ToneWood-Amp

Acoustic Guitar Effects

User Guide (Draft 0.6)

http://www.tonewoodamp.com/

Standards Compliance and Safety Instructions

Standards Compliance

The ToneWoodAmp has been certified to comply with:

CE

EN 55032:2010

Electromagnetic compatibility of multimedia equipment – Emission requirements

IEC 61000-6-1

2005Electromagnetic compatibility (EMC)

Part 6-1: Generic standards

Immunity for residential, commercial and light-industrial environment.

FCC

FCC Part 15B, Class B

IC ICES-003, Issue 5 August 2012

Safety Instructions

1. Read and keep these instructions.
2. Heed all warnings.
3. Use the ToneWoodAmp as instructed. High signal levels can damage the unit.
4. Do not use this apparatus near water.
5. **WARNING!** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
6. Clean the body of the ToneWoodAmp only with dry cloth.
7. Clean the bottom suction rails on the ToneWoodAmp periodically with a damp cloth.
8. Only use attachments/accessories specified by the manufacturer.
9. **WARNING!** If your guitar has a battery-powered preamp and is plugged into a ToneWoodAmp, the preamp will remain active even if the ToneWoodAmp is powered off. Since this will drain the battery, we recommend disconnecting the ¼-in cable from the guitar when it is not being played.
10. **WARNING!** 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.

Warranty Statement

One year limited warranty for parts and labor for units under normal use.

Sixty days warranty for suction tape. Additional tape available for purchase on the website.

Table of Contents

Chapter 1: Introduction

The ToneWoodAmp is a revolutionary device that produces effects from an acoustic guitar without plugging into an amp! The effects emanate from the guitar's sound hole and body.

Similar to the way the strings excite the guitar's top, the ToneWoodAmp vibrates the back of the guitar, producing sound waves that emulate effects, such as reverb, echo, delay, tremolo, and even overdrive. The effects can be edited, saved, and recalled, and each effect has its own gain and volume to blend naturally with the acoustic sound of the guitar.

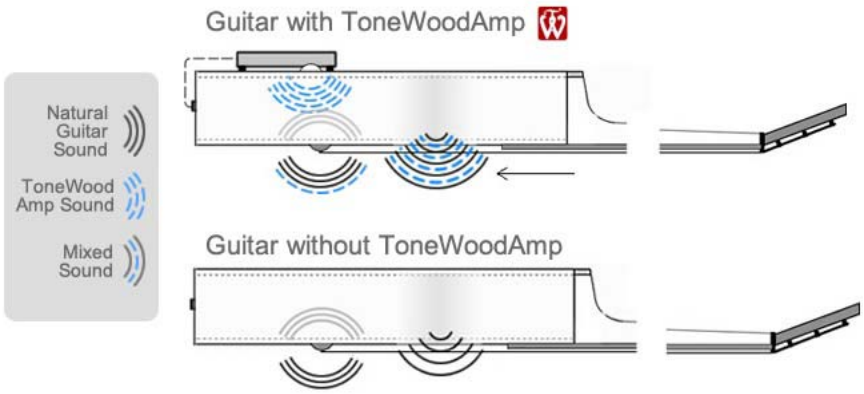

Figure 1-1 How the ToneWoodAmp delivers vibrations to create effects

The ToneWoodAmp can also function as a multi-effects processor, deriving its input from a standard acoustic guitar pickup and sending its output to an amp/PA system. Furthermore, you can connect IOS devices (iDevice adapter required and sold separately) to experiment with audio and MIDI apps.

The back of the ToneWoodAmp has two metal rails coated with soft suction tape. The device attaches by placing these rails on the back of an acoustic guitar opposite a magnetic x-brace mounted inside the guitar:

- The suction tape is a rubbery material with microscopic suction cups. It is important to understand that the tape is not an adhesive and leaves no residue when the ToneWoodAmp is attached and removed from the guitar.
- The magnetic x-brace is an array of four magnets that unobtrusively, using small dots of double-sided tape, adheres to the inside of the back of the guitar.

When installed inside the acoustic guitar, the x-brace magnetically attracts the ToneWoodAmp's metal/suction hybrid rails on the other side, locking the device to your guitar body. You can easily remove and reattach the ToneWoodAmp whenever you like with no cosmetic or structural impact to your guitar. With multiple x-braces, you can easily move one ToneWoodAmp among multiple acoustic guitars. Each guitar can have its own settings.

Chapter 2: Installation

This chapter describes how to:

- Insert batteries into the ToneWoodAmp
- Install the ToneWoodAmp on your guitar.
- Easily detach and reattach the device.

Inserting Batteries

You can use conventional or rechargeable batteries. We support using rechargeable batteries as they eliminate waste and pollution. See Appendix B: *Rechargeable Batteries* for recommendations.

The ToneWoodAmp uses three AA batteries. We recommend high quality alkaline batteries, such as Duracell Coppertop and Quantum and Energizer Eveready.

To insert batteries into the ToneWoodAmp:

1. Remove the battery door by sliding it upwards.
   The battery door is next to the **Input**.
2. Follow the + and - polarity indicators on the door and insert three AA batteries.
   Both batteries stacked on the left should be aligned with their - polarity at the top.

Figure 2-1 Removal of battery port (left), and proper polarity of batteries (right)

3. Test that the device powers on by pressing and holding the blue Power button for one second.
4. Turn off the device by holding the Power button for two seconds.

Preparing for Installation

It is essential to properly position the ToneWoodAmp on the back of the guitar to optimize the sound quality of the effects.

NOTE: *If you ordered the Fishman Neo-D or B-KNG pickup packages, see Installing Bundled Pickups on page 26 before proceeding.*

Positioning the ToneWoodAmp on the Guitar

To position the device on your guitar:

1. Lay your acoustic guitar face down on a safe and sturdy surface (such as padded table, bed, or sofa).
2. Place the device in the proper position for your acoustic guitar body type.

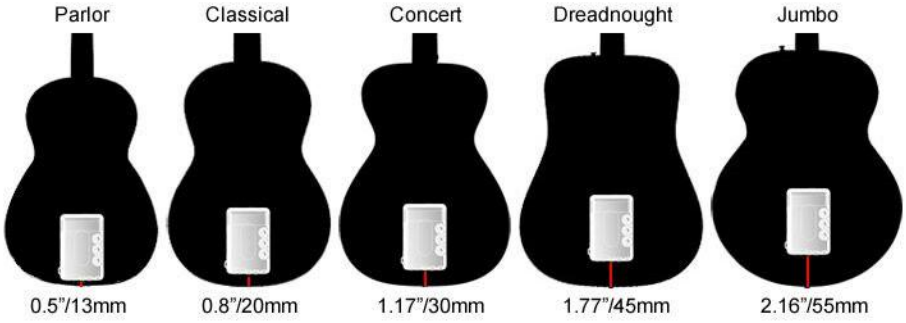

Figure 2-2 Location of ToneWoodAmp on various guitar body types

3. Remove the transparent protective liner from one suction rail on the back of the ToneWoodAmp. Leave the other suction rail liner with the yellow label on for now.
4. Use two long pieces of 3M/Scotch blue painters tape to secure the device temporarily to the guitar. We recommend using this specific brand of tape because it will not leave any residue on your guitar. To ensure proper function of the ToneWoodAmp, both suction rails on the underside of the device must be in full contact with the back of your guitar.

Figure 2-3 ToneWoodAmp taped in position for testing

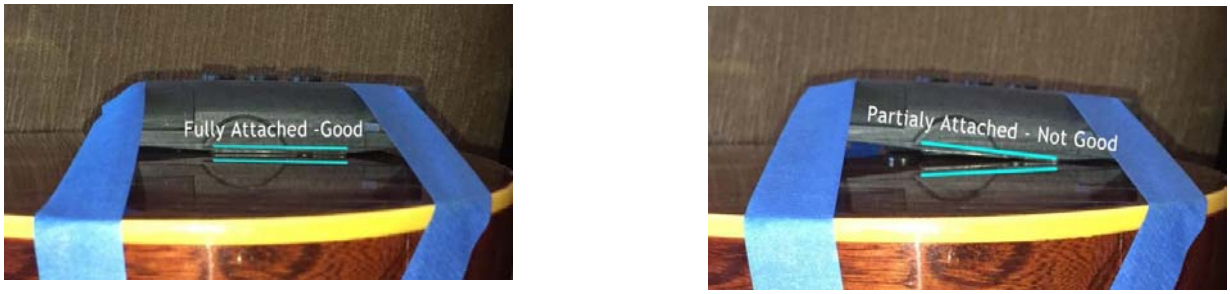

Figure 2-4 ToneWoodAmp taped properly (left) and incorrectly (right)

Setting the Master Gain for the First Time

Since all acoustic guitar pickups and preamps have different output levels, it is important to find the right output level for your guitar and Master Gain setting on the ToneWoodAmp. The Master Gain sets both the sensitivity of the unit and the signal level sent to all of the ToneWoodAmp's effects.

To configure the ToneWoodAmp with your guitar for the first time:

1. Before turning on the ToneWoodAmp to test the sound it is important to reset the EQ on your acoustic guitar to completely flat and turn the volume to its lowest setting.

   If your acoustic guitar does not have an EQ or volume control skip this step.
2. Plug your guitar into the ToneWoodAmp **Input** jack.
3. Turn on the device by holding the blue Power button for one second.

   Do not touch any of the knobs yet.
4. Slowly turn your guitar's volume up while playing single notes.

   The goal is to hear the effect at a comfortable volume with the guitar volume set half-way up. If that is the case, you are ready to move on to the magnetic x-brace installation.

   If the effect's volume is too quiet or too loud, adjust the Master Gain, which controls the incoming signal level to the ToneWoodAmp.

To adjust the Master Gain:

1. Combo-click the **Effects** and **Parameters** knobs simultaneously.

   The Global Settings menu appears in the display.
2. Turn the **Effects** knob clockwise until you see **Gain%**.
3. Click the **Effects** knob and turn it clockwise to set the amount of Master Gain.

   Select a value in the range 10–100% that, with your guitar volume halfway up, is just enough to hear the ToneWoodAmp's effect comfortably.
4. Click the **Effects** knob again to confirm and apply the displayed value.

WARNING: *If your guitar has a battery-powered preamp and is plugged into a ToneWoodAmp, the preamp will remain active even if the ToneWoodAmp is powered off. Since this will drain the battery, we recommend disconnecting the ¼-in cable from the guitar when it is not being played.*

Installing the ToneWoodAmp

The magnetic x-brace lets you attach the ToneWoodAmp securely to your guitar. It uses double-sided 3M tape to adhere to the inside of the guitar's body and secure the ToneWoodAmp to your guitar with strong magnets.

We describe how to install the x-brace in two phases: First is a practice run so you can explore and understand the internal structure of the guitar before installing the x-brace. The second phase is actually installing the x-brace.

Figure 2-5 Magnetic x-brace alone (left) and inside the guitar (right)

To practice a dry run installing the magnetic x-brace:

1. With the ToneWoodAmp still adhered to the back of your acoustic guitar with the two strips of 3M tape, set the guitar top side up on a sturdy, soft surface.
2. Loosen your strings so there is no tension.

NOTE: *Do not yet remove the protective liners on the adhesive stickers of the magnetic x-brace!*

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3. Insert the magnetic x-brace into the guitar body through the sound hole.
4. Hold the magnetic x-brace at a 45° angle with the back magnets closer to the guitar's back.
5. Move the magnetic x-brace towards the rear of the guitar until you feel magnetic attraction between the lower magnets and the ToneWoodAmp on the other side.
6. Allow the two back magnets to rest on the wood first, then let the other front two magnets fall into place.
7. Test that all four magnets attract to the ToneWoodAmp by trying to lift each magnet on the brace.

   You should feel the same resistance from each magnet before detaching.
8. Make sure that no brace, end-pin or cables are in the way, and remove the magnetic x-brace from the guitar.

To install the magnetic x-brace in its proper position:

1. Remove the thin protective liners from the white double-sided adhesive stickers on the x-brace magnets, leaving the white sticky pads on the magnets.

   Four extra stickers are provided in the ToneWoodAmp packaging in case you make a mistake.

2. Repeat the steps 3–8 from the practice dry run to place the x-brace but avoid touching the white sticky pads to the wood until you feel your magnetic destination again.

   Some touches can happen but do not press down on the stickers until the magnetic x-brace is in position.

3. After resting the magnets in place and checking with your fingers that all four points of the magnetic x-brace are aligned and magnetically attracted, press down on the magnetic x-brace firmly.

   It is now securely adhered to the inside of the guitar.

Figure 2-6 ToneWoodAmp mounted on back of guitar

4. Remove the blue tape used to secure the ToneWoodAmp to the back of the guitar.

   The ToneWoodAmp is now securely attached to the guitar using the magnetic x-brace and the suction tape.

   The device can now be detached and reattached easily (see page 12).

Chapter 3: Basic Use

Turning the ToneWoodAmp On and Off

To turn on the ToneWoodAmp:

- Press the blue button on the side (see below) for about a second.
  The display goes through a short startup cycle ending with the name of the current effect.

To turn off the ToneWoodAmp:

- Press the blue button on the side (see below) for about two seconds.
  The display shows the current battery level and the unit turns off when you release the button.

Using the Effects

The ToneWoodAmp has three 3 knobs: **Effects**, **Parameter**, and **Amplitude**.

Effects Knob

This knob determines which effect is currently used. The ToneWoodAmp has eight effects: Reverb (hall, room, plate), Delay, Tremolo Delay, Tremolo Leslie Style, Auto-wah, and Overdrive.

Turn the **Effects** knob to scroll through effects. The displayed effect is selected.

NOTE: *When selecting ToneWoodAmp effects, you must turn the knob three clicks to get to the next effect. This prevents accidental adjustment during play.*

Parameters Knob

The **Parameters** knob adjusts the behavior of the effects, each of which has three programmable parameters.

When an effect is selected, the most important parameter in that effect is always selected first by default. For example, the Delay effect has **Speed**, **Feedback**, and **Reverb** parameters. The **Parameter** knob first adjusts the **Speed** of the delay. Turn the **Parameters** knob and the display shows the parameter name and current value (0–25) as you turn the knob.

To select the other Delay parameters, click the **Parameters** knob to cycle to **Feedback** and **Reverb**, and then back to **Speed**.

Amplitude Knob

The **Amplitude** knob adjusts the effect's **Volume** (default) and **Gain**. Turn the **Amplitude** knob and the display shows **Volume** with its current value (0–25). Click the **Amplitude** knob and turn it to adjust the effect's **Gain**.

NOTE: *Volume and gain are both programmable within the effect preset but do not affect the ToneWoodAmp's overall volume. See xref to understand volume and gain.*

Detaching and Re-attaching the ToneWoodAmp

Detaching

To detach the ToneWoodAmp from the guitar:

1. If you've left one of the protective liners on one of the suction rails, with the guitar face down, simply lift up on the bottom-side of the ToneWoodAmp in a door opening motion and remove the device.
2. If both suction rails are exposed, it may take a little more effort to detach the device. Grip the two half-round sides of the device and use your other hand to get underneath the front to slowly leverage it upward. *Do not use brute force as it might damage the ToneWoodAmp!* Just allow air to slowly slip under the suction tape.

   It might take a few seconds for the unit to disconnect from the guitar.

Re-attaching

To re-attach the ToneWoodAmp from the guitar:

1. Hold the device using two hands with your fingertips below the bottom.
2. Hover the device over the back of the guitar, and search for the point of strongest attraction from the magnetic x-brace.
3. Allow the ToneWoodAmp to gently snap onto the magnets, using your fingertips to temper the force.

Chapter 4: Advanced Use

Combo Clicks and Held Knob Functions

Some essential actions require clicking two knobs simultaneously:

- Combo-click **Effects** and **Parameters** to enter the Global Settings menu.
  See *Global Settings Menu* on page 16 to learn about this menu.
- Combo-click **Parameters** and **Amplitude** to enter the D.I. Mode Settings menu.
  See *D.I. Menu* on page 19 to learn about this menu.
- Combo-click **Effects** and **Amplitude** to Lock and Unlock the ToneWoodAmp's knobs.
  Locking prevents accidental knob adjustment during play.

In addition to combo clicks certain functions are done by clicking and holding one knob:

- Click and hold **Effects** for two seconds to access the Memory menu.
- Click and hold **Parameters** for two seconds to access the Insert (iDevice) menu.
- Click and hold **Amplitude** for two seconds to access the Notch Filters menu.

NOTE: *The Multi-function knob behavior is shown on the device.*

Saving and Loading Presets

When you are satisfied with the effect's parameter settings, you can save them as a preset. Each effect has ten preset slots (a total of 80) in which you can Save, Load, or Delete.

Save

To save an effect:

1. Click and hold the **Effects** knob for two seconds.
   You will see **Memory>** on the display.
2. Turn the **Effects** knob clockwise until you see **Save>.**
3. Click the **Effects** knob again.
   You will see **No** on the display (as if asking "Are you sure?").
4. Turn the knob clockwise until you see the **Yes**, and click to confirm save.

The Save function can overwrite existing presets. If a preset is already occupied with settings saved to it, you will see **Overwrite** instead of **Save** followed by the number of the preset. To overwrite the preset with your new settings, click the **Effects** knob, select **Yes**, and click the **Effects** knob to confirm the save.

Load

To load a saved effect preset:

1. Click and hold the **Effects** knob for two seconds.

   You will see **Memory>** on the display.
2. Turn the **Effects** knob clockwise until you see **Load>.**
3. Click the **Effects** knob again.
4. Turn the **Effects** knob to scroll to the desired preset.
5. Click the **Effects** knob again to confirm the load.

NOTE: *When you change effect parameters, they are maintained until you turn off the unit. If you want to use these changes next time, remember to save before shutting down.*

Delete

To delete a saved effect preset:

1. Click and hold the **Effects** knob for two seconds.

   You will see **Memory>** on the display.
2. Turn the **Effects** knob clockwise until you see **Delete>.**
3. Turn the **Effects** knob to scroll through the 10 presets.
4. Select the desired preset and click the **Effects** knob again to confirm deletion.

Connecting to an External Amp

When you connect the ToneWoodAmp's output jack to an amplifier or PA system, **D.I. Blend** automatically appears in the display.

To adjust the D.I. parameters:

1. Turn the **Amplitude** knob to adjust **D.I. Blend**.

   This controls the dry/wet mix sent to the **Output** jack.
2. Click the **Amplitude** knob.

   The **D.I. Level** option sets the overall output volume from the unit. Since the ToneWoodAmp has a relatively high output volume, be careful when adjusting this parameter.
3. Click the **Amplitude** knob again to toggle the effect's Gain or Gain and Volume depending on the D.I. Settings.

Connecting to an IOS Device

This 1/8-in TRS jack (also called *mini stereo*) lets you interface an IOS device (such as an iPhone or iPad) to utilize guitar effect and MIDI apps.

NOTE: *IOS device connectivity requires an iDevice adapter (sold separately).*

To connect to an IOS device:

1. Connect the iDevice adapter to your IOS device.
2. Connect the 1/8-in cable to the female end of the adapter.
3. Insert the other end into the 1/8-in TRS jack on the ToneWoodAmp.
4. Launce the desired app(s) and enjoy experimenting.

With an IOS device plugged into the ToneWoodAmp, you can choose whether its signal will go through the ToneWoodAmp's effects or not:

- **Parallel** Mode (default): The IOS device signal does *not* flow through the ToneWoodAmp's effects.
- **Serial** Mode: the IOS device signal is routed through the ToneWoodAmp's effects.

To choose Parallel or Serial Mode:

1. Click and hold the **Parameters** knob for two seconds.
   Insert> appears on the display.
2. Turn the **Parameters** knob to select between **Serial** and **Parallel**.
3. Click the **Parameters** knob to select the desired mode.

Locking and Unlocking the ToneWoodAmp

Combo-click **Effects** and **Amplitude** to Lock and Unlock the ToneWoodAmp's knobs. Locking prevents accidental knob adjustment during play.

Battery Level Display

Warning messages:

- **Clip**
- **Low Battery**

Chapter 5: Configuring the ToneWoodAmp

Global Settings Menu

Many important ToneWoodAmp settings are in the Global Settings menu.

To access the Global Settings menu:

1. Combo-click **Effects** and **Parameters.**

   Settings appears on the display.
2. Turn the **Effects** knob to scroll through the following options:
   - **Guitar** – Displays a preset menu that lets you configure different guitars to use with the ToneWoodAmp.
   - **Gain %** – Sets the Master Gain of the input signal to the ToneWoodAmp.
   - **Sleep** – Activate Sleep mode so the device automatically goes into a dormant state when the guitar is placed in a vertical stand. This saves battery and lets you to pick up the guitar and resume with the same effects settings.
   - **Dim** – Sets a time after which the LCD dims.
   - **Start With** – Determines the effect presets loaded upon power up. Option 1: Starts with Effect #1. Option 2: Starts with last effect used.
   - **Battery Type** – State the type of battery: Alkaline or three types of rechargeable.
   - **Esc** – Exits the Global Settings menu.

Global Guitar Settings: Guitar (Guitars 1 - 5)

When using the ToneWoodAmp with multiple guitars, you may find that your presets sound great with one guitar but do not work the same with another. This can be caused by different pickup types, output levels, or other physical aspects of the guitars. Therefore, when moving the ToneWoodAmp from one guitar to another you may need to set custom gain and tonal settings for each instrument. The ToneWoodAmp has five editable global Guitar presets, each with its own Master Gain and Notch Filter settings.

To modify the Guitar settings in the Global Settings menu:

1. Combo-click **Effects** and **Parameters**.
2. Turn the **Effects** knob until you see **Guitar**.
3. Click the **Effects** knob to see which guitar preset you are currently on (for example, **Guitar 1**.)
4. Turn the **Effects** knob to select a new Guitar preset between 1–5.
5. Click the **Effects** knob again to select the displayed guitar preset.

   Gain and Notch Filter settings are derived from this preset if they were previously set, and they are saved to this guitar preset if changed.

Global Settings: Master Gain (Gain%)

This sets the Master Gain of the unit which sets the nominal sensitivity of the unit.

To set the Gain % for a preset, continue from step 5 in the previous section:

6. Turn the **Effects** knob clockwise until you see **Gain%**.
7. Click the **Effects** knob and turn it clockwise to set the amount of Master Gain.

   Select a value in the range 10–100% that, with your guitar volume halfway up, is just enough to hear the ToneWoodAmp's effect comfortably.
8. Click the **Effects** knob again to confirm and apply the displayed value.

   This new value is saved automatically within the selected Guitar preset.

Now instead of reprogramming many settings to move the ToneWoodAmp from one guitar to another, you can easily recall the proper settings for each by choosing its preset.

Global Settings: Sleep Mode

Using an accelerometer, much like those in a smart phone or tablet, the ToneWoodAmp automatically detects when the guitar is placed vertically in a stand and can enter a sleep state to extend battery life. When you pick up your guitar, the ToneWoodAmp wakes up and uses its last used settings.

To put the ToneWoodAmp in a sleep state to save batteries while not in use:

1. Combo-click **Effects** and **Parameters.**

   Settings appears on the display.
2. Turn the **Effects** knob clockwise until you see Sleep.
3. Click the **Effects** knob again, and turn the knob to change the amount of time before the ToneWoodAmp goes into Sleep mode after being placed on stand.

   You can select 10–90 seconds in increments of 10, or No Sleep to not use the function.
4. Click the **Effects** knob again to select and save.

NOTE: *Sleep mode disables automatically when the ToneWoodAmp is connected to an amp or PA system.*

WARNING: *If your guitar has a battery-powered preamp and is plugged into a ToneWoodAmp, the preamp will remain active even if the ToneWoodAmp is powered off. Since this will drain the battery, we recommend disconnecting the ¼-in cable from the guitar when it is not being played.*

Global Settings: Dim

To save even more battery life, the ToneWoodAmp can automatically dim the LCD screen after a specified period of inactivity.

To manage the Dim setting:

1. Combo-click **Effects** and **Parameters.**
2. Turn the **Effects** knob until you see Dim.
3. Click the **Effects** knob.

   Seconds appears on the display with a value.
4. Select a value in the range 5–20.
5. Click the **Effects** knob again to select and confirm your changes.

Global Settings: Start With

Upon power up, you can choose whether the device starts with:

- the first effect selected on preset 1;

  - *Or* -

- your last effect and preset used before powering down.

To select the best option to start with:

1. Combo-click **Effects** and **Parameters.**
2. Turn the **Effects** knob until you see Start With.
3. Click the **Effects** knob to select this menu.
4. Turn the **Effects** knob to select between Last Used or Patch 1
5. Confirm your selection by clicking the **Effects** knob.

NOTE: *When you set the Last Used option, your last used preset on the current effect will be recalled, but all other effects revert to those in preset 1. Regardless of which Start With option you choose, if you want a certain preset to be recalled immediately upon switching to an effect, store it to preset 1.*

D.I. Menu

To enter the D.I. menu:

1. Combo-click the **Parameters** and **Amplitude** knobs.
2. Scroll the **Parameters** knob clockwise to see the output settings:
   - **TWA and Amp**: Lets you hear effects through the body of the guitar while sending the guitar and effects to the **Output** jack.
   - **TWA or Amp** (default): When a cable is attached to the **Output** jack, the ToneWoodAmp stops interacting physically with the guitar and sends guitar and effect signals to the **Output** jack only.
   - **Mute D.I.**: Mutes the signal to the to the **Output** jack without having to pull cables or turn the volume down. Toggle to un-mute. When muted, the ToneWoodAmp resume exciting the body of the guitar.

Insert Menu

With an IOS device plugged into the ToneWoodAmp, you can choose whether its signal will go through the ToneWoodAmp's effects or not:

- **Parallel** Mode (default): The IOS device signal does *not* flow through the ToneWoodAmp's effects.
- **Serial** Mode: the IOS device signal is routed through the ToneWoodAmp's effects.

To choose Parallel or Serial Mode:

1. Click and hold the **Parameters** knob for two seconds.

   Insert> appears on the display.
2. Turn the **Parameters** knob to select between **Serial** and **Parallel**.
3. Click the **Parameters** knob to select the desired mode.

Notch Filters

Some guitars might experience feedback when using the ToneWoodAmp for the same reasons a guitar feeds back with an amplifier or PA. A notch filter can isolate and attenuate feedback frequencies, letting you attain a better overall sound at higher levels. The ToneWoodAmp's notch filters can be used creatively, but their primary function is to attenuate frequencies causing feedback.

The ToneWoodAmp offers two programmable Notch Filters:

- **Notch Low** operates in the range 100 Hz –1.1 kHz
- **Notch High** operates in the range 200 Hz –2 kHz

NOTE: *The Notch Filters do not affect the DI signal out of the ToneWoodAmp.*

Using the Notch Filters

To access and program the Notch Filters:

1. Enter the Notch Filter menu by clicking and holding the **Amplitude** knob for two seconds. **Filters>** appears on the display.
2. Turn the **Amplitude** knob clockwise to select **Notch Low** or **Notch High**.

Once you select **Notch Low** or **Notch High** each ToneWoodAmp knob assumes a new role in controlling the filter's parameters.

- **Effects** cuts the selected frequency, increasing attenuation turning clockwise from 0 to 20.
- **Parameters** selects the notch filter frequency. The values change in 40 Hz increments. Click the **Parameters** knob and the values now change in 4 Hz increments, making it easier to accurately hone in on problem frequencies.
- **Amplitude** controls the relative volume of the selected filter. This is useful when identifying problematic feedback frequencies.

Eliminating Feedback

A common practice to find and fix feedback is to search for the problematic frequencies by selecting a narrow band, sweeping across frequencies until the feedback disappears, and then applying the appropriate amount of cut at that frequency. This is known as the *Search and Destroy* method.

To Eliminate feedback using the *Search and Destroy* method:

1. Enter the Notch Filter menu by clicking and holding the **Amplitude** knob for two seconds.

   Filters> appears on the display.
2. Turn the **Amplitude** knob clockwise to select Notch Low.

   The **Amplitude** knob now controls the filter's volume.
3. Although rather annoying, turn **Amplitude** clockwise and let the feedback continue.
4. Turn the **Effects** knob fully clockwise until the value reaches 20 (the maximum amount of attenuation).
5. Slowly turn the **Parameters** knob to scan through the frequency spectrum until the feedback starts to dissipate.

   It can be helpful to click the **Parameters** knob to toggle into fine tuning (4 Hz increments) and scan until you find the frequency with no feedback.
6. With the problematic frequency identified, slowly turn the **Effects** knob counterclockwise to reduce the amount of attenuation until the feedback starts to become audible again.
7. Now turn the **Effects** knob clockwise a few notches until it goes away again.

   You have found the minimum cut to avoid feedback without altering the tonal balance of the ToneWoodAmp's effects.
8. Click the **Amplitude** knob to save your changes.

   Notch Filter settings are automatically saved to individual Guitar presets.
9. If you notice another problematic frequency, select Notch High and repeat Steps 3 through 8.

NOTE: *The Notch High filter is set by default to cut 900 Hz as this seems to be a typically problematic frequency between the ToneWoodAmp and most guitars. However, this is just a starting point so feel free to adjust it.*

Once you tame these frequencies, you can turn up the volume of the ToneWoodAmp much louder without feedback. As an added bonus, you are now familiar with the *Search and Destroy* method, which is comes in very handy in many audio situations.

Updating Firmware and Software

Chapter 6: Caring for the ToneWoodAmp

Storage

Cleaning

Appendix A: Default Effect Values

There are 8 built-in effects, each with 3 parameters and 10 memory slots.

The numbers in brackets are the recommended (default) parameter values for each effect.

Hall Reverb (Gain 12, Volume 20)

- Decay – reverb time (18)
- Pre-delay – time before the reverb gets triggered (10)
- Hi cut – shelf filter that cuts above the selected frequency (5)

Room Reverb (Gain 10, Volume 20)

- Decay – reverb time (22)
- Pre-delay – time before the reverb gets triggered (10)
- Hi cut – shelf filter that cuts above the selected frequency (25)

Plate Reverb (Gain 9, Volume 20)

- Decay – reverb time (23)
- Pre-delay – time before the reverb gets triggered (0)
- Hi cut – shelf filter that cuts above the selected frequency (10)

Delay (Gain 10, Volume 18)

- Speed – delay time (11)
- Feedback – number of repeats (11)
- Reverb – basic reverb in addition to the delay (9)

Tremolo/Delay (Gain 15, Volume 20)

- Rate – tremolo speed (9)
- Depth – degree of tremolo effect (25)
- Delay – time before tremolo begins (5)

Leslie style Tremolo (Gain 12, Volume 20)

- Rate – tremolo speed (9)
- Depth – degree of tremolo effect (25)
- Reverb – basic reverb in addition to the tremolo (25)

Auto-Wah (Gain 12, Volume 20)

- Sensitivity – higher values produce more effect with lighter touch (25)
- Envelope – attack, decay, sustain, release (23)
- Reverb – basic reverb in addition to the effect (10)

Overdrive (Gain 19, Volume 18)

- Drive (25)
- Filter (25)
- Reverb (16)

DSP Bypass – (Gain 15, Volume 0)

- DSP Bypass is not an effect, but is a method of muting or bypassing the DSP effects.
- Notch Filters:

  Notch Low (no cut)

  Notch High (Cut 17 on frequency 930Hz)

Appendix B: Rechargeable Batteries

Please be aware of the following issues if you use rechargeable batteries:

- Not all rechargeable batteries are alike. Most of the less expensive rechargeable batteries have very low energy density which means they will not last as long and may not respond evenly to peak outputs, depending on their charge level.
  If you are going to use rechargeable batteries, choose only those with high energy density. An affordable example is the UltraCell Plus NiZn 1.6 V AA - 2800 mAh High Capacity Rechargeable Battery and the Acuvar NiMh 1.2 V AA 3100 mAh.
- Please note: Most rechargeable batteries are slightly thicker and longer. ToneWoodAmp units with serial numbers below X7999 have a slightly narrower battery cavity so extracting them might be difficult. See images below for a workaround. Also, unlike most rechargeable batteries, the Acuvar brand battery size is much more compatible.

Workaround: To insure easy removal of rechargeable batteries (mostly for units up to SN X7999), apply a piece of tape to both top and bottom batteries (**B-1**) and make sure that the tape is nested between the two top batteries **(B-2)**. This will allow you to pull out the bottom battery together with the top one, preventing it from getting stuck inside.

Figure B-1 Taping two rechargeable batteries together for easy insertion and removal

Figure B-2 The tape is nested between the two top batteries

Appendix C: Installing Bundled Pickups

Installing the Neo-D Pickup

If you ordered the ToneWoodAmp and Fishman Neo-D pickup package, follow these instructions to test the ToneWoodAmp and the pickup together.

1. Prepare the ToneWoodAmp for install and position it with the blue tape.

   See *Preparing for Installation* on page 7.
2. Place the Neo-D pickup in the sound hole.
3. Loosen the two screws on the Neo-D pickup using a Phillips head screwdriver.

   Allow enough space for the wood of the guitar to fit into the pickup.

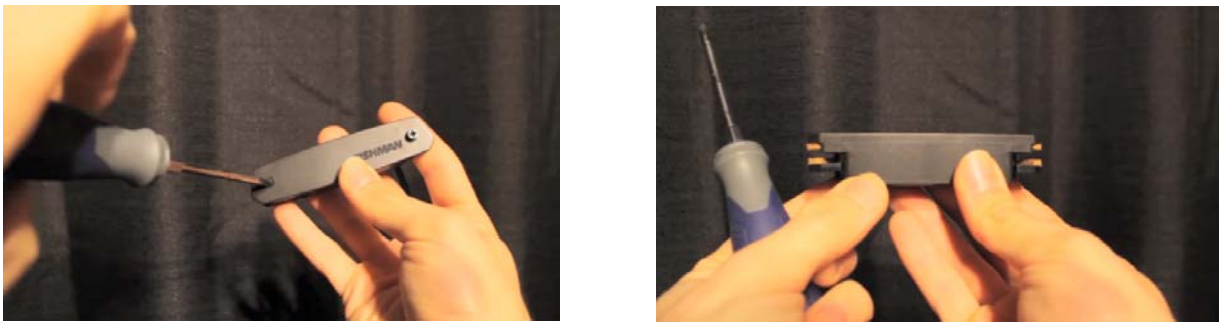

Figure C-1 Neo-D pickup

4. Insert the pickup making sure the attached cable comes out of the sound hole on the side closest to the neck.

   This is very important as it insures the cable stays out of the way of your picking hand.

Figure C-2 Neo-D pickup cable position

5. Tighten the screws on the pickup to hold it in place.
6. Position the pickup cable so it goes under the guitar below the sound hole, and travels along the back of the guitar to the **Input** jack of the ToneWoodAmp.

Figure C-3 Neo-D pickup cable plugged into ToneWoodAmp

7. With the pickup in position and plugged into the ToneWoodAmp, set the Master Gain to 100%. See *Setting the Master Gain for the First Time* on page 8. The Neo-D typically sounds best when the Master Gain is set in the range 80–100%. Use your ears to determine the best setting for your guitar.
8. Disconnect the Neo-D cable from the ToneWoodAmp.
9. Loosen the screws on the pickup and remove it from the sound hole.
10. Continue with the installation of the magnetic x-brace.

    See page 10.
11. Reinstall the Neo-D pickup into the sound hole of your guitar, plug it in, and enjoy the sounds of your ToneWoodAmp.

Installing the B-KNG Pickup

If you ordered the ToneWoodAmp and B-KNG pickup package, follow these instructions to install the ToneWoodAmp and the pickup together.

1. Coming soon....