product Registration form online at

<http://www.fishman.com/register.asp>

Why register? When you do, we have your information on file should your Aura Acoustic Imaging Blender ever require warranty service. Your registration also keeps you on the cutting edge: we can let you know when updates and upgrades for the Aura become available.

Welcome!

We at Fishman thank you for purchasing the Aura Acoustic Imaging Blender. You'll be glad you did, because the Aura is going to forever change the way you think about acoustic amplification. Whether you're plugging in onstage, recording in the studio, jamming with friends or just noodling around at home, this little silver box will transform your amplified acoustic sound.

Through the magic of cutting-edge digital technology, Aura grants the secret wish of every acoustic musician: dead-on amplified acoustic tone. No apologies. No compromises. Imagine the kind of realism you hear on your favorite acoustic recordings, but without a microphone. Aura is making instant believers of those who have written off pickups in the past.

Aura's acoustic Sound Imaging technology holds 16 Sound Images; the musical, genetic material of a variety of the world's choicest acoustic guitars and microphones. When you plug into the Aura, its advanced algorithms transform your pickup signal into glorious, warm and radiant mic'd-up acoustic guitar tone. Can a pickup ever sound as good as a microphone? The answer is Yes. Cast off any preconceptions of what a pickup can sound like and be prepared for the future of acoustic amplification. You have found your Aura.

If you have any questions or comments, please contact us at tech@fishman.com.

What Is a Sound Image?

A Sound Image is a sophisticated algorithm that transforms your pickup's signal into that of a microphone in front of a guitar (or other stringed instrument). To transform the caterpillar pickup signal into the butterfly sound image, the algorithm seamlessly adjusts the pickup's phase and frequency response to match the instrument and microphone in the Sound Image template. Also, signature elements like body size, radiant sound from the guitar, body resonance, mic distance and even the microphone's personality all get added into the equation for amplified acoustic guitar sound with indisputable realism.

Everyone loves the sound of a well mic'd acoustic guitar. The transparency of a fine microphone positioned precisely at the elusive "sweet spot" in front of a guitar is a beautiful thing. Over the years, we have endeavored to capture these qualities with our pickup systems, with varying degrees of success. But with just a pickup, we could never capture the same sound quality as a top shelf studio microphone setup. That is, until now.

At Fishman, we set out several years ago to figure out exactly what it is about the interaction between a microphone and a guitar that is so special, and how this special relationship can be re-created with a pickup. We looked at the behavior of a vibrating guitar top and the way sound radiates off the instrument. We studied what a microphone "hears" compared to what a pickup "feels". We joined forces with Akai Professional especially for the Aura project.

Aura Capabilities

What does it do?

The Aura is the logical extension of Fishman's Blender technology. With a traditional Blender, we combine the utilitarian function of a pickup with the unquestionable realism that only a microphone can add. This combination produces a whole that is much greater than the sum of the parts.

The Aura Acoustic Imaging Blender takes the concept a giant leap forward by eliminating onboard microphones from the equation and replacing them with digital Sound Images derived from a real studio environment.

What you can expect from the Aura?

Sound Imaging bridges the credibility gap between unamplified and amplified acoustic guitar sound. Unlike modeling, which takes a generic signal and applies a specific coloration, Sound Imaging matches the specific sound of an acoustic guitar with a specific Sound Image. Modeling is simulation, whereas Sound Imaging is re-creation. Don't expect a catalog of different guitars at your fingertips; that is not what the Aura is intended for. Expect the Aura to amplify **your** instrument's most natural sound with incredible accuracy.

Size Matters

There are good reasons why acoustic guitarists gravitate toward one body style or another. Strummers often go for the big, boomy rhythm that only a dreadnought can produce. Fingerstylists tend to favor smaller instruments, like the grand concert for its tonal balance and quick, feather-touch response. People looking for the best of both often play grand auditorium instruments. Because Aura is about re-creating an instrument's individual character, it is important to match your guitar with a Sound Image based on a similar sized guitar and pickup type.

What Happens If I Mix and Match Sound Images?

We're not telling you that you can't try transforming your old Silvertone into a D-45 sound image, but don't expect miracles. The resonance and tonal balance of one type of guitar could be at odds with a dissimilar sound image. The nature of your particular guitar and the interactive nature of the Sound Image may clash, so proceed with caution. In the best cases, an acoustically neutral sounding instrument can "put on" some of the resonant characteristics of a dissimilar Sound Image, but we can't guarantee your results.



Aura, the Internet and You

The Aura ships with sixteen factory-loaded Sound Images of various guitar, microphone and pickup combinations. Of these sixteen factory-loaded Sound Images, twelve can be replaced with new Sound Images. Why would you want to start replacing these before you've even unpacked the Aura?

Because each Sound Image in the Aura is specific to body size, microphone model and pickup type, you may not find a factory preset that is a perfect match for your instrument. If you have internet access, you can download new Sound Images from our Aura website and transfer them to Aura through its MIDI-In port. We offer an ever-expanding library of new digital Sound Images, available only at www.fishman.com. Plus you can take advantage of email access to Fishman's legendary customer support with tips, tricks and trouble-shooting for your Aura. If you are already on the internet, come visit the Aura section of our website. If not, we suggest you take the plunge and get online. Then you can start taking advantage of the many valuable online resources available for the Aura.

MIDI Requirements

To transfer Sound Image data from your computer to the Aura, you'll need a MIDI interface.

If your computer has a USB port, you'll need a USB to MIDI adapter. This cable may have a second MIDI in connector that goes unused.

Go to www.fishman.com for complete Sound Image downloading instructions.

More Sound Images are available at www.fishman.com !

Although we include a representative group of instruments with the Sound Images presently in your Aura, we understand that you may want more than 16 to choose from. Especially when you consider how many different kinds of acoustic guitars exist.

To address this desire, we are gathering new Sound Images on an ongoing basis and offering them to you to download free from our Aura Gallery at the above website. Once you've downloaded your new Sound Images, you will be able to transfer them directly to the Aura via its MIDI-In port.

Aura Custom Shop

Imagine having a personal Aura library with Sound Images derived from your actual instruments! For the ultimate Aura experience, we will be setting up an Aura Custom Shop where we create new Sound Images for your personal instrument. Visit our web site at www.fishman.com for more details.

Rear Panel

1 XLR Out

Connect this balanced -4dBu level output to the input of your PA system, recording console, or to a microphone input on a portable amplifier. The Sound Image/pickup mix gets routed through this output.

2 Gnd/Lft

Move the Gnd/Lft switch to the “Lft” position to eliminate the ground loop hum that can occur when you use the XLR and (1/4”) Outputs together.

3 Output

Plug this unbalanced -10dBu output to your stage amplifier or an unbalanced mixer input. The Aura will sound best when you plug in to an acoustic instrument amplifier (like the Fishman Loudbox™), a full range keyboard amplifier, or a PA System.

4 Input

Connect your instrument to the Aura Input with a standard shielded cable.

Input Requirements

Use a so-called “string-sensitive” pickup on your instrument. For acoustic guitar this means an undersaddle pickup or a magnetic soundhole pickup. The Aura will not perform well with soundboard type pickups, such as the Fishman SBT or any other pickup that locates on the soundboard, away from the bridge. If your pickup system has a microphone, turn it off.

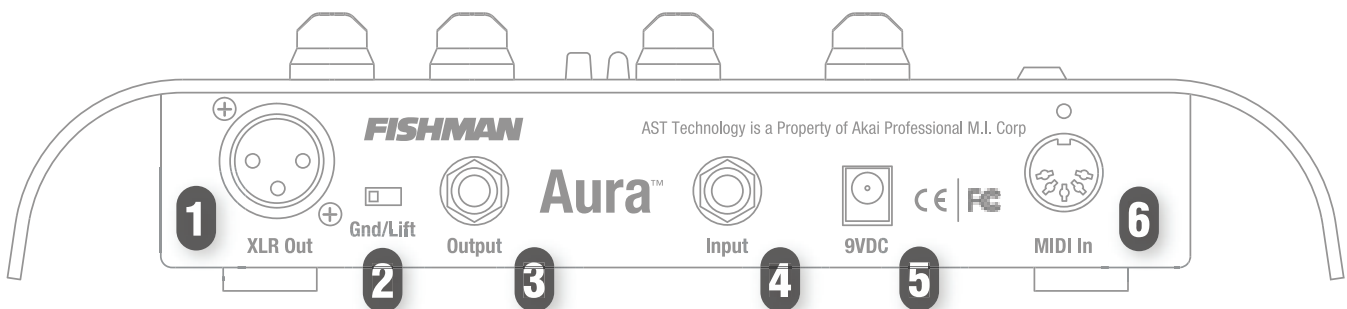
5 9VDC

Connect only with a regulated 9 Volt, 200mA AC adapter. Plug in the 9VDC input to turn the Aura on; there is no on/off switch. A Fishman 910-R AC adapter is included with all units sold in the USA. If you purchased the Aura outside the USA, you must supply your own AC adapter. We recommend the Roland PSA Series or a comparable equivalent.



6 MIDI In

Through this input you can transfer Sound Image data to your Aura from an ever-expanding library at the Fishman website. Go to www.fishman.com for additional information.



Front Panel

1 Output Level Knob

Sets the overall level at the XLR and ¼" outputs.

2 Phase Switch

Use this global phase switch to improve the amplified response at low volumes and to help reduce feedback at high volumes.

3 Input Level and LEDs

Lets you match the output of your pickup to the input of the Aura for the cleanest possible signal.

4 Effect on/off Switch

Push this switch to turn the digital Sound Image off and on. The green light turns on when the Sound Image is active.

5 Parameter Knob

In Edit mode, point the knob to the desired parameter to access it.

6 Edit/Play Switch

Flip the switch to Play to access the 50 program locations for your sound image/pickup mixes.

Move the switch to Edit to access the 11 adjustable parameters.

7 LED Display

The LED display references the 11 parameters in Edit mode, the 50 program locations in Play mode, and the pitch names and calibration frequencies in the Tuner mode.

8 Data Knob

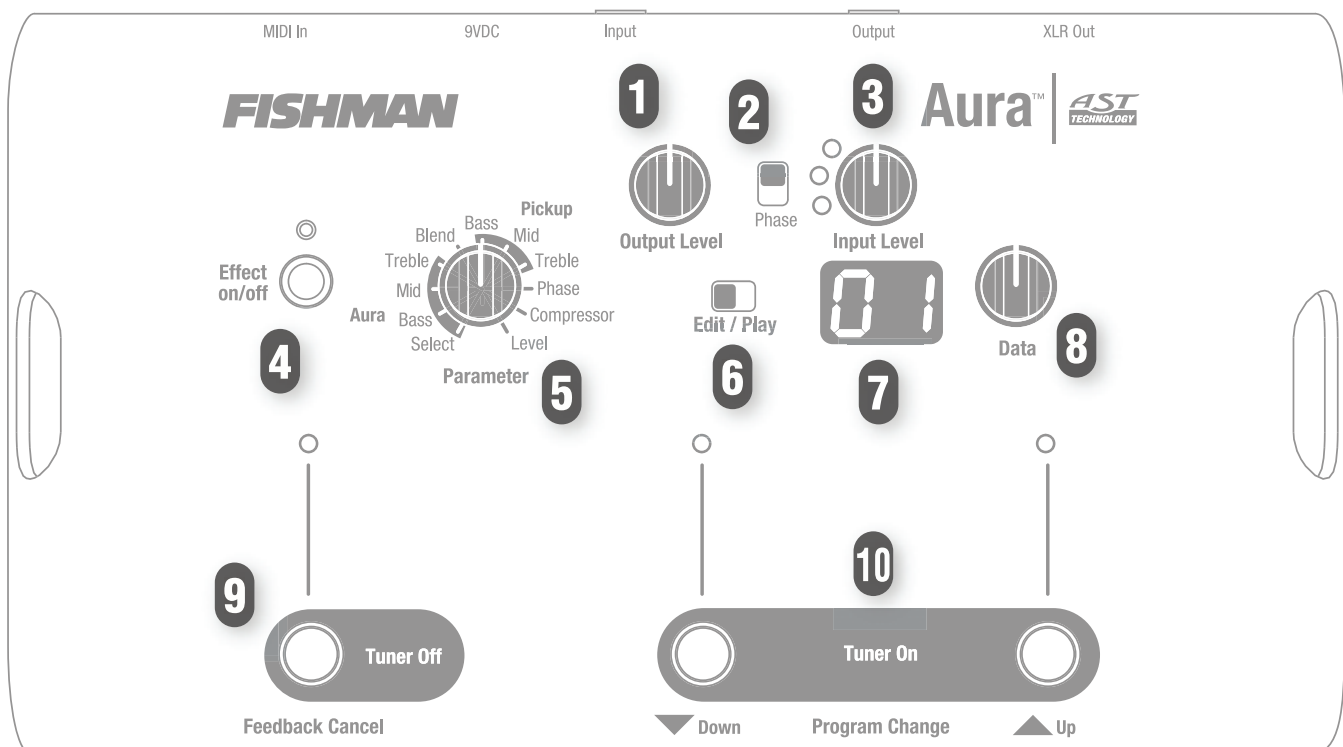
This multi-function knob affects the behavior of parameters in the Edit mode, scrolls through program locations in the Play mode and calibrates the reference pitch in Tuner mode.

9 Tuner Off/Feedback Cancel Footswitch

This dual-function footswitch disengages the Tuner and turns the Feedback Cancel feature on and off.

10 Tuner On/Program Change Footswitches

These dual-function switches are for engaging the chromatic Tuner and changing program locations.

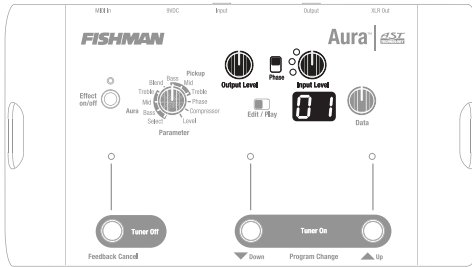


Chapter 1

Control Panel Overview

The Five Basic Control Groups

The Aura control panel can be divided into five functional groups:

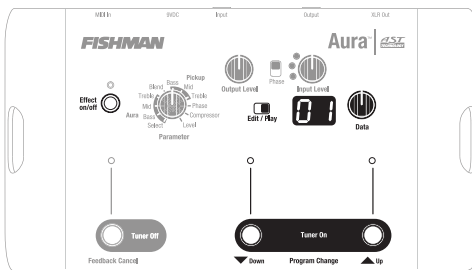


1 Input/Output (see page 15)

The Input Level control sets the optimum amount of gain for your pickup.

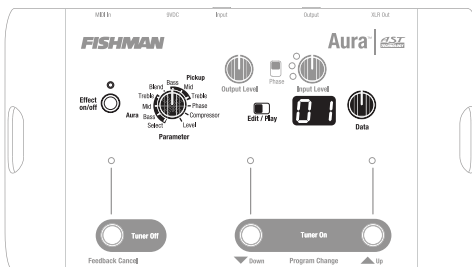
The Output Level sets the level going to your amp or mixer.

The slide switch marked Phase corrects phase anomalies that can degrade your sound or cause acoustic feedback



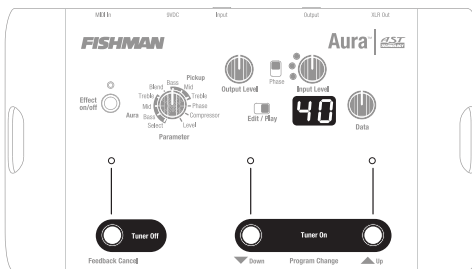
2 Play Mode (see page 16)

Move the switch from Edit to Play and use the Data knob or the Program Change switches to choose the location of the program that you will be working with. Initially this means that you'll be checking out the first 16 program locations and the factory mixes associated with them. Once you get more fluent with the Aura, you will use the Play mode to assign your mixes to the program locations (01-50) of your choice. During a performance, you will normally use the Aura in Play Mode. Use the Effect on/off switch to compare the Aura mix to the unadorned pickup sound.



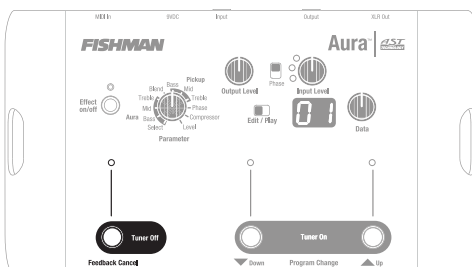
3 Edit Mode (see page 18)

Move the switch from Play to Edit to access the Aura's universe of adjustable parameters and tailor your mixes specifically to your preferences. Use the Effect On/Off switch to compare the Aura mix to the unadorned pickup sound. Use the Effect Off as your baseline for setting the level of your sound image/pickup mixes.



4 Tuner (see page 23)

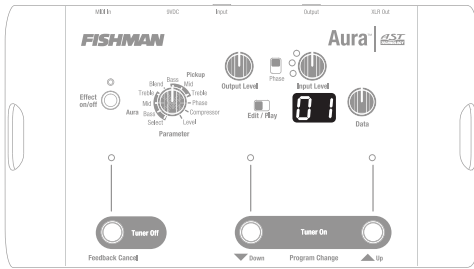
You have the option to mute the outputs (or not), and to change the calibration frequency of the chromatic tuner.



5 Feedback Cancel (see page 24)

The Feedback Cancel feature can be programmed to eliminate feedback in any of the 50 program locations.

LED Display



The LED Display is your guide for navigating through the Play, Edit and Tuner modes.

1 Play mode: The display shows your present program location.

2 Edit mode: Shows the status of a selected parameter.

3 Tuner mode: Displays the note name and calibration frequency of the tuner.

In Play mode, the Aura's LED displays the number of the program you are in.

Play **01** to **50** = Programs 1 through 50

In the Edit mode the Aura's display tells you the status of a selected Parameter.

Select **0F** = no digital Sound Image, just pickup
P1 to **P4** = Permanent Factory Preset Sound Images
01 to **12** = Semi-permanent presets; these can be replaced with newer Sound Images imported from www.fishman.com

Aura - Bass, Mid, Treble

01 to **12** = 1 to 12 dB boost
-1 to **-9** = 1 to 9 dB cut
0 = flat

Blend

P = pickup only
1 = 87% pickup
2 = 75% pickup
3 = 62.5% pickup
4 = 50/50 pickup/Sound Image
5 = 62.5% Sound Image
6 = 75% Sound Image
7 = 87.5% Sound Image
A = Aura Sound Image only

Pickup - Bass, Mid, Treble

01 to **12** = 1 to 12 dB boost
-1 to **-9** = 1 to 9 dB cut
0 = flat

Pickup Phase

0 = non-inverting
1 = inverting

Compressor

0F = off
C1 to **C9** = recommended for Chords (strumming)
L1 to **L9** = recommended for Lead
 (flat picking, finger style)

Level

0 = no boost or cut
1 to **3** = 1 to 3 dB boost
-1 to **-9** = 1 to 9 dB attenuation

Tuner

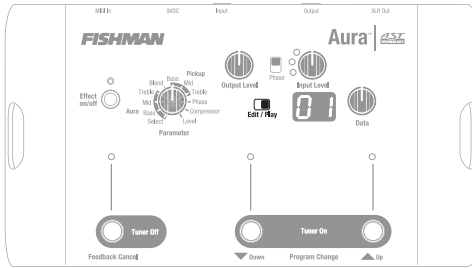
40 = A 440 Hz calibration frequency
 (dot in upper left corner) = Mute disengaged
A = A
A' = A#
B = B
C = C
C' = C#
D = D
D' = D#
E = E
F = F
F' = F#
G = G
G' = G#

Factory Default Settings

-- = all programs and parameters can be returned to factory default settings (excepting user downloaded Sound Images).

TO RESET: Hold down both UP and Feedback Cancel switches for over 2 seconds while plugging in 9V power.

Edit/Play Switch



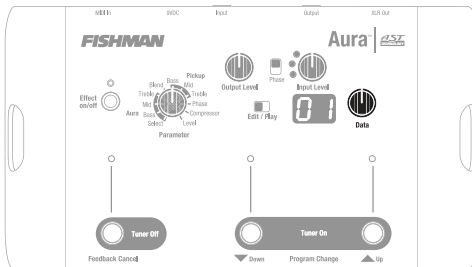
Use this switch to navigate between the 50 program locations in Play and the 11 selectable parameters in Edit. The mixes you create in Edit will automatically be placed in the last selected program location when you move the switch to Play.

Move the switch to Play and the numbers in the LED display will refer to the 50 program locations available in the Aura's memory. Use the Data Knob or the Up and Down footswitches to move through the different program Locations.

When you move the switch to Edit, the numbers and letters in the display will refer to the Aura parameters. In Edit, you select a Parameter, then dial it in with the Data knob.

TIP: Think of the program locations in Play as your canvasses and the parameters in Edit as paints. You choose a canvas (the program number in Play), move the switch to Edit, then choose from your palette of paints around the Parameter knob. Color and shade the subject by modifying the eleven parameters with the Data knob. Once you switch back to Play, you've put the paint to canvas.

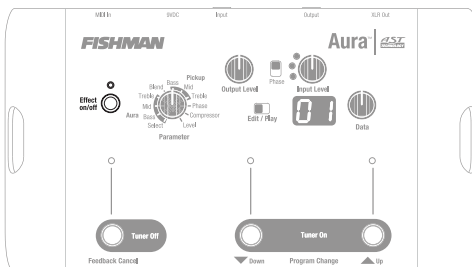
Data Knob



The Data Knob is a general-purpose control that gets you to and from where you need to go within the Aura. Its action is always reflected in the Aura's LED display.

- In the Play Mode, use the Data knob to move through your program locations (01-50).
- In the Edit Mode, use the Data knob to change the behavior of the selected parameter.
- In tuner mode, the Data Knob can change the pitch calibration frequency to anywhere between 427 and 453 Hz.

Effect on/off Switch

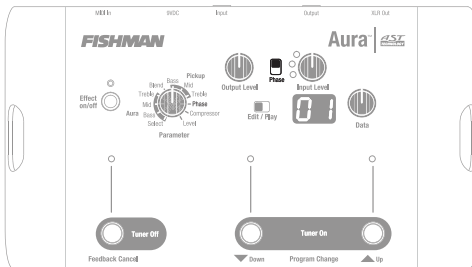
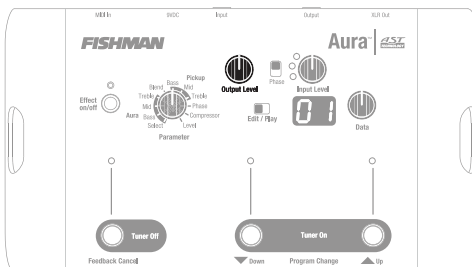
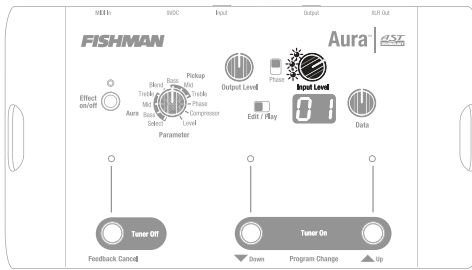


The Effect on/off Switch lets you bypass the blended sound image/pickup mixes in both the Play and Edit Modes, so that only the basic pickup signal from your instrument appears at the Aura's outputs. Use the Effect on/off Switch to help set baseline levels for your mixes (see page 22) and to compare your raw pickup sound to the enhanced sound.

Chapter 2

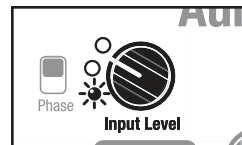
Inner Workings

Input /Output

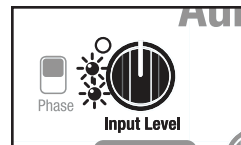


Input Level and LEDs

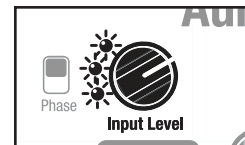
Use the Input Level control and the multi-colored LEDs to set the gain structure for the Aura. When you plug into the Aura, play your instrument aggressively and adjust the Input Level control so that the green LED (signal present) lights brightly, the yellow LED (optimal level) flickers often and the red LED does not flicker on at all. If the red LED lights up at all, lower the Input Level accordingly.



Signal Present



Optimal



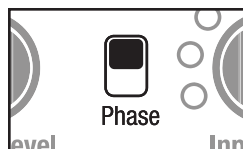
Clipping

Output Level

For the cleanest signal, set this control as high as possible without clipping and causing audible distortion to your mixer or stage amplifier input.

Phase Switches

The phase switch is the most misunderstood feature, yet it is also the easiest to use.

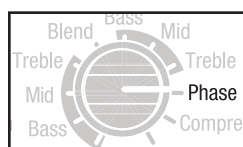


Phase (global, slide switch)

This is a global phase switch that flips the polarity 180 degrees at the outputs. At low volumes when feedback is not an issue, flip this switch back and forth to find the position that yields the fullest response, especially in the bass. At higher volumes, use this switch to subdue feedback between the instrument and your speakers.

Why a Global Phase Switch?

Any time you plug in, there is a 50% chance that the sound of the speaker and the instrument will clash in some way. The clash can manifest itself as a loss of bass response at low volumes or (more often) acoustic feedback at high volumes. The phase switch simply lets you put the instrument and the speaker in agreement. The method for setting the switch is equally as simple: flip the switch and listen. The "correct" position for the switch is the one that works for you.



Phase (pickup phase, located on the Parameter knob, switched by Data knob)

The selection marked Phase on the Parameter knob lets you flip the polarity of the pickup signal 180 degrees. With this control you can align the pickup signal with the Aura Digital Sound Image for a stronger and more cohesive sound. Use the Data control to flip between + polarity (0 in the display) and -polarity (1 in the display).

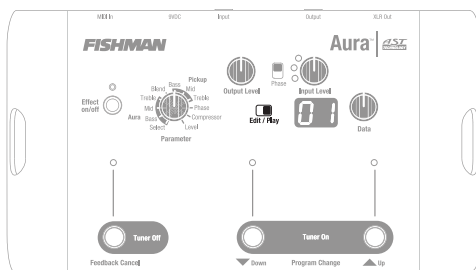
Why a Phase Switch on the Parameter Knob?

A Sound Image is created from an actual microphone in front of a guitar. So the distance of the mic from the instrument and the polarity of the mic capsule will contribute to relative phase of the signal. Because the Aura blends a Sound Image signal with a pickup signal there is a 50% chance that the two will clash. The clash will manifest itself as a loss of bass response, shrill treble, and a generally anemic tone. The phase switch located on the parameter knob simply lets you put the pickup and Sound Image into agreement. The method for setting the switch is simple: set the Parameter knob to "Phase", toggle the Data knob and listen. The "correct" position for the switch is the one that produces the strongest sound.

How to use the Phase switches:

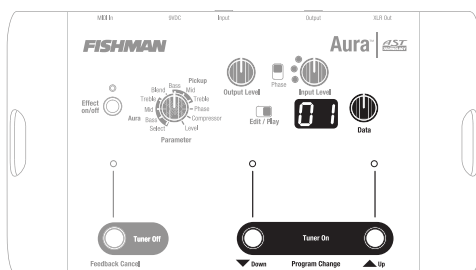
- 1 Start with the Edit/Play switch in the Play position and select a program. Make note of the number of the program and move the switch to the Edit position.
- 2 Turn the Parameter knob to Blend and turn the Data knob clockwise until the letter **A** (Aura effect only, no pickup) appears in the display.
- 3 Raise the Output Level.
- 4 Play your instrument and flip the Phase slide switch back and forth. The desirable position for the switch is the one where the instrument and speaker work in agreement together and feedback is minimized. Note: If you change your position, you may also need to change the position of the Phase switch to maintain the positive relationship between the instrument and the speaker.
- 5 Turn the Parameter knob back to Blend and adjust the Data knob counter-clockwise until the number **4** (50% Aura effect, 50% pickup) appears in the display.
- 6 Turn the Parameter control to the Phase position (Pickup phase).
- 7 Play your instrument, turn the Data knob clockwise (**1** on the LED Display), then counter-clockwise (**0** on the LED Display). Listen to the differences in sound quality and choose the position that sounds the most natural with the strongest bass.
- 8 Move the Edit/Play switch to the Play position to commit the pickup phase switch setting to the program.

Play Mode



Edit/Play Switch

Move the switch to Play and the numbers in the LED display will refer to the 50 program locations available in the Aura's memory.



Programs

There are 50 available program locations in **Play**. To move through them, use the Program Change footswitches or the Data knob. Any one of the program locations can be assigned to any of the parameters in **Edit**. For demonstration purposes, we factory load the first 16 program slots (01-16) in **Play** mode with the corresponding sequence of Aura/Pickup mixes from **Edit**- Parameter, Select (P1-P4, 01-12). You can alter or edit any of these mixes at any time. Program locations 17-50 come from the factory configured with the Select parameter set to "oF" which means that only the unprocessed pickup signal appears in the "Aura" side of the blender.

You can choose how the Aura changes programs in Play Mode

Instant Change Mode (factory default)

In the Instant Change Mode the program changes as soon as you hit the up or down footswitch.

TO ENABLE: Hold down the right footswitch for over 2 seconds, while plugging in 9V power plug. The prompt **IC** will appear in the display.

Pre-select Change Mode

In the pre-select change mode, you can continue playing in one program while you scroll through to the next program with the up and down footswitches. Hit the Up or Down footswitch and the LEDs above them will start flashing. Once you find the program you are looking for, hit the Feedback Cancel footswitch and you will switch to the new program. Note that you have about three seconds after you take your foot off the program change switch to hit the Feedback Cancel and switch to the new program. Otherwise the program reverts to where it was when you started.

TO ENABLE: Hold down the middle footswitch for over 2 seconds while plugging in 9V power plug. The prompt **PC** will appear in the display.

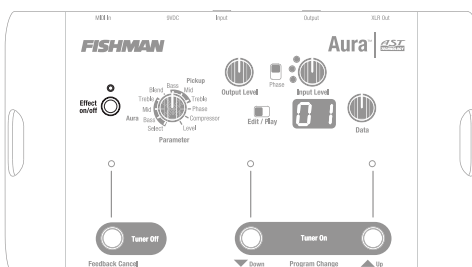
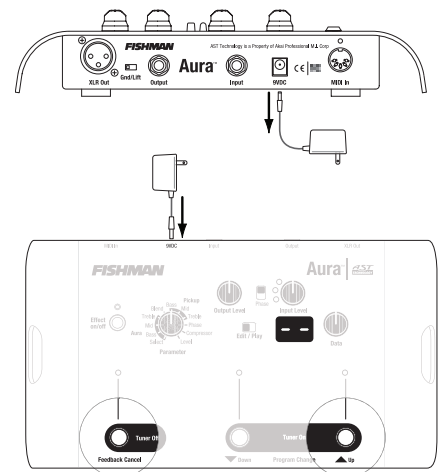
NOTE: Once enabled, “Pre-select Change” will be the normal operating state for the up/down footswitches.

Resetting the Aura to Factory Specs

You can easily return all the programs in the Play mode to the original factory settings with these 3 easy steps:

- 1 Unplug the 9VDC plug at the back of the Aura.
- 2 Hold down the two outside footswitches and insert the power plug into the unit.
- 3 Continue to hold down the outside footswitches until the **--** prompt appears in the display

Note: Sound Images downloaded from www.fishman.com will not be replaced by original Factory Sound Images.

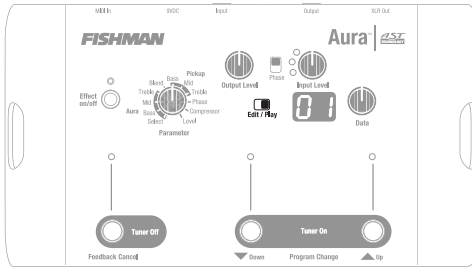


Effect on/off Switch

The Effect on/off lets you bypass the blended sound image/pickup mixes in both the Play and Edit modes, so that only the basic pickup signal from your instrument appears at the Aura's outputs. Use the Effect on/off switch to help set baseline levels for your mixes (see page 22) and to compare your raw pickup sound to the processed sound.

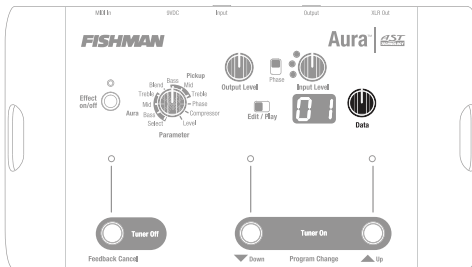
The green indicates that the effect is on.

Edit Mode



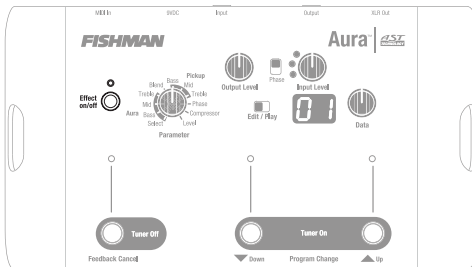
Edit/Play Switch

Move this switch to access the 11 selectable parameters in Edit mode. The mixes you create in Edit will automatically be placed in the last selected program location when you move the switch to Play. When you move the switch to Edit, the numbers and letters in the display will refer to the Aura parameters. In Edit, you select a Parameter, then dial it in with the Data knob.



Data Knob

In the Edit mode use the Data knob to change the behavior of the selected parameter.



Effect on/off Switch

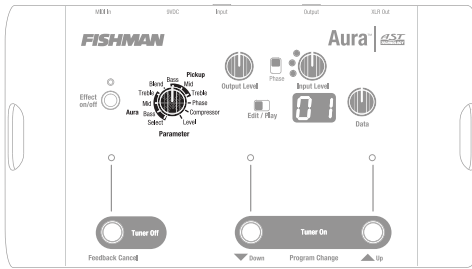
The Effect on/off lets you bypass the blended Sound Image/pickup mixes in both the Play and Edit modes, so that only the basic pickup signal from your instrument appears at the Aura's outputs. Use the Effect on/off switch to help set baseline levels for your mixes (see Level below) and to compare your raw pickup sound to the processed sound.

Setup

Any time you want to change the parameters in a program location (ex: change the Sound Image, the EQ, blend, compression, etc.), or configure an unused program:

- 1** Start with the switch in Play.
- 2** Use the Data control or the Up and Down switches to locate the program number you wish to configure.
- 3** Move the switch to the Edit position. Now you can access the items listed around the Parameter knob.
- 4** Use the Data control to adjust the behavior of each selected parameter.
- 5** Once you are satisfied with the adjustments you've made, move the switch from Edit to Play and your changes will be saved to the last selected program location.

NOTE: To help keep track of your mixes, use the blank Programs page found in the back of this manual.



Parameter Knob

With the Parameter knob, you can access the components used to build Sound Image/pickup mixes. There are two main groups of discrete parameters for the Aura effect and the pickup, plus three other parameters common to both.

To make the parameters available, move the switch to Edit, then move the pointer on the Parameter knob to the parameter that you would like to adjust. Use the Data knob to change the behavior of the selected parameter. Note that you can choose different parameters for all 50 of the program locations in Play Mode.

Select



Your Aura digital Sound Images are located within the Select parameter. A variety of popular guitars are represented in these Sound Images. To identify the various instruments, see the Factory Sound Images list in the back of this manual.

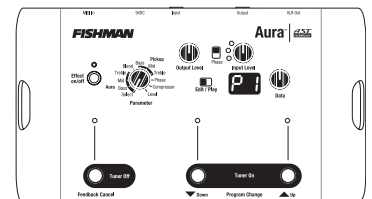
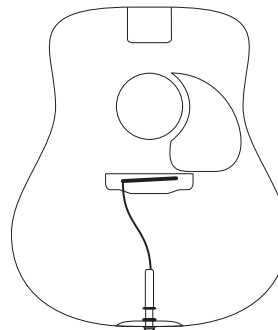
Use the Data knob to move from one Sound Image to the next. The first four Sound Images (**P-1, P2, P3, P4**) are permanently installed in the unit. The remaining images (**01-12**) are semi-permanently installed, and can be replaced, at your option, with new Sound Images that you may download from Fishman at www.fishman.com.

An “off” option (**oF** in the display), puts just your pickup and no Sound Image through the processor. To access it, Start at the **P1** setting on the display and turn the Data control counter-clockwise. This option comes in handy if you would like to mark the unused programs, as with **17-50** in the factory Play programs.

Guidelines for Selecting a Sound Image

We recommend sizing a Sound Image to fit your instrument.

To reproduce the sound of your guitar as accurately as possible with the Aura, we recommend that you match up your guitar's body style and its pickup type with a similar sound image. For example, a dreadnought guitar with an undersaddle pickup will match well with a similar dreadnought sound image. When the natural resonances of the guitar and the response of the pickup are in agreement with those of the Sound Image, the amplified sound will be predictable, consistent and musical.



Can't find the Sound Image(s) to fit your instrument?

Not to worry. We are constantly adding new Sound Images to our catalog that you can download to your computer and then transfer to Aura. Log on to www.fishman.com for more details.

Still can't find the perfect Sound Image after visiting our website?

Send your instrument to the Aura Custom Shop and we will create a custom Sound Image file tailored precisely for your instrument.

Mix and Match Body Styles

While the thought of transforming a diminutive plywood guitar into a vintage high end instrument is intriguing, this is really not the Aura's intended use. Although we encourage you to experiment, we cannot guarantee that your instrument will be compatible with all the available Sound Images. You might get good results mixing and matching your instrument with a Sound Image of a different body style.

If your instrument has lots of natural personality, with strong resonances and complex harmonics, it will clash with Sound Images that are derived from differing body styles. For instance, a handmade lightly braced concert size guitar will not match well with a dreadnought Sound Image, because the distinct personality of the guitar will not agree with the specific resonances and radiation patterns of the dreadnought Sound Image.

The cases in which we've had success mixing and matching various Sound Image body styles have been when the source instrument has a fairly neutral, non-descript sound to start. Laminated guitars, thin bodied acoustic/electrics and heavily braced instruments seem to be good candidates. In these cases, the Aura Sound Image can “add” its personality to a more neutral and less resonant instrument.

Aura Equalization



The bracketed Bass, Mid and Treble parameters next to the “Aura” designation are for equalizing the Sound Image in the mix. We recommend that you use these controls sparingly, especially when boosting. Most often a very slight cut or boost is all that is needed get a Sound Image dialed in. *Set Blend to **A** when you equalize the Sound Image.*

Bass

Use the Data knob to change the behavior of the Bass control. The default Bass setting is flat (read **0** in display). To cut bass, turn the Data knob left and the display will show a negative number (down to **-9**) that indicates the amount cut in dB. To boost bass, turn the Data knob right and the display will show a number (up to **12**) that indicates the amount of boost in dB.

Dial in the bass to add depth or subtract boominess from the Sound Image. The bass control for the Aura is “normalized”, which means that when you boost Bass, the volume stays the same. Only boost Bass if you have weak bass response from the instrument, common with thin body acoustic/electric guitars. Cut Bass if you the sound produced is very boomy, as is often the case with large rosewood body guitars.

Mid

Use the Data knob to change the behavior of the Mid control. The default Mid setting is flat (read **0** in display). To cut midrange, turn the Data knob left and the display will show a negative number (down to **-9**) that indicates the amount cut in dB. To boost midrange, turn the Data knob right and the display will show a number (up to **12**) that indicates the amount of boost in dB.

The Mid control is centered at 1kHz. And affects how well the instrument blends in or stands out in the mix. Cut midrange to make the sound more transparent, especially at high volume levels.

Treble

Use the Data knob to change the behavior of the Treble control. The default Treble setting is flat (read **0** in display). To cut treble, turn the Data knob left and the display will show a negative number (down to **-9**) that indicates the amount cut in dB. To boost treble, turn the Data knob right and the display will show a number (up to **12**) that indicates the amount of boost in dB.

Boosting here will add “air” to the sound. Cutting the treble will mellow and subdue your amplified tone.

Blend



Use the Data knob to change the behavior of the Blend control.

The default Sound Image / pickup Blend setting is **6**, or 75% Sound Image and is set up mainly for demonstration purposes. You will find that a blend with equal or less Sound Image and more pickup is effective for performance. Turn the Data knob left for more of the Aura Sound Image and right for more of the pickup.

A = all Sound Image • **P** = all pickup • **4** = 50/50

Suggested settings for Blend

For most performing situations, you will get the best balance of pickup and digital Sound Image with the Blend set to **3** or **4** in the display (62-50% Pickup). This gives your live sound a good solid foundation as the pickup supplies a strong focused tone and the Sound Image gives you just enough ambience for a credible acoustic performance without feedback. Note that too much Sound Image in the mix can blur your sound at high volumes and is more prone to feedback.

For recording you may wish to set the Blend so that only the Sound Image appears in the mix (**A**). Many engineers like to mix in just a little pickup in a recording to bring the instrument more into focus. In this case, set the blend to **7** or **8**.

Pickup Equalization



The bracketed Bass, Mid and Treble parameters next to the “Pickup” designation are for equalizing the pickup signal. You can use these controls liberally to help dial in your pickup sound. Often a bit of bass and treble boost and a slight midrange cut is in order to get the pickup sound dialed in. *Set Blend to **P** when you equalize the pickup.*

Bass

Use the Data knob to change the behavior of the Bass control. The default Bass setting is flat (read **0** in display). To cut bass, turn the Data knob left and the display will show a negative number (down to **-9**) that indicates the amount cut in dB. To boost bass, turn the Data knob right and the display will show a number (up to **12**) that indicates the amount of boost in dB.

Dial in the bass to add depth or subtract boominess from the Sound Image. Only boost Bass if you have weak bass response from the instrument, i.e. with a thin body acoustic/electric guitar. Cut bass if you the sound produced is very boomy, as is often the case with larger instruments.

Mid

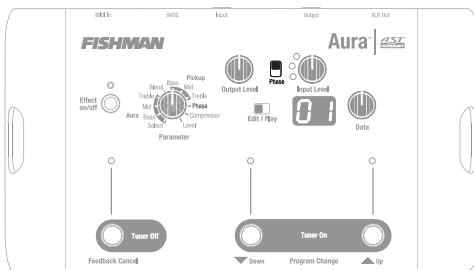
Use the Data knob to change the behavior of the Mid control. The default Mid setting is flat (read **0** in display). To cut midrange, turn the Data knob left and the display will show a negative number (down to **-9**) that indicates the amount cut in dB. To boost midrange, turn the Data knob right and the display will show a number (up to **12**) that indicates the amount of boost in dB.

The Mid control is centered at 1kHz. And affects how well the instrument blends in or stands out in the mix. Cut midrange to make the sound more transparent, especially at high volume levels.

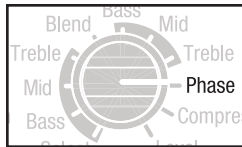
Treble

Use the Data knob to change the behavior of the Treble control. The default Treble setting is flat (read **0** in display). To cut treble, turn the Data knob left and the display will show a negative number (down to **-9**) that indicates the amount cut in dB. To boost treble, turn the Data knob right and the display will show a number (up to **12**) that indicates the amount of boost in dB.

Boosting here will add "air" to the sound. Cutting the treble will mellow and subdue your amplified tone.

**Phase Switches**

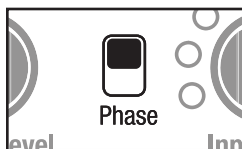
The phase switch is the most misunderstood feature, yet it is also the easiest to use.

**Phase (Pickup Phase, located on the Parameter Knob, switched by the Data knob)**

The detent marked Phase on the Parameter knob lets you flip the polarity of the pickup signal 180°. With this control you can align the pickup signal with the selected Sound Image for a stronger and more cohesive sound. Use the Data control to flip between + polarity (0 in the display) and -polarity (1 in the display).

Why a Phase Switch on the Parameter Knob?

A Sound Image is created from an actual microphone in front of a guitar. So the distance of the mic from the instrument and the polarity of the mic capsule will contribute to relative phase of the signal. Because the Aura blends a Sound Image signal with a pickup signal there is a 50% chance that the two will clash. The clash will manifest itself as a loss of bass response, shrill treble, and a generally anemic tone. The phase switch located on the parameter knob simply lets you put the pickup and Sound Image into agreement. The method for setting the switch is simple: Set the Parameter knob to "Phase", toggle the Data knob and listen. The "correct" position for the switch is the one that produces the strongest sound.

**Phase (global, slide switch)**

The selection marked Phase on the Parameter knob lets you flip the polarity of the pickup signal 180 degrees. With this control you can align the pickup signal with the Aura Digital Sound Image for a stronger and more cohesive sound. Use the Data control to flip between + polarity (0 in the display) and - polarity (1 in the display).

Why a Global Phase Switch?

Any time you plug in, there is a 50% chance that the sound of the speaker and the instrument will clash in some way. The clash can manifest itself as a loss of bass response at low volumes or (more often) acoustic feedback at high volumes. The phase switch simply lets you put the instrument and the speaker in agreement. The method for setting the switch is equally as simple: flip the switch and listen. The "correct" position for the switch is the one that works for you.

How to use the Phase switches:

- 1 Start with the Edit/Play switch in the Play position and select a program. Make note of the number of the program and move the switch to the Edit position.
- 2 Turn the Parameter knob to Blend and turn the Data knob clockwise until the letter **A** (Aura effect only, no pickup) appears in the display.
- 3 Raise the Output Level.
- 4 Play your instrument and flip the Phase slide switch back and forth. The desirable position for the switch is the one where the instrument and speaker work in agreement together and feedback is minimized. Note: If you change your position, you may also need to change the position of the Phase switch to maintain the positive relationship between the instrument and the speaker.
- 5 Turn the Parameter knob back to Blend and adjust the Data knob counter-clockwise until the number **4** (50% Aura effect, 50% pickup) appears in the display.
- 6 Turn the Parameter control to the Phase position (Pickup phase).
- 7 Play your instrument turn the Data knob clockwise (**1** on the LED Display), then counter-clockwise (**0** on the LED Display). Listen to the differences in sound quality and choose the position that sounds the most natural with the strongest bass.
- 8 Move the Edit/Play switch to the Play position to commit the phase switch setting to the program.

Tips on Pickup Phase (located on the Parameter knob, switched with Data knob)

Some Sound Images will dominate the pickup, even with the blend set to 50/50. This can make it hard to hear the "correct" polarity between the pickup and the sound image. We have found it useful to set the blend parameter to favor the pickup while you calibrate the pickup phase. In these cases try setting the blend to 2 or 3. If after adjusting the blend you still have a problem hearing a difference when you toggle the Data knob, try listening with a pair of sealed headphones. The headphones will block out most of the acoustic sound of your instrument and let only the pickup and Sound Image signals get to your ears.

Compressor



Set the Parameter control to Compressor and turn the Data wheel clockwise to the type and amount of compression desired. A little compression goes a long way for acoustic instruments; usually a setting of 2 or 3 will firm up your sound without adding extra coloration.

The Aura's Compressor circuit is designed specifically with acoustic instruments in mind. You can select between two types of compression, designated **C** for Chords and **L** for Lead), for different styles of playing. At the higher settings the additional gain and sustain provided by the compressor may cause some instruments to enter into acoustic feedback.

Use the Level parameter to "normalize" the overall volume at high compression settings. Once you find a compression setting you like, turn the Parameter control to the Level setting. Use the Effect On/Off button to compare the level of your compressed signal and the unprocessed pickup signal. Use the Data control to match the levels of the processed and unprocessed signals.

To reduce hiss, an automatic noise gate is activated whenever the compressor kicks in.

C Compression - Chords and Rhythm

The **C** compression is optimized for chordal accompaniment and has a smooth sustained effect that is right for strumming. The amount of compression is selectable between 1 and 9 dB and corresponds with the numbers in the display.

L Compression - Lead, Flatpicking and Finger style

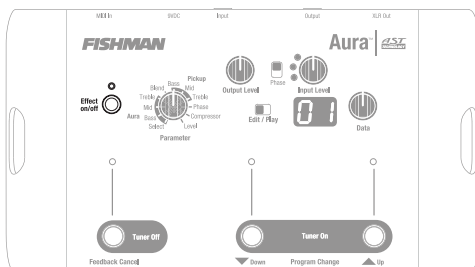
The **L** compressor highlights a quick percussive attack and is ideal for flatpicking or finger style. To access **L** compression, scroll past the highest setting for **C** compression. The amount of compression is selectable between 1 and 9 dB and corresponds with the numbers in the display.

Level



This control is for matching or "normalizing" the baseline levels of the various programs you create with the Aura. You will find that with differences in equalization and compression, one program can unintentionally become louder or softer than another.

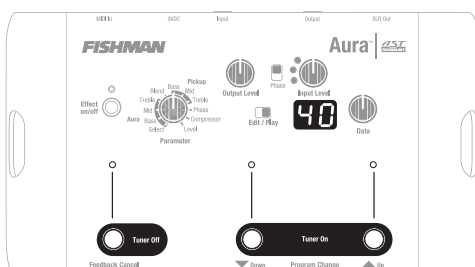
When you finish making parameter adjustments in a program, turn the Parameter control to Level and toggle the Effect on/off switch. If there is a difference in level between the two, adjust the level with Data control until the two levels match. You can also use the Level parameter to preset a hotter level in a program that you intend to use for soloing.



Effect on/off Switch

The Effect on/off lets you bypass the blended sound image/pickup mixes in both the Play and Edit modes, so that only the basic pickup signal from your instrument appears at the Aura's outputs. Use the Effect on/off switch to help set baseline levels for your mixes (see Level above) and to compare your raw pickup sound to the processed sound.

Tuner



This digital chromatic tuner has several programmable features to fit your performance needs. When the tuner is engaged, it is factory set to mute the Aura's outputs. The mute can also be disabled (see below).

Tuner Setup

- 1 Move Edit/Play switch to Play
- 2 Press the two bracketed Tuner On (UP and Down) footswitches simultaneously to activate the tuner.
- 3 Play an open string and the tuner will show the closest note name in the display.
- 4 Watch the LEDs over each foot switch to dial in the note.
- 5 If the left LED lights, the note is flat.
- 6 If the right LED lights, the note is sharp.
- 7 When the center LED lights, the note is in tune.
- 8 To shut off the tuner, press either the Tuner Off (Feedback Cancel) footswitch or both the bracketed Tuner ON (UP and Down) footswitches simultaneously.

Mute Defeat

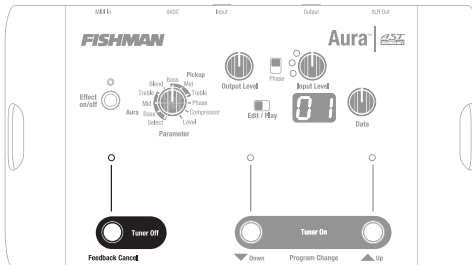
If you wish to override the mute function of the tuner, tap the Down footswitch when the tuner is engaged. A dot will light up in the upper left corner of the display and the pickup signal will appear at the Aura's outputs. This will now be the normal operating state of the tuner, unless you press the Down footswitch again and re-engage the mute before exiting the tuner.

If you wish to re-calibrate the tuner above or below the factory A = 440, turn the Data control while the tuner is engaged. You can lower the reference A to 427 Hz or raise it as high as 453 Hz. Your new calibration pitch will remain the Aura's memory unless until you decide to change it again.

TROUBLESHOOTING TIP: If the Tuner is not registering when you play, it may not be seeing enough signal from your instrument. Raise the Input level until the middle yellow LED flashes frequently when you play aggressively and the tuner will start tracking properly.

Feedback Cancel

We've made it very easy to eliminate the feedback that typically occurs when you plug in an acoustic instrument. Here are three ways to use the Feedback Cancel filter.



Factory Default Feedback Cancel

The Feedback Cancel is set up at the factory with a 100 Hz notch filter; the frequency where many acoustic guitars howl. Simply tap the Feedback Cancel footswitch to engage the filter. If the feedback does not go away go to “On the Fly Feedback Cancel” (below).

On the Fly Feedback Cancel (Play Mode)

If you are in a program the Play mode and your instrument starts to feedback during a performance, the Feedback Cancel feature can scan for feedback and then eliminate it as long as you stay in that program.

If you experience feedback, just hold down the Feedback Cancel footswitch for several seconds, until the LED starts blinking. Release the footswitch and the circuit will seek out the feedback and eliminate it. Note that once you leave the program, the Feedback Filter will shut off and be cleared from that program. If you want to save and have instant recall of a Feedback Cancel setting, see Programmable Feedback Cancel below.

Programmable Feedback Cancel (Edit Mode)

If you want to “Search and Destroy” feedback and then save the setting into a program location, follow the directions below.

- 1 Select a program in the Play mode and make note of the number. Move the switch to the Edit position.
- 2 Step on and hold down the Feedback Cancel footswitch for several seconds until the LED above the switch starts flashing. Release the footswitch and dampen the strings with one hand, then raise the Output Level or your amplifier volume until feedback starts.
- 3 When the LED stops flashing but remains on, the Feedback Cancel circuit has automatically found and eliminated the feedback.
- 4 Move the Edit/Play switch to the Play position to save the Feedback Cancel into the program.
- 5 Whenever you return to this program, the saved Feedback Cancel filter will engage.

Programmed Feedback Cancel, Normally Off

When you want to have the Feedback circuit dialed in a specific program location, but you want it “normally off” so you can recall the setting only when you need it .

Follow the above procedure, and then go back to the Edit mode. Tap the footswitch so the Feedback Cancel LED turns off. Switch back to Play. The saved Feedback Cancel notch in that program location will now be normally off and you can turn it on by tapping the Feedback Cancel footswitch.

The Feedback Cancel can “remember” different notch filter settings for each of the 50 programs in the play mode.

Note that Feedback Cancel is not available when the Tuner is engaged.

Chapter 3

Setting Up for Performance

Setting Up for Performance

With 11 adjustable parameters, 12 factory Sound Images (and more to download from the Fishman Aura website), plus 50 program locations to hold your mixes, the Aura gives you an incredible amount of power and flexibility. You have the power to create an almost infinite number of Sound Image/pickup mixes to suit your taste. The 50 program locations in Play mode let you group your mixes into any order you prefer for quick recall during a performance. All these possibilities may seem a little daunting at first, but once you get familiar with the control layout and navigation you'll find that building your mixes becomes second nature.

If you plan to use the Aura on a gig, we strongly suggest that you first spend some time getting comfortable with it at home. Use this time to find the Sound Images that you'd like to use on the gig and to create the mixes you will use onstage. Once you set up your mixes, document their program locations on the blank Programs page provided in the back of this manual. We suggest you photocopy this page and keep it with your Aura for reference. When you get to the gig, you'll have all your basic settings down, so you can focus your attention on the music and not on your gear.

Understanding Aura Navigation

To get the most out of your Aura experience, you will need to understand the the navigation terminology for this device. If not, here is a brief summary:

Play Mode

Move the Play/Edit switch to Play to make the Aura's fifty program locations (and their related mixes) are accessible.

Edit Mode

Move the Play/Edit switch to Edit to make the Aura's eleven adjustable parameters accessible for building Sound Image/pickup mixes.

Sound Image

The Aura's 16 instrument-specific acoustic guitar templates (driven by your pickup) take the place of a microphone signal in this blender-style device. Instrument-specific means you'll usually get the best results when you choose a Sound Image that matches the style of guitar you play (dreadnought, grand auditorium, classical, etc). Sound Images reside in Edit mode in the Select parameter. Sound Images cannot accidentally be "erased", so don't worry about losing them. Note that any or all Sound Images 01-12 can be replaced with new ones, downloaded from our website and transferred to your Aura via MIDI access. Any Sound Image you replace can easily be retrieved through the same process.

Mix (or Sound Image/Pickup Mix)

We call the blended combination of a Sound Image and a pickup signal a mix. You create a mix by choosing a Sound Image, blending it with the pickup and seasoning to taste with the various parameters in Edit Mode.

Program Locations

The 50 slots in Play mode in which you place your mixes are called program locations. You select a program location with either the Up/Down footswitches or the Data Knob.

Tip: Think of the program locations in Play as your canvasses and the parameters in Edit as paints. You choose a canvas (a program number in Play), move the switch to Edit, then choose from your palette of paints around the Parameter knob. Color and shade the subject by modifying the eleven parameters with the Data knob. Once you switch back to Play, you've put the paint to canvas.

Setting Up A Mix

Here is a general step by step method for putting together a mix. This is a serial procedure in which each step leads to and affects the one that follows. For the most reliable results, try to consistently follow the order below whenever you set up your mixes. If you need more detail than is covered here, refer to the comprehensive descriptions in the Aura Inner Workings Chapter of this manual.

Use the Right Pickup

Make sure your instrument's pickup is compatible with the Aura. For acoustic guitar, use only an undersaddle pickup or a magnetic soundhole pickup. If your instrument has an onboard microphone, shut it off. The first 12 factory Sound Images (**P1-P4** and **01-08**) are calibrated for undersaddle pickups. The last four (**09-12**) work best with magnetic soundhole pickups.

***Will the Aura Work with a wireless system?** Yes, Aura will work with a wireless, but expect to hear some differences in your sound because a wireless transmitter will add anomalies to your signal. Plug into a wireless and your Aura sound will be somewhat compressed with a slight, high frequency "smear" effect.*

Set Levels

- 1** Plug in and adjust the Input Level on the Aura so that the green LED lights brightly, the yellow LED flickers often and the red LED does not flicker at all.
- 2** Flip the Edit/Play switch to Play and raise the Output level to a comfortable volume.

Select a Program Location and a Sound Image

- 1** With the Edit/Play switch set to Play, use the Up/Down footswitches or the Data knob to choose the program location where you'd like to place a mix. Make note of the program number.
- 2** Move the Edit/Play switch to Edit and turn the Parameter knob to Blend. Turn the Data knob clockwise until the letter **A** appears in the display. Lower the Output Level if necessary.
- 3** Move the Parameter knob to Select to access Sound Images. Use the Data knob to navigate through the available Sound Images. Refer to the list of Factory Sound Images to identify one that is compatible with your type of instrument. You may also explore the sixteen Sound Images (**P1-P4** and **01-12**) and find one that sounds good to you. Additional images are available at www.fishman.com and can be downloaded via the internet and transferred to your Aura via a MIDI interface. Visit our web site at www.fishman.com for more details.

Set Phase Switches

- 1** Raise the Output level until the instrument just begins to feedback.
- 2** Play the instrument and flip the Phase switch (the one between the Output and Input Level knobs) back and forth. Leave the switch in the position that sounds best, with the least feedback.
- 3** With the Parameter knob still at Blend, move the Data knob counterclockwise until the number **4** appears in the display.
- 4** Raise the Output level again until the instrument just begins to feedback.
- 5** Turn the Parameter knob to the Phase position, play your instrument and turn the Data knob clockwise (**1** in the display), then counterclockwise (**0** in the display). Listen to the differences in sound quality and choose the position that sounds the most natural with the strongest bass and least feedback.

Set Sound Image/Pickup Blend

Turn the Parameter knob to Blend and use the Data knob to adjust the balance between the Sound Image and the pickup. Set the Blend to **3** or **4** for live sound and to **7** or **A** for recording.

If the Sound Image is so great, why do you need to mix in the pickup too?

The pickup will reinforce the Sound Image signal when you perform with the Aura. With the pickup mixed in, your live sound will be clean, articulate and more dynamic. For recording, we suggest you blend in more of the Sound Image with little or no pickup.

Adjust the EQ

Move the Parameter knob to Bass, Mid or Treble for either the Aura or Pickup and adjust to taste with the Data knob. For best results, apply EQ to the “Aura” side (Sound Image) sparingly. You can apply EQ more liberally for the pickup side. Typically you boost Bass and Treble a bit and cut Mid for the pickup. After you apply EQ, go back to Blend and double-check the balance between the pickup and the Aura (Sound Image).

Set the Compressor (optional)

If you want a bit more punch and sustain from your sound, move the Parameter knob to Compressor and turn the Data knob clockwise. For strumming, set the compressor to about **C1** or **C2**. For single note leads and fingerstyle, turn the Data knob clockwise past **C9** to **L1** or **L2**.

Check the Level

Turn the Parameter knob to Level and check the overall volume of your mix by pushing the Effect On/Off switch several times. Use the Data knob to match the level of the mix to the dry, unadorned pickup sound.

Set Feedback Cancel

Once you have all your parameters adjusted, raise the Output level and see if the instrument will feedback. If it does, lower the Output Level, then hold down the Feedback Cancel footswitch for over two seconds until the LED over the switch flashes. Raise the output level until the feedback returns and it will be recognized by the Feedback Cancel circuit and eliminated.

Finish Up

Now that you have set up all the parameters, move the Edit/Play switch back to Play and you are done. Remember that the location of any mix you create will always get assigned to the last selected program location. Go make some music!

Suggestions for Mixes**Rhythm Guitar**

Cut mids for both the Aura (Sound Image) and the pickup EQ. Try adding a little bit of “**C**” compression (**C1** or **C2**) to fill out the chords.

Flatpicking

Blend in a bit more Sound Image than pickup (about **5** or **6** in the display) and cut the treble for the Aura (Sound Image).

Fingerstyle

Set Blend to **3** or **4** and boost bass slightly for the Aura (Sound Image). Boost bass and treble and cut the mids for the pickup. Use a little bit of “**L**” Compression (**L1** or **L2**) for more “snap”.

Nylon String

Classical guitars tend to have a very open bass response, so cut bass for the Aura (Sound Image).

Solo (boost) setting

If you need more level for a solo section in a piece, go to the level parameter and boost as required.

Mute setting

You can effectively mute any program location you choose.

- 1** Go to Play mode and select the program location you wish to mute.
- 2** Go to Edit mode and set the Select parameter to “**oF**”.
- 3** Set the Blend parameter to **4**.
- 4** Go to the Phase parameter and toggle the Data knob back and forth. Leave the Data knob in the position that mutes the sound.
- 5** Return to Play mode.

Recording

For recording, set the Blend parameter to **7** or **A**.

Build Your Own Programs for Performance

We give you 50 program locations to store your mixes. Here are some suggestions for setting up sequences of programs for performance. Remember to document your mixes and their program locations on the blank Programs page in the back of this manual.

Assigning Sound Images to program locations (Play mode)

You can use the program spaces presently occupied by the Factory preset mixes in slots **01** to **16** to place your own mixes. Don't be afraid to replace the factory mixes with your new ones. You can reprogram the Aura back to your factory settings any time you wish (see Quick Start, Escape Hatch). You can't lose sound or mixes, you can only change parameters and assign mixes to different program locations.

Program Suggestions

Since the Aura always goes back to Program location **01** when you plug it in, we suggest you place your mixes at or around this slot. For example, you might have a mix that you set up for rhythm playing in program **01** and perhaps a flatpicking mix in **02**. For a little more volume, you might place a Solo mix into program **03**. And to round things out, perhaps a fingerpicking mix in **04**.

Multiple instruments

If you play several instruments onstage, try sequencing your mixes so that each instrument has its own space, by separating each group with a "mute" program.

For Example:

- 01** Dreadnought (rhythm)
- 02** Dreadnought (flatpick)
- 03** Dreadnought (boost)
- 04** Mute
- 05** Fingerstyle
- 06** Fingerstyle (boost)
- 07** Mute
- 08** Classical (chords)
- 09** Classical (single note solo)

Use your Aura as a digital scrolling volume pedal

You can set up a bank of program slots to use as a scrolling volume control that you access by pressing the Up/Down footswitches. Go to the Level parameter and incrementally raise each Program in the sequence by one step. If you try this, we also recommend that you use the Pre-select Change Mode as described on page 17 of this manual.

For Example:

- 20** Level -8
- 21** Level -7
- 22** Level -6
- 23** Level -5
- 23** Level -4
- 24** Level -3
- 25** Level -2
- 26** Level -1
- 27** Level 0
- 28** Level 1
- 29** Level 2
- 30** Level 3

Specifications

Power:	150 mA @ 9Vdc
Power Connection:	Center pin negative 2.1mm dia., 5.5mm outer dia.
Input Impedance:	5 Meg
Output Impedance:	1k
Nominal Operating Level:	-17dBu
Unbalanced Output Level:	-10dBu +/- 2dB (-10dBu, 1kHz input)
Balanced Output Level:	-4dBu +/- 2dB (-10dBu, 1kHz input)
Distortion:	Less than 0.1% w/ 30kHz LPF filter (-10dBu, 1kHz input)
Noise Level:	-74dBu, 20Hz - 20kHz A-weighted
Frequency response:	20Hz: 0 +/- 2dB, 20kHz:-1.5 +/- 2dB
Level Indicator Thresholds:	Red (High): -11 dBu +/- 2dB Yellow (Mid): -17 dBu +/- 2dB Green (Low): -24 dBu +/-2dB
Digital Sound Image Bass:	Normalizes level when boosting bass - baseline gain drops 4 dB at maximum bass boost
Boost:	+11.5dB @ 20Hz (relative to 2kHz) +10dB @ 60Hz (relative to 2kHz) +8dB @ 100Hz (relative to 2kHz) +3dB @ 300Hz (relative to 2kHz)
Cut:	-9dB @ 20Hz -8.4 dB @ 60Hz -7dB @ 100Hz -3dB @ 300Hz
Pickup Bass:	
Boost:	+11.5db @ 20Hz +10dB @ 60Hz +8dB @ 100Hz +3dB @ 300Hz
Cut:	-9dB @ 20Hz -8.4 dB @ 60Hz -7dB @ 100Hz -3dB @ 300Hz
Digital Sound Image & Pickup Treble Controls:	
Boost:	+12dB @ 20kHz +9 dB @ 10kHz +3dB @ 3kHz
Cut:	-9dB @ 20kHz -8dB @ 10kHz -3dB @ 3kHz
Digital Sound Image & Pickup Mid Controls:	
Boost:	+11.5dB
Cut:	-9dB
Center Frequency:	1kHz
Bandwidth:	0.55 octave (full boost, -3dB from peak)

Anti-Feedback Filter:	
Cut:	-14 dB
Bandwidth:	0.25 octave (-3dB from baseline gain)
Default Frequency:	100Hz (Without running "Measure" calibration)

Compressor	
C1-C9:	Chord/strumming style Sustained with smooth attack
L1-L9:	Lead style Percussive attack characteristic

Compression threshold:	-22dBu
Compression attenuation at -10dBu:	1dB - 9dB corresponding to the number in the selected compression setting.
Example:	C7 or L7 would produce a maximum compression of 7dB.

Noise Gate:	On when compression is selected.
Gate Threshold:	-46dBu
Normalized Compressor Drive Gain:	To minimize shift in operating level, mid level gain increases proportional to each of the compression settings

All Specifications Subject to Change Without Notification

Glossary

AST Technology

An acronym for Acoustic Spectrum Transform, the trademark for Akai Professional's digital technology that makes digital Sound Imaging possible.

Aura

A digital Sound Image added to a pickup signal.

Data Knob

Turn this knob to modify the Data currently shown in the LED display.

Edit Mode

The state in which the Aura's eleven Parameters are accessible for building sound image/pickup mixes. Also the state in which the Feedback Cancel feature can be preset for later recall.

Initialization

Resets your Aura to its factory default settings.

MIDI

An acronym for Musical Instrument Digital Interface; used to transfer downloaded Sound Image data between your home computer and the Aura.

Mix or Sound Image / Pickup Mix

The blended combination of a Sound Image and a pickup signal, created by manipulating parameters in Edit Mode, and stored in a program location in Play Mode.

Notch Filter

The proper name for the Feedback Cancel function. When the Feedback Cancel circuit identifies the resonant frequency of feedback, it sharply attenuates that frequency in a way that graphically resembles a notch, hence the name.

Parameter

The character attributes of the various Aura functions that can be adjusted.

Play Mode

The state in which the Aura's 50 program locations (and their related mixes) are accessible.

Also the state in which the onboard tuner is accessible.

Program or Program Location

The 50 numbered slots in Play Mode to which sound image/pickup mixes are assigned.

Select (Parameter knob)

Select allows you to choose any of the 16 Sound Images available in the Aura.

Sound Image (or Digital Sound Image)

A sophisticated algorithm that transforms the response of a pickup into that of a microphone in front of a guitar (or other string instrument). A Sound Image is constructed from actual recordings of actual instruments. To transform your instrument's pickup signal, this algorithm seamlessly adjusts the pickup signal's phase and frequency response to match the selected Sound Image template. Also, signature elements like body size, radiant sound from the guitar, body resonance, mic distance and microphone personality are all added to the equation - providing amplified acoustic guitar sound with indisputable realism.

Troubleshooting

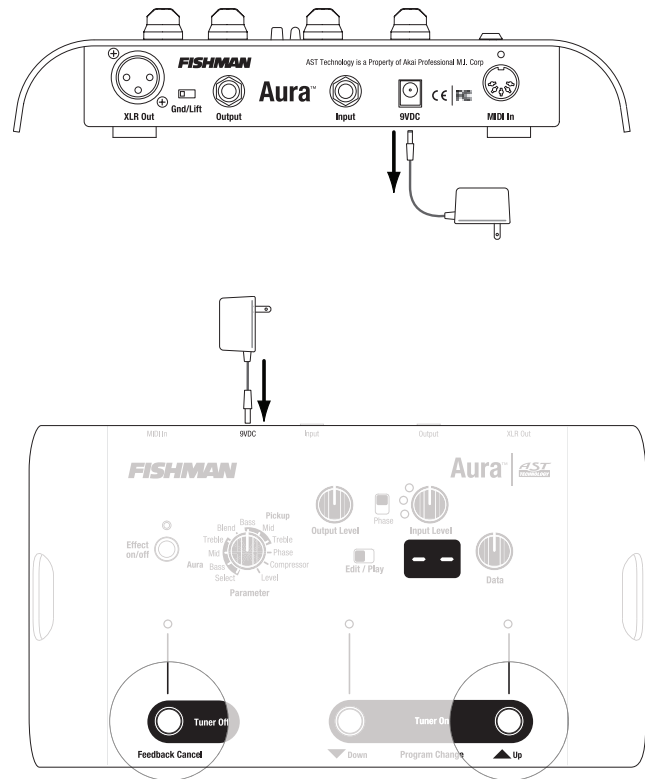
Problem	Possible Cause	Solution
Power does not turn on	<i>Do you have the correct AC adapter?</i>	Use only Fishman 910R or Roland PSA adapters
No sound or not loud enough	<i>Have the connections to other devices been made correctly?</i>	Check your connections
	<i>Are the Input and Output levels too low?</i>	Raise Input and/or Output levels
	<i>Is the tuner engaged?</i>	Disengage the tuner or step on the Down footswitch to un-mute the tuner
Thin sound or weak bass	<i>Are the pickup and Sound Image signals out of phase?</i>	Switch to Edit mode and select the Phase parameter. Turn the Data knob clockwise then counterclockwise and choose the pickup phase that complements the Sound Image
	<i>Is the Sound Image turned on?</i>	Push Effect On/Off button so the LED above it lights up. Switch to Edit mode and choose the Select parameter. Select a Sound Image with the Data knob (the prompt "oF" in the display means that no Sound Image is currently in that program location)
You hear distortion	<i>Is the Input level too high?</i>	Turn down the Input level until the red LED stops flickering
You hear hiss	<i>Is the Input level too low?</i>	Raise the Input level until the Green LED flashes regularly and the red LED does not flash at all
The Tuner will not engage	<i>Is the Aura in Edit mode?</i>	Move the Edit/Play switch to Play
	<i>Is the input level too low?</i>	Raise the input level
You hear an uneven or muddled response from the Aura	<i>Did you choose a Sound Image that matches your instrument's body style?</i>	Select a Sound Image that better matches your instrument
	<i>Does your pickup match the sampled pickup in the Sound Image?</i>	Check the Stock Sound Image chart to find a Sound Image compatible with your pickup (either undersaddle or magnetic soundhole pickup)
	<i>Are you using a soundboard pickup or a microphone?</i>	Use only an undersaddle pickup or a magnetic soundhole pickup
Hum	<i>Do you hear hum through the speakers when you use both the 1/4" and XLR outputs?</i>	Move the Gnd/Lft switch to the "Lft" position
You hear only pickup and no Sound Image		Make sure the Effect On/Off switch is engaged. Confirm that the Program you are in has a Sound Image placed in it. (Check the Select Parameter in Edit mode)

Factory Default Settings

All programs and parameters can be returned to factory default settings (except user-imported Sound Images).

To reset: Hold down both UP and Feedback Cancel switches for over 2 seconds while plugging in 9V power.

A **--** prompt will appear in the LED Display when the Aura has reset.



Factory Defaults:

Play mode, default to program **01**

Programs **01** through **04** correspond to Sound Images **P1** to **P4** (Select parameter)

Programs **05** through **16** correspond to Sound Images **01** to **12** (Select parameter)

Note: Any Sound Images imported by the user into the Aura will remain there when the unit is reset to factory defaults. Original factory Sound Images are available at www.fishman.com.

Programs 17 through 50:

oF no Sound Image selected for these programs, pickup appears in the Aura channel.

Aura EQ Bass, Mid & Treble:

0 (flat)

Blend:

6 (75% Sound Image)

Pickup EQ - Bass, Mid & Treble:

0 (flat)

Phase (Pickup):

0 (positive polarity)

Compressor:

oF (off)

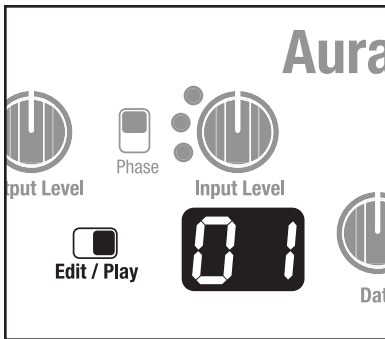
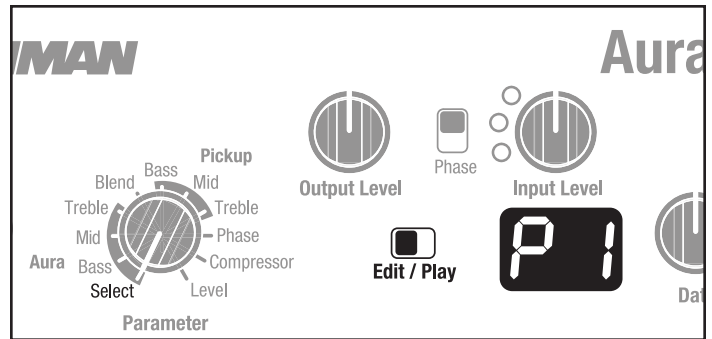
Level:

0 (no boost or cut)

Tuner:

calibrated to 40 (A= 440 Hz), mute engaged

Factory Sound Image/Pickup Mixes*


Play Mode

Edit Mode (Select parameter)

Pgrm #	Instrument	Wood	Pickup	Reference Microphone	Sound Image #	Web Name
01	Dreadnought 1	rosewood	undersaddle	dynamic	P1	MHD28SM58NTI
02	Dreadnought 2	rosewood cutaway	undersaddle	large diaphragm condenser	P2	MD16U47PP
03	Grand Concert 1	mahogany	undersaddle	small diaphragm condenser	P3	M00184011NTI
04	Classical 1	rosewood	undersaddle	large diaphragm condenser	P4	R2CWECCX111PPRO
05	Jumbo 1	maple	undersaddle	large diaphragm condenser	01	GJ200U47NTI
06	Dreadnought 3	rosewood	undersaddle	small diaphragm condenser	02	CD2H4011NTII
07	Dreadnought 4	rosewood	undersaddle	small diaphragm condenser	03	MD28CU31NTII
08	L-Style	rosewood	undersaddle	small diaphragm condenser	04	L09CU31PSB
09	Grand Auditorium	ovankol	undersaddle	small diaphragm condenser	05	T4144011PP
10	Orchestra Model 1	rosewood	undersaddle	large diaphragm condenser	06	MOM21CX11NT1
11	Jumbo 12 String 1	maple	undersaddle	dynamic	07	GF412SM58PP
12	Jumbo 2 Mag	maple	magnetic soundhole	dynamic	08	GJ200SM58REH
13	Dreadnought 5 Mag	rosewood	magnetic soundhole	small diaphragm condenser	09	MD16CU31REH
14	Grand Auditorium 2 Mag	ovankol	magnetic soundhole	large diaphragm condenser	10	T414U47REH
15	Orchestra Model 2 Mag	rosewood	magnetic soundhole	large diaphragm condenser	11	MOM21CX111REH
16	Grand Concert 2 Mag	mahogany	magnetic soundhole	small diaphragm condenser	12	M00184011REH
17-50	No Sound Image, pickup only					

***Note:** All mixes are factory preset to a blend of 75% sound image and 25% pickup.

Programs

01 _____
 02 _____
 03 _____
 04 _____
 05 _____
 06 _____
 07 _____
 08 _____
 09 _____
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 13 _____
 14 _____
 15 _____
 16 _____
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 49 _____
 50 _____

Acoustic Imaging Blender **Aura™**

Limited Warranty

Save your original sales receipt. It is your proof of purchase if you require warranty service.

The Fishman Aura Acoustic Imaging Blender ("Product") is warranted to the original consumer purchaser to be free of defects in materials and workmanship under normal use and service for a period of one (1) year from the date of purchase. If the Product fails to function properly due to defects in materials or workmanship during the applicable warranty period, Fishman Transducers Inc. ("Fishman"), at its option, will repair or replace the Product, with no charge for labor or materials. Lost digital data is not covered under this warranty. This warranty applies only if the Product is sold and delivered within the U.S. by an authorized Fishman Dealer.

Warranty service and repair for the Fishman Aura is to be made only at the factory in Wilmington, MA. Unauthorized repairs will void this warranty.

Note: For factory warranty service, the customer must prepay freight to Fishman.

To obtain factory service:

An Aura Acoustic Imaging Blender repaired under warranty at the Fishman factory will be returned to the customer via UPS ground freight, prepaid by Fishman to any location within the continental United States.

Important!

A Product that is returned to Fishman which is not covered by the terms of this warranty will be repaired and returned C.O.D. with billing for labor, materials, return freight and insurance.

For factory service, you must deliver the Aura Acoustic Imaging Blender via prepaid freight to Fishman.

- 1** Contact Fishman Transducers Factory Service via email (tech@fishman.com) to obtain a Return Authorization number (RA number). Products returned without an RA number will be refused.
- 2** Pack the Aura Acoustic Imaging Blender in its original shipping carton. Include your shipping address (no P.O. boxes or route numbers). Also include a copy of your sales receipt and a note that explains how to duplicate the problem. If we cannot duplicate the problem at the factory or verify the original purchase date, we may, at our option, charge for parts/labor and return shipping.
- 3** Ship the Aura Acoustic Imaging Blender freight prepaid to:

**Fishman Transducers Service Department
340 Fordham Road
Wilmington, MA 01887 USA**

www.fishman.com

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