PreSonus Plug-ins

PreSonus Hub, Ampire, Ampire High Density Pack, Analog Effects Collection, Channel Strip Collection, Fat Channel XT, and VU Meter

Reference Manual

PreSonus®

www.presonus.com

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1   Introduction

Thank you for purchasing PreSonus® plug-in. Originally designed for Studio One, PreSonus plug-ins offer state-of-the-art sound quality and functionality in Studio One Native Effects™, VST3, AU, and AAX formats. This reference manual covers the features and functions of Ampire, Fat Channel XT, and the PreSonus Channel Strip collection as well as the Fat Channel Add-on packs and installation using PreSonus Hub.

1.1   PreSonus Hub

PreSonus Hub is a universal manager application for all PreSonus plug-ins. After you purchase any PreSonus plug-in, you will find the PreSonus Hub application in your MyPreSonus user account. Please follow these instructions to register, download, install, and activate your PreSonus plug-ins.

1.1.1   Registration

When you purchase a PreSonus plug-in on the PreSonus Shop, the product will automatically be added to your MyPreSonus account. If you purchased your product from your favorite PreSonus retailer, please log into your MyPreSonus account, click "Register new product…" and enter the Product Key to your account.

1.1.2   Installation and Activation

The easiest way to install and activate your plug-ins is using the PreSonus Hub application. PreSonus Hub is available as a free download from MyPreSonus. As soon as a PreSonus plug-in is registered to your MyPreSonus account, PreSonus Hub will be automatically added as well.

Note: If you're running PreSonus Studio One on the same computer, be sure to quit Studio One before running PreSonus Hub to install new plug-ins.

1.   Download and install PreSonus Hub.

2. During the installation you will be asked to select what formats you would like to install for your PreSonus plug-ins. Select all that apply. Check your DAW or host applications if you are unsure which format is supported.
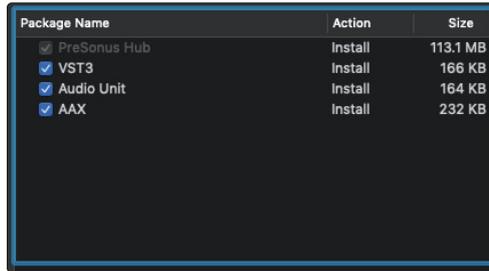
3. Launch PreSonus Hub.

4. Click Authorize to activate Hub on your computer.
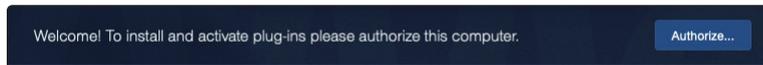
5. Log in with your MyPreSonus credentials.
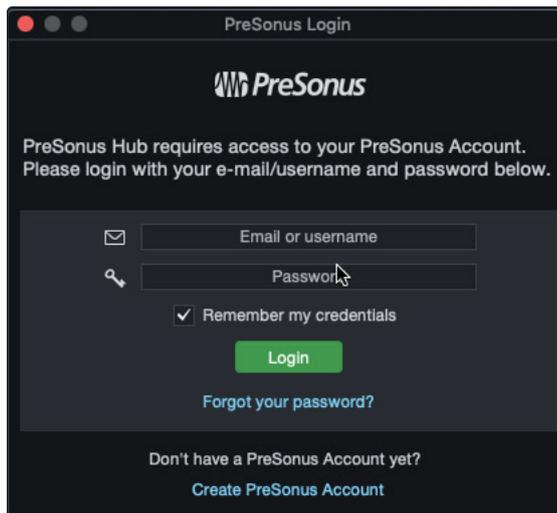
6. Once PreSonus Hub has been authorized, you will find your plug-ins under "My Purchased Items." Click Install for each plug-in you would like to install on your computer. This will download and install the latest version from MyPreSonus.
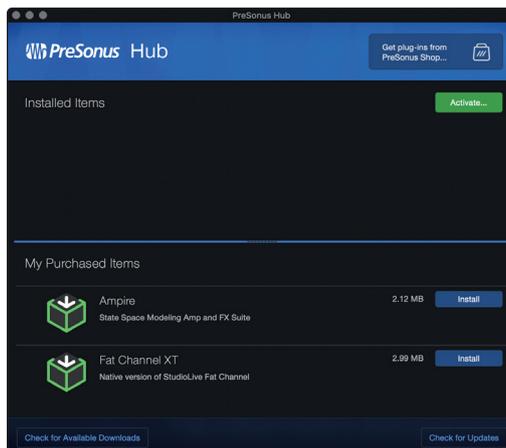
7.   Click Activate.
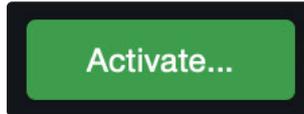
Once installed and activated, your plug-ins will be listed in the Installed Items section.
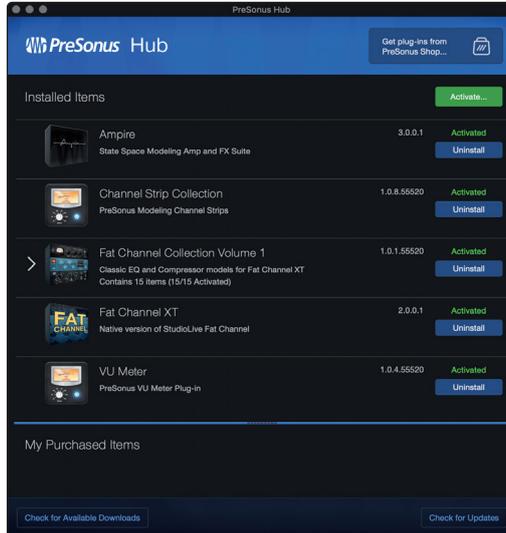
Power User Tip: *If you ever need to uninstall and remove a plug-in from your computer, launch PreSonus Hub and click Uninstall next to the plug-in.*

Use PreSonus Hub to keep your PreSonus plug-ins up to date. Simply click the Check for Updates button to verify that the latest version is installed on your computer.
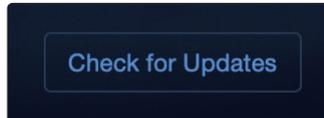
If your PreSonus plug-in is not displayed in the My Purchased Items section, click the Check for Available Downloads button.
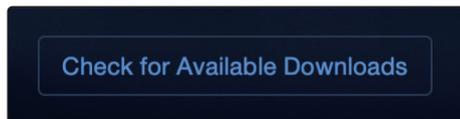
PreSonus plug-ins can also be installed by downloading the installation package from your MyPreSonus account. Launch PreSonus Hub and drag the .install file to the PreSonus Hub application window.

2   Ampire

Available in Studio One Native Effects™, VST3, AU and AAX formats, Ampire is a powerful and versatile collection of guitar- and bass-amplifier models based on our proprietary State Space Modeling technology, with precise emulation of every component in the signal path. Convolution-based speaker cabinets and microphones play a vital role, with variable mic positioning and phase. Signals can be processed pre- and/or post-amplifier by a bevy of effect stompboxes, some of which employ State Space Modeling of their components. Use Ampire with guitars, basses, or any audio signal to create spot-on emulation of guitar amps and cabinets and a rougher, harmonically-enriched sound.

The Ampire window is divided into four main sections:

- **Toolbar.** This runs along the top of the Ampire window, and provides the basic functions such as input and output levels, window configuration, amp and cabinet selectors, and access to the microphone settings and a tuner.

- **Gallery.** The first section under the toolbar allows visual selection and display of the amps and cabinets models. It can be hidden to reduce the overall size of the Ampire window.

- **Edit Section.** The next section houses the controls for the selected amplifier model. It is always visible.

- **Pedalboard.** The bottom of the Ampire window is home to the Pedalboard, which allows you to add up to eight effects units to the signal path and configure them however you want. These effects units are also known as Stomps.

Click on the Presets menu to recall factory presets. These presets cannot be overwritten.

Click on the Info menu to open PreSonus Hub and this reference manual.

2.1   Toolbar

The gateway to Ampire is the toolbar, where component selections are made and basic levels are set. Viewing options are available here too, along with access to a handy tuner and other features.

1. **Input Level.** Use the input level directly at Ampire's input to pull up weak instrument signals or to attenuate loud, processed signals. With a good input level, the signal is in the optimal range for dynamic distortion within Ampire. Variable from -12 dB to 24 dB. This parameter is not saved with each preset. It stays at a static setting for each instance of Ampire until you change it.

2. **Show / Hide Views.** This button hides or reveals different sections of the Ampire window so you only see what you want. Click above the button to toggle the Stage view; click below the button to toggle the Stomps view.

3. **Amplifier Model.** Select an amplifier model by clicking on the Amp name in the toolbar and choosing an amplifier from the Gallery. Move the cursor over the Gallery images to read a brief description of each amp. You can also use the up / down arrows in the toolbar or on the left side of the Stage view to select an adjacent amplifier.

   Changing the amp model changes the characteristics of the entire amplifier, including preamp and power amp distortion and amplification, the differences between channels 1, 2, and 3 (where applicable), and tone stack behavior. Select "None" if you want to bypass the amp head and run the signal directly through the cabinet.

4. **Cabinet Model.** Click the Cabinet Model selection box to choose a cabinet from the Gallery. Move the cursor over the Gallery images to read a brief description of each cabinet. You can also use the up / down arrows in the toolbar or on the left side of the Stage view to select an adjacent amplifier. If you want to take the direct output of the amp head, choose the Bypass icon

   You can also drag and drop Impulse Response files into the Mic A, B, and C slots for the User Cabinet. WAV and AIFF files are supported.

5. **Mic Edit Controls.** Click the Mic Edit Controls button to access the settings for the microphones that were used to capture the sound of each cabinet. *For more information,* **please review Section 2.5**.

6. **Show / Hide Tuner.** This button reveals or hides the Tuner window. *For more information,* **please review Section 2.2**.

7. **Output Level.** Distortion and amplifier emulation may result in massive level changes. Use Output Level to adjust the signal to normal levels. Unlike the Input Level setting, the Output Level value is saved with each preset. Variable from -24 dB to 12 dB.

2.2   Tuner

- **Frequency/Difference.** When a pitched input signal is detected, the name and octave number of the nearest fundamental pitch is shown below the tuning meter (i.e., D#2), with arrows on either side to indicate whether the note is flat, sharp, or in tune (both arrows lit).

- **Frequency.** The fundamental frequency of the input signal is displayed in Hertz (Hz).

- **Difference.** The amount of deviation from center is shown as a positive number (sharp) or a negative number (flat).

- **Strobe.** Click this switch to toggle the tuner between the standard and strobe tuner views.

- **Calibration.** Click and drag the knob to set the tuning reference frequency, or enter a value manually in the number field. [Ctrl]/[Cmd]-click to reset the value to A=440.00.

- **Mute.** Activate the Mute switch to defeat the input signal temporarily while the instrument is being tuned. The signal is restored when the Tuner window is hidden. However, if the Ampire Editor window is closed while the Mute switch is still engaged, the input signal is not restored.

2.3   State Space Amplifier Models

Using our State Space Modeling technology to perform a component-level analysis of every circuit in these sought-after amplifiers enables Ampire to recreate the dynamic behavior and non-linearities that are critical to the distinctive tone and character of tube and semiconductor-based analog circuits.

After an amplifier is selected its controls appear in the middle of the Ampire window (the Edit section). This section will describe the controls for each of the five amplifier models.

2.3.1   MCM 800

This high-gain 80s classic is so loud, you can hear it from Mars—all your neighbors will hear it, too.

- **Tone Controls.** Presence controls the amount of negative feedback; increasing the value changes the high frequencies and harmonics. Bass, Middle, and Treble are basic tone controls for their respective frequency ranges.

- **Gain.** Controls Master Volume controls the final output volume. Pre-Amp Volume controls the level of the input signal before it enters the amplifier circuitry.

- **Sensitivity.** Click one of the connectors to route the signal into the High sensitivity input or the Low sensitivity input.

2.3.2   Dual Amplifier

This three-channel heavy metal standard is ideal when high-gain isn't enough gain. The channels of the Dual Amplifier model are numbered from right to left. They have similar EQ and tone controls, but each has different gain and circuit characteristics.

- **Channel selector.** This knob selects channel 1, 2, or 3. You can also use the small selector buttons between the toggle switches to select a channel. The channel indicators have different colors (green, orange, and red) to help you see which is active. The green channel is "clean", while the orange and red channels are more distorted.

- **Main Power.** There are two options for the power supply characteristics: Spongy or Bold.

- **Tone Controls.** These are identical for channels 1-3. Bass, Mid, and Treble are basic tone controls for their respective frequency ranges.

- **Gain Controls.** These are identical for channels 1-3. Presence controls the amount of negative feedback; increasing the value changes the high frequencies and harmonics. Master controls the final output volume for the channel. Gain controls the pre-amp input level.

- **Mode switch: Channel 1.** This switch as two positions: Clean and Pushed, each with different sound characteristics. Pushed has a boost, so the tone controls contribute less to the sound of Channel 1 in that position.

- **Mode switch: Channels 2 and 3.** This switch has three positions: Raw, Vintage, and Modern. Each provides sound characteristics that were modeled after different amplifiers from the same manufacturer.

- **Rectifier switch: All Channels.** This switch has two positions: Diode and Tube. These determine the basic character of the selected channel, which changes the output volume, the harmonic response, and the amount of headroom for that channel.

2.3.3   VC30

The VC30 is modeled from a versatile 70s British invader that you May associate with a regal guitarist. Served with sides of tremolo and vibrato.

- **Channel Inputs** The VC30 has three channels: Vib-Trem, Normal, and Brilliant. Each channel has two inputs on the front panel, arranged vertically. The low-sensitivity inputs are on the top row, and the high-sensitivity inputs are on the bottom row. Each channel corresponds to a section of controls on the right side. The active channel is determined by which input is used.

- **Vibrato** The controls in this channel are used when one of the Vib-Trem inputs is connected. Use the Speed selector to choose one of the three speeds. The Vib-Trem selector also has three settings (Vibrato, Off, or Tremolo). Adjust the level with the Vib-Trem control in the Volume section.

- **Volume** Adjust the gain of each channel with the corresponding control in the Volume section. Usually only one channel is active, depending on which input is connected. But when the Vib-Trem and Brilliant channels are "jumpered" as shown below, the gain controls for both channels can be used to achieve the perfect blend.

- **Tone** The Treble and Bass controls are dedicated to the Brilliant channel. The Cut control attenuates the high frequencies, and is active for all three channels. 0% = no cut, 100% clockwise = maximum cut.

- **Vib-Trem > Brilliant** The Vib-Trem and Brilliant channels can be patched together and used at the same time. To do this, click input 2 of the Vib-Trem channel, then click it again and a patch cable appears between Vib-Trem input 1 and Brilliant input 2. This shows that the connection has been made.

  This "jumpered connection" sends the signal through both the Vib-Trem and Brilliant circuits, so you have the dirt and tone control from the Brilliant channel and the vibrato / tremolo effect from the Vib-Trem channel available. The relevant controls in each channel can be used to modify and blend the two outputs.

2.3.4   Blackface Twin

This loud American's benchmark cleans and lush reverb have made it a studio staple since 1960-something. It has two channels (normal and vibrato). Each channel has two input jacks that differ in input volume, as well as a Bright switch.

- **Normal.** Channel A simple channel with three EQ knobs and a Bright switch. The EQ knob range is from 1 (maximum cut) to 10 (maximum boost); 5 is neutral (no change). With Bright switched on, high frequencies can pass through the volume stage more easily. The effect depends on the Volume setting; when the volume is low, the Bright switch makes a bigger difference.

- **Vibrato Channel.** The features are identical to the Normal Channel, with the addition of Reverb and Vibrato controls. The Reverb knob controls the amount of spring reverb, with a setting of 1 shutting off the reverb. The Speed and Intensity knobs control the "Vibrato" effect (it's actually tremolo), with a minimum to maximum range of 1 to 10. An Intensity setting of 1 shuts off the Vibrato. The Reverb and the Vibrato Intensity can be toggled between their current value and "Off" by clicking below the appropriate knob.

2.3.5 Amp STV

Bass in your face with a gritty tube midrange. Stands out in a mix. Unsubtle. This amplifier was designed for bass instruments. It has two independent channels, with two inputs per channel (Bright and Normal). The difference between the Normal and Bright inputs is that the Bright input attenuates the low and mid frequencies.

- **Channel One.** Standard volume and boost/cut EQ controls (treble, midrange, bass), with a set of selector switches that influence the results in each EQ range. Click the desired switch to change its setting.

  - **ultra hi** is a two-position switch: flat (0) or boost (+). It has a significant impact on the high frequencies, especially in combination with the other tone controls.

  - **mid frequency** is a three-position switch: 220 Hz, 800 Hz, or 3000 Hz. This sets the center frequency of the midrange EQ band.

  - **ultra lo** is a three-position switch: cut (-), flat (0), or boost (+). It has a significant impact on the low frequencies, especially in combination with the other tone controls.

Channel Two is identical to Channel One, only without the midrange controls.

2.4 Cabinets

- **2x12 VC 30.** Don't let its size fool you, too: this 2x12 cabinet can deliver scintillating tone at high volume—you've finally found what you're looking for.

- **2x12 Blackface.** The dark 2x12 cabinet delivers fuzz and overdriven tones at lower volumes while still capable of sparkling, clean sounds—making it a go-to vintage standard.

- **8x10 STV.** Big bass tones that have shaken the radio for over 45 years need a cabinet the size of a refrigerator. Get the tone you want, no chiropractor required.

- **1x12 American.** Don't let its compact size fool you—this 1x12 sealed cabinet packs a serious punch with a gut-rumbling low end.

- **2x12 American.** This classic American 2x12 cabinet can sing sweet, pristine tones and switch to a swampy blues straight out of the delta.

- **1x12 British.** With mellow high frequencies and a classic British chime, this compact 1x12 cabinet is known for its versatile tone.

- **1x12 Boutique.** This 1x12 cabinet will take you right back to the glory days of rock and roll with classic American tones.

- **1x12 British II.** Portable and affordable, this '70s British bulldog was a working-class hero to a thousand bands—and a million fans.

- **2x12 Boutique.** A 2x12 cabinet with peerless tone and warmth, ready to rock with versatility.

- **4x10 American.** This 4x10 cabinet is the sound of an American legend; perfect for larger-than-life clean tones and bluesy crunch.

- **4x12 British.** The 4x12 cabinet that has lorded over countless arenas and stadiums the world over with its giant wall of sound.

- **4x12 American.** Raise your fist and get ready to shred. This 4x12 only has two volumes: loud and louder.

- **2x10 Bass.** An aggressive 2x10 powerhouse that guarantees your bass will cut through the mix.

- **8x10 Bass.** Punchy, tightly-focused bass is the hallmark of this 8x10 monster. It's a sound that you *feel*.

- **User Cabinet.** Build your own cabinet by loading impulse response files for up to three microphone positions here. A wide variety of formats are supported.

2.5   Mic Edit Controls

1. **Mic Mix Link.** Activate this button to link the microphone channel levels. When linked, moving one fader adjusts all three proportionately, for a combined level of 100%. If a mic level is at 0, moving the other faders adjusts only those channels. Disengage this button for independent control of each microphone level.

2. **Mic Mute.** Each channel has a Mute button. Use the appropriate button to mute only that microphone. Note that this does not affect the Link status of that channel.

3. **Mic Polarity.** Each channel has a Polarity switch. Use the appropriate button to invert the phase of that microphone.

4. **Mic B/C Delay.** These controls simulate moving Mic B and Mic C further from the cabinet. Variable from 0 to 2.9 ms.

5. **Mic A/B/C Mix.** Adjust these faders to achieve the desired level for each mic. When linked (as described above), adjusting one adjusts all three.

2.6   Pedalboard and Stomp Boxes

The Ampire Pedalboard features a wide variety of Stomp Box effects, including distortion and modulation of all sorts. Up to eight Stomps can be used at once and placed in any order you like (pre- or post-amplifier). Several have sync-to-tempo capabilities. You can even use the same Stomp in several slots if you want. Flexibility, thy name is Pedalboard.

If you want to use the Ampire pedalboard without the amps, a separate Pedalboard plug-in is included. This section covers the features of both (except where noted).

Note that all effects are placed prior to the cabinets in the audio chain.

Before describing each parameter, let's take a look at the row of buttons beneath the Stomps window.

The numbered slots show the names of the selected Stomps in the order they appear in the Stomps window. An unused slot has no name. Each slot has an on/off switch, and on the far left is one switch to rule them all: it toggles the entire Pedalboard on and off.

Pre-/post amp placement (Ampire only)

Notice the double blue line between two of the Stomp slots; that's the dividing line between pre- and post-amplifier effects. Click-drag the blue line to place it between any two Stomps, or even before or after the entire Pedalboard. As it moves you'll see a vertical, silver switch move to the same location in the Stomps window.

Mirrored actions

Many of the actions performed in the Stomps window are mirrored in the Stomps tray, and vice versa. For example:

- Click-drag the silver switch in the Stomps window and the blue line moves too.

- Click-drag a Stomp to a new location and its numbered slot does the same below. Remember that this works both ways.

- Toggle the foot switch of an effect in the Stomps window and the on/off switch in the Stomps tray does it too.

- Hover over a number in the Stomp tray to identify that effect in the Stomps window. Hover over the top of a Stomp to see its number.

This is useful if you're using more than one instance of the same Stomp, for example, and you want to know which is which. It also helps if the Stomps are not located directly above their position numbers in the Stomp tray. Some of them are fat in more ways than one.

Add or remove a Stomp box

To insert a Stomp, right-click in an empty space in the Stomps window or in the Stomps tray. To remove a Stomp, right-click on the Stomp itself or on its numbered slot below. Note that a right-click on a Stomp control opens the Macro/Automation menu instead.

Select a Stomp box

Click the name area of any slot in the Stomps tray to open the Gallery and select an effect for that slot. There are too many to fit in the Gallery window, so be sure to scroll up or down if you don't seen the one you're looking for at first.

Bypass

This selection leaves the Stomp slot empty.

2.6.1   Big Fuzz

This State Space modeled distortion pedal is responsible for so many classic riffs, it would take a supermassive black hole to hold them all.

- **Volume.** Controls the level into the Tone circuit.

- **Tone.** Turn to left to attenuate high frequencies; turn to the right for more treble, less bass. Tone control is post the two clipping stages.

- **Sustain.** A pre-pre-amp stage into the Volume circuit. Adds sustain and fuzz.

2.6.2   Compressor

This compressor pedal reduces the dynamic range of your signal for additional shaping of your sound. With its two different modes you can dial in the desired amount of sustain precisely.

- **Gain.** Sets the input gain to the compressor.

- **Peak.** Controls the amount of peak reduction. Higher peak settings result in more gain reduction and more compression.

- **Mode: limit / compress.** Toggle between two different dynamic ratios. When in limiter mode, peaks are limited more aggressively.

2.6.3   Delay

- **Speed.** Adjusts the delay speed from 0.01 to 10 Hz.

- **Sync.** Engage this if you want to sync the delay speed to tempo.

- **Beats.** Selects a beat value for the synced delay speed.

- **LC.** Sets the frequency of the low-cut filter from 20 Hz to 1 kHz.

- **HC.** Sets the frequency of the high-cut filter from 1 kHz to 20 kHz.

- **Feed.** Adjusts the amount of feedback from 0 to 100%.

- **Mix.** Adjusts the mix of the delayed signal with the original signal from 0 to 50%.

2.6.4   Equalizer

- **Guitar/Bass.** Selects the appropriate style, which adjusts the frequency values for each band of the graphic EQ.

- **Band Sliders.** Adjusts the level of each EQ band up or down to achieve the desired EQ setting. Click-drag across them to set a quick curve.

2.6.5   Fat

This State Space modeled 1980s popular pedalboard staple provides three controls to shape your tone for just the right amount of aggression.

- **Distortion.** Turn to the right to increase the amount of distorton.

- **Filter.** With this control fully to the left, the Filter is open and high frequencies can pass; fully to the right, the high frequencies are attenuated. Tone control is post-Distortion.

- **Volume.** Controls the final output level.

2.6.6   Gate

This gate pedal completely removes unwanted noise in your signal. No more buzzing and humming in your signal chain. This One-Knob model has the following controls

- **Threshold.** Adjust the threshold where the Gate will start to work in a wide range from -96dB ... 0dB. All signals above the threshold setting are passed through unaffected, whereas signals below the threshold (e.g. pick-up hum or noise) are muted.

2.6.7   Modulation

- **Chorus/Flanger/Phaser.** Selects the type of modulation.

Chorus

- **Delay.** Adjusts the delay of the chorus signal from 2 to 20 ms.
- **Speed.** Adjusts the chorus speed from 0.01 to 10 Hz.
- **Width.** Adjusts depth of delay line modulation, from 0 to 100%.
- **Depth.** Adjusts the chorus depth from 0 to 100%.

Flanger

- **Delay.** Adjusts the delay of the flanged signal from .2 to 4 ms.
- **Speed.** Adjust the flanger speed from 0.01 to 10 Hz.
- **Sync.** Engage this if you want to sync the flanger speed to tempo.
- **Beats.** Selects a beat value for the synced flanger speed.
- **Feed.** Adjusts the amount of feedback from 0 to 100%.
- **Width.** Adjusts the flanger LFO width from 0 to 100%.
- **Depth.** Adjusts the flanger depth from 0 to 100%.

Phaser

- **Phase.** Adjusts the frequency of the phaser from 240 Hz to 8 kHz.
- **Speed.** Adjusts the speed of the phaser from 0.01 to 10 Hz.
- **Sync.** Engage this if you want to sync the phaser speed to tempo.
- **Beats.** Selects a beat value for the synced phaser speed.
- **Feed.** Adjusts the amount of feedback from 0 to 100%.
- **Width.** Adjusts the phaser LFO width from 0 to 100%.
- **Depth.** Adjusts the phaser depth from 0 to 100%.

2.6.8   MP Ninety

This State Space-modeled classic phase-shifter has a singular focus and a truly unique sound.

- **Speed.** Controls the phaser speed.

2.6.9   PAE Chorus 1

With the flexibility of four pedals in one, this State Space-modeled chorus is the standard to which every other chorus is compared.

- **High/Low.** Selects the input sensitivity.

- **Level.** Control Adjusts the input level.

- **Chorus Intensity.** Controls the rate and depth of the Chorus effect for Chorus mode.

- **Vibrato Depth.** Controls the depth of the Vibrato effect for Vibrato mode.

- **Vibrato Rate.** Controls the rate of the Vibrato effect for Vibrato mode.

- **Normal/Effect.** This foot switch toggles the effect on and off.

- **Mode: Vibrato/Chorus.** This foot switch toggles the effect between Vibrato and Chorus modes.

2.6.10   Pan

- **Speed.** Adjust the pan speed from 0.01 to 10 Hz.

- **Sync.** Engage this if you want to sync the pan speed to tempo.

- **Beats.** Selects a beat value for the synced pan speed.

- **Depth.** Adjusts the pan depth from 0 to 100%.

2.6.11   Reverb

- **Size.** This control affects several parameters to approximate an overall room size. It adjusts the size of the reverberated signal from 0 to 100%, with lower percentages representing smaller rooms and therefore shorter reverb tails and higher percentages representing larger rooms and longer tails.

- **Mix.** Adjusts the mix of the reverberated signal with the original signal from 0 to 50%.

- **LC.** Sets the frequency of the low-cut filter from 20 Hz to 1 kHz.

- **HC.** Sets the frequency of the high-cut filter from 1 kHz to 20 kHz.

- **Damp.** Adjusts the dampening of the reverberated signal from 0 to 100%.

2.6.12   Tremolo

- **Speed.** Adjusts the tremolo speed from 0.01 to 10 Hz.

- **Sync.** Engage this if you want to sync the tremolo speed to tempo.

- **Beats.** Selects a beat value for the synced tremolo speed.

- **Depth.** Adjusts the tremolo depth from 0 to 100%.

2.6.13   Tube Dreamer

This State Space-modeled overdrive pedal offers a mid-boost that has made it a staple for countless players, and can saturate an already-overdriven amp beautifully.

- **Drive.** Turn to the right to increase the Drive amount.

- **Tone.** Turn to the left to attenuate high frequencies.
  The tone control is post-Drive.

- **Level.** Controls the final output stage.

2.6.14   Tube Driver

- **Amount.** Adjusts the amount of drive from 0 to 11.

2.6.15   Wah-Wah

- **Type.** Selection Box Selects the type of wah-wah desired.

- **Amount.** Adjusts the amount of the wah-wah effect from 0 to 100%, equivalent to rocking a traditional wah-wah pedal forward and backward.

3   Ampire High Density Pack

The **Ampire High Density Pack** is an Add-on for Ampire, adding a special collection of three iconic amps and their respective, impulse response modeled cabinets—as well as six unique stomp box effects to complement the core library of amps, cabinets and effects included with Ampire. Ampire High Density Pack is the perfect Add-on not only for metal guitar players, but any musician looking for high-gain sounds and exotic effects.

This Add-on is compatible with the third-generation of Ampire included in Studio One 5.1.1 and later, as well as our VST/AU/AAX version of Ampire available at shop.presonus.com. As a bonus feature, the Impact XT Metal Kit (originally available as part of the Ampire XT Metal Pack) is available to you as a free download on PreSonus Exchange!

As an expansion, the basic functionality of Ampire High Density pack is identical to that of vanilla Ampire, so please read the Ampire section for information on basic use like the Toolbar, Mic Edit Controls, Pedalboard, etc. The amps and stompboxes detailed below will be added to your existing Ampire collection.

3.1   Amplifier Models

3.1.1   Metal Machine+

The backbone of contemporary metal tone, this legendary amp has defined the sound of modern metal with 120 watts of raw power across two channels. Each channel offers a 3-band EQ, plus independent resonance and presence controls. The rhythm channel offers an additional "Crunch" mode. Despite its massive power, this versatile amp is capable of a wide variety of sound, from warm hard rock tones to grim and frostbitten tremolo picking.

- **Channel Select.** Toggles between the Rhythm and Lead channels.

- **Tone Controls.** Pre determines the amount of gain going into the tone control section. High, Mid, and Low are basic tone controls for their respective frequency ranges. Post determines the output level at the end of the tone stack.

- **Crunch.** Adds significant distortion to the Rhythm channel.

- **Reverb.** Dial in this spring reverb emulation to taste. It has a long decay time, so it's easy to go overboard. And sometimes overboard is just enough.

- **Presence.** Available per-channel, Presence controls the amount of negative feedback in the circuit; increasing the value changes the high frequencies and harmonics.

- **Resonance.** Available per-channel, Resonance filters low frequencies in the negative feedback circuit. Use it to tame your low end.

3.1.2   Painapple #4

Terrifyingly high-gain, saturated tone with a simplified, single-channel architecture. featuring a 3-band EQ and four stages of high gain, it covers everything from Blues and vintage Rock tones to characteristic tones rooted in modern metal.

Pineapple's UI is icon-based. Reading left to right, its controls are:

- **Power.** Toggle between 7 and 15 watts.
- **Volume.** Post-EQ Master volume output.
- **Tone Controls.** For Treble, Mid, and Bass.
- **Gain.** Dial in the desired amount of distortion here.

3.1.3   Gazoline Emc2

Two channels of high-octane, high-gain genius; fuel for discerning metal connoisseurs as well as downtuned seven- and eight-string players. This extremely versatile amp offers a three-way mode switch that lets you move from clean to classic/vintage to heavy/modern and back.

- **Mode.** Use this three-way toggle switch to choose from three amplification modes, each adding more gain than the last. Use Mode 1 for the cleanest sounds and Mode 3 for the most high-gain. Note that the Mode control only affects Channel 1.
- **Channel.** Choose Channel 1 to command a variety of tones using the Mode switch, including cleaner tones. Use Channel 2 for consistent high-gain lead sounds.

- **Gain.** Controls the pre-amp input level, per channel.

- **Volume.** Sets the post-EQ output level, per channel.

- **Tone Controls.** Treble, Middle, and Bass are basic tone controls for their respective frequency ranges and are available individually for each channel.

- **Presence.** Presence controls the amount of negative feedback in the circuit; increasing the value changes the high frequencies and harmonics. Affects both Channels 1 and 2.

- **Deep.** Nuanced controls for the low, low end—use this to better match the Emc2 to your cabinet of choice. Affects both Channels 1 and 2.

- **Master.** Final output volume sentsend to DAW.

3.2 Stompbox Models

3.2.1 Demolition Drive

A screamer for the metal crowd and extended-range instruments. Overdrive your amp of choice while keeping the low end in check.

- **Diode.** Choose your clipping style: opamp, red LED, or silicon diode.

- **Vol.** Post-EQ output level, use this to push your amp of choice harder.

- **Bright.** A top-end boost for sparkling, or even raspy, highs. Turning righter=sounding brighter.

- **Drive.** Sets the amount of gain/distortion.

- **Attack.** An eight-way toggle offering many preset tonal variations.

3.2.2   Wildrive

Add grit to your cleans or push your lead tones WAY over the top. Combined with a clean amp, Wildrive will take you on a wild ride loaded with heavy, crunchy tones and harmonics. It's also a perfect match for our MCM 800 amp model.

- **Output.** Post-EQ output level, use this to push your amp of choice harder.

- **Gain.** Sets the amount of gain/distortion.

- **Tone.** Sets the Wildrive's overall tone. Darker to the left, brighter to the right.

3.2.3   Dual Comp

Compress your lows and highs independently for nuanced dynamics processing. Dual Comp's unusual design includes overlapping frequencies and independent controls for the amount of compression. There's no attack control, instead the Dual Comp has fixed fast attack on the high band and a slower attack on the lows. There's even a separate bypass for the highs, so only low frequencies are compressed.

- **Input.** Sets the level going into the Dual Comp.

- **Low Compression.** Sets the compression amount for the low end of your signal.

- **High Compression.** Sets the compression amount for the high end of your signal.

- **EQ Balance.** Dials in the ratio of Low signal to High, as processed by the compressors. Left for more Low and less High, right for more High and less Low.

- **Output.** Post-EQ/compressors output level.

3.2.4   Space Reverb

This doesn't sound like any real reverb… or space, for that matter. Space Reverb's uniquely characteristic shimmer is equally at home in guitar rigs and ambient synth setups because of its ability to produce huge reverb tails with a keyboard-like pad texture.

- **Mix.** Balances between your dry signal (left) and the reverb signal (right).

- **Decay.** Sets reverb tail length. Left is shorter, noon is long, right is loooooooong.

- **Shimmer.** Adds a bright, octave-up glassy enhancement to the reverb tone.

3.2.5   Pitch Shifter

Pitch-shift your performance for radical divebombs or sky-high dog whistle tones. Covers a range of +/- two octaves. Pitch Shifter is uniquely capable of producing dramatic "dive bomb" effects, electrifying pitch-bends and stimulating harmony shifts.

- **Pitch Shifter Pedal.** (Click and drag up and down to manipulate) Changes tone pitch, based on the rules set by the

- **Harmony/Detune Knob.** Use this to choose from 16 presets, including five pitch-bends, nine harmony effects, and two detune effects.

Click the translucent panel below the Harmony/Detune
knob to access the following controls:

- **Mix Harmony.** Sets the blend between the dry, unaffected signal
  and the harmony signal when using one of the harmony effects.

- **Mix Detune.** Sets the blend between the dry, unaffected signal and the
  pitch-bent signal when using one of the detune or pitch-bender effects.

- **Quality (High/Low).** Selects the harmony/detuning
  mode between high and low quality.

3.2.6   Blue EQ
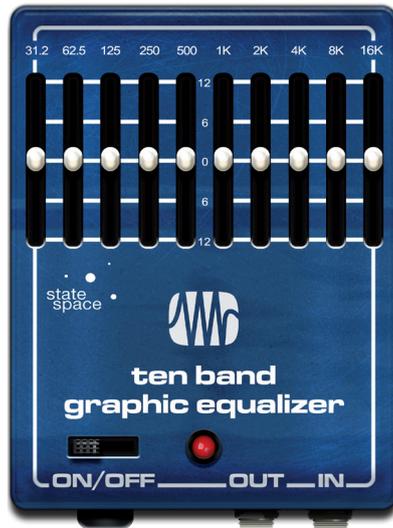
Surgical tone-sculpting. Notch out troublesome frequencies or boost your
favorites. With +/- 12 dB across a 10-band graphic EQ covering the full spectrum,
Blue EQ is the perfect tool to fight feedback and balance your tone.

- **Band controls.** Pick any faders to precisely boost or cut the frequency ranges
  of your choice. Suitable for when amplifier EQs aren't cutting it (or boosting it.)

3.3   Cabinets

1x12 Metal Machine Cabinet. The 1x12 Metal Machine
cabinet is a single 12-inch, closed-back box that is the perfect
match to get the signature Metal Machine+ sound.

2x12 Painapple Cabinet. Pair it with the 2x12 Painapple cabinet, a dual
12-inch closed-back box. Orange you glad we didn't call it banana?

4x12 Gazoline Cabinet. The 4x12 Gazoline cabinet adds even more explosive
power in a quadruple 12-inch closed-back box armed with front-loaded
Vintage-style drivers. Shake the rafters while you wake the neighbors.

4 Analog Effects Collection

Analog Effects Collection is a collection of five modulation, delay, distortion, and dynamics effects available for the first time in VST3, AU and AAX format—previously available only in Studio One!

Analog Chorus, Analog Delay, Rotor, Red Light Distortion and Tricomp represent the pinnacle of PreSonus plug-in design, art, and craftsmanship. With the addition of State Space Modeling technology and a brand new look and feel, the Analog Effects Collection is the perfect complement to any DAW.

4.1 Chorus

Chorus is a 1-3 voice chorus processor with optional LFO delay time modulation and stereo width control. It offers a wide range of effects—from subtle to extreme—with its roots in the 70s era of analog guitar pedals and studio effects processors.

- **Delay.** Adjusts the delay of the Chorus voices. The value you set is the delay time between voices.

- **LFO Shape.** Choose between the four waveforms for the LFO: Triangle, Sine, Sawtooth, or Square.

- **Voices.** Adjusts the number of added voices in the Chorus; select from 1, 2, or 3.

- **LFO.** The LFO modulates the Spacing parameter.

- **Depth.** Adjusts the mix of the processed Chorus output with the dry input signal. Variable from 0 to 100%.

- **St. Width.** Adjusts the spreading of the Chorus voices in the stereo field. Click the Spread button to engage/disengage the Stereo Width feature.

- **LFO Speed.** Adjusts the speed of the LFO.

- **LFO Width.** Adjusts the range of the LFO modulation of Spacing. Variable from 0 to 100%. A value of 100%would modulate the Spacing parameter from 0 to 2x Spacing.

- **Low Freq.** Sets the corner frequency of the low-cut filter.

- **High Freq.** Sets the corner frequency of the high-cut filter.

- **Mode.** Choose between Doubler mode (equivalent to the Chorus effect in Studio One 2.5 and earlier) and Chorus mode, which employs inverse all-pass movement, for truer chorus effect.

4.2   Analog Delay

Analog Delay emulates a BBD with optional tempo sync, LFO, filtered feedback, and other features. It can be used to create deteriorating echoes, echoes with changing delay and pitch, and flanging/chorus effects. These types of sounds are often used in dub music or 70s rock.

The addition of a State Space Modeling based Drive stage adds analog warmth and saturation to the signal for even more tonal control.

- **Delay**
  - **Time.** The base delay time.
  - **Sync.** Optional Sync mode for Time. Sync disengaged results in speed expressed as time from 1 ms to 3 s. Sync engaged results in time expressed as beats from 4/1 to 1/64, with triplets.
  - **Feedback.** Feedback percentage; that is, the amount of delayed signal to be fed back into the delay input. Variable from 0 to 100%.
  - **Boost.** Enable this parameter to boost feedback levels.
- **LFO**
  - **Speed.** The base LFO speed.
  - **Sync.** Optional Sync mode for LFO Speed. Sync disengaged results result in Speed expressed as frequency, from 0.01 Hz to 5 Hz. Sync engaged results in Speed expressed as beats, from 4/1 to 1/64, with triplet and dotted-time variants.
  - **Amount.** Modifies the effect of the LFO on delay speed. Variable from -50%to 50%.
  - **Type.** The shape of the LFO waveform; select from triangle, sine, sawtooth, and square.
- **Color**
  - **Low Cut.** Filters frequencies below this value from the delayed signal. Variable from Off to 20 Hz to 3.2 kHz. Filter is 6 dB per octave.
  - **High Cut.** Filters frequencies above this value from the delayed signal. Variable from 400 Hz to 16 kHz to Off. Filter is 6 dB per octave.
  - **Drive.** Emulates tape saturation with State Space Modeling. Variable percentage from 0 to 100%.

- **Motor**

  - **Factor.** Modifies tape speed. Variable from 0.5 (double the delay length) to 2 (half the delay length).

  - **Inertia.** Modifies speed of changes over time, based on Factor. Variable from 0 to 5.

    Synced LFO and synced delay with LFO slower than delay means that modulation is not perceptible (except with high inertia).

- **Width**

  - **Width.** Regulates the stereo width of the delay feedback. Variable from mono to full stereo width.

  - **Ping-Pong Mode**

    - **Off.** Select this setting to shut off Ping-Pong Mode. This also can be used to freeze the delay effect to one side, for example.

    - **Sum.** Select this setting to feed a mono-summed mix of both channels into the delay. Try higher settings of the Width control to achieve the full ping-pong effect.

    - **2-Ch.** This option feeds the stereo mix into the delay. Try lower settings of the Width control to "monoize" the delay effect.

  - **Swap.** Click this to swap the left and right sides of the Ping-Pong effect. If Ping-Pong Mode is Mono and Width is 100%, for example, this determines whether the delay effect starts on the left or right sides.

- **Global**

  - **Dry/Wet.** Adjusts the mix of processed signal and the original dry signal. Variable from 0 to 100%. A setting of 100% is likely to increase feedback.

  - **Locked.** Engage this switch to prevent changes to the Dry/Wet balance.

4.3   Red Light Distortion

Red Light Distortion is an analog distortion emulator with several selectable distortion models. Choose between different types of distortion by selecting Soft Tube, Hard Tube, Bad Tube, Transistor, Fuzz, or OpAmp emulation. A diverse control scheme allows you to create everything from subtle harmonics that help an instrument cut through a mix to raging walls of noise.

- **In.** Input gain to the distortion. Variable from -12 dB to 24 dB.

- **Distortion.** Only for Hard and Bad Tube types, this is the tube working-point adjustment (bias). Variable from 0 to 10.00.

- **Low Freq.** Filters frequencies below this value from the distorted signal. Variable from 20 Hz to 5 kHz, depending on the High Freq setting.

- **High Freq.** Filters frequencies above this value from the distorted signal. Variable from 800 Hz to 16 kHz.

- **Drive.** Amplification during overdrive. Variable from 0 to 11; drive increases a lot between 10 and 11 for really distorted sounds.

- **Out.** Adjust the output gain of Red Light Distortion. Variable from -12 dB to 24 dB.

- **Stages.** Sets the number of overdrive stages used serially in the signal path (including filters). Select from 1, 2, or 3 with the horizontal fader.

- **Type.** Select the type of distortion emulation by clicking on the display and selecting Soft Tube, Hard Tube, Bad Tube, Transistor, Fuzz, or OpAmp from the list.

- **Mix.** Mix lets you set a mix between the wet (affected) and dry (unaffected) signals running through the plug-in, allowing for parallel processing effects.

4.4   Rotor

Rotor is a rotary speaker effect that simulates the sound of a tube-powered amplifier with independently rotating high-mid horn and bass woofer, as you might find attached to a classic electric organ. Historically, rotary speakers have been notoriously difficult to emulate without owning the real thing, but we feel we've done it justice.

Rotor excels at adding a sense of motion and unique tonal character to organ sounds, guitars, or anything you want to try. Each speaker's rotation can be set to a range of speeds, with realistic braking and acceleration effects when changing speeds. State Space Modeling technology provides authentic tube emulation for extra warmth and character.

- **Off/On.** Toggles the rotating action of the virtual speakers on and off, with a smooth speed transition between states.

- **Slow/Fast.** Toggles between the two preset speeds for the woofer and horn, with a smooth transition between speeds.

- **Amp**

  - **Drive.** Add the desired amount of amp drive to the tone using State Space Modeling technology. Lower settings are cleaner, higher settings are more overdriven.

  - **Horn Q.** Blends in a midrange peak that emulates the resonance of rotating horn speakers. Lower settings are more flat,higher settings have a more pronounced resonance.

  - **A/B.** Toggles between two amplifier models that are recreated using State Space Modeling technology.

- **Position**

  - **Distance.** Lets you choose the position of the virtual microphone that picks up the rotating speaker. At low settings, the mic is close to the speaker, and the stereo sweeping effects are more pronounced. At higher settings, the mic is further away from the speaker, and the effect is subtler and more diffuse.

  - **Balance.** Lets you blend between the woofer and horn, to achieve the desired tonal balance. Fully down, you mainly hear the woofer. Fully up, you mainly hear the horn.

  - **Spread.** Controls the stereo width of the rotating speaker elements. At low settings, the part of the signal signifying the front of each rotating element moves in a tight, distinct band across the stereo spectrum. At higher settings, the rotating element appears wider and more diffuse.

- **Trim**

  - **Woofer Speed** and **Horn Speed.** These dual-slider controls let you set the speed at which the woofer and horn spin at slow and fast speed settings. You can set them to identical values for more coordinated rotation between woofer and horn, or to differing values that set up contrasting rotations.

4.5   Tricomp

Finalize your mix or add brilliance or punch to frequency-rich signals with this three-band compressor with automatic threshold and ratio settings, plus a relative control for the low and high bands and switchable attack and release controls.

- **Input Gain.** Set overall Input Gain to the compressor

- **Mix.** Adjust the mix between dry (unaffected) and wet (effected) signals, for parallel compression effects.

- **Low.** Adjusts the relative amount of compression to be applied to the Low compression band. Variable from -5 to 5 depending on the Compress setting.

- **High.** Adjusts the relative amount of compression to be applied to the High compression band. Variable from -0.50 to 0.50, depending on the Compress setting.

- **Low Freq.** Adjusts the upper corner frequency of the Low compression band. Variable from 80 Hz to 480 Hz.

- **High Freq.** Adjusts the lower corner frequency of the High compression band. Variable from 800 Hz to 12 kHz.

- **In.** Input Meter Displays Tricomp's input level.

- **Reduction Meter.** Displays the amount of signal reduction.

- **Compression Amount.** The relative amount of compression to be applied to all three compression bands. Variable from 0 to 10.

- **Output Meter.** Displays Tricomp's output level.

- **Knee.** Adjusts the distance/curve of the compressor knee. Variable from 0 dB (hard knee) to 6 dB (soft knee).

- **Gain.** Set overall output Gain. Variable from -18 dB to +18 dB.

- **Attack.** When Auto is not engaged, these buttons select the compressor attack time. Fast Attack is 0.1 ms; Slow Attack is 10 ms.

- **Release.** When Auto is not engaged, this adjusts the compressor release time. Release is variable from 1 ms to 300 ms.

- **Auto.** Click to engage adaptive settings for the compressor attack and release times, based on signal content.

- **Saturation.** Saturation recreates the saturation sound of famous leveling amplifiers using State Space Modeling. Variable from 0 to 100%.

- **Sidechain.** Engage by clicking the [Sidechain] button at the top of the effect window to allow specific sources to control the Tricomp processor.

- **Sources.** Click to display a list of potential sidechain channel sources. A checked box indicates the current source. Multiple selections can be made.
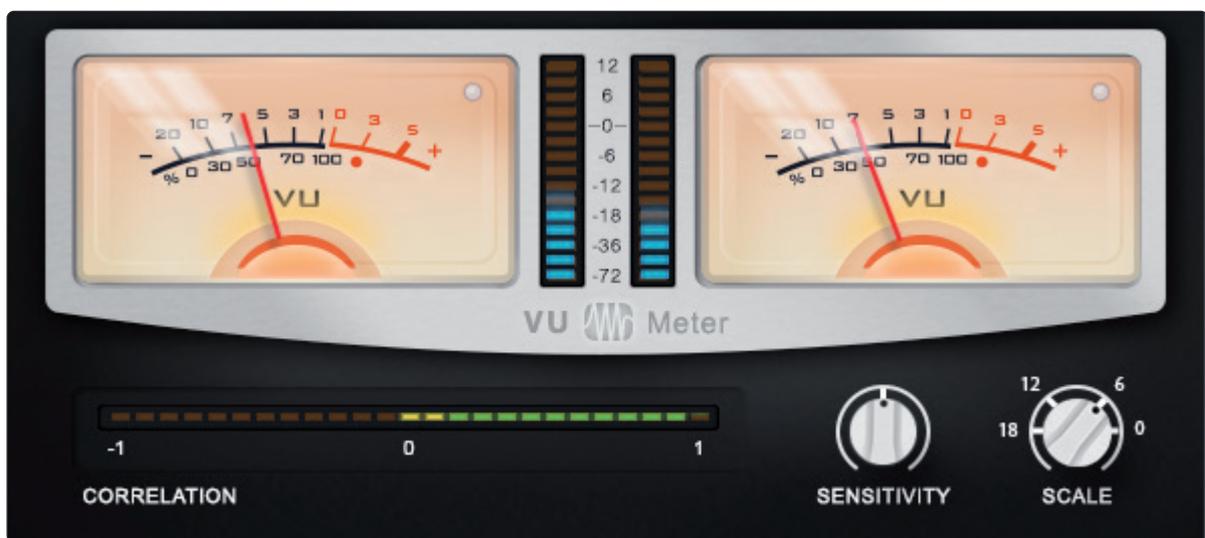
5   VU Meter

The VU Meter plug-in provides the best of both worlds for your signal metering needs: Analog-style VU meters (with clip indicators), and LED-segment-style peak meters. VU meters are most useful for showing overall signal level, whereas peak meters are most useful for keeping track of peak signal levels (like those found in the mix consoles of most DAW applications). By referencing both of these, you can see a more nuanced picture of your signal—overall level and peak level.

A stereo correlation meter rounds out the trio, giving you insight into the left/right phase relationship of your signal.

Click on the Presets menu to recall factory presets. These presets cannot be overwritten.

Click on the Info menu to open PreSonus Hub and this reference manual.

5.1   VU Meter Controls

The follow controls are available for you to better adjust the VU Meter to suit your needs:

- **Sensitivity.** Sets the speed at which the VU meter needles move to follow changes in signal level. At lower settings, the needles move slowly, giving you a more generalized representation of signal output level. At higher settings, the needles react more quickly, giving you a more detailed view of signal level changes over time.

- **Scale.** Sets the digital signal level (in dBFS) that corresponds to 0 dBVU on the VU meters. At a setting of 0, the two scales are equivalent. For example, an input level of 0 dBFS is shown as 0 dBVU on the VU meter. With Scale set to 6, 0 dBVU now corresponds to –6 dBFS, and so on.

  This lets you calibrate the meter to match the amount of headroom you prefer.

- **Correlation.** This meter shows you the phase relationship of your stereo signal. When the meter is at 1, left and right channels are completely in-phase. When the meter approaches –1, divergence between left and right signals is quite high, and your signal may suffer phase cancellation effects if it is later summed to mono. A correlation value between 0 and 1 is generally the goal when you are trying to avoid phase issues upon mono summing.

6   Channel Strip Collection

The Channel Strip Collections features a State Space-modeled RC500 FET-based compressor with semi-parametric EQ and the VT1 boutique tube preamp with FET-based compressor and semi-parametric EQ.

Click on the Presets menu to recall factory presets. These presets cannot be overwritten.

Click on the Info menu to open PreSonus Hub and this reference manual.

6.1   VT1 Tube Modeling Channel Strip

Input

The Input section provides tools to shape your signal as it enters VT1.

- **HP Filt.** Lets you set the corner frequency of the provided high-pass filter, from 18–200 Hz. The higher you go, the more bass information is filtered out of the signal.

- **HPF Out/In.** Lets you enable (IN) or disable (OUT) the high-pass filter.

- **Trim.** Lets you adjust the amplification of your input signal, between –12 and +12 dB.

- **Impedance.** Lets you emulate the effects of changing the input impedance of a hardware preamp when a sensitive microphone is connected. The impedance mismatch yields subtle changes in tonal color. Try different setting to find what works best with the material you're processing.

- **Polarity.** Reverses the polarity of your input signal. This can be useful for minimizing the effects of phase cancellation between signals, especially when a source has been recorded with more than one microphone.

- **Gain.** This parameter directly controls the gain section of VT1's vacuum tube emulation, providing up to 20 dB of additional gain in steps of 5 dB before your signal reaches the compressor and EQ stages. This can be used to reinforce low-level signals, or to drive the compressor and EQ stages harder.

Compressor

Use the Compressor section to control or re-shape the dynamic behavior of your signal. Compression is often used to reduce the dynamic range of a signal (to control peaks and accentuate low-level information) or to accentuate signal peaks, to increase apparent "punch."

- **Threshold.** Sets the threshold of the compressor in a wide range. When the amplitude of the input signal exceeds the threshold you've set, the compressor engages.

- **Ratio.** Sets the slope of the compressor as a ratio between input and output levels, from 1:1 to 4:1. At 1:1, no gain reduction occurs at any threshold setting. At 2:1, for every 2 dB of signal level above the threshold setting, only 1 dB of signal increase occurs, and so on.

- **Attack.** Sets the speed at which the compressor acts on input signals that cross the Threshold setting, in a range between 0.5–500 ms. Slower attack times allow signal peaks to pop through uncompressed before gain reduction reaches the amount set by the Threshold and Ratio controls, accentuating the attack of transient signals. Faster attack times control peaks more closely.

- **Release.** Sets the speed at which the compressor returns to normal after input signal crosses below the threshold setting, in a range between 40–500 ms. Some signals sound their best with shorter release settings, some sound best with a longer release. Letting the signal recover faster from the compression effect can be useful to enhance the room sound of microphone signals. Slow release settings can create for smooth and less obvious compression effect. Set this control to taste.

- **Comp.** Bypass Bypasses the compressor section. When the indicator light is on, thecompressor is bypassed.

- **Gain.** Provides up to 18 dB of make-up gain for the compressed signal.

- **EQ > Comp.** Switches the order that signals enter each processing stage. When the indicator light is off, the signal goes to the compressor before heading to the EQ. When the light is on, the signal goes to the EQ before heading to the compressor.

Equalizer

Use the Equalizer to boost or cut specific areas of the frequency spectrum of your signal, to accentuate or de-emphasize those frequencies, as needed.

- **Freq.** Sets the center frequency of the current EQ band.

- **Gain.** Sets the level of boost or cut applied by the current EQ band, between −18.5 and +18.5 dB.

- **EQ Bypass.** Bypasses the equalizer section. When the indicator light is on, the EQ is bypassed.

- **HF Peak.** Switches the high EQ band between shelf (boost/cut is applied to all frequencies including and above the chosen frequency) or peak (boost/cut centers around the chosen frequency) modes. When the indicator light is on, the high band is in peak mode.

- **LF Peak.** Switches the low EQ band between shelf (boost/cut is applied to all frequencies including and below the chosen frequency) or peak (boost/cut centers around the chosen frequency) modes. When the indicator light is on, the low band is in peak mode.

Meter and Level

- **MTR-GR/MTR-IN.** Lets you choose to display either the level of gain reduction occurring in the compressor section (GR), or input signal level (IN).

- **Level.** Lets you adjust the overall output level of VT1, from −90 to +11 dB.

6.2   RC500 FET Modeling Channel Strip

Compressor

Use the Compressor section to control or re-shape the dynamic behavior of your signal. Compression is often used to reduce the dynamic range of a signal (to control peaks and accentuate low-level information) or to accentuate signal peaks, to increase apparent "punch."

- **Threshold** sets the threshold of the compressor, in a range between –25 and +18 dB. When the amplitude of the input signal exceeds the threshold you've set, the compressor engages.

- **Attack** sets the speed at which the compressor acts on input signals that cross the Threshold setting, in a range between 0.5–10 ms. Slower attack times allow signal peaks to pop through uncompressed before gain reduction reaches the amount set by the Threshold and Ratio controls, accentuating the attack of transient signals. Faster attack times control peaks more closely.

- **Release** sets the speed at which the compressor returns to normal after input signal crosses below the threshold setting, in a range between 40–500 ms. Some signals sound their best with shorter release settings, some sound best with a longer release. Letting the signal recover faster from the compression effect can be useful to enhance the room sound of microphone signals. Slow release settings can create for smooth and less obvious compression effect. Set this control to taste.

- **Compressor Out/In** bypasses (OUT) or enables (IN) the compressor section.

Preamp

This section provides processing tools for the signal, applied as it enters and exits RC500.

- **Gain.** Provides a generous amount of additional gain before your input signal reaches the compressor and EQ stages. Can be used to reinforce low-level signals, or to drive the compressor and EQ stages harder.

- **Polarity.** Reverses the polarity of your input signal. This can be useful for minimizing the effects of phase cancellation between signals, especially when a source has been recorded with more than one microphone.

- **Hi Pass Filter.** Lets you toggle the provided high-pass filter on or off for the input signal. When enabled, low-frequency information below 80 Hz is attenuated by a slope of 12 dB per octave.

- **Master.** Adjusts the overall output level.

Equalizer

Use the Equalizer to boost or cut specific areas of the frequency spectrum of your signal, to accentuate or de-emphasize those frequencies, as needed.

- **Freq.** Sets the center frequency of the current EQ band.

- **Gain.** Sets the level of boost or cut applied by the current EQ band, between –18.5 and +18.5 dB.

- **Peak/Shelf.** Switches the corresponding EQ band between shelf or peak modes. In peak mode, the EQ band boosts and cuts signals centered around the frequency you set with the

- **Freq control.** In shelf mode, all frequencies at or above the chosen frequency (on the high band) or at or below the chosen frequency (in the low band) are affected.

- **Equalizer Out/In.** Bypasses (OUT) or enables (IN) the equalizer section.

Meter

- **MTR-GR/MTR-OUT.** Lets you choose to display either the level of gain reduction occurring in the compressor section (GR), or overall output level (OUT).

7   Fat Channel XT

Fat Channel XT is a complete virtual version of the channel strip found on the StudioLive Series III line of mixers. With gate/expander, compressor, parametric EQ and limiter functions, Fat Channel combines many essential processing functions into one easy-to-use tool. Along with its "clean" modern dynamics and EQ processors, Fat Channel XT gives you a selection of high-quality emulations of vintage compressors and EQs to suit your needs.

Click on the Presets menu to recall factory presets.
These presets cannot be overwritten.

Click on the Info menu to open PreSonus Hub and this reference manual.

7.1   Fat Channel XT Global Controls

1. **Stacked Mode.** Click this option to toggle the display state of Fat Channel XT. When disabled, only the currently selected processor (such as Gate or Compressor) is displayed. When enabled, all four processors are displayed at once, in a stacked arrangement.

2. **Processor Select Buttons** (Gate, Compressor, Equalizer, Limiter) When Fat Channel XT is not in Stacked Mode, click these buttons to display the processor block of your choice.

3. **Processor Enable/Disable** Click the round button next to the processor name of your choice to toggle the on/off state for that block of processing. Each processor also has its own enable/disable switch within the module interface.

4. **Swap Comp/EQ Order.** Click this button to swap the places of the Compressor and Equalizer processors in the signal chain.

5. **Compressor and Equalizer Model Selectors.** Click the menu next to the name of the Compressor or Equalizer processors to open a Gallery view, from which you can choose the desired Compressor or EQ model. Hover the cursor over each image to view a brief description, then click to select the one you want.

    Compressor offers the following choices:

    - **Standard.** A flexible, modern compressor, with a clean, hi-fi sound.

    - **Tube.** A model of one of the best-loved vintage tube-based opto-compressors. Excels at vocal smoothing and at making bass instruments sound larger-than-life.

    - **FET.** A model of one of the most-used vintage FET-based compressors. Great for adding an aggressive edge and accentuating room sound for drums, guitars, and other highly transient signals.

    Equalizer offers the following choices:

    - **Standard.** A flexible, full-featured modern EQ, with a clean, hi-fi sound.

    - **Passive.** A model of the "rolls-royce" of vintage tube-based passive EQs. Deceptively simple controls and a rich, thick sound make it perfect for gentle tone shaping or adding vintage character.

    - **Vintage.** A model of what some call the "final word" in vintage solid-state EQs. Combines an "everything sounds better through it" quality with musically-chosen EQ frequencies for quick, reliable tonal magic.

7.2   High-Pass Filter (HPF)

- **High Pass.** Sets the frequency of the high-pass filter.
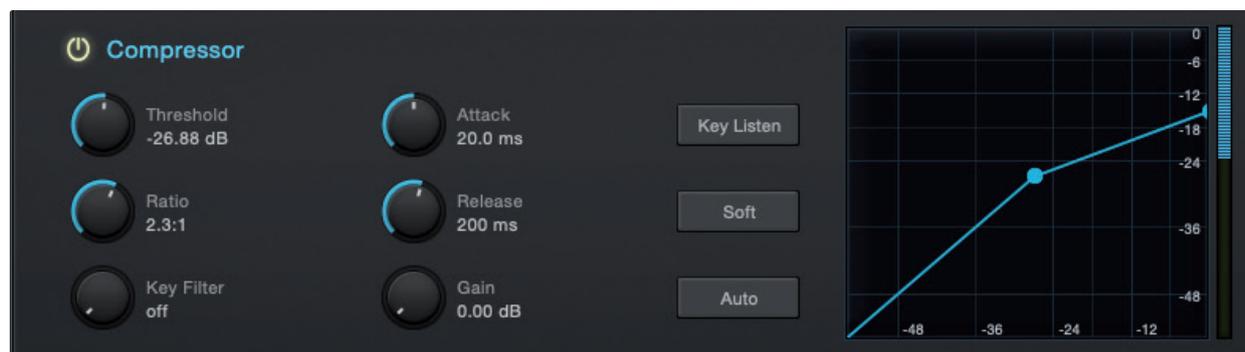 Turn all the way left to disengage the filter.

7.3   Gate
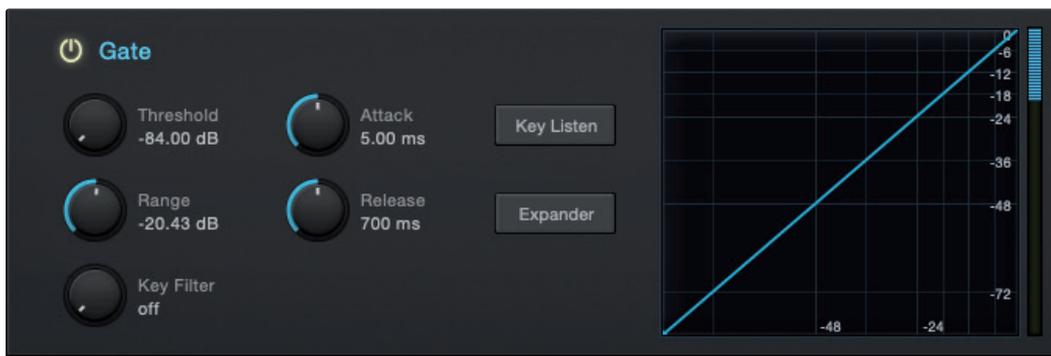
- **Enable/Disable.** Click the power button either in the header
  or in the module to enable or disable the Gate.

- **Threshold.** This knob sets the level at which the gate opens. Essentially,
  all signals above the threshold setting are passed through unaffected,
  whereas signals below the threshold setting are reduced in level by the
  amount set by the range control. If the threshold is set all the way to
  the left, the gate is turned off (always open), allowing all signals to pass
  through unaffected. You can set the threshold from 0 to -84 dB.

- **Range.** This adjusts the amount of gain reduction the gate
  produces. The range can be set from 0 to -84 dB. The Range
  control is not available when using the expander.

- **Key Filter.** This knob adjusts the frequency at which the gate opens. Setting
  a specific frequency, in addition to a specific decibel level, provides more
  sonic shaping. The key filter can be triggered by the selected channel or
  bus's signal or by sidechaining a channel and using its signal as the source.

- **Attack (Att).** This adjusts the rate at which the gate opens on the selected
  channel or output. You can set the attack time from 0.02 to 500 ms.

- **Release (Rel).** Adjusts and displays the rate at which the gate closes on the
  selected channel. The release time can be set from 0.05 to 2 seconds.

- **Key Listen.** This button engages and disengages the Key Listen
  function, which lets you hear how the gate Key Filter is set.

- **Expander.** Switch the gate into expander mode.

- **Interactive Graph.** This graph provides a visual representation of
  the settings and current activity of the gate. You can also adjust the
  setting by moving the blue dots to adjust Threshold and Range.

7.4　Compressor

7.4.1　Standard Compressor

- **Enable/Disable.** Click the power button either in the header or in the module to enable or disable the Compressor.

- **Threshold.** This knob adjusts the compressor threshold for the selected channel. The compressor engages as soon as the signal level (amplitude) exceeds the threshold value. Moving this control to the left lowers the threshold so that compression begins at a lower amplitude value. The threshold can be set from -56 to 0 dB.

- **Ratio.** This knob adjusts the compression ratio (or slope). The ratio is a function of the output level versus the input level. For example, if you have the ratio set at 2:1, any signal levels above the threshold setting are compressed at a ratio of 2:1. This means that for every 2 dB of level increase above the threshold, the compressor's output only increases by 1 dB. The ratio can be set from 1:1 to 18:1 or "limit" which is the equivalent of infinity:1.

- **Gain.** This sets and displays the makeup gain of the compressor for the selected channel. Compressing a signal usually results in an overall reduction in level (gain reduction), and the Makeup Gain control lets you increase the volume to make up for this gain loss, if desired. You can adjust the Makeup Gain from 0 dB (no gain adjustment) to +28 dB.

- **Attack.** This adjusts the speed at which the compressor acts on the input signal. A slow attack time (moving the slider to the right) allows the beginning component of a signal (commonly referred to as the initial transient) to pass through, uncompressed, whereas a fast attack time (fully to the left) triggers compression immediately when a signal exceeds the threshold. You can set the attack from 0.2 to 150 milliseconds.

- **Release.** This determines the length of time the compressor takes to return the gain reduction back to zero (no gain reduction) after crossing below the compression threshold. Release can be set from 2.5 to 900 milliseconds.

- **Key Listen.** This button engages and disengages the Key Listen function, which lets you listen to the signal that is being fed to the compressor's detector.

- **Auto.** This enables Automatic Attack and Release mode. When Auto mode is active, the Attack and Release controls become inoperative, and a pre-programmed attack and release curve is used that sets the attack to 10 ms and the release to 150 ms. Meanwhile, all other compressor parameters can still be adjusted manually.

- **Soft** .This engages soft-knee compression. In normal operating mode, the compressor is set for hard-knee compression, meaning the gain reduction applied to the signal occurs as soon as the input signal level exceeds the threshold value. When the Soft Knee button is engaged, the ratio increases gradually as the signal reaches the threshold.

- **Interactive Graph.** This graph provides a visual representation of the settings and current activity of the compressor. You can also adjust the setting by moving the blue dot to change the Threshold and Ratio values.

7.4.2   Tube Compressor

- **Enable/Disable.** Click the power switch to enable or disable the Tube Compressor module.

- **Comp/Limit.** Toggles the Tube Compressor between its compressor and limiter modes. When in compressor mode, it acts with a variable ratio of 1:1-10:1. When in limiter mode, it acts with a variable ratio of 10:1-20:1, more aggressively limiting peaks.

- **Gain.** Sets input gain to the compressor. Because this type of compressor operates in a different way than a standard compressor, much of the way that it affects signals is based on the input level. Try different settings to see what suits your needs.

- **Peak Reduction.** Sets the amount of peak reduction to apply to the signal. Higher settings result in more gain reduction and more pronounced compression effect.

- **Key Filter.** Sets the frequency of a high-pass filter that sits in the compressor sidechain. The higher the setting, the more frequencies are excluded from reaching the compressor's detector, with a variety of useful dynamic results. Ranges from "Off" to 16 kHz.

- **Key Listen.** This button engages and disengages the Key Listen function, which lets you listen to the signal that is being fed to the compressor's detector, after it has passed through the Key Filter.

- **VU Meter (Gain Reduction).** This vintage-style VU meter shows a smoothed representation of gain reduction applied by the compressor over time.

7.4.3   FET Compressor

- **Enable/Disable.** Click the power switch to enable or disable the FET Compressor module.

- **Input.** Sets input gain to the compressor. This setting affects the action of the compressor, so feel free to try various settings to find the optimal effect for your needs.

- **Output.** Sets the amount of "makeup gain" to apply to a signal. Once a signal is compressed, its overall level is often reduced. This gain control lets you bring it back up to the proper level after compression occurs.

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- **Attack.** This adjusts the speed at which the compressor acts on the input signal. A slow attack time (moving the slider to the right) allows the beginning component of a signal (commonly referred to as the initial transient) to pass through, uncompressed, whereas a fast attack time (fully to the left) triggers compression immediately when a signal exceeds the threshold. Attack ranges between 0.8 to 0.02 milliseconds.

- **Release.** This determines the length of time the compressor takes to return the gain reduction back to zero (no gain reduction) after crossing below the compression threshold. Release ranges between 1.1 second to 50milliseconds.

- **Ratio Selector Buttons.** These buttons let you choose a compression ratio: 4:1, 8:1, 12:1, 20:1, or "All." The ratio is a function of the output level versus the input level. For example, if you have the ratio set at 4:1, any signal levels above the threshold setting are compressed at a ratio of 4:1. This means that for every 4 dB of level increase above the threshold, the compressor's output only increases by 1 dB. The "All" setting recreates the "all buttons pushed in" setting that helped make this compressor type a legend, providing massive punch and crunch when driven hard.

- **Key Filter.** Sets the frequency of a high-pass filter that sits in the compressor sidechain. The higher the setting, the more frequencies are excluded from reaching the compressor's detector, with a variety of useful dynamic results. Ranges from "Off" to 16 kHz.

- **Key Listen** .This button engages and disengages the Key Listen function, which lets you listen to the signal that is being fed to the compressor's detector, after it has passed through the Key Filter.

- **VU Meter (Gain Reduction).** This vintage-style VU meter shows a smoothed representation of gain reduction applied by the compressor over time.

7.5   Equalizer

7.5.1   Standard EQ

- **Enable/Disable.** Click the power button to enable or disable the Equalizer module.

- **Low Shelf (LS) & High Shelf (HS) Buttons.** These buttons turns Shelving mode on or off for the High and Low bands. When the Shelf button is engaged, the associated High or Low frequency section is switched from parametric EQ to shelving EQ.

- **Band Enable/Disable Buttons.** These buttons select which EQ band is being controlled by the Frequency, Gain, and Q controls.

- **Freq.** This knob selects the center frequency of the corresponding band. You can adjust the center frequency in the following ranges for each band: Low Band: 36 to 465 Hz Low-Mids: 90 Hz to 1.2 kHz Hi-Mids: 380 Hz to 5 kHz Highs: 1.4 to 18 kHz

- **Gain.** This knob boosts and attenuates the selected frequency with a range of -15 to +15 dB.

- **Q.** This adjusts the Q value for the corresponding frequency band. The Q is the ratio of the center frequency to the bandwidth. When the center frequency is constant, the bandwidth is inversely proportional to the Q, so as you raise the Q, you narrow the bandwidth. Hence, the smaller the number, the wider the curve.

- **Interactive Graph.** This graph provides a visual representation of the current settings. You can change the settings by moving the blue dots to adjust the frequency and gain at the same time. The first time you touch a dot, the associated band automatically turns on. Tapping or clicking a dot turns the band on and off.

7.5.2   Passive EQ

- **Enable/Disable** Click this On/Off switch to enable or disable the Passive Equalizer module.

- **Low Boost.** Sets the level of boost applied around the chosen low frequency. This control interacts nicely with the Low Attenuation control, allowing for boosts in apparent bass energy while keeping overall bass energy within optimal limits.

- **Low Attenuation.** Sets the level of attenuation applied around the chosen low frequency. This control interacts nicely with the Low Boost control, allowing for boosts in apparent bass energy while keeping overall bass energy within optimal limits.

- **Low Frequency** Sets the center frequency of the band covered by the Low Boost and Low Attenuation controls.

- **High Bandwidth.** Sets the bandwidth (Q) for the High Band.

- **High Boost.** Boosts the High Band.

- **High Frequency.** Sets the center frequency for the High Band.

- **High Attenuation.** Sets the attenuation for the High Band.

- **Attenuation Select.** Sets the Frequency at which the attenuation begins.

7.5.3   Vintage EQ

- **Enable/Disable.** Click the power button to enable or disable the Vintage Equalizer module.

- **Low Frequency.** Sets the corner frequency of the low-frequency shelving band of this EQ. Choose from 35, 60, 110, or 220 Hz.

- **Low Gain (LF).** Sets the amount of boost or cut to apply the to low-frequency band of this EQ. Range of plus or minus 16 dB.

- **Low-Mid Frequency.** Sets the center frequency of the low-mid-frequency band of this EQ. Choose from 360 Hz, 700 Hz, or 1.6 kHz.

- **Low-Mid Gain (LMF).** Sets the amount of boost or cut to apply to the low-mid-frequency band of this EQ. Range of plus or minus 16 dB.

- **High-Mid Frequency.** Sets the center frequency of the low-mid-frequency band of this EQ. Choose from 3.2, 4.8, or 7.1 kHz.

- **High-Mid Gain (HMF).** Sets the amount of boost or cut to apply to the high-mid-frequency band of this EQ. Range of plus or minus 16 dB.

- **High Gain (HF).** Sets the amount of boost or cut to apply the high-frequency shelving band of this EQ. Range of plus or minus 16 dB.

7.6   Limiter
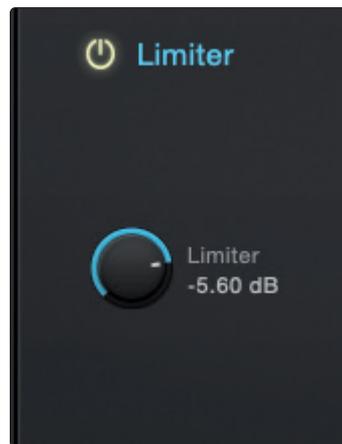
- **Enable/Disable.** Click the power button either in the header or in the module to enable or disable the Limiter.

- **Threshold.** Sets and displays the threshold of the limiter on the selected channel. The limiter engages as soon as the signal level (amplitude) exceeds the threshold value. Moving this control to the left lowers the threshold so that limiting begins at a lower amplitude value. The threshold can be set from -28 to 0 dB.

8   Fat Channel XT Add-ons

Fat Channel XT Plug-in Add-ons allow you to enhance your Fat Channel XT with additional processor models. These plug-ins are virtual signal processors that load in Fat Channel XT to expand your compressor and EQ processor libraries. Each plug-in comes in both StudioLive Series III format and Fat Channel XT format so you can use your new processor on your computer and in your mixer.

The Classic Studio, Modern Classics, and Vintage Channel Strips bundles are available individually from your authorized PreSonus dealer or from shop.presonus.com. Or buy all three bundles—12 processors in all—in the Fat Channel Collection, Volume 1, to supercharge Fat Channel XT.

To load any Fat Channel plug-in model, add the Fat Channel XT plug-in to your session and click the model menu from either the Compressor or EQ section. You'll find any authorized and installed plug-in model available to be loaded within the Fat Channel plug-in.

8.1   Available Models

Available Compressor Models

The following compressor models can be added to your Fat Channel XT plug-in:

Brit Comp. Capturing the unique sound of a twin VCA gain-reduction amplifier design, the Brit Comp is ideal for taming piano dynamics or adding punch to drums and percussion. Included in the Classic Studio Bundle.

Classic Compressor. The smooth character of this compressor allows you to create transparent or extreme color changes to your audio, making it a workhorse for just about any application. Included in the Vintage Channel Strips Bundle.

Comp 160 Compressor. With simple controls, yet capable of extreme compression traits, the Comp 160 provides VCA character with a personality all its own. Try it on drums—you'll be glad you did! Included in the Modern Classics Bundle.

Everest C100A Compressor. Based on a classic design focused on gentle, natural-sounding gain reduction, the Everest C100A helps control dynamics while still letting the signal breathe. Included in the Modern Classics Bundle.

FC-670 Compressor. This model of an iconic compressor/ limiter of the 1950s imparts an unmistakable silky warmth on just about any signal. Included in the Classic Studio Bundle.

RC-500 Compressor. FET-based compressors such as the one in the PreSonus RC 500 use transistors to emulate a triode tube's operation and sound. This type of compressor generally provides a faster attack time and better repeatability than the optical compressors typically found in channel strips. Modeled after PreSonus' RC500 signature FET compressor, this plug-in provides an ultra-fast attack time and repeatable performance. Included in the free PreSonus Bundle.

Tube P1B Compressor. In general, the response time of optical compressors tends to soften the attack and release, which can smooth out uneven volume fluctuations. Emulating an all-tube, optical design, the Tube P1B compressor delivers musicality, preserving the clarity of the signal even at the most extreme settings. Included in the Vintage Channel Strips Bundle.

VT-1 Compressor. Stunning high-end sound and incredible versatility are hallmarks of PreSonus' VT-1, which is modeled after a popular vacuum tube channel strip's FET compressor. The VT-1 provides fast attack and repeatable performance with a fully variable ratio. Included in the free PreSonus Bundle.

Available Equalizer Models

The following EQ models can be added to your Fat Channel XT plug-in:

Alpine EQ-550. The 1960s-vintage EQ provides consistent, repeatable equalization using three overlapping bands, divided into seven fixed frequency points, each with five steps of boost or cut. Its selectable peaking or shelving filters for the high and low band, along with an independently insertable bandpass filter, provide an easy path to creating acoustically superior equalization. Included in the Classic Studio Bundle.

Baxandall EQ. This EQ offers the world's most popular EQ curve. Using gently sweeping treble and bass EQ shelves, it allows you to make subtle, yet effective, changes over wide swaths of the frequency spectrum. Included in the Modern Classics Bundle.

RC-500 EQ. It's rare to find a truly outstanding solid-state channel strip that can deliver a vintage vibe reminiscent of classic high-end products, yet employs a thoroughly modern design. The PreSonus RC 500 was one of these rare gems. The RC 500 EQ plug-in is modeled after the channel strip's 3-band semi-parametric EQ and combines isolated filters and optimized, per-band Q to provide subtle signal-shaping without harsh artifacts. Included in the free PreSonus Bundle.

Solar 69 EQ. The sound of classic British EQ is absolutely legendary and has enhanced many a great recording. Emulating this classic British design, the Solar 69 EQ adds definition to kick drums, shapes electric guitars, and adds shimmer to acoustic guitars and vocals without sacrificing body. Included in the Classic Studio Bundle.

Tube Midrange EQ. This midrange EQ is based on a passive, all-tube design for ultra-smooth and musical equalization, making it ideal for any midrange source material. Included in the Vintage Channel Strips Bundle.

Vintage 3-band EQ. With its distinct filter shaping, sheen, and bite, this three-band active EQ includes both high and low shelving filters, providing enhanced tone-shaping possibilities. Included in the Vintage Channel Strips Bundle.

VT-1 EQ. The VT-1 EQ models a popular vacuum tube channel strip's 4-band semi-parametric EQ, which combines isolated filters and optimized, per-band Q. Designed with musicality in mind, this EQ is smooth and refined, which made it an instant classic. Included in the free PreSonus Bundle.

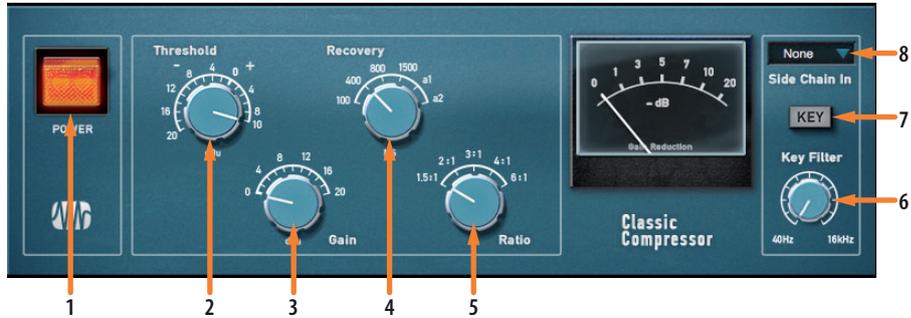## 8.2   Compressor Plug-in Models

8.2.1   Brit Comp

1. **Compressor On / Off.** Enables / disables the compressor in the signal chain.

2. **Threshold.** Sets the Threshold for the compressor.

3. **Attack.** Sets the Attack time in milliseconds (ms) for the compressor.

4. **Ratio.** Sets the compression Ratio.

5. **Release.** Sets the Release time in seconds (s) for the compressor.

6. **Makeup.** Sets the amount of make-up gain applied to the signal by the compressor.

7. **Key Filter.** Sets the Key Filter frequency.

8. **Key On/ Off.** Enables / disables the Key Filter.

9. **Sidechain.** Sets the sidechain channel.

8.2.2　Classic Compressor

1. **Compressor On / Off.** Enables / disables the compressor in the signal chain.

2. **Threshold.** Sets the Threshold for the compressor.

3. **Gain.** Sets the amount of make-up gain applied to the signal by the compressor.

4. **Recovery.** Sets the release time for the compressor.

5. **Ratio.** Sets the compression Ratio.

6. **Key Filter.** Sets the Key Filter frequency.

7. **Key Filter On/ Off.** Enables / disables the Key Filter.

8. **Sidechain.** Sets the sidechain channel.

8.2.3　Comp 160 Compressor

1. **Threshold.** Sets the Threshold for the compressor.

2. **Compressor On / Off.** Enables / disables the compressor in the signal chain.

3. **Compression.** Sets the Compression ratio.

4. **Output Gain.** Adjusts the gain of the of the output amplifier stage. The Output Gain control does not interact with the compressor threshold.

5. **Key Listen.** Enables / disables the Key Filter.

6. **Key Filter.** Sets the Key Filter frequency.

7. **Sidechain.** Sets the sidechain channel.

8.2.4   Everest C100A Compressor

1. **Compressor On / Off.** Enables / disables the compressor in the signal chain. This can be controlled both by clicking or tapping on the LED or by clicking or tapping on the switch (Call-out #5).

2. **Attack.** Sets the Attack time for the compressor between Fast, Medium, and Slow.

3. **Release.** Sets the Release time for the compressor between Fast, Medium, and Slow.

4. **Gain.** Sets the output gain of the compressor. This level is monitored by the meter.

5. **Compressor On / Off.** Enables / disables the compressor in the signal chain. This can be controlled both by clicking or tapping on the switch or by clicking or tapping on the LED (Call-out #1).

6. **Gain Reduction.** Sets the amount of gain reduction applied to the signal.

7. **Key Filter.** Sets the Key Filter frequency.

8. **Key Listen On/ Off.** Enables / disables the Key Filter.

9. **Sidechain.** Sets the sidechain channel.

8.2.5   FC-670 Compressor

1. **Compressor On / Off.** Enables / disables the compressor in the signal chain.

2. **Input Gain.** Adjusts the gain of the input signal as it goes into the compressor.

3. **Threshold.** Sets the Threshold for the compressor.

4. **Time Constant.** Adjusts the fixed Attack and Release settings.

5. **Key Filter.** Sets the Key Filter frequency.

6. **Key Listen On/ Off.** Enables / disables the Key Filter.

7. **Sidechain.** Sets the sidechain channel.

8.2.6   RC-500 Compressor

1. **Compressor On / Off.** Enables / disables the compressor in the signal chain.

2. **Threshold.** Sets the Threshold for the compressor.

3. **Attack.** Sets the Attack time in milliseconds (ms) for the compressor from 0.5 ms (Fast) to 10 ms (Slow).

4. **Makeup.** Sets the amount of make-up gain applied to the signal by the compressor.

5. **Release.** Sets the Release time in seconds (s) for the compressor from 40 ms (Fast) to 500 ms (Slow).

6. **Key Filter.** Sets the Key Filter frequency.

7. **Key Filter On/ Off.** Enables / disables the Key Filter.

8. **Sidechain.** Sets the sidechain channel.

Power User Tip: The RC-500 Compressor has a fixed ratio of 3:1. This ratio will work well for a wide variety of instruments. If you would like more compression, lower the threshold while raising the input level. Lighter compression can be easily achieved by raising the threshold.

8.2.7   Tube P1B Compressor

1. **Gain.** Sets the amount of make-up gain applied to the signal by the compressor.

2. **Attack.** Sets the Attack time for the compressor.

3. **Ratio.** Sets the compression Ratio.

4. **Release.** Sets the Release time for the compressor.

5. **Threshold.** Sets the Threshold for the compressor.

6. **Attack / Release Mode.** When set to "Fixed", the Attack time is set to 1 ms and the Release time is set to 50 ms. When set to "Manual", these times are user definable by the Attack (#2) and Release (#4) controls.

7. **Compressor On / Off.** Enables / disables the compressor in the signal chain.

8. **Key Filter.** Sets the Key Filter frequency.

9. **Key On/ Off.** Enables / disables the Key Filter.

10. **Sidechain.** Sets the sidechain channel.

8.2.8   VT-1 Compressor

1. **Compressor On / Off.** Enables / disables the compressor in the signal chain.

2. **Threshold.** Sets the Threshold for the compressor.

3. **Attack.** Sets the Attack time for the compressor from 0.5 ms (Fast) to 10 ms (Slow).

4. **Release.** Sets the Release time in seconds (s) for the compressor from 40 ms (Fast) to 500 ms (Slow).

5. **Ratio.** Sets the compression Ratio.

6. **Gain.** Sets the amount of make-up gain applied to the signal by the compressor.

7. **Key Filter.** Sets the Key Filter frequency.

8. **Key Filter On/ Off.** Enables / disables the Key Filter.

9. **Sidechain.** Sets the sidechain channel.

8.3   Equalizer Plug-in Models

8.3.1   Alpine EQ-550
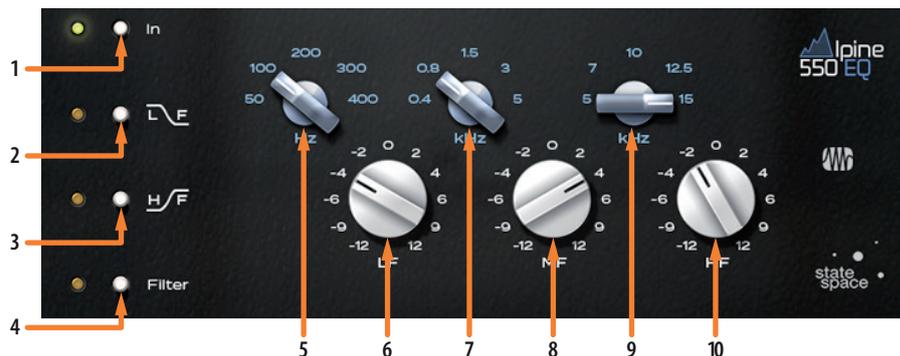
1. **EQ On/Off.** Enables / disables the EQ in the signal chain.

2. **L/F.** Toggles between a Peak and Shelf EQ for the low band.

3. **H/F.** Toggles between a Peak and Shelf EQ for the high band.

4. **Filter.** Toggles a Band Pass filter from 50 to 15 kHz on or off.

5. **Low Band Frequency.** Sets the frequency for the low band.

6. **Low Band Gain.** Sets the amount of gain for the low band.
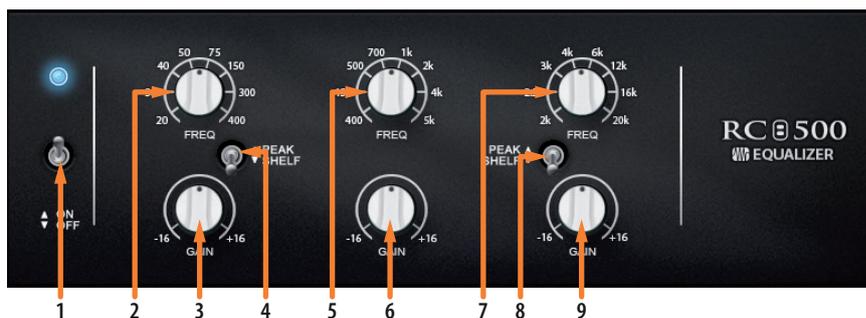
7.   **Mid Band Frequency.** Sets the frequency for the mid band.

8.   **Mid Band Gain.** Sets the amount of gain for the mid band.

9.   **High Band Frequency.** Sets the frequency for the high band.

10. **High Band Gain.** Sets the amount of gain for the high band.

8.3.2   Baxandall EQ

1.   **EQ On/Off.** Enables / disables EQ in the signal chain.

2.   **Low Cut.** This controls the cut-off frequency of the 12
     dB/octave Low Cut filter from 54 to 12 Hz.

3.   **Low Shelf.** Sets the threshold of the low shelf from 74 to 361 Hz.

4.   **Low Frequency.** Sets the amount of gain for the low band.

5.   **High Frequency.** Sets the amount of gain for the high band.

6.   **High Shelf.** Sets the threshold for the high shelf from 1.6 to 18 kHz.

7.   **High Cut.** This controls the cut-off frequency of the 12
     dB/octave High Cut filter from 54 to 12 Hz.

8.3.3   RC-500 EQ

1.   **EQ In/Out.** Bypasses the EQ circuit in the signal chain.

2.   **Low Band Frequency.** Sets the center frequency of the EQ's low-frequency band.

3.   **Low Band Gain.** Sets the attenuation or boost of the EQ's low-frequency band.

4.   **Low Band Shelf.** By default, the low band of the EQ is a
     standard peak filter with a fixed Q of 0.6. When the Shelf switch
     is engaged, the low band functions as a shelving filter.

5.   **Mid Band Frequency.** Sets the center frequency of the EQ's mid-frequency band.

6.   **Mid Band Gain.** Sets the attenuation or boost of the EQ's mid-frequency band.
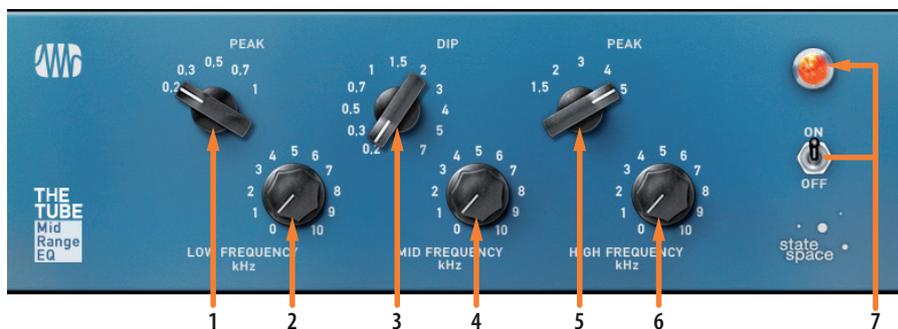
7. **High Band Frequency.** Sets the center frequency of the EQ's high-frequency band.

8. **High Band Shelf.** By default, the high band of the EQ is a standard peak filter with a fixed Q of 0.6. When the Shelf switch is engaged, the high band functions as a shelving filter.

9. **High Band Gain.** Sets the attenuation or boost of the EQ's high-frequency band.

8.3.4   Solar 69 EQ

1. **Low Band Frequency.** Sets the center frequency of the EQ's low-frequency band.

2. **Low Band Gain.** Sets the attenuation or boost of the EQ's low-frequency band.

3. **Mid Band Frequency.** Sets the center frequency of the EQ's mid-frequency band.

4. **Mid Band Gain.** Sets the attenuation or boost of the EQ's mid-frequency band.

5. **Peak / Trough.** When in Peak mode, the Mid Gain control will boost the midrange. When switched to Trough mode, the Mid Gain will cut the midrange and narrow the Q to function as a notch filter.

6. **High Band Frequency.** Sets the center frequency of the EQ's high-frequency band.

7. **High Band Gain.** Sets the attenuation or boost of the EQ's high-frequency band.

8. **Polarity.** Flips the polarity.

9. **EQ On / Off.** Enables / disables the EQ in the signal chain.
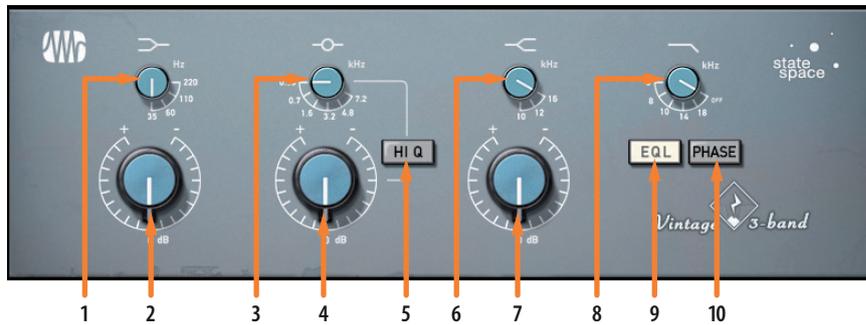
8.3.5   Tube Midrange EQ

1. **Low Band Frequency.** Sets the center frequency of the EQ's low-frequency band.

2. **Low Band Gain.** Sets the attenuation or boost of the EQ's low-frequency band.

3. **Mid Band Frequency.** Sets the center frequency of the EQ's mid-frequency band.

4. **Mid Band Gain.** Sets the attenuation or boost of the EQ's mid-frequency band.

5. **High Band Frequency.** Sets the center frequency of the EQ's high-frequency band.
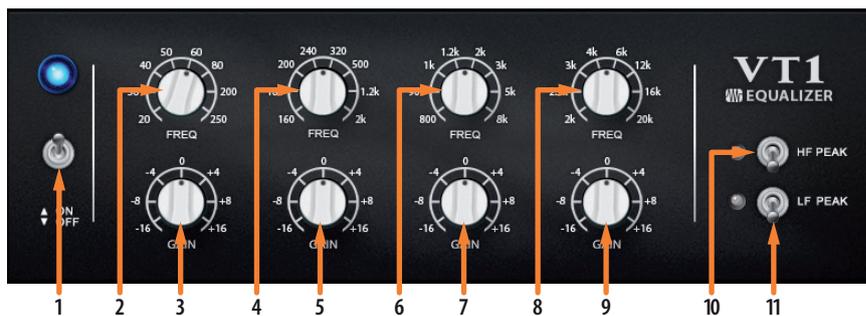
6. **High Band Gain.** Sets the attenuation or boost of the EQ's high-frequency band.

7. **EQ On / Off.** Enables / disables the EQ in the signal chain.

8.3.6   Vintage 3-band EQ

1. **Low Band Frequency.** Sets the center frequency of the EQ's low-frequency band.

2. **Low Band Gain.** Sets the attenuation or boost of the EQ's low-frequency band.

3. **Mid Band Frequency.** Sets the center frequency of the EQ's mid-frequency band.

4. **Mid Band Gain.** Sets the attenuation or boost of the EQ's mid-frequency band.

5. **Hi Q.** Switches between a wide and narrow Q.

6. **High Band Frequency.** Sets the center frequency
    of the EQ's high-frequency band.

7. **High Band Gain.** Sets the attenuation or boost of the EQ's high-frequency band.

8. **High Pass Filter Frequency.** Sets the frequency threshold for the High Pass Filter.

9. **EQ L.** This enables or disables the EQ in the signal chain.

10. **Phase.** Reverses the polarity by 180˚ at the output.

8.3.7   VT-1 EQ

1. **EQ On / Off.** Enables / disables the EQ in the signal chain.

2. **Low Band Frequency.** Sets the center frequency of the EQ's low-frequency band.

3. **Low Band Gain.** Sets the attenuation or boost of the EQ's low band.

4. **Low Mid Band Frequency.** Sets the center frequency of the EQ's
    low-mid frequency band. The low-mid band has a fixed Q of 0.6.

5. **Low Mid Band Gain.** Sets the attenuation or boost of the EQ's low-mid band.

6. **High Mid Band Frequency.** Sets the center frequency of the EQ's
    high-mid band. The high-mid band has a fixed Q of 0.6.

7. **High Mid Band Gain.** Sets the attenuation or boost of the EQ's high-mid band.

8.   **High Band Frequency.** Sets the center frequency
      of the EQ's high-frequency band.

9.   **High Band Gain.** Sets the attenuation or boost of the EQ's high band.

10.   **HF Peak.** When the Peak switch is engaged, the high band of
      the EQ becomes a standard peak filter with a fixed Q of 0.6.
      When it is disengaged, the high band is a shelving filter.

11.   **LF Peak.** When the Peak switch is engaged, the low band of
      the EQ becomes a standard peak filter with a fixed Q of 0.6.
      When it is disengaged, the low band is a shelving filter.

Added bonus: PreSonus' previously Top Secret recipe for…

Rice Dressing

Ingredients:

- 1 lb ground beef
- 1 lb chopped chicken liver
- 1 onion (diced)
- 2 green peppers (diced)
- 4-6 celery stalks (diced)
- 2 garlic cloves (minced)
- ¼ C. chopped fresh parsley
- 3 C. chicken stock
- 6 C. cooked rice
- 1 Tbs. oil
- Salt and pepper to taste
- Cayenne pepper to taste

Cooking Instructions:

1. In a large pot, heat oil on medium high and add meat, salt, and pepper to taste. Stir until meat begins to brown.
2. Lower heat and add all vegetables. Cook until onions are transparent and celery is very tender. Add stock as necessary to prevent burning.
3. Stir in cooked rice. Add remaining stock and simmer on low until ready to serve.

PreSonus Plug-ins

PreSonus Hub, Ampire, Ampire High Density Pack, Analog Effects Collection, Channel Strip Collection, Fat Channel XT, and VU Meter

Reference Manual