

SONOMA



WIRE WORKS

RAW

RIFFWORKS



RECORDING

MADE FUN

User Manual

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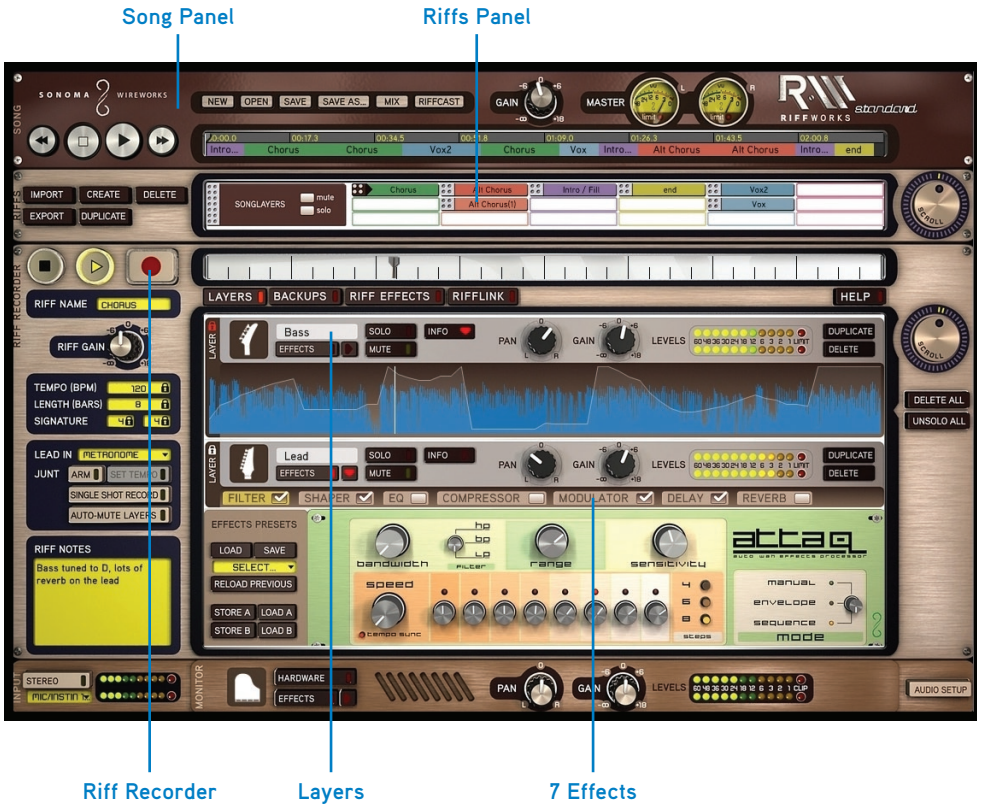
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II. Interface



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RiffWorks

Chapter 1 Quick Start Guide

1.1 Welcome!

Congratulations new RiffWorks user. You have chosen wisely. RiffWorks recording software is the most fun you'll ever have with a computer and a guitar. This first chapter will help you get started quickly and will put you well on your way to recording your first song. Remember that RiffWorks was made to be intuitive and easy to use, so don't spend too long reading the manual. Go have fun. You can come back to the manual if there's something you want to know more about.

For this quick start guide, we will assume you have already installed and setup RiffWorks. If you have not, refer to the Installation Manual.

1.2 Getting Started



Launch RiffWorks by double-clicking on the desktop icon or selecting the program from the start menu under Sonoma Wire Works/RiffWorks. If you are on a Mac, simply double click on the RiffWorks application icon.



To start recording:

- * Click the Riff Recorder PLAY button

- * Click the BACKUPS button and choose an InstantDrummer SESSION and PART.



- * Select the TEMPO by clicking and dragging the cursor up and down, or double-clicking in the box and typing.

- * Select the LENGTH the same way you did the TEMPO and note that Riffs loop when they reach the end.

- * Click the LAYERS button to see your takes appear when recording.



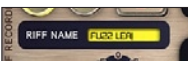
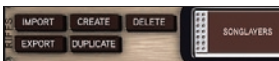
- * Click the big red RECORD button.

NOTE: If you can't hear your guitar and nothing is being recorded, please see Chapter 2 — Setting up RiffWorks.

1.3 Recording More Parts

As you continue recording, you'll want to make more and more Riffs for different parts of your song. Here's how to work with Riffs:

- * Each Riff is represented by a colored brick in the RIFFS list. Use different colors to help you organize your Riffs.
- * To switch the Riff you are currently viewing in the Riff Recorder, just click on a brick. The selected Riff has a little brown triangle.
- * Each Riff can have a different InstantDrummer or other BACKUPS, different TEMPO, LENGTH and different RIFF EFFECTS.
- * Create a new Riff by clicking the CREATE button. It automatically copies the backup and tempo settings from the Riff you currently have selected.
- * DUPLICATE copies all the layers as well as the backups settings of the currently selected Riff to a new Riff.
- * You can rename a Riff by typing in the RIFF NAME screen in the RIFF RECORDER.



1.4 Creating a Song

Finally, you'll want to bring all those parts together to create your masterpiece. Here's how to create a song:

- * Once you have several Riffs, you can drag them up to the SONG timeline to build a song.
- * You can rearrange Riffs in the SONG timeline to experiment with your song structure.
- * You can click in the SONG timeline to start the song playing part way through.
- * Once you have a song built, you can record solos or vocal tracks across the entire song by using the SONGLAYERS.



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- * When you SAVE a song, it saves all the Riffs with their layers and the Song sequence in one RiffWorks Song file (.rws).
- * To get a .WAV file to burn to a CD, press the MIX button.

1.5 Tips and Tricks for Creating Songs

To make recording your songs easier, here are some helpful tips:



- * Turn on AUTO-MUTE LAYERS to automatically mute each layer as it's recorded.



- * Use JUNTA to set the tempo with your guitar.

Song Layers is a special Riff that allows you to record straight linear tracks, or layers, over a complete song. This is especially useful for recording solos and vocals.

- * Click on the SONGLAYERS brick once you've created your song in the SONG timeline.
- * Click RECORD and it will record for as long as you want. SONGLAYERS never loop.
- * Both the SONG timeline and the RIFF RECORDER timeline move when playing SONGLAYERS.
- * Clicking PLAY on the RIFF RECORDER will stay focused on the SONGLAYERS.
- * Clicking PLAY on the SONG panel will switch away from the SONGLAYERS.

Here are some things you might find useful when working with Song Layers.

- * If you rearrange the Riffs in your song after you record in SONGLAYERS, the tracks may not match up.
- * If you want a Lead-in on the SONGLAYERS, just create a 2 bar Riff and put it at the beginning of your song.

Chapter 2 Setting up RiffWorks

2.1 Using the Interface - How to Turn Knobs and Click Buttons

There are no hidden menus in RiffWorks. Everything looks like a piece of hardware. To interact with it you must turn knobs and click buttons. Here's how:

2.1.1 Turning Knobs



All knobs in RiffWorks function the same way. Left-clicking on a knob and dragging the cursor directly up or down will cause the knob to rotate either right (cursor up) or left (cursor down).

Right-clicking a knob or CTRL-clicking on a Mac will return the knob to its default position. With knobs like gain and pan, this default position is in the center. With some of the InstantDrummer knobs like INTENSITY and VARIATION, this default position is all the way to the left or at zero.

2.1.2 Clicking Buttons



All buttons in RiffWorks require a single left-click of the mouse to turn them on or off. Buttons like the LAYERS, BACKUPS, and REWIRE buttons of the Riff Recorder, will only allow one button to be on at a time. So clicking the LAYERS button while it is already on will not turn it off.

2.1.3 Numbers and Names



Not a knob or a button, the TEMPO, LENGTH and SIGNATURE boxes are extra special. Clicking and dragging up or down will change the value. Double-clicking on the box will produce a cursor so that any value may be typed in. Press Enter or Return after typing to input the value.



RIFF NAME and RIFF NOTES do not require numerical values, but rather text. Double-clicking on these boxes will produce a cursor. Once you have the cursor, you can then type anything you want into these boxes. Press Enter or Return after typing to input your text.

2.1.4 Scroll Wheels



There are two Scroll Wheels in RiffWorks: one on the RIFFS panel, and one on the RIFF RECORDER panel. Scroll wheels will not turn until they have enough Riffs or enough Layers to scroll through. When there is nothing to scroll through, there will only be a single light lit around the scroll wheel. As Riffs or Layers are created, more lights will be lit.

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2.2 Getting Your Instrument Ready

2.2.1 Tune up

Tuning up before you start recording is an important habit. There's nothing more frustrating than coming back to a song that you've been working on and not being able to play in tune because it was recorded with an out of tune guitar.

2.2.2 Fresh Strings

If you're having trouble keeping your guitar in tune, or your tone just sounds dead, try a fresh set of strings. Stretch them out a bit once you've got them on before you tune, because they will tend to loosen up a bit as they break-in.

2.2.3 Plug-in

Make sure you've got enough cable so that you can comfortably move around without jerking on your audio interface or knocking your favorite beverage into your keyboard.

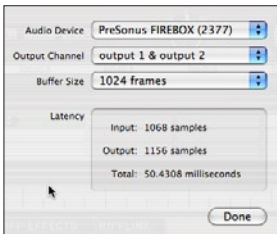
2.2.4 Turn on

Don't forget to plug-in and turn the volume up on your guitar or other instrument. Often when you're not getting signal into the computer, this is all it is.

2.3 Audio Setup

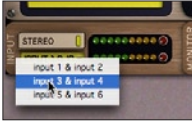
Your computer's primary ASIO or Core Audio device is automatically selected the first time you launch RiffWorks.

* Click the AUDIO SETUP button to choose another device or to select an alternate output channel.



* On Mac OS you can also set the buffer size here.

* On Windows the buffer size is set in the ASIO CONTROL PANEL, bring it up by clicking the button in the AUDIO SETUP panel.



- * Change input channels in the lower left corner with the INPUT pop-up menu.
- * With Line 6 GearBox, you need to launch the application separately and adjust the monitor settings appropriately to hear your guitar.

If you do not hear any audio or see any choices in the INPUT pop-up menu, please consult the troubleshooting section of the manual.

2.4 Input and Monitoring

2.4.1 Input

The INPUT signal you are recording into RiffWorks can either be a STEREO or MONO signal.



- * Turn off the STEREO button if the Input Meters only light up on one channel when recording. You may have to select the right channel if no audio is detected on the left channel.

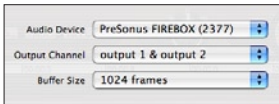
2.4.2 Monitoring

The INPUT can be heard either directly through the HARDWARE interface you are using or through EFFECTS and amplifier plugins like Amplitube LE.



- * To hear Amp plugins or custom RiffWorks effects on your live guitar signal, turn off HARDWARE Monitoring.

When you turn off HARDWARE Monitoring, you introduce a delay, or latency, that affects the Monitoring of your recording only. It does not affect the actual recording. However, if that latency is too large, it can become very difficult to play your guitar.



- * You can reduce input latency by selecting a smaller buffer size from AUDIO SETUP panel. A good starting point is 512, though faster computers can easily handle buffer sizes of 256 or even smaller.

2.4.3 Monitoring Pan, Gain, and Levels

The PAN, GAIN, and LEVELS section of the MONITOR panel only become active when the HARDWARE monitoring button has been turned off. All three will illuminate. Whatever your PAN and GAIN knobs are set to, the new LAYERS that are recorded will have the same PAN and GAIN settings. However, both PAN and GAIN settings are non destructive and both may be changed at anytime.



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2.4.4 Icons and Avatars



The ICON next to the HARDWARE and EFFECTS button appears on each LAYER you create. When you are not logged into RiffLink, this ICON defaults to the headstock of an electric guitar. Left-clicking and holding on the ICON will produce a collection of other ICONS you may choose from. You may also change the ICON on a LAYER after it has been recorded.



If you are logged into RiffLink, this ICON will change to your default AVATAR. For more information on AVATARS and RiffLink, please see the chapter on RiffLink.

Chapter 3 Recording

3.1 The Riff Recorder

The Riff Recorder is the heart of RiffWorks. This is where all the recording happens. When you select a Riff from the RIFFS list, its contents and settings are all displayed here. Remember that RiffWorks has a Riff based workflow where songs are recorded in chunks instead of all the way through. Those chunks of your song (Riffs) can have a variety of BACKUPS, varying lengths, and so on. Just check up in the RIFFS List to see which Riff has the little brown triangle. This is the Riff you are seeing in the RIFF RECORDER.



3.1.1 Screen

The Riff Recorder Screen is the big portion in the middle of the Riff Recorder. It can display different things depending on which button you have pressed above the screen. The different views are: LAYERS, BACKUPS, RIFF EFFECTS, RIFFLINK and HELP.



3.1.2 Layers

Each time you record, one or more new layers is created. Layers are basically a single recording of your instrument. You can stack layers on top of each other (bass, guitar, vocals) to create a full Riff sound. The Riff Recorder, by default, will record a new layer each time the Riff loops. Use this looping feature to quickly double up your tracks, do multiple takes, and so on. Each layer has several controls for mixing and applying effects.

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3.1.3 Backups

RiffWorks includes four diverse backups to accompany you while you record. The BACKUPS are organized in a different section than layers, but they are mixed into the Riff's audio just like layers are. When you click the BACKUPS Tab, you can turn on/off different backups (Instant Drummer, Metronome, ReWire, REX Player) as well as edit their individual settings. For more information, see the chapter on BACKUPS.

3.1.4 Riff Effects

The RiffWorks Effects are available to use on each individual Riff. There are several places that you can apply the Sonoma effects in RiffWorks. Riff Effects applies the effects to the full mix of the Riff. Basically, RiffWorks mixes all the Layers and Backups together and then applies these effects. If you want to apply effects to only one layer, look into Layer Effects. For more information, see the chapter on EFFECTS.

3.1.5 RiffLink

The RiffLink tab is your portal to RiffLink from within the RiffWorks interface. After you login, this screen allows you to see public RiffLink collaborations, your collaborations, etc. You can also open RiffLink songs directly from this screen. For more information, see the chapter on RiffLink.

3.1.6 Help

A brief help guide is built right into RiffWorks. Clicking the HELP button shows the Index. Each page has a button at the top to take you back to the index, and a MORE button to launch a web browser pointed at this user guide.

3.1.7 Riff Transport

RiffWorks might look a little strange to some of you because it has two transports: the Song Transport and the Riff Transport. The Riff Transport is the primary one that you will use while building your Riffs. It controls the playing and recording of an individual Riff. The Riff Transport is a looping transport, meaning that it will loop back to the beginning when it reaches the end of the Riff.

STOP



Click the STOP button or press the SPACEBAR to stop playing or recording the current Riff.

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PLAY



Click the PLAY button or press the SPACEBAR to hear the current Riff. Use the PLAY button if you want to play along with the current Riff without recording a layer or just want to play around with the mix.

RECORD



Click the red RECORD button or press the RETURN/ENTER key to start recording. When you reach the end of the Riff, that layer will be added and RiffWorks will automatically start recording a new layer.

RiffWorks detects if you have not played anything during a loop and it won't create empty layers while you're not playing. However, if you have a very noisy amp, RiffWorks may create layers anyway.

Pressing STOP within the first bar during recording will cancel the layer, even if you were making sound (unless the Riff Length is set to only 1 bar).

3.1.8 Riff Timeline

Watch the Riff Timeline to see where you are within the current Riff while you're playing or recording. The marks in the Timeline show the beats and measures.



3.2 Controls

3.2.1 Riff Name



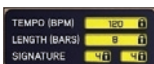
Click in the yellow RIFF NAME box and type to change the name of the current Riff. Press RETURN/ENTER or click away from the control to finish editing.

3.2.2 Riff Gain



The Riff GAIN knob controls the overall level (loudness) of the current Riff. This is a great way to match the different levels of Riffs after you've created a song. If your Riff is too loud compared to your other Riffs, just turn this knob down instead of turning down all the layers.

3.2.3 Tempo



Set the tempo of the current Riff by clicking the yellow tempo box and sliding up and down, or by clicking in the box and typing. You can only set the tempo before recording layers. Its nice to adjust this while you're playing to get a good feel for the tempo. You may (and probably should) also use JUNT to set the tempo (see below). Note that once you record a

RiffWorks

layer in a Riff, the Tempo, Length and Signature are locked. These are also locked if a Riff has been added to the Song Timeline. Deleting all the layers and removing the Riff from the Song Timeline will unlock these values.

3.2.4 Length



This may be an unfamiliar control for those of you who are used to just recording until you press stop. RiffWorks has a Riff based workflow, meaning that you create your song in smaller segments. After creating a new Riff, you tell RiffWorks how long that segment is using the LENGTH control. The length is set in bars. In 4/4 time, 1 bar is 4 beats. Set the LENGTH by clicking on the yellow LENGTH box and sliding the mouse up and down. Note that Riffs loop when they reach the last bar.

3.2.5 Signature

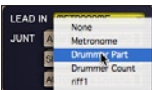


Set the time SIGNATURE. The number of beats in a bar is determined by the Time Signature setting. 4/4 is the most common Time Signature in popular music forms.

* In 4/4 time that would sound as 'Tee ta ta ta'.

* In 5/8 time it would sound as 'Tee ta ta ta ta'.

3.2.6 Lead In



LEAD IN allows you to get a two bar count-in before you start recording. This can help you get into the groove. There are five different Lead In settings to choose from: None, Metronome, Drummer Part, Drummer Count, and Riff.

None — This is the default setting. There won't be any Lead In when None is selected.

Metronome — This will play two bars of the METRONOME sound selected under BACKUPS. Even if METRONOME is not active under BACKUPS, the Metronome will still play during the Lead In when Metronome is selected from the Lead In menu.

Drummer Part — This will play two bars of the current DRUMMER selected under BACKUPS. Like the Metronome setting, even if the DRUMMER is not active under BACKUPS, it will still play during the Lead In when it is selected from the Lead In menu.

Drummer Count — Some of the Instant Drummer sessions have a part labeled Count-In. When you select Drummer Count from the Lead In menu, the Drummer Count-In part will play during the Lead In.

Riff — See the chapter on Advanced Techniques for more information on Riff as Lead In. The Lead In menu will continue to expand as more and

more Riffs are added to the song.

3.2.7 Junt



JUNT is a musician centric feature. It can detect your tempo based on instrument input. Think of it as a Tap Tempo using your guitar strings. Just mute your guitar strings, and strum the tempo you want to play. You can also use JUNT with other instruments, but it will work best with non-sustaining sounds (like finger snaps through a microphone, or short percussive notes on a piano). JUNT has two modes. Use it to just set the tempo, and/or use it to start recording. The sensitivity of Junt was tuned for a guitar, but it has also been shown to work quite well with just a voice speaking "one, two, three, four". Other instruments may work as well.

Using Junt to Set the Tempo



- * Click on Junt SET TEMPO
- * The Status Message in the Riff Timeline will display "Junt Scanning"
- * Strum with palm muting (junt junt junt junt) in rhythm for the number of counts you have set in the time signature.
- * As you Junt, the Status Message will display each count. If it mis-triggers, you might see it jump ahead or miss a beat. Just stop, and wait for it to display "Junt Scanning" again.
- * Once Junt has successfully tracked a count, it will set the Tempo automatically.

Using Junt to Start Recording



- * Click Junt ARM
- * Strum with palm muting (junt junt junt junt) in rhythm and then start playing your riff.
- * Once Junt has successfully tracked a count, it will start recording automatically.
- * If you have the Lead In set to "None" it will start recording immediately, otherwise, it will play the Lead In first.

Using Junt to Set the Tempo and Start Recording



- * Click Junt ARM and SET TEMPO
- * Proceed as described above.
- * The Tempo will be set and Recording will begin automatically.

Caveats

- * If you have delay type effects on the input signal, these can cause miss-triggers.
- * If you are having trouble setting a really fast tempo, 200+ bpm for example, try to Junt in half time, then double the tempo manually once

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it is detected.

* If Junt keeps missing your beats, make sure you have enough input level.

3.2.8 Single Shot Record



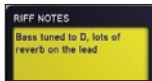
By default, RiffWorks continues recording new layers when it reaches the end of a Riff (loop based recording). This feature gives you an alternative. It records the first pass through the Riff as a new layer and immediately switches to play when it loops (no new layers). It's fun to use this feature to lay down a rhythm layer on the first pass and then switch to practicing your lead on the second pass without recording it.

3.2.9 Auto-Mute Layers



Usually RiffWorks will add layers that will play back the next time through. Often, you want to do things like multiple takes and it's annoying to hear your previous take. Press the Auto-Mute button before you press record for an alternative. It adds any new layers already muted, meaning that you won't hear them. To hear them after you've recorded them in Auto-Mute, just click the Mute button for that Layer to turn Mute off.

3.2.10 Riff Notes



Enter notes you'd like to write about the current Riff here. It's useful for remembering chords you played, lyrics, ideas, etc. Use it for whatever you want!

3.3 Layers

One or more new layers is created each time you record. Each layer has several controls for mixing and applying effects.



3.3.1 Controls

Lock

Click on the small Lock icon in the top-left corner of the layer to lock the layer. This prevents it from accidentally being deleted. You might record several takes, but only want to keep a couple of them. In this case, lock the ones you want to keep, and use the DELETE ALL button to delete the rest.

Icon

* Click on the Layer Icon to change the icon.

* Changing the icon in the Input Monitor panel changes the icon that is applied to newly recorded layers.

* When you are logged into RiffLink the Layer Icon displays your Avatar.



Label

Click in the white rounded-rectangle to edit the layer label. Used in combination with the Layer Icon, it helps to quickly spot the tracks you are looking for.

Effects

By pressing just the ARROW button, you can show just the effects buttons to see which effects are on, and bypass them.

To edit the effects, click on the EFFECTS button. For more information, see the chapter on EFFECTS.



Mute

The MUTE button allows you to silence a layer.

Solo

The SOLO button allows you to hear only that layer (and any others that are already solo'd). You can use the UNSOLO ALL button to clear all the solo buttons at once.

Info

Press the INFO button to access Gain Automation. See the section on Gain Automation for more information.

Pan

Turn the PAN knob to shift the sound from left to right.

Gain

Turn the GAIN knob to change the overall level of the layer, after the effects and gain automation are applied.

Level

The level meters indicate the level of the layer as it goes to the mixer, after all the effects, panning and automation have been applied. If the red LIMIT light comes on, you may need to reduce the level to avoid overloading the output.

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Delete

Delete a Layer using the DELETE button. A layer cannot be restored once it has been deleted.



You can also delete all layers within a Riff by clicking the DELETE ALL button that is located to the right of the Layers panel.

Locked layers cannot be deleted, even with DELETE ALL.

Duplicate

Clicking the DUPLICATE BUTTON copies the layer and all its settings. You can create doubled parts or parallel effects chains by duplicating a layer and changing the effects on the copy.



Gain Automation

Each layer has the ability to automate the gain level. Clicking on the INFO button opens the automation editor.

* The blue lines that appear represent the relative audio level of the recording over time. The higher the level, the taller the line.

* Clicking and dragging anywhere in the waveform view allows you to draw a level curve that is applied to the sound. You can draw fade-ins and fade-outs or cut out specific notes.



More Info on Fading Techniques from a Sonoma Wire Works Newsletter Column:

First Click the LAYER INFO button. "Now, let me explain what you're looking at. RiffWorks just computed a quick analysis of the sound level of your layer across the length of the Riff and drew it in this nice blue color. When you hit play, you'll notice a play pointer moving over the top. You might be wondering how this fixes fade outs and punch outs (what those in the industry call muting a small section of a recording). The part that actually fixes the problem is really subtle. It's the white ghosting over the panel. Try pressing the mouse button in that info panel and drawing around. There is a white line over the ghosted region that reflects your mouse position. THIS is what is going to fix your problems; it controls

the gain of the layer at that point in the Riff. If you just dragged one point down, you will have notched out that note by turning the volume down really quickly. If you drew a nice downwardly sloped line on the end of the Riff you'll hear the layer fade out at the end of the Riff. If you draw a crazy shape, you'll hear the layer changing in volume across the whole Riff like a completely customizable tremolo. If you want to fade out your whole song, mix it down to a new Riff and draw a fade out on the mixed down layer in that new Riff. Totally messed up one of the verses in your song? Just mute it out in that layer by dragging all that section down in the Riff Info panel. It's easy. Play with it. You'll get it."

3.4 How to Record a Riff

Now that we've explained what everything is, here is how you record a Riff:

1. Click on the LAYERS tab.

2. Click the red Record button or press the RETURN key to start recording. (many keyboards may say ENTER)

- * You'll see that the Riff Timeline Cursor moves from left to right, and then starts back at the left again and keeps looping until you click the stop button. Each recorded loop is saved as a layer within the Riff.

- * Click the AUTOMUTE button to mute tracks as they're recorded. Once you think you've got a layer recorded just the way you like, you can go back and manually unmute the track(s) of your choice.

- * Please refer to the RiffWorks Trouble Shooting Guide if you are unable to hear your instrument while playing. Layers will only be created if you play your instrument after you have clicked the red RECORD button.

3. Click the STOP button or press the SPACEBAR to stop recording. Alternatively, you can click the PLAY button or press the RETURN (or ENTER) key instead to hear what you've just recorded.

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Chapter 4 Building a Song

4.1.1 Riffs Panel



The Riffs Panel contains the Riffs List, Song Layers, and some important functions for manipulating Riffs like IMPORT, EXPORT, CREATE, DUPLICATE, and DELETE.

4.1.2 Riffs List

The Riffs List is where all your Riffs are kept and organized. Here are some notes on using the Riffs List:

- * Each Riff is represented by a colored brick in the RIFFS list. You may use different colors to organize your Riffs.
- * To switch the Riff you are currently viewing in the Riff Recorder, just click on a brick. The currently selected Riff has a little brown triangle.
- * Each Riff can have a different InstantDrummer or other BACKUPS, different TEMPO, LENGTH and different RIFF EFFECTS.
- * You can rename a Riff by typing in the RIFF NAME screen in the RIFF RECORDER.



4.1.3 Import



Clicking the IMPORT button allows you to bring in Riffs you have previously exported from other songs. You can only IMPORT a Riff (.rwr) file. You cannot IMPORT an audio file (but we know you want to and we're working on it:-)

4.1.4 Export



Clicking the EXPORT button allows you to save a single Riff for use in another song. You may only export Riffs as .rwr files. You cannot export Riffs as audio. To export Riffs as audio, see the section on the MIX function later in this chapter.

4.1.5 Create



The CREATE button will create a new Riff with the same SIGNATURE, LENGTH, TEMPO, and BACKUPS as the Riff that is currently active. This saves a lot of time when you want to work on another part of the song,

but you plan on keeping the same TEMPO and feel. The CREATE function will not copy over any LAYERS from your currently active Riff. The new Riff will not have any LAYERS in it at all.

4.1.6 Duplicate

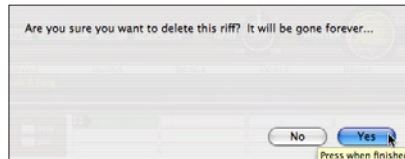


The DUPLICATE button will copy everything about your currently active Riff including SIGNATURE, LENGTH, TEMPO, and BACKUPS as well as all the LAYERS into a new Riff. The new Riff will have the same name as the original plus a "[#]" suffix. Right clicking and dragging a Riff to a new location in the Riff List will also duplicate the Riff.

4.1.7 Delete



Clicking DELETE will erase the currently active Riff Brick. When you click DELETE, a dialog will pop-up asking you if you are certain you wish to delete this Riff Brick. Be sure you want to delete it when you click "Yes" because there is no undo.



4.1.8 Song Layers



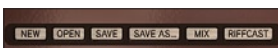
SONG LAYERS allow you to record single takes over all the Riffs of your entire song. This is great for vocal tracks or guitar solos. Please see the chapter on Advanced Techniques for more information on SONGLAYERS.

4.2.1 Song Panel

At the top of RiffWorks is the Song Panel. This is where you can create new songs, open old ones, save the one you're working on, or mix it down into a file. The Song Timeline is where you drag and drop Riffs to create your song.



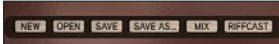
4.2.2 New



Clicking the NEW button will create a new RiffWorks song. If you have not yet SAVED your current song, you will be asked to do so.

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4.2.3 Open



Clicking the OPEN button will bring up a file browser. Select any RiffWorks song to load it.

4.2.4 Save



Clicking the SAVE button will save your current song by automatically overwriting the last saved version. If you have not yet saved your song, clicking save will bring up a file browser in which you will be asked to name your RiffWorks song.

4.2.5 Save As

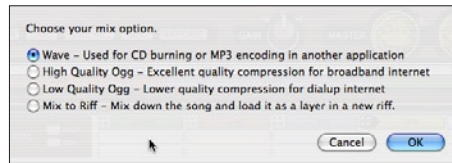


Every time you click SAVE AS you will be asked to name your RiffWorks song even if you've saved it before. This is useful for saving multiple versions of your song. Always save multiple versions of your song. That way, if you decide you liked a guitar line or vocal part better before, you can always go back.

4.2.6 Mix



When you have your song recorded and you are happy with the sound, it is time to mix down. Clicking the MIX button at the top of the song panel brings up the Mix Options dialog.



Mix Options

A. WAV - This mixes the song down to a .wav file. These are perfect for burning to a CD, or using a third party program like iTunes to convert to mp3.

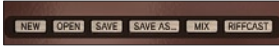
B. Ogg Vorbis (.ogg) files are a modern, free replacement for the mp3 format. Most sound player applications either have support built-in or there are plug-ins available. Several portable players have support for these files built in as well.

1. High Quality Ogg — In our own blind listening tests, high quality Ogg files were difficult to tell from uncompressed .wav files on professional monitors.

2. Low Quality Ogg — In our own blind listening tests, low quality ogg files were much better sounding than mp3 files of equivalent bit rates.

C. Mix To Riff — This is a wonderful feature in RiffWorks that allows you to turn an entire song into a single new Riff. See the chapter on advanced techniques for some tips and tricks for this feature.

4.2.7 RiffCast



Clicking RIFFCAST will bring up the RiffCast dialog. Enter all the information you want about your song, check the box certifying that you were the author of this song, and click RiffCast. You'll need your user name and password that you used to authorize RiffWorks. Your song will be mixed down and uploaded to the online RiffCaster website and instantly podcasted. Once your song is posted you can visit the website to listen, read comments from other users, and get a portable player you can post on your own myspace page, blog or website.

See the chapter on RiffCaster for more information.

4.2.8 Song Transport



There are two transports in RiffWorks - the Riff Recorder transport and the Song Transport. The Riff Recorder transport is used to play and record a single Riff, whereas the Song Transport is used to play all the Riffs you have placed into the Song Timeline.

- * Clicking PLAY on the Song Transport will start the Timeline in the SONG panel to begin playing.
- * Holding FORWARD or REWIND will cause the pointer to scrub through the audio so that you may move the pointer to some point in the middle of a Riff.
- * Clicking STOP will bring the pointer back to the beginning of the Timeline.
- * Clicking in the top half of the Timeline will cause the pointer start at that point, even if it is in the middle of a Riff.

4.3 Creating a Song

RiffWorks uses a Riff based workflow. Here are some notes on how to create a song after you've recorded multiple Riffs.

- * Once you have several Riffs, you can drag them up to the SONG timeline to build a song.
- * You can rearrange Riffs in the SONG timeline to experiment with your song structure by clicking and dragging Riffs.
- * To remove a Riff from the song, just drag it out of the timeline.
- * You can click in the SONG timeline to start the song playing part way through.
- * Once you have a song built, you can record solos or vocal tracks across the entire song by using the SONGLAYERS.
- * When you SAVE a song, it saves all the Riffs with their layers and the Song sequence in one RiffWorks Song file (.rws).
- * To get a .wav file to burn to a CD, press the MIX button.

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4.4 Master Output



Adjust the mix down level of your Song using the Master GAIN knob, while watching the levels on the MASTER meters.

RiffWorks has a built-in compressor/limiter on the output. It keeps the levels below clipping as much as possible, so if your levels start getting hot, you won't hear that awful distorted digital clipping sound right away. If the level gets too hot, like when the needles are pegged and the Limit light is on constantly, you can still get some peaks that clip.

- * Compression begins at -6dB on the meters.

- * Limiting begins at -3dB on the meters.

- * The Limit light starts to come on at -3dB also.

Some styles of music sound better with more or less compression and limiting. If your music sounds too squashed or pumps and breathes, turn down the Master Gain so that the MASTER Meters read -6dB at the peaks. When using Mix to Riff, the master output Compressor and Limiter are bypassed, and the mix is stored as floating point data to preserve all the information with no loss of resolution.

Chapter 5 Backups

RiffWorks includes four diverse backups to accompany you while you record. The settings for each Backup are stored in each Riff. So every Riff can have different backup settings. All the backups are tempo synchronized. If you change the Tempo of a Riff, the backups will stay right in sync.



5.1 InstantDrummer

InstantDrummer invites you to jam with great sounding drum tracks. Pick a groove, count off a tempo, and InstantDrummer inspires you with its continuously varying drum tracks and fills using perfectly matched, full kit studio drum recordings.

Spin the InstantDrummer INTENSITY knob to set the mood from mellow to aggressive. Dial in some VARIATION to get a constantly evolving beat. AMBIENCE adds room sound and GAIN sets the level. No tedious editing or disappointing sounds, just a great drummer, ready to jam.



5.1.1 Session

Use this menu to select the InstantDrummer Session you would like to play. Each InstantDrummer session will have a different set of parts.

A. Demo — All versions of RiffWorks include the Demo drummer session. It contains several parts made by our partner companies for you to sample.

B. Included InstantDrummer Sessions — If you purchased RiffWorks Standard or Line 6 Edition, the following sessions are included with your purchase. If they were not included with your installation, be sure to download them or you'll be missing out! Included Sessions:

- * Discrete Drums — Bare Bones
- * Drums On Demand — Habanero Groove
- * Drums On Demand — Half Nelson

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- * Drums On Demand — When I Drum Around
- * Sonoma Wire Works — Afro Island Grooves
- * Sonoma Wire Works — Mekanik Beats
- * Sonoma Wire Works —Trash Funk
- * Submersible Music — Matt Sorum Basic

C. Get More Drums — At the bottom of the SESSION menu, you can select *Get More Drums* to go directly to the online store to shop for more InstantDrummer Sessions from top drum content companies for \$9.99 each. More new sessions are being added all the time.

5.1.2 Part

Use this menu to select the part you'd like to play. Parts are often organized into song segments like Verse, Chorus and Bridge, but each drum content company does it a bit differently.

5.1.2 Screen



When you select an InstantDrummer Session, the screen displays a custom graphic. In most cases it includes information about the original tempo the drum tracks were played when recorded. This is the tempo the drummer will sound the most natural.

- * If the Riff Tempo is set much lower than this, you may hear some chop-piness in the audio.
- * If the Riff Tempo is set much higher than this, the playing may sound unnatural, or even humanly impossible.

5.1.3 Intensity



Each part of an InstantDrummer session may have a range of intensities to select from. This could mean the beat has fewer hits, or less use of cymbals, or different effects applied. It is up to the creators of each session to determine what to use this for.

5.1.4 Variation



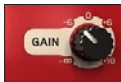
Each part of an InstantDrummer session has a fill associated with it. The InstantDrummer always plays a fill on the last bar of a Riff. As you turn the Variation knob up, the InstantDrummer session will constantly vary the beat by inserting parts of the fill through out the Riff.

5.1.5 Ambience



The Ambience knob controls the amount of Room or Reverb on the drum sound. Some InstantDrummer Sessions include custom recorded Room tracks that are controlled by Ambience. Others just use the built-in Reverb in RiffWorks.

5.1.6 Gain



This controls the level of the InstantDrummer in the Riff mix.

5.1.7 Installing InstantDrummer Sessions

- * Download the .swd file from the store, choosing Save in the download dialog.
- * Make sure your browser didn't change the name of the file, for example changing .swd to .zip, or adding [1] to the name of the file.
- * Double click the .swd file.
- * A dialog will open saying the InstantDrummer session is installed and ready to use.
- * You do not need to quit RiffWorks to install InstantDrummer sessions.

5.2 Metronome



The Metronome in the BACKUPS panel can be used for Lead-in, while recording, for a really simple beat, or to add extra flavor in addition to the drummer. You can select the sound, set the volume and pan settings. The Metronome plays an accented sound on the 1 of each bar, and a normal sound on the other beats. The number of beats in a bar is determined by the Signature setting. 4/4 is the most common time signature in popular music forms.

- * In 4/4 time that would sound as 'Tee ta ta ta'.
- * In 5/8 time it would sound as 'Tee ta ta ta ta'.

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5.3 ReWire



ReWire is a protocol built into RiffWorks, Reason and other ReWire applications. ReWire applications and RiffWorks can work together simultaneously. Their transports lock, and audio from the other applications comes into RiffWorks with sample accurate timing.

The ReWire process is pretty simple.

1. Open RiffWorks.
2. Open ReWire Device Application (Reason, etc.)
3. Enable ReWire backup in RiffWorks.

Now, your current Riff length in RiffWorks will be reflected in the loop points of your Reason song. Move the beginning loop point in Reason to where you want Reason to start playing for your currently selected Riff.

1. Hit PLAY in RiffWorks.
2. Adjust GAIN in the ReWire backup panel to whatever you want.

This is a very brief explanation, but it should get you going. You should also read about your ReWire device application as they all do things a little differently.

5.4 Rex Player



The Rex Player plays tempo synchronized loop files in the Rex file format (.REX and .RX2).

Loading Rex files in RiffWorks

- * Click the LOAD button to open a file browser and the Rex files will load and play in RiffWorks.
- * Each Riff has 4 slots for Rex files.
- * Some or all of the Rex files included with Reason are built into special files that only Reason can browse into. If you want to use those, you

will have to load them into Dr. Rex players in Reason and use Reason in ReWire slave mode.

Tips and Tricks for the REX Player

- * If the Rex file you load is longer than the length of the Riff, unexpected results may occur, like it might play differently each time through the loop.
- * If you make your own Rex files with Recycle, be sure you add at least a few slice markers and set the right loop point, or the file will do strange things when you use the Riff in a song.

Chapter 6 Effects

There are four places you can add effects in RiffWorks:

1. Input Effects are setup in the MONITOR panel. They can only be used if HARDWARE monitoring is off. They are applied in real-time and can be adjusted after recording in the LAYER panel EFFECTS. The AMP plug-ins are applied pre-recording and CANNOT be changed later.
2. Layer Effects can be set on any LAYER. Just click the EFFECTS button on the LAYER panel to see them.
3. Riff Effects are applied to all the layers in a Riff. If you want the same effect on all the layers in your Riff, this can save some CPU power. It's a great place to add some EQ or a little Reverb to your entire Riff.
4. Backup Effects - In the BACKUPS panel you can apply different effects to each backup separately.

Effects

* Filter — Attaq is an auto-wah type effect with three different modes: manual, envelope and sequence.



* Shaper — Tripwire is a three-band EQ and compressor with distortion on each band.



* Modulator — Tempest has 11 different types of modulation effects and multiple waveforms.



- * Delay — 4x4 is a four tap delay with some special features like panning and damping.



- * Reverb — SuperTanker is a reverb with selectable flavors and adjustable size.



- * Compressor — Stamina is a compressor/sustainer, start by adjusting the Compression knob.



- * EQ — No Equal is a vintage style EQ with three parametric bands and two roll-off filters.



Presets

- * When you SAVE a preset, it saves all the settings for any effects that are on.
- * When you LOAD a preset, it loads only the settings for effects that are on, and turns the others off, without affecting their settings.

6.1 Input Effects

The RiffWorks effects, plus approved amp plug-ins can be activated and heard while playing your instrument through RiffWorks by using the EFFECTS feature.

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- * First turn down the monitor level on your hardware device.
- * Turn off HARDWARE monitoring by clicking the HARDWARE button.
- * Then click the EFFECTS button to show the list of effects.



Amp (not included in RiffWorks Line 6 Edition, please launch GearBox separately)

Control amp modeling plugins by using the AMP tab. Clicking on AMP the first time will show a popup menu of available plugins, as well as options to set the VST plugin path (Windows only), rescan for plugins, or get more amps from the Sonoma Wire Works store (coming soon). When an amp plugin is selected, it automatically opens the user interface in another window. You can close the interface and the amp will continue to be heard, unless you uncheck the AMP power button. To conserve CPU power and make RiffWorks Songs sharable with RiffLink, the input signal is processed by the plugin before it is recorded to disk. So amp settings cannot be changed after recording at this time.

Effects

RiffWorks Effects are all processed in real-time. The more effects you use, the more CPU power it takes. As you record layers, the Input Effects settings are copied to the layer, so that you can hear the effects just as they were when you played it, and you can go back and change them in each layer later.

Monitor Gain

With hardware monitoring turned off, you'll be hearing your instrument through RiffWorks. If you were hearing it through your hardware before, now you'll be hearing it doubled up. You should turn down the monitor level on your hardware. Some devices may control this via a front panel knob, others may use a software control panel. Consult your device's documentation for setting the monitor level. Other names this might be known as include, playback, computer, or cue mix/level. Once you have the hardware monitor level turned down, you can control your monitor level with the GAIN and PAN knob on the input monitor panel. These levels will be copied to new layers as they are recorded.

Latency

Turning on input effects may add latency, or delay from the time you play to the time you actually hear your instrument. If the latency is too much to play comfortably, you can try adjusting the buffer size in the AudioSetup dialog.

6.2 Layer Effects

The RiffWorks Effects are available to use on each individual Riff Layer.

1. Record a layer.
2. Click on the layer's EFFECTS button.
3. Click the checkbox next to the name of the effect to activate it.

Some effects can increase or decrease the volume of the layer, so be sure to adjust the volume accordingly using the layer GAIN knob.



Save and recall Layer Effects settings with EFFECTS PRESETS.

6.3 Riff Effects

The RiffWorks Effects are available to use on each individual Riff.

1. Open or create a new Riff.
2. Record one or more layers.
3. Click on the RIFF EFFECTS button.
4. Click the checkbox next to the name of the effect to activate it.

Effects Presets

Save and recall Riff Effects settings with EFFECTS PRESETS.



Riff Gain

Some effects can increase or decrease the volume of the Riff, so be sure to adjust the volume accordingly using the RIFF GAIN knob.



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6.4 Backup Effects

In the BACKUPS panel you can apply different effects to each backup separately.

6.5 Effects Guide

6.5.1 Filter

Attaq is the ultimate Auto-wah filter effect. You can create a classic, fixed wah tone; a responsive envelope wah; and even a custom tempo-synched wah sequence. Attaq is all of the best wah effects in one!



There are three different ways to use Attaq, each with some different controls. These modes are called MANUAL, ENVELOPE and SEQUENCE. The MANUAL mode doesn't change while you play. It is like leaving your wah pedal in one position to bring out a great constant tone. This effect can be dramatic. The ENVELOPE mode behaves like a classic envelope wah stomp box. As you play harder the wah morphs into a completely different tone. Try playing softly with an occasional hard note that you want to emphasize. The wah opens up on that note to give you great touch sensitive tone. The SEQUENCE mode is certainly the most unique. In this mode, you can actually change the tone of the wah with the beat of the music. You can get everything from smoothly varying tone over several measures to fast syncopated beats rupturing out of your guitar chords. This is by far the most configurable mode. Now that you understand that Attaq is really 3 different wah effects, lets get into how to control the tone for each one.

MANUAL Mode: Set the MODE control to MANUAL. Now, turn the RANGE knob. The RANGE knob is equivalent to your wah pedal position. Turn it up to open up the sound and turn it down to close it off. Unlike a standard wah pedal, there's still a lot of tweaking you can do. Try increasing the BANDWIDTH knob to sharpen up the tone. You can change it from subtle to downright gnarly just by playing with this knob. You can also change the style of wah using the FILTER knob. The three filter choices are Lowpass (LP), Bandpass (BP), and Highpass (HP). What do these mean? Lowpass lets all the lower frequencies through like a classic wah pedal. Bandpass actually cuts out the low and high frequencies, only allowing a small band of frequencies through. You can use this to accentuate a particular range of notes. Highpass actually cuts out all the

low frequencies leaving only the nasally highs. You can get some crazy sounds out of this filter. The SENSITIVITY and orange SEQUENCE controls have no impact with this mode.

ENVELOPE Mode: The RANGE, BANDWIDTH, and FILTER controls behave like the MANUAL mode, but an extra knob completely changes the tone and feeling of this effect. The ENVELOPE mode listens to how hard you play and changes its position accordingly. Play soft and it sounds like you have your wah pedal all the way closed, but snap a hard note and hear those filters open up. RANGE controls the filter position when you are playing soft, but the SENSITIVITY knob controls the position when you are playing hard. You can play with RANGE and SENSITIVITY to control where and how much that wah filter is going to open up for your style of playing. If it sounds like your filter is always wide open, turn down the SENSITIVITY until you get that nice touch sensitive tone. If the effect doesn't sound too different from what you had in the MANUAL mode, try turning up the sensitivity to get it to open up wide when you play a hard note. The orange SEQUENCE controls have no impact with this mode.

SEQUENCE Mode: The RANGE, BANDWIDTH, and FILTER controls behave the same as the above modes. Instead of using sensitivity to control the position of the wah, you can use eight step sequencer knobs that step in time with your riff. The sequence controls are all in the orange section of Attaq. The STEPS buttons set the number of distinct steps you want to use in the sequence. You can select 4, 6, or 8 depending on how complex you want the sequence to be. The 8 smaller SEQUENCE knobs to the left are used to set up the wah position for that moment in time. The light above each knob shows you the current wah position as it cycles. For example, if you want to open up the wah a little more at that point in time, turn up the corresponding knob. Strum a chord and listen to your sequence go by. Listen [add preset name]. The SEQUENCE knobs are relative to your RANGE and control. You can completely change the tone of your sequence without having to change every knob. If you like the sequence, but want it to be higher, just increase the RANGE control. The SPEED control changes the pace at which the sequencer runs. Turn the knob up to speed up your sequence. Below the SPEED knob is a TEMPO SYNC button. This allows you to sync the speed of your sequence to the tempo of your Riff using beat quantities like quarter, eighth, or sixteenth notes.

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6.5.2 Shaper

TripWire is a complete multiband compressor/distortion effect. The tone you can get out of this unit is almost limitless.



Simple EQ: In its most basic form, you can use TripWire as a basic 3 band EQ similar to the classic bass/mid/treble EQ effects. But even in this, TripWire is very configurable because you can set the width of the different bands. Turn all 3 COMPRESSION knobs down (to the left) to turn off any band compression. Also make sure that the 3 DISTORTION switches are turned off.

Now you can just use the 3 LEVEL knobs to control the amount of Lo, Mid, and Hi signal you want just like you're used to. Where this gets really cool is that you can change the frequencies at which the EQ bands transition by using the 2 CROSSOVER FREQUENCY knobs. The left one controls the Lo to Mid point and the right one controls the Mid to Hi point.

For example, lets say I want to add a little mid scoop to my bass layer. I can reduce the level of the midrange by turning down the MID LEVEL knob. This will scoop out the mids, but maybe it is taking too much of the upper bass with it. I can get that range back by turning up the LO to MID (left) crossover knob. The ability to control the crossover points of the 3 band EQ is simple and extremely powerful to shape your tone just the way you want.

Multi-band Compression: You are already familiar with the 3 band nature of TripWire, but now we'll throw in the first twist. If you are new to compression, here's a quick introduction. If you turn up the COMPRESSION on a specific band, it will decrease the volume of the peaks and leave the quieter sections alone. You can essentially smash the dynamic range of the signal by turning up the compression and adjusting the band levels to what sounds good. This is useful in a lot of situations. It can make your guitar have more perceived sustain. It can smooth out your vocals. It can warm up your guitar. Compression is a very useful effect in making great sounding recordings. Usually, compression is applied to the entire signal, but with TripWire you can set different amounts of compression for the different bands of a signal.

So how would you use this? Well, lets take a guitar sample, listen, and

try to smooth and warm up the overall tone without using the level as an EQ. Now we will turn up the LO COMPRESSION to smooth out the huge transient peaks in the low frequencies. When we take out the dynamics in this range, we can create an almost constant bass level in the layer that will have an overall warmer tone to it. If we just turned up the low level control those bass transients will pop and thump when you hit the strings hard. The Compression tames those transients that allowed us to bring the overall bass level up without the downsides.

Multi-band Distortion: This is where things get crazy. We can take our complete tone modifying effect with EQ and Compression and add different distortions to each band. You turn on the distortion by flipping the DISTORTION switch to the ON position for the band you want to distort. You then select the type of distortion you want to apply to that band using the SHAPE pop-up. Finally, you can decide how much distortion you want to add with the DRIVE knob.

There are several shapes in the menu. FUZZ is a basic distortion like you would find in a stomp box. The others are unique because they actually change the pitch of your signal. When using this on one band you create a harmonized signal of what you are actually playing and the pitch shifted version. DOWN shifts the signal an octave down. DD shifts the signal two octaves down and can sound completely outrageous with the right notes. UP shifts up an octave - this sounds good on just about everything when well balanced with the other bands. The others are trippy because they shift your notes by a 3RD, 4TH, or 5TH. Try soloing with one of these, set to the MID band.

Check out some of the factory presets for TripWire to get a glimpse of what is possible. It is a complete "design your own pedal" kind of effect with full harmonizers, distortion, compression, and EQ. This one is a lot of fun...

6.5.3 EQ

No Equal is a British style EQ, which allows you to make frequency adjustments to your signal. There are 5 bands to this EQ, separated with stitching, which control different parts of the frequency spectrum.



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The 5 bands all have a red frequency control which sets the range where the EQ is working, but the 3 middle bands also have silver gain knobs which allow you to select how much you want to boost or cut the signal around those frequencies. So, why only 3 gain knobs and not one for each band? All of the 5 EQ bands are designed to do different things within different regions of the audio spectrum.

LOW CUT is a filter which gently removes the frequencies below the setting on the knob. Just set the frequency knob to the desired frequency to turn it on. This band doesn't have a gain knob because it is designed to remove as much as possible below the set frequency.

LOW is a shelving filter which allows you to boost or cut all frequencies below the selected frequency. This band is designed to give you precise control over your bass response.

MID is a peaking filter which cuts or boosts content in the crucial mid-range frequency band. This is probably the most often used band as you can add presence or create holes for other instruments.

HIGH is a shelving filter which can boost or cut frequencies above the set frequency. You can use this band to add high-end sparkle, or just take a little edge off.

HIGH CUT is a filter which can be used to reduce high frequency noise or distortion.

A tip to use the 3 bands with BOOST/CUT knobs effectively: First turn the BOOST/CUT knob all the way up (+18 on the right is all the way up). Then adjust the red frequency knob until you hear the sound that you want to add or remove. Finally adjust the BOOST/CUT knob back down to taste.

6.5.4 Compressor

Stamina is a classic compressor with automatic make-up gain. It compresses dynamics and can lengthen sustain of just about any recording. Compression is a very popular effect in recording because it gives you a more constant volume in your recording.



A compressor turns down the volume of the loud parts while leaving the softer parts alone. For instance, say you were singing and had a great take, but there are some parts that are louder than others. You can use Stamina to smooth out the dynamics of your vocals in a fairly subtle way.

COMPRESSION is the primary control in Stamina. It sets the volume that you want to start to control the peak level. Compression really works by turning down the volume when the signal goes above a set loudness. Turn it up to start controlling the dynamics at a lower threshold.

SLOPE controls how abruptly the compressor deals with the loud parts of the signal. The slope controls the amount it is turned down. If you want to very subtly control the dynamics, use a smaller SLOPE to less aggressively control the peaks. Or crank up the SLOPE to just smash the signal down to a constant level.

ATTACK and RELEASE are controls that adjust how fast the compressor can control the dynamics. Use small attack and medium release times for cleaner compression, or change them to get the effect you are looking for. With low ATTACK and RELEASE times you can start to get pumping and breathing effects which can be fun on the right material.

Like all effects of this sort, you need to use Stamina in moderation to retain some liveliness in your recording. Radio mixes tend to over-compress music to make sure it is always at the same level, but many feel that this takes away some of the life and reality of the music. Remember, the meter in the middle of Stamina will always show you just how much you are compressing the signal. There are plenty of sources that describe how much compression is desirable for a specific type of recording.

6.5.5 Modulator

Tempest is our modulation powerhouse. You can choose one of 9 classic effects including PHASER, TREMOLO, FLANGER, CHORUS, VIBRATO, AUTOPAN, LPFILTER (lo-pass), BPFILTER (band-pass), and HPFILTER (high-pass). Not only do you get all these effects but you also get to control the modulation SHAPE with 5 available shapes! This is like having 45 different modulation effects in one.



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You can completely change the style of the effect based on the SHAPE of the oscillator you choose. You can choose classic shapes like SINE or TRIANGLE, but you can also choose wacky shapes like SQUARE, SAWTOOTH, and even RANDOM if you like experimenting. Check out the Sweep-o-Meter to see the differences between the oscillators. In combination with the 9 different effects, this is a design your own modulation effect.

All of these effects share three more controls to allow you to modify the sound, DEPTH, RANGE, and SPEED. The exact meaning of these controls can vary from effect to effect, but there are some general uses. DEPTH tends to control how pronounced the effect is, while RANGE controls the width or range of modulation. SPEED is the rate at which the modulation effect oscillates. There is also a TEMPO SYNC button to sync the speed up with the tempo of the Riff. Like other tempo syncable effects, you can get some great rhythm in your tone.

Tempest is another deep effect from Sonoma Wire Works. Check out the factory presets and then go wild with all the different combinations.

6.5.6 Delay

4x4 is a multi-tap delay effect. This is not your dad's delay. It is something completely new and different. There are 4 different taps. A tap is a specific delay time that you want to mix back into your original signal. Most delay pedals only have 1 tap that you set the delay for. We have 4 with different delay times and levels. These aren't just 4 taps, it is more like having 4 different delay pedals which feedback into themselves and the others. It can get crazy very quick with this kind of effect.



Feedback, Damping, and Mix: There are two knobs on the left, which control FEEDBACK and DAMPING. FEEDBACK controls how much of the delayed signal gets added with the input and sent back into the delay. For example, if you just Junt your strings, you will hear a repeating delayed junt which decays over time. The FEEDBACK knob controls how fast this decays. Turn it down and you will only hear one delayed copy of the signal. Turn it up and it will take a really long time to decay. DAMPING controls the amount of high frequency reduction each time the signal goes back through the delay. You can hear the signal get darker with every fed back delay. There is also a MIX knob on the right, which controls

how much of the original signal you're hearing with respect to the crazy delayed signal. Turn it up for all delayed signal, turn it down to reduce the volume of the delays.

Delay Taps: The center section of the 4x4 panel has four different knob sections with different colors. Each one of those colors represents a different delay tap. Each tap has a LEVEL and DELAY TIME knob. The LEVEL knob controls the volume of this specific tap. If you want to turn off this tap, just turn the LEVEL all the way down and you won't hear it anymore. In fact, this is a good way to start. Add the taps one at a time until you get the desired sound you are looking for. The DELAY TIME knob controls the length of the delay for that tap. You can set it just like any delay stomp box, or you can select the TEMPO SYNC button to make the delay some fraction of the song tempo. Tempo synced delay is pretty cool since you can create rhythmic delays.

Different Taps, Different sound: Now we need to talk about the differences between the taps. 4x4 was designed as a stereo effect with different delay taps going to different channels (left and right). The left two taps (1 and 2) affect the Left channel and the right two (3 and 4) affect the right channel. This means that you can turn all the taps off except 1 and you will only hear the delay in the left channel. Turn on 4 and you will hear it in both channels, but you can set the delay in each channel to different times. So, if taps 1 and 4 are the Left and Right delay taps, respectively, what are 2 and 3? Taps 2 and 3 were designed to be ping-pong style delay taps. Whereas taps 1 and 4 feedback into themselves keeping each delay in its starting channel, taps 2 and 3 feedback into the opposite channel. Woah! Turn off all the taps for now by setting all the LEVELS to 0. Now, turn up the LEVEL of tap 3. You should hear the first delay come in the right channel and then the second delay come in the left channel and continue to ping back and forth between the right and left channels. Now try changing the DELAY TIME of tap 2 to be something different than tap 3 and notice that when the signal pings over to the left it is delayed by a different amount. Tap 2 behaves the same exact way but it starts with the left channel. These two taps are like having two delay pedals, one going out to each channel, that feedback into each other instead of themselves. This can get crazy very quick. Play with some of the factory presets to get the hang of this.

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6.5.7 Reverb

Super Tanker is our metallic effect reverb. This includes such classics as Spring and Plate, but also includes some of our own interesting reverbs. You can select the reverb type by choosing from the REVERB TYPE popup menu.



You can then tweak the size (reverb time), with the SIZE knob and the high frequency damping with the DAMPING knob. You can also set the amount of reverb you want in the signal using the mix knob.

Chapter 7 RiffCaster

Share Your RiffWorks Songs Online Quickly and Easily with RiffCaster

- * RiffCaster is a free service for RiffWorks users. Anyone may listen to and comment on the songs for free. Additional features may be made available to RiffLink subscribers.
- * Once you've completed your song, click the RIFFCAST button to bring up the RiffCaster submission dialog.
- * Choose the RiffCaster Station to post your song, or choose to enter your song in a current RiffRumble competition.

The screenshot shows a submission dialog box with the following fields and options:

| | | | |
|-------------|------------------------------|-------------------------------------|--|
| Title | Psyche Rock | Performers | Malcolm Suzuki |
| Artist | Malcolm Suzuki | | |
| Genre | | | |
| Copyright | 2007 | Organization | |
| Description | Psychedelic rock jam! | | |
| License | Creative Commons - Share ... | <input checked="" type="checkbox"/> | I certify that I am the copyright holder or have the rights to broadcast this material under this license. |
| Station | RiffCaster - rock songs | User Name | |
| | | Password | |

Buttons: Cancel, RiffCast

<http://www.sonomawireworks.com/riffcaster>

Tips and Tricks for RiffCaster

Once your song has been posted:

- * You can share your song's unique URL (Permalink) with others.
- * You can post a portable RiffCaster player by copying the HTML code from post and pasting it into your MySpace page, blog or other website.

Chapter 8 RiffLink

Collaborate Online with Users from Around the World Using RiffLink

- * The first 60 days of RiffLink are free, after that a subscription is required to use the service.
- * Click the RIFFLINK button in the RIFF RECORDER panel.
- * Login with your SonomaKey - the same user name and password you use for the Sonoma Wire Works store, forums, product registration and so on.
- * Select a Collaboration to join by clicking OPEN or click the CREATE button to start a new one.
- * Once you've joined a Collaboration, you can chat with other users in the RIFFLINK screen.
- * To get back to the list of Collaborations, use the VIEW popup menu.
- * RiffWorks works just like normal once you have a Collaboration open.
- * To logout of RiffLink, just click the NEW button in the Song panel.

Tips and Tricks for RiffLink

- * You can only delete the Layers and Riffs that you create.
- * Only the user that created a Riff can record the first Layer in that Riff.

Technical Specifications

- * Variable bit-rate compression (approx. 6:1)
- * Allows 6-12 simultaneously streaming layers in and out on median performance CPU
- * Unlimited number of users can collaborate on a session,
- * Only 4 users can be connected at the same time to a session.
- * Mac and PC users can collaborate seamlessly

8.2 RiffLink Accounts

RiffLink uses your SonomaKey login name and password. You will have to register RiffWorks with Sonoma Wire Works before you can try RiffLink. Please see the Installation guide for more information.

How to Retrieve Your Password:

There is a password reminder link on the RiffLink page:
<http://www.sonomawireworks.com/rifflink>

8.3 Collaborations

Connect to the RiffLink Server

1. Click the RiffLink button to open the RiffLink login dialogue pane.
2. Type in your RiffLink login name and password and then click the LOGIN button. Please see the RiffLink Accounts section of this guide if you

do not already have a RiffLink account.

3. You should now see a list of active Public Collaborations.

Join an Existing Collaboration

1. You can pull up additional information about a collaboration by clicking on the name of the collaboration.
2. Click OPEN to join a collaboration. You will be prompted to save your current song at this time.
3. Once the collaboration has loaded you will be then be able to edit, save and mix-down the Riffs and song the same as you can do with regular RiffWorks songs.
4. Changes you make to the song will appear to the other active contributors in near real-time.

Please note that any additions you make to the song using the Rex Player and ReWire backups will not be audible to other collaboration participants. Add-on Instant Drummer packs can be used, but will not be heard by other RiffLink members who do not have those drummers already installed.

Create a New Collaboration

1. Once logged into RiffLink, click the CREATE button. This will open your web browser and take you to the RiffLink website.
2. Type the title of your new collaboration in the TITLE field.
3. From the pull-down menu, choose a MUSICAL STYLE that will best fit the genre of your collaboration.
4. In the NOTES box you can leave useful information and details about your collaboration for other contributors.
5. Select to create a PUBLIC or PRIVATE collaboration. A public collaboration can be viewed and edited by any RiffLink member, whereas a private collaboration can only be viewed and edited by you and other RiffLink members to whom you give access.
6. Click SAVE when finished.
7. Bring RiffWorks back to the foreground. You can either minimize or close your web browser window at this time.
8. Your newly created public collaboration can be found at the bottom of the list of public collaborations. Likewise, private collaborations can be located by using the pull-down menu and selecting PRIVATE COLLABORATIONS. Join your collaboration by clicking OPEN.

Chapter 9 Advanced Techniques

9.1 Song Layers

Song Layers is a special Riff that allows you to record straight linear tracks, or layers, over a complete song. This is especially useful for recording solos and vocals.

- * Click on the SONGLAYERS brick once you've created your song by dragging some Riffs to the SONG timeline.
- * Click RECORD and it will record for as long as you want. SONGLAYERS never loop.
- * Both the SONG timeline and the RIFF RECORDER timeline move when playing SONGLAYERS.
- * Clicking PLAY on the RIFF RECORDER will stay focused on the SONGLAYERS.
- * Clicking PLAY on the SONG panel will switch away from the SONGLAYERS to the currently playing Riff.

Tips and Tricks for Song Layers

- * If you rearrange the Riffs in your song after you record in SONGLAYERS, the tracks may not match up.
- * If you want a lead in on the SONGLAYERS, just create a 2 bar Riff and put it at the beginning of your song.

9.2 Riff As Lead-In

Under the LEAD IN section of the Riff Recorder, you have the option of selecting any one of your Riffs as a LEAD IN. When you select a Riff as a LEAD IN, you will be able to record a layer on that Riff before that Riff Recorder switches over to your current active Riff.

[Image of Riff Lead in recording timeline]

This is very useful if you want to record a few pickup notes from one section to another. It will make your transitions much more seamless.

9.3 Mix to Riff

Mix to Riff is one of the options you are given under the MIX dialog menu. When you mix your song to a Riff, the whole song becomes a single LAYER in a new Riff including all LAYERS, BACKUPS, EFFECTS, and SONG LAYERS.

This is a great way to include Drummers in a RIFFLINK session that other users may not own. Also, if you use Reason or another ReWire program, you can use Mix to Riff to include the parts you've created in those programs inside your RiffWorks song.

Chapter 10 Troubleshooting

| PROBLEM | CAUSE | SOLUTION |
|-------------------------------|---|---|
| Can't Register | * Forgot Password | Click the Forgot Password button, then check your email (don't forget to check the spam folder) |
| | * Out of activations | You can Activate RiffWorks on up to 3 machines. Contact Support to get more. |
| | * Don't have internet | See the installation guide |
| No playback audio | * Speakers not turned on, or not plugged in | Plug 'em in, and Turn 'em on |
| | * Volume down on Audio Device or Speakers | Turn it up |
| | * Wrong device selected in Audio Setup | Click on Audio Setup, and choose correct device |
| Can't hear recording | * Instrument Not Plugged in or turned up | Plug it in, and turn it up |
| | * Wrong Input Selected in Input menu | Select correct Input from menu |
| Recording is only in one side | * Instrument is connected to mono input | Turn off stereo button and select input channel |
| Crunchy/Glitchy audio | * Buffer size too small | Open Audio Setup or ASIO control panel and increase buffer size |
| | * Too many effects or too many layers | Get more RAM or a faster computer |
| Live guitar sounds delayed | * Buffer size too large | Open Audio Setup or ASIO control panel and reduce buffer size |

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| PROBLEM | CAUSE | SOLUTION |
|---|---|---|
| No Audio Devices listed in Audio Setup | * MacOS: Intel Macs have separate built-in audio devices | Open AudioMidi setup and create an Aggregate device |
| | * WinXP: No ASIO driver installed | Make sure you have an ASIO device and the current drivers for it |
| InstantDrummer sessions missing | * V1 drummers not copied | Run the RiffWorks v2.1 updater, it will copy your V1 drummers over for you |
| | * V2 required for sessions purchased from Sonoma Wire Works | If you still have V1 (song bar is Red) you have to upgrade |
| | * RiffWorks isn't registered and activated | Register RiffWorks with Sonoma Wire Works |
| | * Drums must be purchased with same account as RW is registered | Contact support if you bought drums with the wrong account |
| | * Downloaded them, but they didn't show up | Choose Save when you download the .swd files and Double Click them to Install |
| RiffWorks won't launch | * Your computer doesn't meet the system requirements | Check the system requirements |
| | * RiffWorks won't run on MacOS X 10.3 | Upgrade to 10.4 or higher |
| RiffWorks crashes when I load a plug-in as the AMP effect | * RW does not support all VST or AudioUnit plug-ins | Try another plug-in |

Chapter 11 Support

Forums: The Sonoma Wire Works user forums are filled with other enthusiastic RiffWorks users from all over the world. Chances are someone there has already asked the same questions you have, knows the answer to your problem, and will gladly give you the tips you need at any hour of the day. Sonoma Wire Works support monitors the forums daily and answers questions as well, but because we're only in one time zone, the users usually beat us to it!

Online Guide: Accessible at www.sonomawireworks.com/guide

Support Team: If you just can't find the answer to your problems anywhere, you can always contact us directly. We use a web-form to keep support requests organized and be sure that no one goes unanswered. Please be sure to fill out the form completely so that we can help you as quickly as possible. <http://www.sonomawireworks.com/support.php>

Chapter 12 Glossary of Recording Terms

12.1.1 ASIO

ASIO stands for Audio Stream Input Output and is the driver of choice for an audio interface on the Windows platform.

12.1.2 Beverage

A beverage is a tasty treat that quenches your thirst and renews your creative spirit. They come in a variety of flavors and have a multitude of effects on the music making process.

12.1.3 Buffer Size

As audio is being recorded into the computer, it is received in chunks of information. A Buffer is essentially a bin that gets filled with audio information. When the Buffer is full, the audio is written to memory or to the hard drive. Then, it is filled again. The Buffer Size corresponds to how big the Buffer is. It is often measured in number of samples. Common Buffer Sizes are 256, 512, and 1024.

The larger the Buffer, the more time it takes to fill it up. This means the audio is being written less often and CPU usage is reduced. However, monitoring latency increases as Buffer Size increases. To decrease monitoring latency, decrease Buffer Size. But a lower Buffer Size means more CPU usage. You must find a balance.

12.1.4 Click

Click refers to a metronome that plays along with your recording. A click is very useful since it helps keep you in time while you play. This allows you to add other very rhythmic parts and have everything be in sync with each other. It takes some practice to play with a Click, but it's very important to the recording process.

12.1.5 Clipping

There is an upper limit to how loud a signal can be when it is being recorded. If the signal is too loud, the peaks of the signal will be flattened out and the signal will be distorted. Keep an eye on the red lights in the level meters. They're a warning that the signal is too loud and may be clipping. Turn down whatever you're recording to stop that from happening.

12.1.6 Compressor

A Compressor is a type of effect that evens out your recording. It makes the loud parts quieter and the quiet parts louder. Compression is used

everywhere, but is often quite effective on vocals, bass, and drums.

12.1.7 Core Audio

Core Audio is the type of audio driver used on Mac systems using OSX.

12.1.8 dB

dB stands for Decibel and is a measurement of volume. In recording measurements, volumes can range from ∞ dB to +18 dB or higher. A 6 dB increase is perceived as twice as loud.

12.1.9 Distortion

Distortion can be both a wonderful and terrible thing. Whenever a signal is amplified, if the original signal and amplified signal differ by more than just volume, distortion has been introduced. When you plug a guitar into a tube amplifier and crank it up, you hear distortion. This is a great type of distortion and leads to great guitar tone. Different types of amplifiers, as well as distortion effects, distort in different ways and color the sound.

However, when recording a vocal signal or an acoustic guitar, if the signal is recorded too loud or too hot, clipping may occur and distortion is introduced. This is often not desired, and in this situation, distortion is a bad thing.

12.1.10 Driver

A Driver is the piece of software that tells the computer's operating system how to talk to a piece of hardware. Any type of external hardware requires a Driver to be installed in order to function properly.

12.1.11 Effects

An Effect is a process that alters a signal or a recording. Common effects are distortion, reverb, delay, EQ, and compression.

12.1.12 EQ

EQ is a type of effect that stands for Equalization. EQ allows you to increase or decrease the volume of a signal or recording at different frequencies.

12.1.13 Gain

Gain changes the volume level of a signal or recording. Gain can be increased or decreased. Zero gain means no change. Gain is often measured in Decibels or dB, see above.

12.1.14 Latency

Whenever a digital process takes place, there is an amount of time between the start of the process and the end of it. When recording audio

RiffWorks

and trying to monitor through effects, the process creates a delay or latency between creating a signal, plucking a string, and hearing that signal. Latency is often measured in milliseconds and can be eliminated or greatly reduced either by monitoring only through Hardware or by decreasing the Buffer Size.

12.1.15 Level

Level is a term given to meter indicators used to measure the loudness of your signal or recording. Level meters can use LED lights or VU needle meters. The scale is often labeled in Decibels or dB, see above.

12.1.16 Limit

Limit is what a Limiter does.

12.1.17 Limiter

A Limiter is an effect similar to a compressor, but it only tries to stop signals or recordings from exceeding a certain value, usually 0dB. There is a Limiter built into the output of RiffWorks to stop your song from Clipping.

12.1.18 Mix

Mix or mixing is the process of balancing levels, adding effects, and changing pan settings in order to produce a beautifully balanced final recording in which every instrument is clear and audible.

MIX is also the function that allows you to turn your RiffWorks song into a single audio file for your listening pleasure and the listening pleasure of your fans. Mom's going to love it.

12.1.19 Monitor

To Monitor something is to listen to it as it's being recorded or played back. The Monitor levels are usually different from the actual recorded levels.

12.1.20 Mute

To Mute an input or a track is to silence it.

12.1.21 Pan

Pan is the control that affects the stereo balance of a track. You may pan something all the way left, so it only plays in the left speaker or headphone, or Pan it all the way right. Panning is a great way to create space in a recording.

12.1.22 Punch

A Punch or punch-in is to record over a small section of recording.

If you were singing and did everything perfectly except for a couple words, you may just want to replace those couple words instead of recording everything all over again.

In RiffWorks, you cannot punch according to the traditional definition, but you can remove a section of a recording by using the Gain Automation. Then record another layer to replace that removed section.

12.1.23 **Reverb**

Reverb, short for Reverberation, is an effect used to recreate the sound of some kind of space. Reverbs can replicate halls, rooms, or even the spring reverbs from old guitar amps. Reverb helps the mixing process by allowing different tracks to sit in different parts of the perceived stereo space. In short, more Reverb makes something sound farther away.

12.1.24 **ReWire**

ReWire is the protocol developed by Propellerhead Software that is built into RiffWorks. That allows you to use RiffWorks simultaneously with programs like Reason, Ableton Live and more. See your other program's documentation on ReWire capability for more information.

12.1.25 **REX**

REX is a type of file format used for audio loops. RiffWorks has a built in REX player for using those audio loops in your songs. Many REX loops are available on commercial loop CDs.

12.1.26 **Solo**

Solo is a quick way to mute all the other tracks but the one you want to hear. When you click Solo on a track, only that track will play. When you click Solo on another track, only the two Solo'd tracks will play and so on.

12.1.27 **Stereo**

Stereo is a two channel signal using both the left and right speaker. RiffWorks records in both Stereo and Mono. Mono, short for monophonic or one voice, will put the same signal in the left speaker and right speaker equally.

12.1.28 **Tune**

Are you in tune? Before you start recording, be sure to tune up. If you are using a chromatic tuner, 440Hz is the standard reference point for the 'A' note. If you don't use that standard reference, you will not be in tune with keyboards or other guitars. Always tune before recording.

Chapter 13 Sonoma Wire Works Store

Visit our online store for logo merchandise, dozens of InstantDrummer sessions, hardware, and more: www.sonomawireworks.com/store

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