



VETTA II

Pilot's Handbook

An in-depth exploration of the revolutionary technologies and tonal pleasures of the Vetta II.

The serial number can be found on the back panel of your Vetta II. It's the number that begins with "(21)". Please note it here for future reference:

SERIAL NO: _____

WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

CAUTION: To reduce the risk of fire or electric shock, do not remove screws. No user-serviceable parts inside. Refer servicing to qualified service personnel.

CAUTION: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



The lightning symbol within a triangle means "electrical caution!" It indicates the presence of information about operating voltage and potential risks of electrical shock.



The exclamation point within a triangle means "caution!" Please read the information next to all caution signs.

YOU SHOULD READ THESE IMPORTANT SAFETY INSTRUCTIONS KEEP THESE INSTRUCTIONS IN A SAFE PLACE

Before using your Vetta II, carefully read the applicable items of these operating instructions and safety suggestions:

1. Obey all warnings on the Vetta II and in this Pilot's Handbook.
2. Do not place near heat sources, such as radiators, heat registers, or appliances which produce heat.
3. Guard against objects or liquids entering the enclosure.
4. Connect only to AC power outlets rated 100-120V or 230V 47-63Hz (depending on the voltage range of the unit; refer to the back panel). Current ratings should be 4A for the 120V range and 2 A for the 230V range.
5. Do not step on power cords. Do not place items on top of power cords so that they are pinched or leaned on. Pay particular attention to the cord at the plug end and the point where it connects to the amp.
6. Unplug your Vetta II when not in use for extended periods of time.
7. Do not perform service operations beyond those described in the Vetta II Pilot's Handbook. In the following circumstances, repairs should be performed only by qualified service personnel:
 - liquid is spilled into the unit
 - an object falls into the unit
 - the unit does not operate normally or changes in performance in a significant way
 - the unit is dropped or the enclosure is damaged
8. Prolonged listening at high volume levels may cause irreparable hearing loss and/or damage. Always be sure to practice "safe listening."



Please Note:

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WELCOME TO VETTA

More Than Just An Amplifier

First off, thanks for buying a Vetta and taking a great big step into the future of guitar amplification! You now own extremely detailed models of vintage, classic, modern, and original guitar amplifier tones as well as a collection of virtual stompboxes, rack gear, speaker cabinets, switchers and routers. In short, the most complete and toneful guitar system ever created.

Who is Line 6?

As you may know, Line 6 first came on the scene way back in 1996, with a new kind of guitar amplifier—the first to put digital software modeling technology to work in a combo amp for guitarists. In order to pioneer this technology, we had set ourselves the modest task of understanding everything there is to know about all the great guitar amps of history. We knew it meant countless hours of playing our guitars with an endless parade of lust-inspiring amps—but for the good of the world, we were willing to do it.

So we began what has continued to be our constant quest, assembling the world's finest collection of amplifiers, each one a uniquely excellent example of an amp design recognized by guitarists the world over as a true “tone classic.” We plugged in, we played, we probed, we measured, we dissected—and we began to discover a new knowledge to change the world of guitar.

With a guitar in one hand and modern computer measuring gear in the other, we put our amps through their paces and got them to give up their secrets—a guitar pickup output, after all, is an electronic signal, and tubes and the rest of the guitar amplifier electronics, speakers and cabinets are really just a complex form of signal processing. We figured out how to make software to emulate these world-class amplifiers. And thus distilled the noble history of guitar tone heritage into a

revolutionary, patented DSP (digital signal processing) software-based modeling technology to power the first Line 6 amplifiers and bring a new revolution of tone and technology to guitarists.

The next stop for Line 6 was the world of direct guitar recording and preamplification. We stocked up on the coffee, snacks, strings and more gear—the basic essentials of the guitarist’s lifestyle—and turned our tone technologists loose to solve the age old problem of getting great live amp tone when recording in the studio. Behind the security-sealed doors of our research laboratories, electric guitars wailed, test tones warbled, microphones got poked and prodded, a few people got shocked by power tubes or filter caps (those things can pack a wallop!) and the magical mysteries of acoustical physics were gradually revealed as never before.

When it was finally time to get out and see the sunshine again, we emerged to meet the world with a world-changing direct recording technology we call A.I.R. (which officially stands for Acoustically Integrated Recording outputs), and an idea for something we called POD. We realized we were gonna need a bigger building. So we got a new place, kept cranking out the amps, and expanded the assembly line to spawn PODs destined to become the choice of platinum recording artists the world over—as well as regular everyday guitarists—forever changing the world of guitar recording.

With the new building came space to stretch out, and our thoughts turned from our amps to our feet. Pretty handy for walking around, but they become *really* useful when they’re working all those great stompboxes that have been as much a part of the electric guitar experience as the amplifier. So we began a new quest, assembling the most in demand and hippest stompboxes ever made in order to put them through the same rigorous modeling procedures.

Many was the night we had to stay up late drinking way too much Pepsi, comparing the subtle appeal of different delay pedals, and the weekends we had to spend hauling vintage effects home for more testing in our personal studios—yes, it’s a rough job, but someone has to do it. Much caffeine, careful study and a whole lot of strings later, we proudly premiered our series of Stompbox Modelers and their rack mounted cousins, the Studio Modelers. Each one contains a dream collection of lovingly crafted digital software models resulting from our meticulous study of a carpet-full of the greatest effects of guitar history.

Then came our biggest challenge. Ideas that had been fermenting in our lab for years were finally ready to be distilled in a complete ground-up reworking of our modeling technology. This was the chance to go far beyond everything we'd done, combining the knowledge and unique technological tools we'd created along our way with a whole new round of innovation. That's when we began a top secret project to make the greatest guitar amp ever known.

More strings, more snacks, a few new guitars (you've gotta keep things fresh) and we were ready for our new mission. As unsuspecting suburban life continued to spin on around us, we spent our days and nights crafting a new method for emulating the amplifier and effects electronics with far greater detail than ever before. We built brand new software components of each critical stage of the signal chain. All the classic amps and effects in our collection got a new round of study. We found new ways to duplicate the effects of tubes and other electronic components with a quality and exactness that had never been achieved before. We took a thoroughly fresh approach to our direct out technology, to insure that what goes to a recording or live sound system can be every bit as satisfying as what comes out of a live amp setup. And, to put it all together, we created a completely new way to 'wire' these software parts together to work their combined magic. The result was not only vastly more accurate models based on the great vintage and classic amplifiers and effects in our collection, but also fresh hybrid amp models and completely unique and original amp tones that respond in ways physical circuits never could. We call this new modeling technology "Point to Point Interactive Modeling," and it's what's pounding along in the heart of your Vetta.

Vetta Then And Now

So, as our little walk through the halls of history shows us, Vetta is the culmination of years of research in service on Line 6's endless quest for the great guitar tone. Of course, we couldn't leave well enough alone (being an endless quest and all), and decided to further expand on the ultimate guitar amp. Thanks to Vetta's expandable hardware architecture and it's re programmable software, we managed to squeeze in several new tricks without having to leave the original Vetta owners behind. Behold, Vetta II: Even more amp models, more sonic control, and now a comprehensive digital interface that introduces the perfect marriage between Vetta and Variax, the world's first Digital Modeling Guitar.

Welcome to Vetta • Vetta Then And Now

I • 4

Since each and every Vetta ever produced can be upgraded to Vetta II's functionality, we've decided to simplify the text in this manual (and save a little ink) by just referring to this family of products as Vetta. You can add the "II" any time you like. So, now that you know the history of Vetta, it's time to fire it up and find out exactly what this puppy can do...

REALLY QUICK START GUIDE

POWER: Connect the power cord between Vetta's rear panel and your power outlet. Don't turn the power on yet. If you've got a Vetta HD, hook up your speakers.

FBV: Connect the Line 6 FBV foot controller to Vetta's rear panel (the older Line 6 Floor Board does *not* work with Vetta).

PLUG IN: Plug your guitar into Vetta's GUITAR input, or your Variax into the rear panel's VARIAX IN with the included Variax cable. Turn Vetta's MASTER VOLUME knob down. Flick Vetta's POWER on. Turn MASTER VOLUME up.

PRESETS: Press the FACTORY button (it lights). Turn the knob near Vetta's smaller display to select from the 64 Factory channels. There are 16 Factory Banks; each Bank has four channels (labeled A, B, C, D).

AMP TONE KNOBS: Look at the amp tone knobs (DRIVE, BASS, MID, TREBLE, PRESENCE, VOLUME). The two ON buttons to the left turn Vetta's two *simultaneous* amps on and off. The KNOBS buttons decide whether the amp tone knobs control Amp 1, Amp 2, or both (press both buttons at once).

AMP 1 & AMP 2: Press *only* Amp 1 on. Spin the AMP MODEL knob, watch the big display. Press *only* Amp 2 on, turn the Amp Model knob to set the model for Amp 2. Turn them both on and experience two amps at once.

EFFECTS: Turn the Reverb knob to 12 o'clock. Look at the 12 Effect On/Off buttons on the top right of the amp. Press the REVERB button. Play guitar. Press REVERB again. Play. Get it?

EDITING: To edit Reverb, press EDIT. Press REVERB. The knob below MODEL on the display now sets the Reverb model. Turn the PAGE knob for more Reverb pages.

GLOBAL CONTROLS: Unlike most everything else, these knobs don't get stored when you save. Reverb can be edited and saved per channel, and then this knob adjusts the overall Vetta experience 'wetter' or 'drier' to suit your taste. Set the three Global Control knobs straight up at 12 o'clock for the standard sound experience.

SAVE: The SAVE button saves your changes. Read on for more details.

KNOBS, BUTTONS, FLASHING LIGHTS

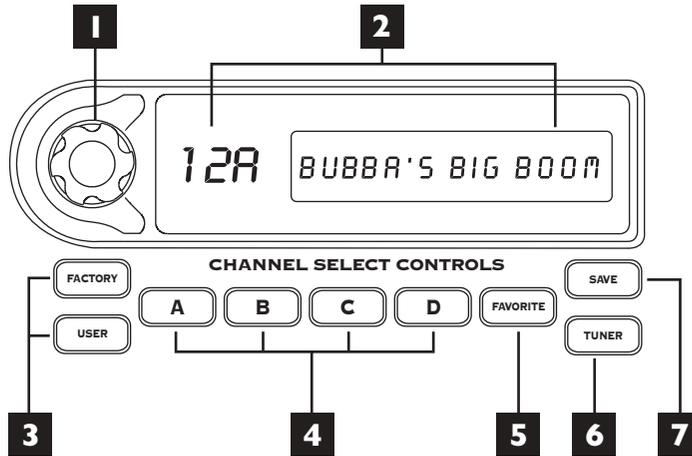
Front Panel: The Big Picture

We realize that on first glance at your Vetta, you probably thought to yourself, “My, what a lot of knobs and buttons and flashing lights!” You’re right, we’re not gonna make any bones about it. There they are. On a *guitar amp!*

There’s no need for panic, though. We’ve organized everything so that using your Vetta can be as simple or as complex as you want. If you want to use only the incredibly toneful amp models and ignore the rest of the amp, you can easily do that. If you want to tweak everything, we’ve made it easy to do that as well. And all thanks to the knobs and buttons and flashing lights.

To help you get it all sussed out, let’s break down the control panel of your Vetta into five different sections: Navigation, Amp Controls, Effects, Functions, and Global Controls, and let’s look at these one at a time.

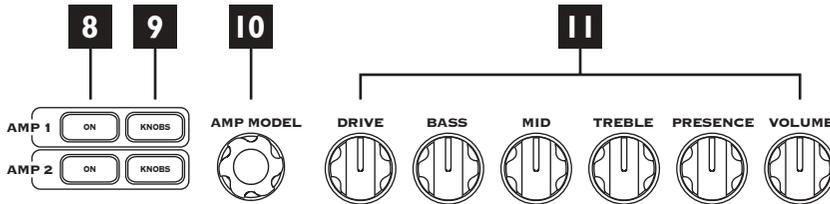
Navigation



This is where you choose which section of memory (Factory or User) you want to use, as well as which Channel you want. This is also the place to save, and select the tuner.

1. **Select Knob:** Use this knob to choose which channel you want to use. Each area (Factory or User) has 16 banks of 4 channels each for a total of 128 channels.
2. **Channel Display:** Shows you which channel you have selected both alphanumerically (e.g. 12A) and by channel name (e.g. Bubba's Big Boom).
3. **Factory/User Buttons:** These switch between the Factory and User sections of Vetta's memory. User memories are rewritable (you can change them). Factory are non-rewritable. Vettas leave Line 6 with the same thing in Factory and User memory.
4. **Channel Select Buttons:** These select between the channels in the current bank. A, B, C, or D, it's easy as 1-2-3... 4?
5. **Favorite Button:** One button instant access to your favorite channel. The Basic Operations chapter tells you how to choose a channel as your Favorite.
6. **Tuner Button:** Press it once to turn on the built-in chromatic tuner. Press it a second time to turn the tuner off. There's that easy-to-use technology again.
7. **Save Button:** Press this when you want to save something, whether it's the current channel, custom settings for amps or effects, or even sending Vetta's memory out the MIDI port. For more details about saving stuff, see the Basic Operations chapter.

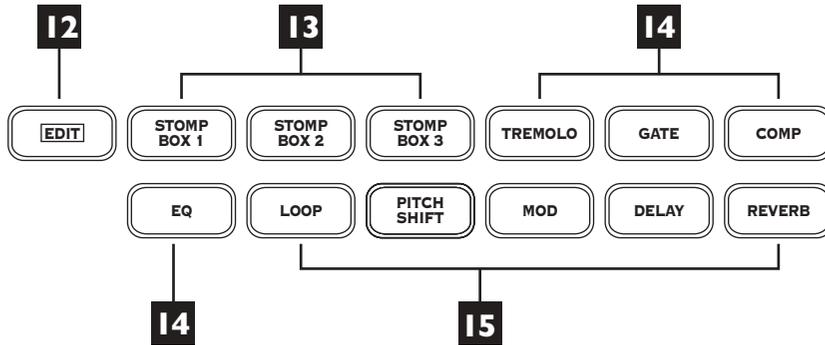
Amp Controls



In this area, you select amp models, turn them on and off, and dial in your basic amp tones.

8. **Amp Buttons:** These buttons let you turn Amp 1 and Amp 2 on and off (or, more accurately, toggle between on and standby states for an amp). As you might guess, if it's lit, it's on, and if it's dark, it's on standby.
9. **Knobs Buttons:** Select which amp will be controlled by the Amp Control knobs. Once again, lit indicates it's the amp you're adjusting, dark means it's not. Press both buttons at once, and you can lock their controls together and adjust them both at once (more about this in Basic Operations).
10. **Amp Model Knob:** Use this to select just which one of Vetta's amazing amp models is going to run in the Amp 1 or Amp 2 slot for the sound you're creating.
11. **Amp Tone Control Knobs:** Drive, Bass, Mid, Treble, Presence, and Channel Volume. They do just what you'd expect them to do for the selected amp(s). In the case of amp models that emulate classic equipment, these tone controls are carefully crafted, for each model, to mimic the behavior of the controls of the original unit that we studied to create the amp model.

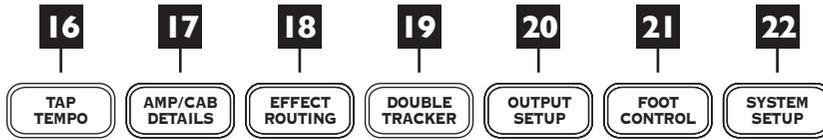
Effects



Here's where you control and setup all your effects. The basic brain dead mode of operation is light on, effect on. Light off, effect off. All the effects work at the same time (with the exception of Pitch Shift and Modulation), to achieve any level of moderation or excess you desire. Press the Edit button to dive deep into the details of any effect and tweak it to make it your own.

- 12. Edit Button:** When Edit is lit, we call this “Edit Mode”, and the larger Vetta display (just to the left of this button) can show Edit Pages for fine tuning effect details. The most important things to know about Edit Mode are that the little knobs below the display set the values shown on the display, with the PAGE knob on the far right selecting different pages for the currently selected effect. An effect selected for display/editing flashes its light. A first press of an effect button in this state selects it for editing, and additional presses of the same button turn the effect on and off. See the Basic Operations chapter for the details.
- 13. Stompbox Buttons:** These buttons turn the three stompbox effects on or off. As just described, when Edit mode is on, they also call up the stompbox effects' Edit Pages so you can fine tune stompbox settings.
- 14. In-Line Effects Buttons:** Turns the appropriate effects on or off (Tremolo, Gate, Comp and EQ), or selects it for editing, as above.
- 15. Routable Post Effects Buttons:** Turns the appropriate effect (or the Effects Loop) on or off, or selects it for editing, as above.

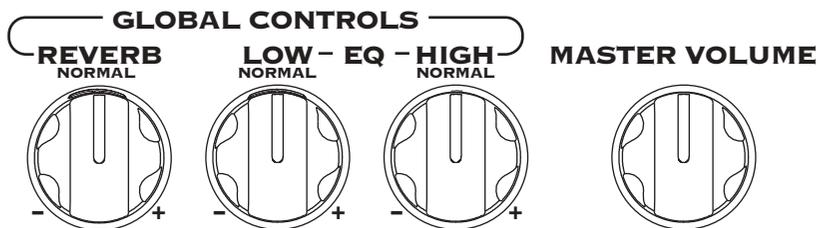
Functions



All of these buttons except Tap Tempo and Double Tracker light up when you press them the first time, and turn off with your second press. When lit, the larger Vetta display is used to display settings related to the selected Function.

- 16. Tap Tempo Button:** This handy button can be used to set the time for delays, tremolos, choruses, vibratos, phasers, flangers, or any other effects that have a time-based element. For each effect, you can determine whether the Tap Tempo will affect it, and how, on a channel-by-channel basis. If you're into synchronized effects, you need to know all about this stuff; see the chapters on the Stompboxes and Post Effects for all the details.
- 17. Amp/Cab Details Button:** Press this when you want to choose which speaker cabinet model is assigned to which amp and set the panning of the amps in the stereo field. This is also where you can assign Variax settings for each of Vetta's channels.
- 18. Effects Routing Button:** Lots of fun to be had here. Press this to move stompboxes, wah, volume pedal, and post effects around in the signal path.
- 19. Double Tracker Button:** Press this to turn on or off the Double Tracker effect. This modern wonder simulates the sonic experience of playing along with a second guitar player, and does it in real time. To edit the Double Tracker's parameters, press the Edit button then press the Double Tracker button. Please note that Double Tracker only works on channels using two amps.
- 20. Output Setup Button:** Press this to display the pages for setting up the Line 6 exclusive A.I.R. II processing for the direct outs, turn the speakers on and off, turn Vetta's unique 'Wide' mode on and off, set the level for the Direct Outs, or setup the Digital Outputs.
- 21. Foot Control Button:** Give this a push to set details of operation for the FBV Foot Controller.
- 22. System Setup Button:** Press this to adjust the contrast of the displays, choose which MIDI channel Vetta will use, and other basic housekeeping tasks. This is also where you can turn On or Off the guitar input, Variax input and assign the digital inputs.

Global Controls



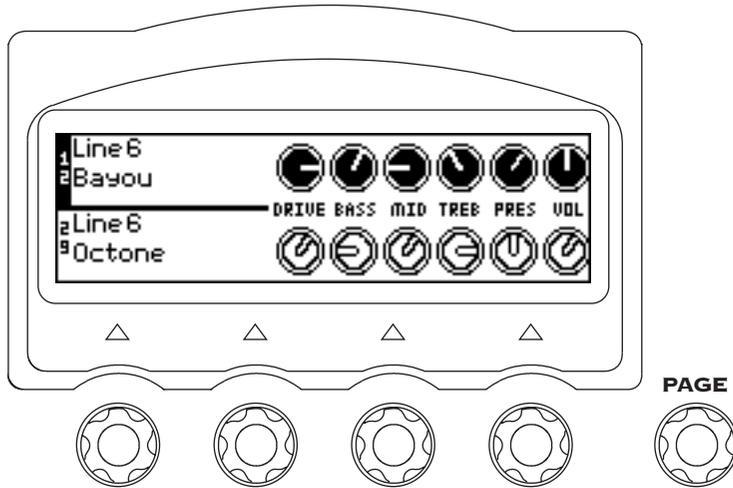
These knobs give you control over Reverb, your overall bass and treble, and volume. Unlike most other things on Vetta, the positions of these knobs are NOT saved when you save a channel.

The basic idea is that, when you are at your gig, recording session or just jamming, you may find that the space you're playing in makes it desirable to make a temporary tweak to your Vetta's overall sound. Let's say you're playing in a place that's all brick walls, and things are just way too bright. Or maybe it's nothing but sumptuous velvet, and your high end seems to have disappeared. In either case, the Low and High EQ knobs should help you improve the situation. Straight up, the knobs have no effect (there's a little notch to make it easy to set them to this 'Normal' position). Turn clockwise past 12 o'clock for more EQ, turn counterclockwise below 12 o'clock for less EQ. This EQ is independent of, and unrelated to, the Amp Tone Controls Bass, Mid and Treble.

The Reverb knob increases or decreases the amount of Reverb you'll hear when any Vetta channel is selected and the Reverb is on. This is designed to give you the basic experience you expect from Reverb on a guitar amp: set the knob high and everything you do with the amp has a lot of reverb; set it low and there's less reverb. At the minimum setting, you hear no reverb at all, regardless of whether the Reverb effect's button is on or not.

In general, we recommend that you leave the Reverb knob set to its 12 o'clock 'Normal' position any time that you're setting up sounds that you plan to save or use regularly. Set the amount of Reverb that you want for the particular channel by pressing the Edit button to light it, pressing the Reverb button to display its Edit Pages, and turning the little knob below the MIX value shown on Vetta's larger display. Then press SAVE to save the channel with that Reverb setting, and if you find you need a bit more overall Reverb (or less) when you get to the gig, grab the Reverb knob!

Main Display



The normal display state, called the Amps At A Glance Page, shows which amp models you've got going, and how their Tone Controls are set; this is detailed in the Basic Operations chapter. In this state, the knobs below the display don't function.

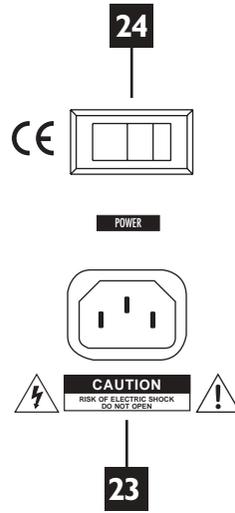
At other times, the red arrow lights between the little knobs and the display will light to show that one or more of the knobs is ready to do something. When editing a stompbox, for instance, the display will look something like this, and the little arrow lights will be lit to show that their knobs set things on this page:



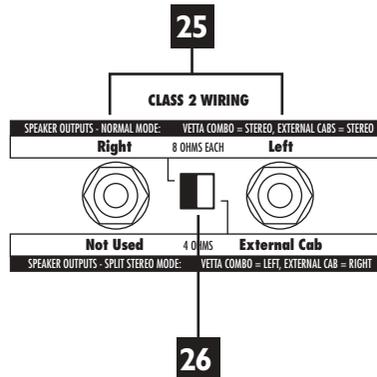
The words 'Page 1/2' at the top right box tell you this is the first of two different Edit Pages for this stompbox. The Page knob moves you through these pages. These versatile knobs and display make frequent appearances in the Basic Operations chapter.

Vetta Combo Rear Panel Power and Speaker Outs

And now we come to the combo's 'gazintas and gazoutas', as audio engineer types say:



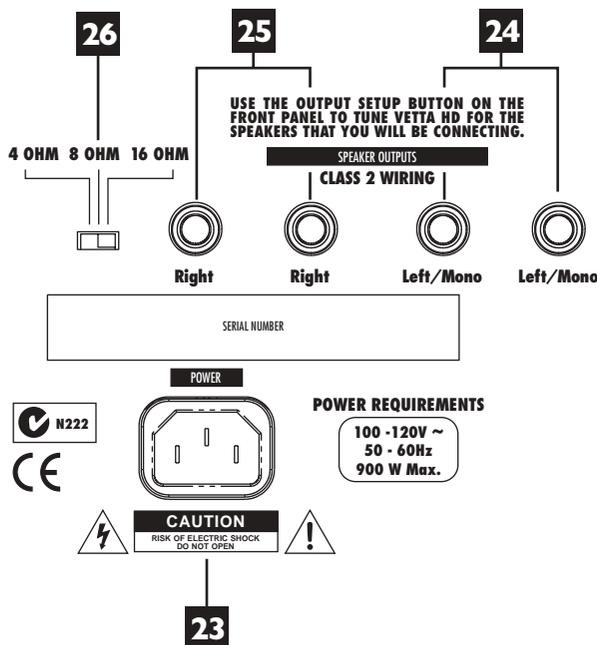
- 23. **Power Connector:** Where the power cable goes. We'll let you decide which end.
- 24. **Power Switch:** The original digital control: one finger determines on or off.



- 25. **External Speakers:** These jacks are for connecting external speaker cabs.
- 26. **Speaker Configuration Switch:** Selects between Split Stereo and Normal modes.

Vetta HD Rear Panel Power and Speaker Outs

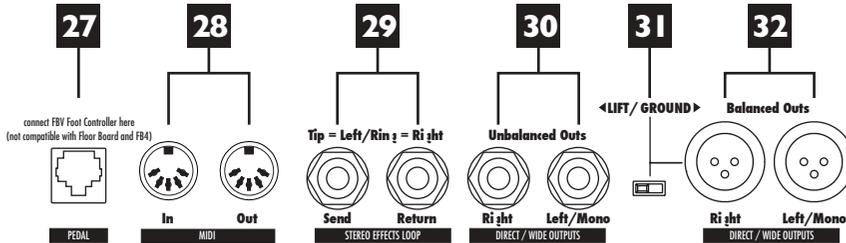
Whereas the Vetta HD has things arranged somewhat differently:



- 23. Power Connector:** Little bitty electrons flow in here to make things work. Connect the supplied cable to the source of electrons, then flick the power switch that's on the front panel to let the electrons in.
- 24. Left/Mono:** These two jacks are wired in parallel and output the left signal (if you're running in stereo) or the mono signal if you're running mono. Be sure you've chosen the corresponding stereo or mono operation on the Vetta front panel as described in page 4•35.
- 25. Right:** These jacks carry the right output when you're running stereo.
- 26. Ohm Selector:** Be sure to set this switch to match the ohm rating of the speaker cabinets that you are connecting to your Vetta HD. If this switch and your speaker cabinets' ohm ratings are mismatched, your Vetta will sound wrong.

Vetta Combo & HD Common Rear Panel Connections

The Vetta combo and HD have these rear panel connections in common:



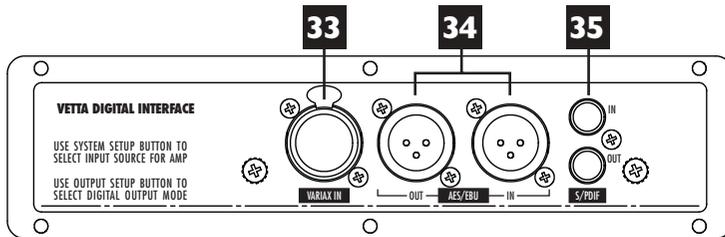
- 27. Pedal Connector:** Connect your FBV foot controller here.
- 28. MIDI In/Out:** Hook up MIDI cables for doing MIDI stuff here. Like the rest of your cables, you should get some decent ones for the job, with nice molded plastic ends.
- 29. Stereo Effects Loop Send/Return:** Stereo Send and Return for the programmable stereo effects loop of your Vetta. Use a pair of 1/4-inch TRS to dual 1/4-inch TS cables (commonly called 'Y' or 'insert' cables), one for the send, one for the return. More detail, plus pictures are to be found on page 4•14.
- 30. 1/4-inch Direct/Wet Outputs:** Normally, these are your Direct Outs, for recording, or sending a feed to a house sound system when you're playing live. These outputs utilize a new, second generation of Line 6's exclusive A.I.R. processing which has made Line 6 products like POD the undisputed standard for recording guitar direct. The level at these outputs is set via the Outputs Setup button. See page 4•32 for details.
- Vetta also has a 'Wide Mode' which lets you use these outputs for the kind of wet cab/dry cab setup employed by some guitarists, and which is normally only possible with a much more elaborate switching and routing system (all of which Vetta takes care of for you). See page 4•34 for more on Wide Mode.
- 31. Ground Lift Switch:** If you're getting ground loops when connecting Vetta's Direct/Wet Outs to other equipment, use this to lift the grounds of the XLR Direct Outs *only*. The unbalanced 1/4-inch outs don't have separate grounds that can be lifted.
- 32. XLR Direct/Wet Outputs:** Same thing as the 1/4-inch outs, only these are the connections the pros typically use, and the Ground Lift Switch works with these.

A quick note about direct outs:

When using the direct outs, there can be a ‘pop’ on the outputs on power up or power down. We recommend that you either disconnect the direct outs or power down whatever the direct outs are connected to before powering your Vetta on or off.

Vetta Digital Interface Card

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33. Variax RJ-45 Digital Input: This allows for digital connection from the Variax modeling guitar to the Vetta. Vetta will supply power to the Variax from this connection. Variax settings can be stored and recalled within Vetta channels when this input is used. Connection can be made with the included locking Variax cable or with any standard CAT 5 Ethernet computer cable.

34. AES/EBU digital I/O: This allows for digital connection to other digital devices with AES/EBU interfaces such as effect processors, digital mixing consoles, digital recorders or computer interface cards. Up to 24-bit, 96kHz quality.

35. S/PDIF digital I/O: This allows for digital connection to other S/PDIF digital devices such as effect processors, digital mixing consoles, digital recorders or computer interface cards. Up to 24-bit, 96kHz quality.

Selection of the Variax input, AES/EBU input or S/PDIF input can be found on page 2 of the System Setup menu, as described on page 4•39.

The sample rate and resolution of the AES/EBU and S/PDIF outputs can be set on page 4 of the Output Setup menu, as described on page 4•36.

BASIC OPERATIONS

Selecting Factory/User Memory

From Vetta

Vetta has two sections of memory (Factory and User) of 64 Channels each. These are organized as 16 banks of 4 channels each, which gives us a total of 128 Channel Memories. Press the Factory or User button to select one or the other.

From the FBV

From the FBV foot controller, simply press the Bank Up and Bank Down switches simultaneously to toggle between Factory and User.

Selecting a Channel

From Vetta

Turn the knob to the left of Vetta's smaller display to spin through all the channels. You'll spin through the four channels of a Bank as you go. So, if you start at Bank 1, you'll get 1A, 1B, 1C, 1D and then 2A, 2B, etc. Press the A, B, C, D buttons to select one of the four channels in the current bank. And, because we're all creatures of habit, we've given you a Favorite button for easy, instant access to any one of the Vetta's channels without any knob turning required (see page 4•26 for details). Channel selection from Vetta is normally 'instant access', but you can also choose a 'deferred' mode if you prefer (see page 4•40 for details).

From the FBV

On the FBV, you use the Bank Up or Bank Down switches to select a new bank, but a new channel will not load until you press one of the Channel Select switches. This enables you to switch to channels that are several banks away without you (or your audience) having to hear all the channels in between.

From MIDI

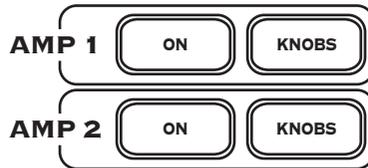
Vetta responds to MIDI Patch Change commands. Patch Changes 0-63 select the User Channels. 64-127 select the Factory Channels.

Editing Amps, Cabs & Variax

Working With One Amp

One of the revolutionary features of Vetta is its ability to provide two totally independent amp models at the same time. As amazing as this is, and as hard as it can be to go back to a single amp after you've gotten used to the whole new world of sonic possibilities opened up by this feature, sometimes you only want to use one amp at a time. Here's how.

4 • 2



Standby Mode

The ON knobs are like the standby switches on old tube amps. Simply press an ON button to turn an amp on (light on) or put in standby mode (light off). Amp 2 is in Standby in the example shown below:



Note that as you switch from two amps on to only one amp on, the amp that's left on may also change its location in the stereo field. The 'Amp Panning' page of the Amp/Cab Details buttonbutton sets separate panning depending on whether an amp is on by itself or with a second amp. (See 'Changing Amp Panning', page 4•3.)

Remember that, although you may choose to work with a single amp, two amps are always available in every stored channel. The name of the model assigned to the amp that is in Standby is displayed so you know what you're gonna get when you turn an amp on.

Working With Two Amps

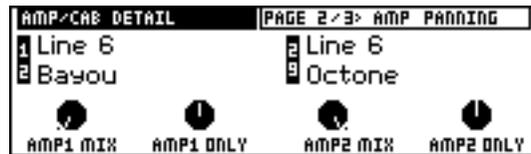
Switching between Amps

When you're working with two amps, the KNOBS buttons select which amp you want to control with the Drive, Bass, Mid, Treble, Presence, and Volume knobs. If you press both KNOBS buttons at the same time, the controls of the two amps will be locked together (see 'Synchronized Editing' page 4•5). You can tell which amp is being controlled by looking at the display. The amp that's selected will have its knobs highlighted black, like Amp 1 below:



Changing Amp Panning

Whether you're working with a single amp, or two at once, you have complete control over where they're placed in the stereo field. You may want to have your two amps panned hard left and hard right when they're both on (which gets really exciting when you're using separate left and right cabs with Vetta HD, or the Vetta combo with an external cab in Split Stereo Mode as described on page 4•43), but then when you kick your FBV switch to turn on only one you may want that amp to be panned center. To edit your amps' panning, press the Amp/Cab Details button. Use the Page knob to select Page 2, 'Amp Panning':



AMP1 MIX sets the pan of Amp 1 when it and Amp 2 are both on. AMP1 ONLY sets pan when only Amp 1 is on. Same idea for the AMP2 controls. Press Amp/Cab Details again when you're done, and this display will be dismissed.

Selecting an Amp Model

When you've got 2 amps on, you use the KNOBS buttons to select which amp you want to control, Amp 1 or Amp 2 (or both). Try pressing the KNOBS buttons to get only Amp 1's lit, and turn the Amp Model knob to select the amp model you want. For a complete list and description of the available amp models, see page 5•1, or you can see just see a list without the descriptions (less interesting reading, but faster) in the Amp Models Appendix on page 10•1.

Editing One Amp's Settings

OK, now here's the really hard part. With Amp 1 still selected, use the knobs labeled 'Drive', 'Bass', 'Mid', 'Treble', 'Presence', and 'Volume' to control drive, bass, mid, treble, presence, and channel volume, respectively. As you move the knobs, you'll see their movement mirrored in the large display. (We call this view 'Amps At A Glance'.) Whew! Told ya it was gonna be hard, didn't we? In a second we're gonna get really fancy and do both amps at the same time, but first, let's talk some relativity theory.

Absolutely Relative

There are two different ways that Vetta can respond to you as you turn the amp knobs. These are called Absolute and Relative knob control. You choose between them by pressing the System Setup button and turning the small knob under Knob Mode (page 4•41 has got the details). Here's how Absolute and Relative work:

In Absolute mode, when you move a knob, its setting will immediately jump to where the knob is pointing, regardless of where it was set before. In other words, if you bring up a new channel that has the Treble set to 4, but the Vetta's physical Treble knob itself is currently pointing at 8 from the last sound you were messing around with, when you move the Treble knob, the setting will immediately jump to 8 and then follow along as you turn. This is handy because it means that, if you know you like the Bass knob pointing a certain place with a certain Amp Model, you just point the physical knob there and you're cool. Also, once you've turned all the knobs while editing a sound, all the knobs are pointing the same way as the 'virtual' knobs in the large display. Absolute mode is great for creating new tones from scratch or making big changes in existing sounds, but its one drawback is that if you liked the sound that was in the channel and had only wanted to make a small tweak to it, you have to turn the physical knob to where the setting's virtual knob was before you can make that small adjustment. That's why there's Relative mode.

In Relative mode, the idea is that the knobs work, as all knobs generally do, as your basic more/less controls. When you turn one of the Amp Control knobs up, the sound will simply be adjusted up without any jumping to the value of the physical knob. Same thing going down. Seems cool, right? The only downside is that the *physical* knob doesn't generally point to where the *virtual* knob points (as the next paragraph explains in by-the-numbers detail). Depending on the way you dial up amp sounds, this may never matter for you. If you don't care whether Bass happens to be set to 2 or 8, and you just want to get more or less, Relative Mode may be just the thing for you. And you can always look at the display if you do happen to want to see what the setting is.

In the interests of those who hunger for a sense of completeness, let's return to our previous example, but this time let's see what happens if you're in Relative rather than Immediate Mode for the knobs. If your channel is set to a value of 4 for Treble and the physical Vetta Treble knob is pointing to 8, then when you start turning the physical knob down from 8, you'll see on the Amps At A Glance display that the Treble value doesn't jump to 8. Instead, it simply scales down from 4, reaching the minimum setting when the physical knob reaches the minimum. The same thing happens when you turn the knob up: the setting is adjusted upward toward its maximum as the knob is turned to reach the physical maximum.

Synchronized Editing (A New Olympic Event?)

As we touched on briefly in the section on switching between amps, you can control both amps simultaneously by locking their controls together. This can be very handy if you've got a basic relation that you like between the two amps, and you want to experiment with overall tonal subtleties.

The most important basic stuff to know about this is that, when you press the KNOBS buttons for Amp 1 and 2 at the same time, you can now control them both together. Turn any amp control knob above 12 o'clock, and the controls for both amps will be turned up together. Turn down below 12 o'clock, and the controls for both amps will be turned down together. And if you turn back to 12 o'clock, the original relationship between the two amps will be restored. The really cool thing is that the relative settings of the two amps will be maintained as you turn them up and down. So if Amp 1 has Bass turned higher than Amp 2 when you start, this relationship will be maintained. And, like we say, if you want to get back where you started, just turn the knob to 12 o'clock.

If you're one of those people who really likes the step by step approach, try this:

1. Turn ON two amps, and press KNOBS for Amp 1 only. Set Bass to 9 o'clock.
2. Press KNOBS for Amp 2 only. Set Bass to 3 o'clock.
3. Press both KNOBS buttons together to engage Synchronized Control....

You should see something like this on Vetta's larger display:



If you've followed the steps, your Vetta's physical Bass knob should be at the 3 o'clock position. Now, start turning Bass down and watch the display. As you turn, the two amps' settings will remain offset, until Amp 1 "bottoms out." Keep turning down, and you'll see Amp 2's Bass eventually bottom out, too. Now, start turning up and you'll see that Amp 2 (which, remember, started out at the higher setting) will begin turning up while Amp 1 remains at the minimum setting. Keep going up, and once Amp 2 starts moving past 12 o'clock, Amp 1 will start turning up, too. The offset between the two amps has been maintained even though you bottomed out the control. The same thing happens as you turn the knob up. And, as we say, if you want to restore the initial setting of the two amps, just turn back to 12 o'clock.

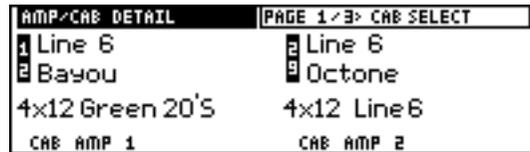
Thus, the two amps' controls can move together in harmony, even as each retains its own individual tonal identity. It's the kind of harmonious relationship management that we all wish we could attain, isn't it?

Cabinets

Being able to mix and match speaker cabinets has always been an important part of the guitarist's tonal arsenal. It's a great way to radically alter the sound of an amplifier. You may have a combo amp that you've been using for years, and you figured you've heard everything it has to offer. But then you hook its speaker outputs up to your 4x12 cabinet, and suddenly your old dog is showing you some new tricks! Fortunately, with Vetta you won't need a warehouse, a semi-trailer or frequent visits to a chiropractor when you want to experiment with a wide selection of our amp and cabinet model combinations.

Selecting a Cabinet

Press the Amp/Cab Details button. Vetta's larger display should now show something like this:



Use the knobs under the display to select cabinets for either or both amps. For a complete list of available cabinets, see the Cabinet Models Appendix on page 10•3.

Variax

Page 3 of the Amp/Cab Details menu allows you to save Variax settings within your Vetta channels. This means that with the touch of a button on your FBV you can recall not only the proper amp, cabinet and effects settings, you can also recall the proper guitar for that channel! This represents the state of the art in total guitar system integration. Your Variax must be connected digitally to the Vetta for this to work.

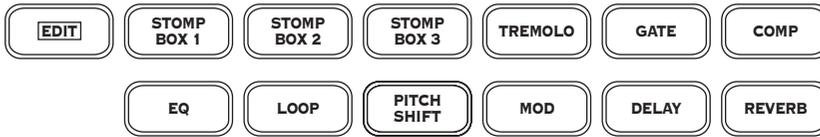


The MODEL parameter is where you choose which Variax instrument model you wish to recall with the Vetta channel. The first choice you have for the MODEL parameter is “None.” With this setting the Vetta will not change your Variax’s MODEL or TONE when this Vetta channel is recalled. The setting is also controllable directly from the Variax’s Model and Pickup Selector switches.

The TONE parameter allows you to store the tone setting of the Variax model for this Vetta channel. This can be particularly useful with Variax Acoustic and Reso models, as the tone control has special functions for those models. The TONE setting can also be directly controlled by the Variax’s Tone knob.

The CONTROL parameter can be set to On or Off. With this parameter set to Off, the Vetta will never change the settings your Variax. This is a global setting.

The Vetta is designed to work best when connected to a Variax with software version 1.1 or higher. It can also function just fine with versions below 1.1, but there may be a few limitations in Variax’s ability to communicate its controls to Vetta. The Software version of your Variax can be displayed on your Vetta on Page 4 of System Setup. If the version is below 1.1, please visit www.line6.com for details on how to download a software update for your Variax.



Effects

From down and dirty stompbox distortion to studio quality reverb lushness, Vetta lets you take your pick of effects, and set 'em up and route 'em however you like.

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On/Off Control

As we covered on page 3•4, the basic brain dead mode of operation for the stompboxes and other effects is for the Edit button to be *off*. Just press effect buttons: light on means effect on. Light off, effect off.

Edit Mode

When Edit is lit, we call this “Edit Mode”, and the Vetta display just to the left of the Edit button can show Edit Pages for fine tuning effect details. The most important things to know about Edit Mode are as follows: The little knobs below the display set the values shown on the display, with the PAGE knob selecting different pages for the currently selected effect. An effect selected for display/editing flashes its light. Pressing the button for the currently selected effect turns the effect on and off just like non-Edit mode. And, as you tweak things, if you find a setting that you like more than our factory default for a model (since everybody’s ears are different and your guitar probably “likes” particular effects settings more than others), you can save it as your own customized default (see page 4•26).

But before you get all advanced, let’s get a good solid footing in the fundamentals of the effects world with....

Stompboxes

Considering the fact that the pedal board owned by one ardent member of the Line 6 stompbox development team is large enough that it could double as a dinette if you put legs on it, some might say we’re overly fond of stompboxes. These little metal beasts have been, after all, the guitarist’s principal tool for sonic flexibility for the past 40 years and more.

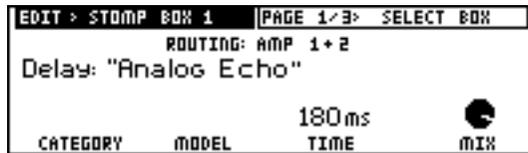
Vetta gives you three stompboxes, but not just any three—you get *any* three. Each of the internal stompboxes in Vetta can be assigned to be any of the numerous choices available. They can all be different, they can all be the same, and they can be mixed and ordered however you want. They can even be routed to feed either or both of the amps in a channel (see ‘Routing Stompboxes’, page 4•18).

Normally, for Line 6 Factory sounds, Stompbox 1 will be a distortion effect, Stompbox 2 a modulation effect, and Stompbox 3 a delay effect. That’s mostly because that’s the order guitarists generally use, but if you feel the need to do something differently, don’t let yourself feel bound by tradition.



Editing a stompbox

With the Edit button *off*, press any one of the Stompbox buttons a couple times. This will turn the selected stompbox (1, 2, or 3) on and off. Now, with that stompbox that you *just* pressed still lit up, light up the Edit button. Welcome to Edit mode! At this point, your display will look much like this:



In this example, the display says “ROUTING: AMP 1 + 2”, meaning this stompbox is routed to feed both amps (see page 4•18 for Routing details). Since the stompbox is feeding both amps, this means that whether you have Amp 1 or Amp 2 turned off, you’ll hear the stompbox. If you *did* have a stompbox routed to Amp 1 only, and Amp 1 was off, you would, of course, not hear the stompbox even if you turned the stompbox on. Just like *real* amps and stompboxes, right?

The first two knobs below the display select Category and Model. You’ve got five categories for stompboxes: Dynamics (compression and auto swell), Distortion (including overdrive and fuzz), Modulation (chorus, phase, flange, etc.), Delay (including echo) and Synth/Filter. Each of the five types of stompbox have their own editing pages. Dynamics, being relatively simple, have only one page, while the others have two or three. As usual, the Page knob selects amongst these pages.

For a complete list of all Stompboxes with thrilling descriptions including just what you can edit for each stompbox, see the creatively titled chapter, The Stompboxes (page 6•1). Or see a boring list with no descriptions on page 10•4.

Delay and Modulation stompboxes include settings for Tap Tempo on their last edit page. There's a complete discussion of all the exciting details coming up that you definitely need to read if you plan to make Tap Tempo a part of your life. But first...



In-Line Effects

The Tremolo, Gate, Comp(ressor) and EQ Buttons make up the In-Line Effects group. These always sit at the same position in Vetta's effects flow. Gate happens to come right at the start, before all the stompboxes, and the rest come right after the amp/cab. The ones after the amps give you independent processing for each amp (natch).

Operation is the usual: light on, effect on. Light off, effect no worky. Light up the Edit button, and you'll see that each of these effects has a customized set of edit pages (described in detail starting on page 7•1) that let you choose models and make other settings. Tremolo, for instance:



Tremolo also includes Tap Tempo as is about to be described, right after...



Routable Post Effects

The Loop, Pitch Shift, Mod, Delay and Reverb Buttons are known around Line 6 as the Routable Post Effects gang. Like the Stompboxes, these guys are always hanging out together, only their turf is post (in other words, after) instead of before the amps. And,

also like the stompboxes, their routing can be changed around for whatever fiendish purpose you may have in mind. As you've no doubt guessed, it's a light on/off, effect on/off sort of thing with the buttons, and with the Edit button lit you can get down and dirty with the details. With Edit lit and Mod selected, for example:



As with the Stompboxes, turn the knob below the word MODEL, and you'll be selecting amongst the available models for the Modulation effects. The other knobs on the page allow you to dial in other key settings for the effect, and PAGE lets you get to any other pages available for the effect. The last page of every Routable Post Effect gives you IN controls for Amp 1 and Amp 2. This means that you can, for example, have different levels of reverb on each amp.

The Effects Loop, being sort of the loner in the Routable Post Effects gang, gets its basic description on page 4•14. For a complete list of the individual editing options for all the Routable Post Effects, see the (you guessed it) Effects chapter, page 7•1. And now...

Tap Tempo and Time/Speed control

The Delay and Modulation stompboxes, as well as the Tremolo, Mod and Delay effects all have Time or Speed parameters, with the option to sync as many of these as you like together for Tap Tempo control via the Vetta Tap Tempo button and FBV footswitch.

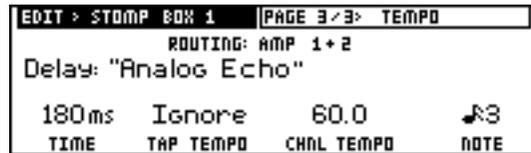
You may find it helpful to think of these time-based effects in Vetta as a band. You want them to all play in time—at the same tempo—although that doesn't mean they all are going to play exactly the same thing. You may want your stompbox delay doing quarter notes while your post delay effect does half note triplets and your tremolo is pulsing along on eighth notes and your chorus warbles dotted quarter notes (obviously, you're into jazz). You may also want to have some of your time-based effects ignoring the tempo altogether, free spirits, not locked into anything, kinda like that one kid who never quite got the rhythm—or never needed it.

Setting Tap Tempo

The key to getting your sonic landscape sync'd, is the Channel Tempo. With Vetta, each channel has a tempo, and you can set it one of two ways.

First, you can simply tap on the Tap Tempo button on your Vetta or the Tap Tempo footswitch on the optional FBV foot controller. These taps are interpreted by Vetta as quarter notes—just as if you were counting the band off 1-2-3-4. It only takes two taps for Vetta to calculate a new tempo, and the Tap Tempo button and FBV light will blink to show the tempo you've set.

The second method is to set the Tap Tempo value directly from one of the effects edit pages. Every effect in Vetta that can lock to Tap Tempo, whether stompbox or post effect, has a similar edit page. Here's a delay stompbox, for example:



The TIME knob sets the time for this particular effect in milliseconds, independent of whether the effect is locked to Tap Tempo or not. As a matter of fact, if the effect is locked to Tap Tempo, changing the TIME via this knob will unlock that effect from Tap Tempo. This is the same TIME parameter that you see on the first edit page for this effect (we put it in both places for convenience). Modulation effects similarly show speed (instead of time) on their first page and this tempo page.

The TAP TEMPO knob tells the effect to “Ignore” Tap Tempo, or “Lock” to it.

CHNL TEMPO (channel tempo to its friends) shows the Channel Tempo in BPM.

NOTE determines what note value (anywhere from a sixteenth note triplet to a whole note) the effect will use. Each effect in a channel can have a different note value.

Tempo Gone Out of Bounds

Vetta's Delay effects support a maximum of 2 seconds of delay time. When you have set a delay effect to use a large note value, and you then Tap or dial in a slow Channel Tempo, you may sometimes come up with a note/tempo combination that goes over

this limit. We've designed Vetta to deal with this situation in a musical way: it will simply reduce the time value to one half of the tempo/note calculated value, which should get things back into range while still keeping everything in sync with your tempo. This all happens instantly, as soon as you dial or tap in the new, slow tempo.

Turn a stompbox on, for instance, select a delay model (page 4•10 tells how) and spin the page knob to the last page. Set TAP TEMPO to 'Lock', CHNL TEMPO to '60bpm' and NOTE to a half note. You'll see that this sets your TIME to 2000ms, which is the maximum available.

Now, turn the knob below CHNL TEMPO counterclockwise to set the tempo to 59.5bpm, and you'll see that your delay time jumps down to 1008ms—one half of the 2014ms value that would be required for a half note at 59.5bpm. Your delay is still in sync with the Channel Tempo, but it is effectively working as a quarter note instead of a half note.

One cool side effect of the way that this is arranged is that Vetta still knows what note value you had intended for this effect. So if you switch back to a higher tempo again, the time will once again be set to match to match the note.

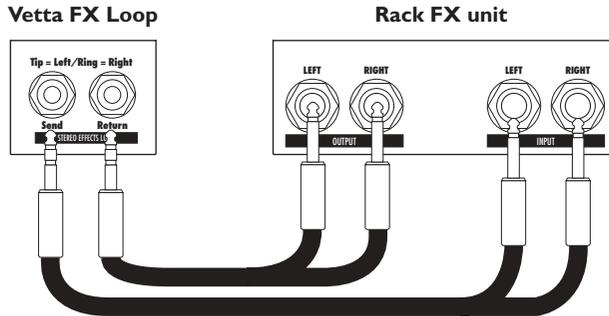
The Effects Loop

While we've tried to anticipate all of your effects needs, you may still want to use other effects with Vetta. That's okay, we won't be upset. Obviously, if you've got actual physical world stompboxes you want to use, run them in front of Vetta as you would do with any other amp. If you've got rack mount effects or other devices that work at line level, these can be hooked up in Vetta's effects loop. This loop is switchable (from the front panel or from the FBV foot controller), the on/off state is remembered with each channel that you save, and you can even route the loop either series or parallel (see 'Routing Post Effects' on page 4•18).

Analog Effects Loop

To hook something up to Vetta's loop, you'll need a pair of what are commonly referred to as 'Y' or 'insert' cables. These cables have a 1/4-inch TRS (Tip, Ring, Sleeve) plug on one end, that splits out to a pair of 1/4-inch TS (Tip, Sleeve) plugs at the other end. You'll need one of these for Vetta's loop send, and one for the return. You hook them

up like this:



It's worth pointing out here that we *haven't* hooked these cables up the way you might use them for an effect 'insert.' An effect insert uses these cables to allow input and output signals to both be connected at the one jack. If Vetta had an effect insert (like many mixing boards do), you'd jack the TRS end of a single one of these cables in this insert, then one of the split ends of the cable would go to the effect's input and the other would go to the effect's output. But as the picture shows, we're not doing that.

Once you've got your external effects hooked up, press the LOOP button as needed to get the loop turned on. Just as with all the other effects, light on, loop on. Light off, loop goes bye-bye.

Digital Effects Loop

Vetta's effects loop can also be assigned to either the S/PDIF or AES/EBU digital I/O for use with outboard effect processors that have the same digital connections.



Page 4 of Output Setup is where you will make these settings. The first parameter is FORMAT. This is where you set the bit depth and sample rate coming from the Vetta. Use the soft knob under FORMAT to change this parameter. You have the choice of

16, 20 or 24 bit resolution as well as sample rates of 44.1, 48, 88.2 and 96kHz. It is wisest to set these parameters for the highest qualities your outboard effect processor supports and set the processor to lock to the incoming signal from Vetta. Vetta can also be set to match the bit depth and sample rate of the signal at the digital input. This means your outboard effect processor can be set to “internal” if you wish. The next parameter is SOURCE. Use the soft knob to set this to LOOP. The next parameter is DIG OUT. Simply choose AES/EBU or S/PDIF depending on which format your outboard effect processor uses. The final parameter is GAIN. If you find that the input to the effect processor is low, you can boost the gain up to +12dB.

Effects Loop Levels

The next step is to set up the send and return levels for the loop. Press the Edit button. If the Loop page isn't showing already, press the Loop button and it will be. You'll see something along these lines:

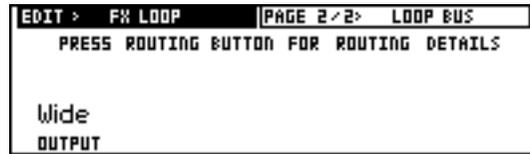


The left most knobs, labeled AMP1/L SEND and AMP 2/R SEND control your signals differently depending on how your loop is routed. You'll want to check out Effect Routing on page 4•18 in order to get your loop properly set for the particular sonic madness you have in mind. When the loop is first in the chain of post effects or in any parallel routing, the loop sends are getting signals from the discrete outputs of Amp 1 and Amp 2, regardless of how the amps are panned. When it's not first in the post effects signal path, routed in series or chain, the sends are from the left/right outputs of the previous effect.

When the loop is routed parallel or chain, set the mix control on the effect in the loop to 100% wet. Use the RETURN MIX knob on the display shown above to determine how much of the effect you want to hear. If you instead try to run your external effect at something other than 100%, you'll get a bad sonic experience known as 'comb filtering' to audio engineers if the external effect unit is digital, and you'll get your stereo signals collapsing to mono if your external effect unit sums its left/right inputs to mono (as many effects processors do).

When the loop is routed series, use the mix control on the effect in the loop to set the mix. No worries about comb filtering here, but if your effect unit sums its left/right inputs to mono (often, the 'direct' signal is summed, even when the 'effect' part of the signal is stereo) then the fancy panning you set up on Vetta may be lost when you hit the loop.

The effects loop outputs can be assigned to the WIDE outputs on page 2. This setting can also be made on page 3 of Effect Routing.



Double Tracker

We're particularly proud of Vetta's Double Tracker which allows you, for the first time, to get the experience of studio double tracking when you're playing live. It's like having a second guitarist following you around all the time, only you don't have to pay him (hey, sounds like most of the bands we've been in).

This effect can be a major size enhancer for your tone, especially when you're using a physical set up that includes separated left and right cabinets with a Vetta HD, or a Vetta combo hooked up to an extension cab like the Vetta 212S Extension Cab running in Split Stereo (see the back of your Vetta combo and page 3•8).



Unlike the other buttons in the Function row, The Double Tracker works as an Effect On/Off button. Specifically: If the Double Tracker button is lit, the effect is active. To edit Double Tracker parameters, the Edit button must be pressed. If Double Tracker was not the last effect accessed, the Double Tracker button must also be pressed.

NOTE: Double Tracker is a feature that requires a large stereo field to be effective. The distance between the two 12" speakers in the Vetta combo may make this effect seem subtle. Try running an extension cabinet with the Vetta combo in stereo mode. Place the extension cabinet about six feet away from the Vetta combo. You'll find that this effect is much more pronounced. The wider the stereo field, the more pronounced the effect.

Effects Routing

Vetta has versatile routing options for the stompboxes and other effects. Even the volume and wah pedals can be moved. Routing is stored with each individual channel, so each of your sounds can have a completely different setup.

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Routing Stompboxes & Pedals

Press the Effects Routing button. Turn the Page knob if necessary to get to Routing Page 1, and the display should look something like this:



Here we see the obvious benefits of that nice graphic display. Turn the knob under ITEM to select a stompbox or pedal to position, and the knob under POSITION to move it. Then, as they say in the shampoo biz, repeat as necessary with the other stompboxes and pedals. That's it, you're done setting up your stompboxes and pedals.

Routing Post Effects

Vetta allows for complete control over the routing of the post effects. You can change the order of the effects, the signal flow (series, parallel or chain) and even the physical output assignment of the effects. On the bottom of Effect Routing page 2, there are three parameters called ITEM, POSITION and ROUTE.

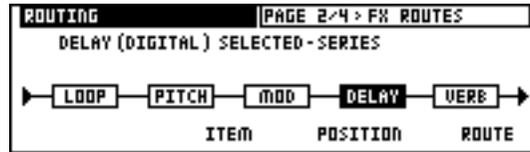
ITEM allows you to choose which of the five effects blocks you want to edit.

POSITION allows you to put the selected effect block anywhere in the post effect chain.

ROUTE allows you to choose series, parallel or chain.

Series Routing

All the effects in this example are routed in series:

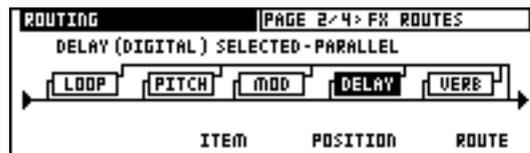


Series means that an effect in the chain gets the full output of the previous effect, so that your reverb, for example, is applied to both your amp signal *and* the effected signal coming from the delay and modulation effects that are in front of it.

This is exactly like simply connecting together a bunch of stompboxes. Every stompbox gets its output from the previous stompbox, so that whatever the previous stompbox does determines what the next stompbox will have to work with. If the first box adds lots of distortion to the signal, all the rest of the boxes get that distortion fed into them, too. This works great for stompboxes and many other effects, but there are times you want to keep a previous effect from determining what a later one will have to work with. Which leads us to....

Parallel Routing

For instance:



Notice the lines in the signal flow diagram. As they show, each one of the effects is getting its input directly from the beginning of the signal chain, rather than from the previous effect. This is what 'parallel' means: the input for a particular effect is parallel to the others, with parallel here meaning that the input is independent from the other effects and happens at the same time as they are getting their inputs. In this example all the effects happen to be parallel, so every one of them is getting its input "direct from the source" rather than from the previous effect.

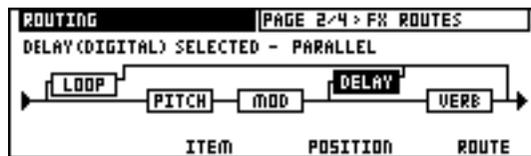
Basic Operations • The Effects Loop

To understand what this means, let's compare what happens if you take a simple example of two effects, chorus and delay, running in series versus parallel:

If the chorus comes first and then the delay, and you've routed them in *series*, this means that what the delay effect does its processing on is the output of the chorus effect. So when you play a note, you hear a chorused version of it, followed by a delayed repeat of that chorused signal.

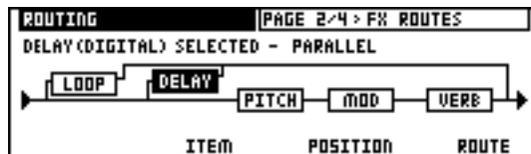
On the other hand, let's look what happens if the delay is routed in *parallel*. This means that the delay gets its input independently of the chorus, so what it's processing is the non-chorused version of the signal. Play a note, and what you'll hear is chorused guitar, followed by a non-chorused delayed version.

In the example below both LOOP and DELAY are routed in parallel. The DELAY



output is running parallel so the VERB is not getting any input signal from the delay. The VERB is getting the same pitch-shifted, modulated signal as the DELAY is. If we don't want the signal feeding the DELAY to first be pitch shifted and modulated, we must move the position of the DELAY before those effects.

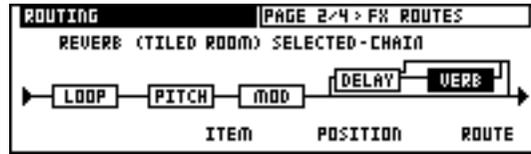
To move the DELAY block use the soft knob below ITEM to select DELAY. Then use the soft knob below POSITION to move the DELAY block before PITCH. Now in this example, both the inputs and outputs of LOOP and DELAY are in



parallel. PITCH, MOD and VERB are all in series. This is unparallelled signal routing power! (Cheesy pun intended.)

Chain Routing

OK, so now that you've got the hang of Series and Parallel, let's get fancy.



Once again, a picture's worth a thousand words. As this example display shows, the Loop, Pitch and Mod effects are in series, with each one receiving its signal from the previous effect. Notice the difference between the inputs of the Delay effect, which is parallel, and the Reverb. The Delay is getting its input from the main signal flow, whereas the Reverb, which is routed as a Chain effect, is getting its input directly from the Delay.

Chain routing means that the wet signal, and *only the wet signal*, of the previous effect is fed to the input of the following effect. This is different from Series, where both dry and wet signals are fed through from the previous effect.

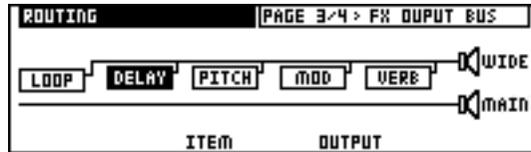
So, what's it for? In this example, since Reverb is routed as a Chain effect, it's getting its input from the wet signal of the delay only. Assume all the other effects (Loop, Pitch, Mod) are turned off and you've got the Mix for the Delay set to 50%. When you play a note, you'll first hear it without reverb, and then you'll hear a delayed version of it with reverb. If the Reverb was instead routed in parallel, you'd hear Reverb when you first played the note, but you wouldn't hear any Reverb on the delayed signal at all. And, of course, if Delay and Reverb were routed in Series, then you'd hear Reverb on both the direct signal passing through the delay effect, *and* on the delayed wet signal coming out of the delay.

All these configurations are built up from three ways that an individual effect "block" can be connected to the other effects around it. These three ways are called Series, Parallel and Chain.

Assigning post effects to the Wide outputs

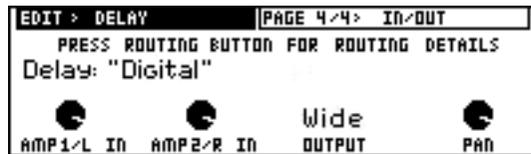
Wide mode is used when you wish to separate your amp tone and your effect sounds by running the effect signal to separate power amps and speakers. (see page 4•34 for details on turning Wide mode on or off.) You can assign any or all of your post effects

to the wide outputs. These assignments are made on page 4 of the Effects Routing page. Use the soft knob below ITEM to select an effect block and then use the soft knob below OUTPUT to assign the effect to either the MAIN or WIDE outputs.

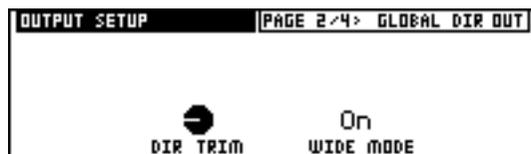


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You can also assign post effects to the wide outputs within the parameters of the individual post effects. Changes made in either area are reflected in the other.



The Wide outputs will only function if the Wide mode parameter is set to ON in page 2 of the Output Setup screen.



A Few Words About Effects Panning

The Pitch Shift, Mod and Delay effects sum to mono the signals that are sent to them for processing, and the PAN knob on the last page of all these effects lets you determine how much of the effect's output then goes left, and how much goes right. The stereo placement of the amps and other effects isn't disturbed by these effects' mono summing *when you route the effects in parallel or chain* (which is one of the advantages of these routing setups), *but routing Pitch Shift, Mod or Delay as Series*

effects will cancel your previous effects' panning. (For the technically-minded members of our audience: since the effects' outputs are stereo, the PAN control is, strictly speaking, a balance control rather than a pan, but "Effects Output Balance" was a little bit too much text to fit on the screen, "Out Bal" fit but was confusing, and we figured "Pan" was gonna get the job done just fine.)

To take an illustrative example, let's say you're using one of the simple all-series routing setups, and you want to have two amps running, with Amp 1 panned hard left, Amp 2 panned hard right, and Reverb on Amp 2 only. Assuming that you've set your amp panning as described on page 4•3, all you'll need to do is press the Edit button to get it lit, press the Reverb button if the Reverb settings aren't already shown on the display, and turn the Page knob to select the last page for the Reverb. AMP1/L IN should be set to zero, and AMP2/R IN should be turned up. Grab the knob below the label PAN and spin it to set the knob graphic on the display all the way right. Spin back to the first page of the Reverb and make sure the knob below MIX is turned up to give you some 'verb, and that the Global Control for Reverb isn't turned off. Press the Edit button to turn its light off, check to make sure that Amp 1, Amp 2 and Reverb are all on, and you should be hearing Amp 1 coming out reverb-free on the left and Amp 2 coming out reverb-ified on the right.

Also be sure to check out 'Stupid Effects Tricks' on page 8•9 for more panning fun.

Setting the Volume Pedal's Minimum Volume

Page 4 of Effects Routing gives you the option to set a minimum value for the Volume Pedal. If you set the Volume Pedal to the first possible position, at the beginning of the signal flow, or the last possible position, at the very end (see page 4•18), Routing Page 4 looks a whole lot like:

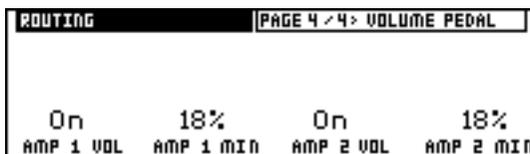


This minimum value determines how much volume you'll hear when the volume pedal is at the heel position. The heel position normally turns the volume off (a setting of 0% for the MIN value), but you may find it preferable to set it so the heel position is not all the way off. This comes in handy, for instance, when you want to

use the volume pedal to easily move between preset levels for you rhythm and lead volume. To adjust the Volume Pedal minimum setting, just spin the knob below the word MIN.

When you were routing those stompboxes (Gosh, remember those good times? They seem like only a few pages ago... page 4•18 to be exact), if you happened to place the volume pedal anywhere other than the first or last possible position, you'll notice that you have a few of extra options here:

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Well, look at that! You can assign minimum values for each amp independently. And, if you're really crazy, the knobs below AMP 1 VOL and AMP 2 VOL allow you to turn the volume pedal on and off for each amp independently, as well as reverse the pedal action. When set to Reverse, the volume pedal will act backwards on that particular amp, so that when the pedal is at its 'toe-down' position, the amp will be at its minimum setting, and you'll get maximum volume at the 'heel-back' position of the volume pedal. This last feature is very handy for performing live cross fades between the two amps stored in a channel. Set AMP 1 VOL to On, for instance, and AMP 2 VOL to Reverse. Now you can pedal the blend of the two amps from all Amp 1 (toe-down on the volume pedal) to all Amp 2 (heel-back) and anywhere in between.

Saving

Once you've got that tone-to-die-for all dialed in, you're naturally going to want to store it somewhere so that you can revisit it again and again, if only to be able to tell yourself, "Wowsers, I sure am clever, aren't I?" Since we believe that self-affirmation is a good thing, we've provided you with a number of different ways in which you can store and revisit your incredibly responsive and toneful sound. All of this magic starts with pressing the Save button. As an added convenience (and as a nice sort of nagging you so you don't forget to save that sound you spent half an hour on) the Save button even lights up whenever you adjust the settings of the current channel, to let you know that you've done something that you might want to think about saving.

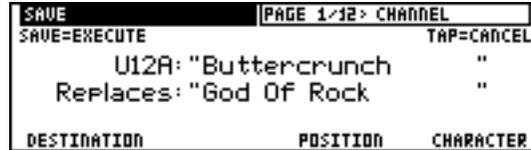
Saving a Channel

This whole party kicks off by pressing that ol' Save button, at which point your display should look something like this:



If you simply want to overwrite the channel you're currently using, leaving the name the same, all you have to do is hit Save a second time. Vetta defaults to saving the channel with the same name, and in the same location. The only exception is when you're using a Factory channel. In this case, Vetta will pick the corresponding User channel as the destination. The Factory and User memory areas have the same information in them when your Vetta ships out from Line 6, so if you haven't been filling up the User channels with all your own creations, this should work great.

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Selecting a Channel To Save To

If, on the other hand, you don't want to overwrite the channel you started with, and you want to save this channel somewhere else, just turn the knob below the word DESTINATION and choose the channel where you want to save your new sound. The display also shows you the name currently stored in that destination channel. When you get to the channel you want to replace, you're probably going to want to set a new name for what you're about to save, so...

Naming a Channel

You'll notice the labels POSITION and CHARACTER above the right two knobs. POSITION selects one of the 16 characters of the name, and the CHARACTER sets the chosen character.

Finishing the Save Operation

Once you've chosen where you want to save your sound, and given it a name, there's only one more step. Just press the Save button, and Vetta will write your sound to the channel you've chosen. Now, every time you want to relive the thrill and excitement of your new sound, just call up that channel. Who says you can't go home again?

Setting Your Favorite Channel

When you finally find one of Vetta's sounds that typifies your unique abilities as a guitar stylist, or just one that you really like and think that you might use a whole lot, you can store it as your favorite channel. Once you do this, every time you press the Favorite Channel button on Vetta or Favorite Channel switch on the FBV, your favorite of all sounds will be at your fingertips. Favorite Channel acts like a TV remote control's "Last Channel" button, so that pressing it a second time will take you back to the Channel you were in before you switched to your Favorite Channel.

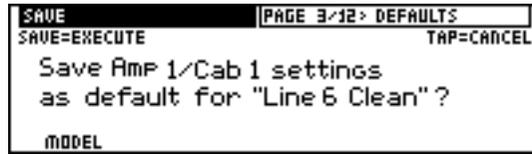
Note that Favorite Channel is not an additional channel. It's just a pointer to one of the regular Factory or User channels. This makes it very easy if, fickle guitarist that you are, you suddenly decide that something else is your favorite. You just point Favorite Channel at something else, but you don't have to dump your previous favorite out of the amp. Kinda like staying on speaking terms with your ex.

So, how do you tell Vetta which is your Favorite Channel? Just select that channel, press Save, press Favorite, and Press Save a second time. You can also select Page 2 of Save to do the same thing. If, by chance, you've made some alterations to the current channel that you haven't saved yet, Vetta will prompt you to save these first, since you presumably want those to be part of what makes this your favorite.

Saving Model Default Settings

You've probably got old stompboxes around that you haven't moved the knobs on in years, even if you use them all the time. Like all of us, there are certain things you come back to time and time again, and it's nice to be able to get them quickly and easily when you want them. That's why Vetta lets you customize the default settings of every amp model and most of the effects. This way, when you pull one of these things out of Vetta's digital gig bag, it's ready to go, just the way you like it.

As with everything else in this section, the magic starts when you press the Save button. Then turn the Page knob to this page:



If you want to save your current amp settings as the default for the amp model you're using (which means that every time you select that amp model from the Amp Model knob, these are the settings that will automatically come up), just press Save a second time. If you play with the knob under the label MODEL, you'll notice that you can save defaults for stompboxes and most of the effects, as well. Spend a while doing this, and by the time you're finished, your Vetta can be uniquely yours, tuned in to your special personality and your guitars, the unique embodiment of all you are and all you can be. OK, so we're overstating the point, but it is cool, isn't it?

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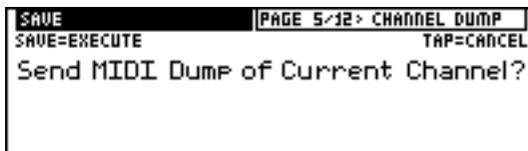
Backing Up Your Channel Memories

If you're spending *any* time at all making your own sounds, it's a *very* good idea to back them up. This way, if your Vetta is stolen by space aliens on their own quest for advanced tone technology, you'll be able to get another one from us to restore your sounds to.

So, how to get a copy of the information that's stored in your Vetta? Vetta's MIDI connections and a computer with MIDI librarian, sequencer, or MIDI sysex utility software do the trick. If you don't have a computer, a hardware MIDI sequencer or MIDI filer can do the same. We'll give you the basic rundown on what to do here, but you'll also have to read the instructions that come with whichever MIDI thingy you're using (we can't take all the hassle out of life, but we can at least give you great tone to express your frustrations with when you meet it).

Backing Up a Single Channel

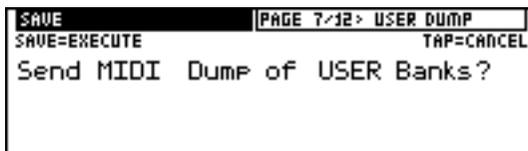
One way to build your personal MIDI-based library of sounds is to save them individually, so each backup file can have its own name. Hook Vetta's MIDI out to your MIDI device's MIDI in, and set the MIDI device or program to receive a sysex dump. Then press Vetta's Save button, and turn the Page knob to this page:



Once you're there, press Save a second time. The display will say "Sending MIDI Sysex", and when it finishes, do whatever your MIDI setup needs you to do to save the dump to disk (or wherever it stores its data).

Backing Up The User Bank

If you want to backup the whole User bank, that's easy too. As before, connect Vetta's MIDI Out to your other MIDI device's MIDI In. Set your MIDI utility to receive a sysex dump and press Vetta's Save button. Then turn the Page knob to this page:



Press Save a second time, and you'll see the familiar "Sending MIDI Sysex" message. Once it's done, you'll of course need to be sure that the dump you sent was properly received and saved on your MIDI setup, and you can rest assured in the knowledge that your precious data is now safely backed up.

Things to Know About Vetta's Memory

Vetta actually has two sections of memory for its channels. In addition to the memory that you save to when you hit the Save button, Vetta keeps a separate internal, compressed backup of the channel data. Each time you hit the Save button, you're

saving to the expanded memory, while the compressed, internal backup is kept in its original state. This compressed memory comes in handy if you should ever decide that you want to get rid of all the new stuff you've made and get back where you started from (which we'll describe how to do in the next section).

It's important to know this because, in order to receive a whole block of channels via MIDI, Vetta has to use the memory space that it normally uses for the compressed backup. It has to erase this compressed backup, and then it can receive the block of channels that you're dumping in from MIDI. When it does this, you'll lose Vetta's internal copy of its original User sounds. But since we build Vetta with an identical copy of channels in both the User and Factory memory, you can access these sounds from the Factory memory banks.

Restoring From Backups

What good is backing up your work if you can't restore it? Here's how.

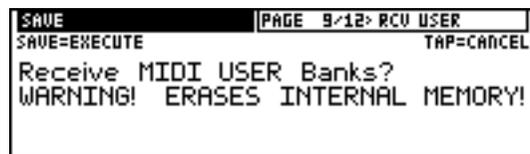
Restoring a Single Channel from MIDI

In this case, you're gonna need to connect the MIDI Out of the MIDI thingy you've stored your memory on to Vetta's MIDI In. Then do whatever you have to do to open the file in your MIDI program or select it on your MIDI device and transmit it to Vetta. Vetta will receive that data as if you had edited the current channel: the Save button will be lit to indicate that you should press save if you want Vetta to store this to an internal channel memory so it will remember it (see page 4•24 for the skinny on saving a channel).

Restoring the User Banks from MIDI

Again, you're gonna need to connect the MIDI Out of the MIDI thingy you've stored your memory on to Vetta's MIDI In. Then do whatever you have to do to open the file in your MIDI program or select it on your MIDI device to get it ready to send.

Now press Vetta's Save button and turn the Page knob to this page:



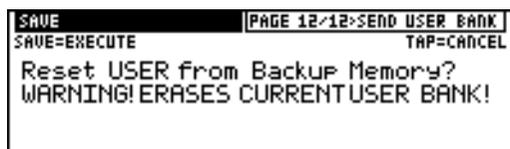
Now you have to clear Vetta's internal, compressed memory backup so it has the memory space required to receive the MIDI dump (as described on page 4•28). This doesn't affect the Factory memory, model defaults, or other information that Vetta stores.

Press the Save button while this page is showing, and you'll see a message telling you that Vetta is clearing the memory. When it's finished, and the message goes away, you can then start transmitting the MIDI dump from your MIDI setup. When it finishes transmitting, Vetta will take another few minutes to expand the data from the compressed form it just received to become the format it uses internally, (you'll see it doing this, channel by channel) and then you're ready to roll.

Expanding the User Bank from Internal Memory

You can instruct Vetta to expand the memory from its internal, compressed backup (described on page 4•28) to take the place of its active, expanded memory. Vetta does this automatically when receiving a MIDI dump as we just described. You can also do this if you ever want to reset Vetta to use the last set of channels that you dumped to it via MIDI. And if you've never dumped channels in via MIDI, you can use this to restore Vetta to the original memory it had when it shipped from Line 6.

Just press the Save button, and spin the Page knob until you get:



Press the Save button again, and you'll see Vetta count through the channels one by one as the memory expands.

Altering the Factory Memory

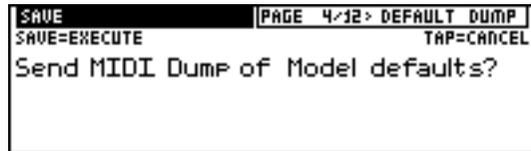
You may have noticed, as you've gotten familiar with the various Save pages, that pages are also included for Sending the Factory banks as a MIDI Dump, receiving the Factory memory as a MIDI dump, and expanding the Factory banks from memory (pages 6, 8, and 11 respectively). While the normal thing is for the Factory channels to remain unaltered, in the same state as when your Vetta shipped from Line 6, it is

also possible for you to swap a different set of channels into the Factory's banks via MIDI. If you're a tweaked tone fanatic, this allows you to have all 128 of your Vetta's channels fully customized, making it the ultimate hot rod for your personal tone trip.

To take advantage of this feature, you'll need a MIDI program or device that lets you assemble a whole bank of Vetta sounds. Or, if you prefer, you can set up the bank of sounds you want right in Vetta's own User memory. Then dump the Vetta User memory out to your MIDI device or program, and turn around and dump the data back to Vetta again, this time to its Factory bank—there's no difference in the file format between User and Factory memory. Before you do all this, you should backup your Vetta's original Factory memory (via MIDI) so it's always handy in case you ever want to re-visit your original Vetta experience.

Backing Up Your Model Default Settings

If you customize the Model Default Settings of any of your Vetta's amp models and effects (as described on page 4•26), you'll want to be sure to back them up to a MIDI program or device so you've still got them in case anything ever happens to your Vetta. Once again, we start by connecting Vetta's MIDI Out to your MIDI setup's MIDI In, and then you set your MIDI setup to receive a sysex dump. Press Vetta's Save button and turn the Page knob to this page:



Press the Save button a second time to do the deed. When Vetta finishes sending the sysex dump, be sure to save the dump on your MIDI setup, and you're done.

Restoring Your Model Default Settings

Again, you're gonna need to connect the MIDI Out of the MIDI thingy you've stored your memory on to Vetta's MIDI In. Then do whatever you have to do to open the file in your MIDI program or select it on your MIDI device to get it ready to send.

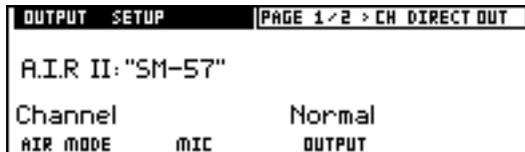
Now press Vetta's Save button and turn the Page knob to this page:



Now you have to clear Vetta's current Model Default memory so it has the space required to receive the MIDI dump. Press the Save button while this page is showing, and you'll see the message "Erasing model defaults." When it's finished, another message says "Ready to receive model defaults." You can then start transmitting the MIDI dump from your MIDI setup.

Output Setup

Vetta has a number of options that determine how the direct outs and speaker outputs function. To access these, you start by pressing the Output Setup button, at which point your display is magically transformed to:



If you're familiar with Line 6's award-winning POD, you know our first generation of A.I.R., the revolutionary technology that made recording guitars direct sound like recording guitars the old fashioned way (you know, stick the amp in the middle of a room that was specially designed for recording, spend several hours fiddling with microphone positioning, then finally record the track—that old fashioned way). Vetta debuts A.I.R. II, the next generation (and no, we're not going to turn it into a movie featuring steely jawed heroes and a daffy robot, so don't even ask us), for an even more satisfying recording experience. A.I.R. II expands on the original by offering models of a variety of microphone types and placements (both on and off axis).

A.I.R. Mode

The knob below A.I.R. MODE lets you determine whether the A.I.R. settings will be global (all channels use the same setting) or per channel (each channel uses the A.I.R. setting that is stored with it).

MIC Setup

This knob selects which mic type and placement you would like for the current channel or global setup. For the full menu, see ‘A.I.R. II Mic Options’ on page 10•9.

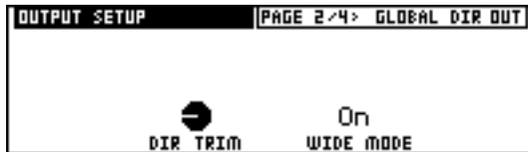
Output

The OUTPUT parameter selects which outputs are active per channel on the Vetta. The three choices for this parameter are Direct, Speaker or Normal. A setting of “Direct” means only the Direct outputs are active. A setting of “Speaker” means only the Speaker outputs are active. A setting of “Normal,” which is the default, means that both the Direct and Speaker outputs are active. If you are performing on stage using a Variax acoustic model, it is likely that you will only want that signal to feed the Direct outputs and not go to the Vetta speakers. The Direct outputs would feed the Front Of House mixer which would be amplified through the P.A system. In this situation it is likely that you would hear your acoustic signal from stage monitors. If it is a small show and you don’t have stage monitors, you can change this output parameter to Normal so you can monitor your acoustic guitar sound through your amp, while the Direct output still feeds the P.A speakers. At a small gig like this you would probably not want your electric guitar sound to feed the P.A. system. Here you would set the parameter for “Speaker” so your electric guitar tone only comes from the Vetta speakers.

NOTE: Wide mode can only be set On or Off if the Output parameter is set to “Normal.” If Wide mode is On and you set the Output parameter to Speaker or Direct, Wide mode will turn Off. If Wide mode is turned On while the Output parameter is set to Speaker or Direct, the Output parameter will change to Normal.

Wide Mode

You use the knob below WIDE MODE on the second Output Setup page to globally turn Wide mode on and off. What the heck do we mean by ‘Wide’ in the first place? Good question, and we’re awfully glad you asked.



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Wide mode gives you the ability to run what is often referred to as wet/dry setup. When running like this, the wet portion of post effects that have been assigned to the ‘Wide’ bus (you make this assignment from the last edit page of those effects or on Effects Routing page 3) will be removed from the signal being sent to the speakers in your Vetta and will only appear on the “Direct/Wide” outputs (both XLR and 1/4-inch). You can then connect these outs to a separate power amp and speakers, keeping your basic ‘dry’ guitar tone pumping out of Vetta while the ‘wet’ effects pump out of the separate speakers. This can give improved definition for your basic guitar sound, even when you lay on the ‘grease’, plus you can spread the effects cabinets wide on stage for a truly huge stereo image.

Dir Trim

Normally, the Master Volume knob on your Vetta sets the level for the internal speakers (and any external speakers you connect), without having any effect on your Direct Output level. This is a good thing, for instance, when you’re playing live. It means you can set a low master volume level for your amp on stage (maybe it’s a small venue) while still pumping out full level at the direct outs so the house sound system is getting plenty of juice. This is also a good thing if you’re recording in the studio, using your amp to monitor with the other band members while your direct out is being recorded. Once again, an appropriately low master volume level that you might want for the amp doesn’t force you to have a low level signal going to tape.

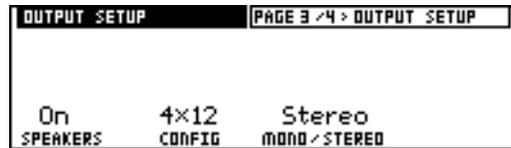
Vetta pumps enough level out of its direct outs to light up the input meters for +4 pro recording. For live sound systems, as well as many recording setups designed to work with lower levels, this can sometimes be overkill. The DIR TRIM knob lets you roll back the Direct Out level, and keep your sound guy or lower level recording system happy.

You may have noticed that we said the Master Volume doesn't affect the Direct Output level *normally*. It does, however, affect the Direct Output level if you turn the speakers off (see the next page) or plug in headphones. In this scenario, since you're only listening to the Direct Outs and headphones, we make the Master Volume knob now adjust both of these levels. When this is happening, the Dir Trim setting is ignored.

Just for completeness, we should also mention that the Master Volume knob also affects the Direct Output levels if you're running in Wide Mode.

Speakers On/Off

The second page available from the Outputs Setup button lets you globally turn the speakers (both internal and any external cabinets you might be running) on and off, as you may want to do when recording direct, or even for running direct-only for a live setup. Although the speakers can be turned off on a per channel basis on Page 1's OUTPUT setting, turning off the speakers with the SPEAKERS control is the easy way to turn off the speakers for all Channels at once.



When you've turned the SPEAKERS off, the Master Volume control sets the level for the direct outs. Plugging headphones into the Vetta combo also turns off the speakers.

Mono/Stereo

This page also lets you choose to operate your Vetta in mono or stereo. This is generally most valuable on the Vetta HD in case you're using a mono setup, but feel free to mono-ize your combo if that's what makes you happy.

Speaker Configuration

The CONFIG control tunes the output of the Vetta to match the type of cabinet(s) you are using. The Vetta Combo leaves the factory set to 2x12; change this setting to 4x12 if you want to use 4x12 cabinets. The Vetta HD leaves the factory set to 4x12; change this setting to 2x12 if you want to use 2x12 cabinets. If you are using some mix of 2x12, 4x12, or other cabinets, select 4x12.

Digital outputs

The FORMAT parameter is where you set the bit depth and sample rate coming from the Vetta. Use the soft knob under FORMAT to change this parameter. You have the choice of 16, 20 or 24 bit resolution as well as sample rates of 44.1, 48, 88.2 and 96kHz. Vetta can also be set to MATCH the bit depth and sample rate of the signal at the digital input. This allows you to decide the best word clock scenario for your setup.

The SOURCE of digital output can be set to NORMAL, DRY or LOOP.

OUTPUT SETUP		PAGE 4/4 > GLOBAL DIG OUT	
96/24 FORMAT	Normal SOURCE	AES/EBU DIG OUT	+0dB GAIN

A setting of NORMAL mirrors the direct outputs. Don't forget that when WIDE mode is active, only signals assigned to the wide outputs are sent to the physical direct outputs. As the NORMAL setting for the digital output mirrors the direct outputs, the signals assigned to the wide outputs would also feed the digital outputs.

A setting of DRY sends a completely dry, unprocessed instrument signal to the digital output. This can be useful for Re-amping. (For more info on Re-amping see 'Advanced functions of the digital I/O' on page 4•41)

A setting of LOOP is used when you wish to connect to an external effect processor digitally. In this mode, the Digital inputs and outputs replace the analog effects loop on the rear panel.

The DIG OUT parameter allows you to choose the digital format that is sent from both the AES/EBU and S/PDIF digital output. Although the AES/EBU and S/PDIF formats are similar, there are differences in the use of some of the non-audio information. This parameter assures compatibility with other digital devices that might use these extra bits.

The final parameter is GAIN. This allows you to boost the gain of the digital output signal up as far as +12dB in 1dB increments.

Foot Control

As the chapter ‘Using FBV Foot Controllers’ on page 9•1 relates in detail, options for the optional FBV foot controller can be set from the Vetta Foot Control button:



On the first page, you can choose to have the FBV pedals control wah and volume, or act as expression pedals (more on that in the next paragraph). You also have three different styles of volume pedals to choose from: Linear, Log and Double Log.

With a LINEAR setting, the volume pedal has a fast rise and reacts very quickly. This can be handy when using the pedal for a “volume swell” effect. This is also the best choice when the Volume Pedal is placed after the amps.

With a LOG setting the volume pedal has a little more play room between the heel and toe position. If you feel that the Linear setting goes from 0 to 100% too quickly, the Log setting should remedy this for you.

With DOUBLE LOG, the volume pedal reacts a little slowly. It is similar to LOG but has twice the amount of play room in between the heel and toe position. With this style of volume pedal in front of a “high gain” amp setting, the heel position will be OFF and then slowly move from a very light distortion to the full on high gain setting at the toe position. Try all three settings and see what feels best to you. Remember that you can change this setting per channel on Vetta.

Basic Operations • Foot Control

The Mod Switch parameter sets the Mod switch on the FBV to control Pitch Shift or Mod, as these two effects cannot be used simultaneously.



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The second and third pages of Foot Control (we're only showing you page 2 here; page 3 works just like it) let you set what the pedals will control if you're not using them for Volume or Wah:

The knob below DEST sets the destination for the pedal. In other words, this is the thing that the pedal is going to control.

The knob below DEPTH sets the percentage of change to be controlled by the pedal (more on that in a moment).

The knob below RESPONSE lets you select "Contin" (which would be "Continuous" if we had the space) or "Switch." Continuous is what you normally expect from a pedal, smoothly adjusting from one extreme to another. Switch gives you a hard switchover from one setting at the heel-back position to another at the toe-down.

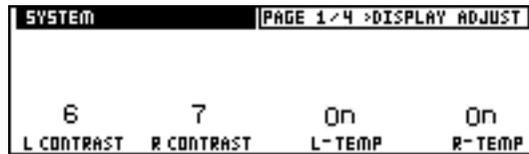
To understand how this works from a mathematical perspective (just skip to the next paragraph if you think math is as much fun as a trip to the dentist), let's say that the destination parameter is the mix of an effect, which you've got saved in this channel with a setting of 20%. With the pedal at its heel-back position, this mix is unchanged at 20%. Now if you set your DEPTH here to 50%, this means the pedal is going to increase your mix setting 50% of the way from what's stored in the channel (20%) to the maximum possible mix value (100%). A quick bit of mathematical calculation ($20 + .5 \times [100-20] = 60$) reveals that this means 60% mix at the toe-down position.

But who needs math? Just set the pedal to the heel-back position, light up the Edit button and adjust the effect parameter that you're targeting so that it sounds the way you want it to when the pedal is at this heel-back position. Then press the Foot Pedal

button to get back here, step on the gas to ram the pedal to the toe-down position, turn the knob below DEPTH 'til you like what you hear, and you're golden. Now if only doing your taxes could be so easy!

System Setup

System Setup lets you set up, you know, system type stuff. Press the System button for this first page:



Display

Human beings come in a variety of shapes and sizes. That kind of variety is good, but it also means that everybody views the display of their Vetta from a different angle. Adjusting a display's contrast makes it more or less readable at different angles. Turn the knob below L CONTRAST to adjust the contrast of Vetta's left display (where the names of the channels are shown). The knob below R CONTRAST lets you dial in your view of the right display, where this System Setup page is shown. If your Vetta has been on for a long period of time and the displays start to look washed out, turn the L-TEMP and/or the R-TEMP Temperature parameters to ON and readjust the CONTRAST controls to taste. This will help compensate for wide temperature variations and bring the displays back in to focus.

Input Select

Page 2 of the System setup allows you to control your Vetta inputs. Each of the inputs can be independantly turned on or off, allowing for the mixing of multiple inputs.



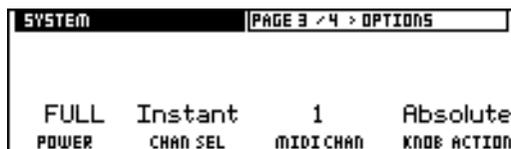
The VARIAX control turns the rear panel Variax In on or off.

The DIGITAL parameter allows you to pick the left, right or stereo input of the S/PDIF or AES/EBU signal as an input.

The ANALOG parameter refers to the standard guitar input. You can leave both the VARIAX and the ANALOG inputs turned on. If you're performing on stage you can have a regular electric guitar plugged in to the analog input and your Variax plugged in digitally. Simply leave the volume knob turned down on the instrument you're not using at the time.

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Spin the Page knob, and feast your eyes on System Setup page three:



Power Mode

Sometimes, too much power can really be too much. When playing in a bedroom or at a small rehearsal, Vetta's power ability can make it difficult to play softly! By setting the POWER mode to Half, setting soft volumes on the Master Volume becomes more manageable.

Channel Select Mode

There are two Channel Select modes for Vetta: Immediate and Deferred. take your pick by twisting that little knob below the label CHAN SEL:

Instant Mode

Instant mode is for today's no-nonsense, gotta- have-it-now crowd. When in Instant mode, Channels are loaded as you dial through them from the Select knob on the amp.

Deferred Mode

When you're in Deferred mode, spinning the knob next to Vetta's smaller display lets you see the names and numbers for each channel, without having the channels actually load. The display will be flashing. When you find the sound you want,

press the A, B, C, or D button that corresponds to the channel in that bank (so if you're looking at the display flashing "11C The Big Finale," which is the channel you want, press C to load it.).

The FBV always operates in Deferred Mode: Bank Up and Bank Down move up and down a bank at a time, and the display flashes the name of the channel you've banked up or down to. When you're in the bank that you want, stomp on A, B, C, or D to load the corresponding channel.

MIDI Channel

Here's where you set which MIDI Channel (1-16) Vetta will use to communicate with other MIDI devices.

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Knob Action

We talked a little bit earlier about the two different ways that the knobs on Vetta can work (see 'Absolutely Relative' on page 4•4). Here's where you set which way your Vetta will respond to your knob tweaking.

Software Version

Page 4 of System Setup shows you which version of software your Vetta is running. If you have a Variax connected digitally to the Vetta, your current Variax software version will be displayed as well.



Advanced functions of the digital I/O

Using the digital I/O, Vetta can be used as an outboard digital effects processor. You can hook it up to your digital mixing console or your DAW. Simply assign an aux send to an S/PDIF or AES/EBU digital output and plug that in to a Vetta digital input. Then plug the digital output of the Vetta into one of the digital inputs on your digital mixer or DAW and assign that digital input to a pair of channels or effect returns.

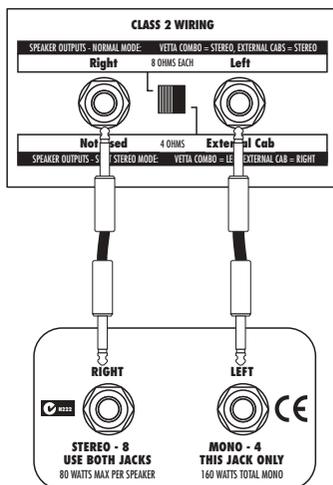
The digital input enters the signal path right at the beginning just like the guitar input. So you can add cool stomp effects like the synth/filters. Try running a vocal track through one of the synth/filter stomps for a crazy effect! You can run a drum loop through two of the 75 amp models. Pan one amp to the left and one amp to the right to get a really cool, dirty drum sound. Take advantage of the reverb, chorus and delays for keyboard parts. The possibilities are endless. Not only is the Vetta an amazing guitar amplifier, it can also be an amazing studio tool.

NOTE: These are the proper settings to use Vetta as a digital effects processor as described above: On page 4 of Output Setup, the SOURCE needs to be set to “normal”, FORMAT needs to be set to MATCH if your DAW or Digital mixer’s clock is set to internal (AES/EBU or S/PDIF depending on which interface you’re using) and DIG OUT needs to be set properly to AES/EBU or S/PDIF. Then the DIGITAL input on page 2 of System must be set to match the digital output on page 4 of Output Setup.

The same settings can be used for “re-amping.” This is where you record the dry instrument signal to a track rather than recording the sound of the amplifier. During mixdown you can find an amp tone that really fits the mix. The benefit is that you are not locked in to one sound. This also allows you to change the sound at any point in the song. Because Vetta responds to MIDI program changes, you can actually have a sequencer change the Vetta presets at just the right times in the song. Vetta allows you to send your “dry” instrument sound to the digital output for recording while you listen to the sound of your amp. Simply set SOURCE to “dry” on page 4 of Output Setup. This page also has a digital gain control so you can boost the digital output signal as much as +12dB. Keep in mind that if you boost the output level that is being recorded, a hotter signal will play back when you get to re-amping, thus driving the input of the amp harder, causing a more distorted amp tone.

Running External Speakers with Vetta Combo

The Vetta combo has two different options for running external speaker cabinets, and the optional Vetta 212S Extension Cab works beautifully with either one (hint, hint). Remember that Vetta can get loud, and you'll want whatever extension cabinet you use to be able to handle at least 80 watts per side. If you have a stereo speaker cabinet with an impedance of no *less* than 8 ohms per side, we suggest that you connect it to Vetta like so:



With this setup, you can set the split switch to either Normal or Split Stereo mode (controlled by the slide switch between the two speaker out jacks). When the rear panel switch is set to 'Normal' mode, the Left and Right speaker outs feed your external speakers the same thing that Vetta's own left and right speakers get (Vetta's speakers work at the same time as the external ones that you connect). You'll probably want to run this way if you stack Vetta with a second stereo cabinet, or you want to flank it with separate left and right cabs, or you just want to get a bigger setup going without having your stereo separated hard left and right.

When the switch is set to 'Split Stereo' mode, the external cabinet(s) will carry only Vetta's right channel, while the internal Vetta speakers will carry the left channel. This is the mode to use if you want to set up with the largest possible stereo image by running the external cabinet on the other side of the stage (besides, you really want

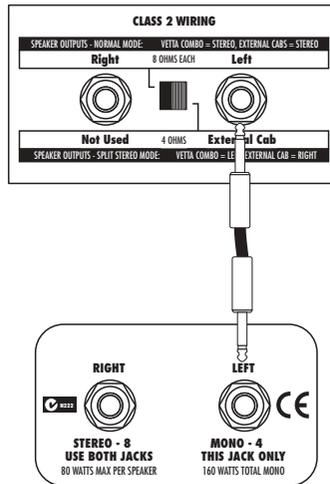
Basic Operations • Running External Speakers with Vetta Combo

the bass player to hear your brilliant solo). It's also great when you're using Vetta's 2 Amps at Once feature with the amps panned hard left and right, since your rig then behaves just like two independent amps, each with its own cabinet.

When you're running like this, make sure that your external speakers are running at 8 ohms per channel (or greater, in which case everything will still work, but they'll be quieter than at 8 ohms). *Don't run lower than 8 ohms per channel* or you'll overheat your Vetta and its thermal protection circuit will kick in and shut off the power amps (so you lose your sound).

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If, on the other hand, you have a mono speaker cabinet with a minimum impedance of 4 ohms, you should hook it up like this.



With this wiring, you can only use Vetta's Split mode. You can, of course, run an 8 ohm or greater cabinet wired like this, but we can't guarantee that you'll get the best balance of level between the amp and extension cab because Vetta's left and right power amps will be loaded unevenly. You'll run into the same uneven loading problem if you try and run an 8 ohm cabinet wired like this in Normal mode.

Regardless of which setting you choose for the external speaker outs, for the ultimate in cabling flexibility and simplicity, we suggest that if you *are* using a Vetta 212S Extension Cab, you always hook up two cables, one from Vetta's left speaker output

to the 212S left input, and one from Vetta's right speaker output to the 212S right input. Hooking up both cables makes connecting the external speaker cabinet a no-brainer no matter which setting you happen to have going, and it means you can switch anytime without re-cabling.

No matter how you hook up your external cabinets, make sure that you use cables specifically made for speaker connections. Avoid using shielded cables (like guitar cables), since their small wire gauge can limit the amount of power transmitted to the speakers and keep your audience from hearing every note.

Oh yeah, one more thing. If no external speakers are connected to your Vetta, the Normal/Split Stereo mode switch will have no effect at all, so you don't have to worry about changing it if you unplug your cab.

Running External Speakers with Vetta HD

If you're the proud owner of a Vetta HD, this information is just for you. In addition to placing a multitude of amp models, stompbox models, and post effects at your disposal, the Vetta HD also offers the flexibility and power to drive a wide variety of speaker cabinets. The type and number of speaker cabinets you choose is up to you, and will probably depend on your performing situation: some gigs require the focused growl and grind of a closed back 4x12, while other gigs work better with the classic sound of an open back 2x12. The Vetta HD can handle either alternative with equal aplomb.

Speaker Cabinet Basics

Be sure to turn the amplifier off when connecting or disconnecting speaker cables and cabinets. (This protects both the amplifier and the speakers.)

Use only heavy gauge, unshielded cables for hooking up speaker cabinets. (Do not use standard guitar cables to connect your speaker cabinets, as they will degrade your sound.)

Take a Load Off

While you would never want to operate a tube amplifier without a load (that means without speakers attached), operating the Vetta HD without a load is OK! You do not need to have speakers connected to the amplifier in order to use the balanced Direct Outputs. Fortunately, you can always simply deactivate the speaker outputs from the Output Setup edit pages to avoid having to disconnect the speakers.

Volume Levels

Exercise some common sense about volume levels. The Vetta HD can drive four 4x12 cabinets with power to spare, so it's got enough juice to fry the speakers of most setups if you really tried. If you see the speakers practically jump out through the speaker grille, back off on the Vetta HD's Master Volume a wee bit to get things back into the realm of reasonable operational levels. Also understand that Line 6 cannot be liable for replacement of speakers damaged by abuse. So, feel free to crank it up, but do it with a bit of sense.

Setting the 4/8/16 Ohm Switch

It's important to set Vetta's rear panel 4/8/16 OHM switch to match the impedance of the cabinets that you are driving. You must match impedance to get the full volume and response, and to avoid overheating and shutting down the power amplifiers.

The correct setting of the 4/8/16 OHM switch may not always be immediately obvious. While most modern speaker cabinets (like the Line 6 4x12 and Vetta 2x12 Extension cabinets) will clearly label their jacks with the impedance load that the speakers present to an amplifier, some vintage cabinets don't include impedance labeling. There are, fortunately, some general rules of thumb that you can usually rely on:

The first thing to know is that, due to the magical nature of electricity, the impedance load that a speaker cabinet creates depends on (1) the impedance of each speaker and (2) whether these speakers are hooked up in *series* or *parallel*. Series means that the speakers are wired up to the speaker jack in their cabinet so that electricity coming into the jack from your HD flows first into one speaker, and then into the next. Parallel means that the speakers are wired so that each has a direct connection to the jack, giving them each a direct connection to the electrical power supplied by your HD.

Typically, 2x12 cabinets are loaded with 8 ohm speakers. If they operate in mono, their internal wiring is generally done in parallel for a 4 ohm load. If they have a stereo option, this splits the speakers so that each acts as an 8 ohm load.

- To use the HD with this typical 2x12 cabinet in mono, you'd set the HD's 4/8/16 OHM switch to 4 ohms and connect only the HD's left/mono output to the single mono input of the cabinet.
- For stereo HD operation with this typical 2x12 cabinet, you'd set the HD's 4/8/16 OHM switch to 8 ohms and connect cables from HD's left output to the speaker cabinet's left input, and from HD's right output to the speaker cabinet's right input.

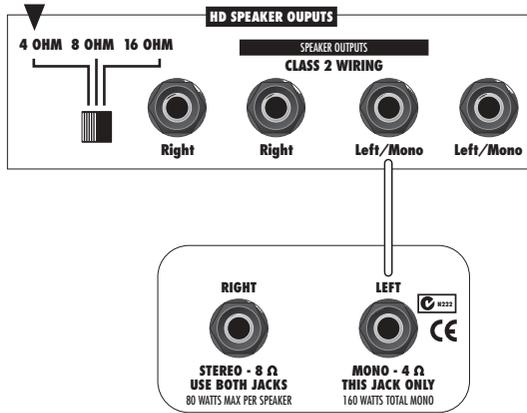
Most 4x12 cabinets are loaded with 16 ohm speakers. When they operate in mono, their internal wiring is generally done in a combination parallel/series configuration that adds up to a 16 ohm load. If they have a stereo option, this configures the speakers left/right so that each side acts as an 8 ohm load.

Line 6 4x12 cabs are loaded with 8 ohm speakers wired for a 4 or 16 ohm load when running stereo, and either 2 or 8 ohms in mono.

If you connect two cabinets that have the same impedance to the two left jacks of HD or the two right jacks (but *not* one each to left and right), that side of Vetta's power amp will be connected to the speakers in parallel, and the result will be an ohm load that is one half of the impedance of one speaker cabinet alone. For instance, if two 16 ohm 4x12 cabinets are connected to the left outputs (or the right ones) of Vetta HD, the impedance of the combined cabinet setup is 8 ohms, and you should set the Vetta HD rear panel 4/8/16 OHM switch to 8 ohms in order to match.

Pictures are handy! See the following pages for illustrations of typical setups.

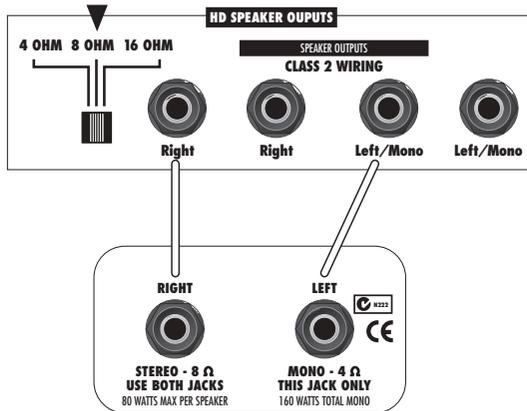
Hooking up your Vetta HD to a single 2x12 in mono.



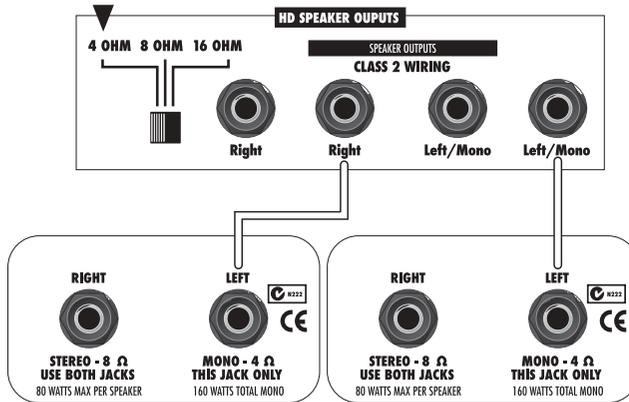
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Hooking up your Vetta HD to a single 2x12 in stereo.

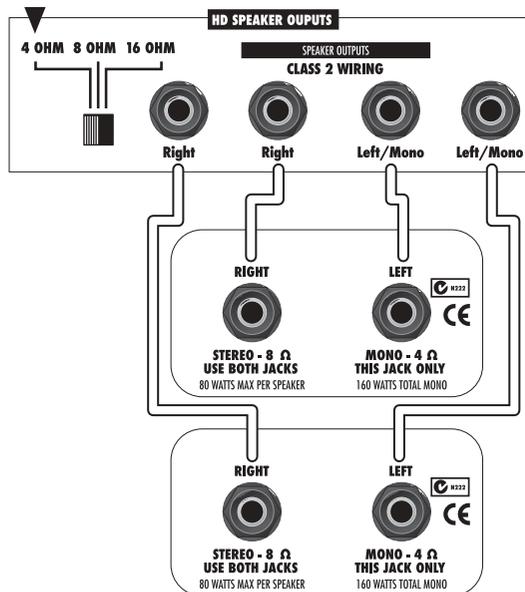
Keep the HD's Master Volume below 9 o'clock with this setup so you don't blow your speakers!



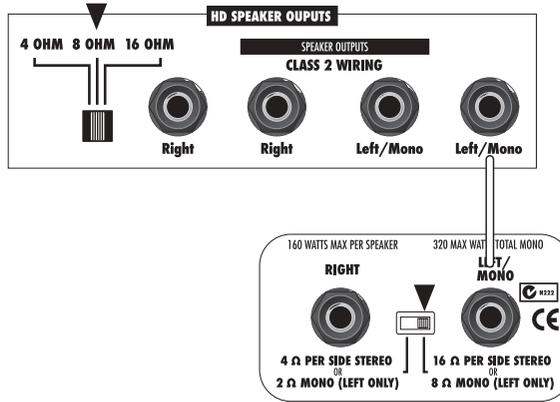
Hooking up your Vetta HD in side by side stereo with two 2x12s



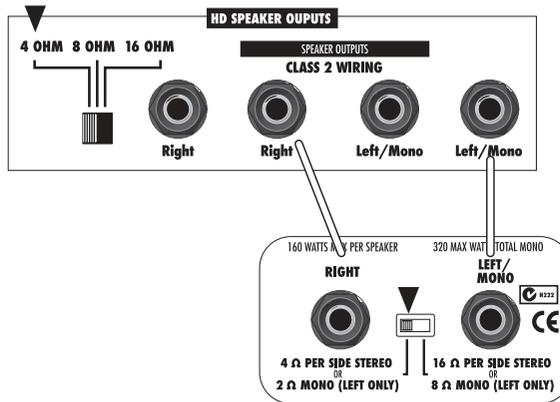
Hooking up your Vetta HD in stacked stereo with two 2x12s



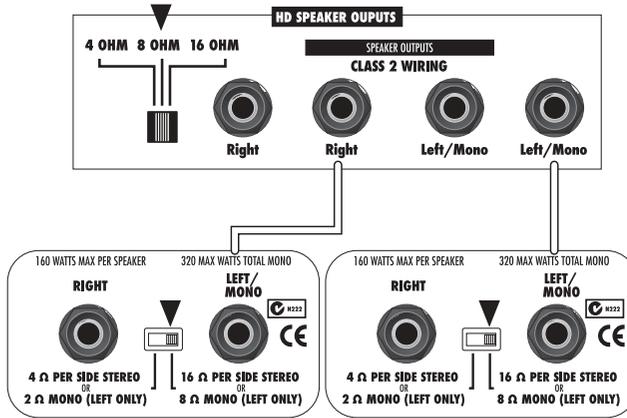
Hooking up your Vetta HD in mono with single 4x12



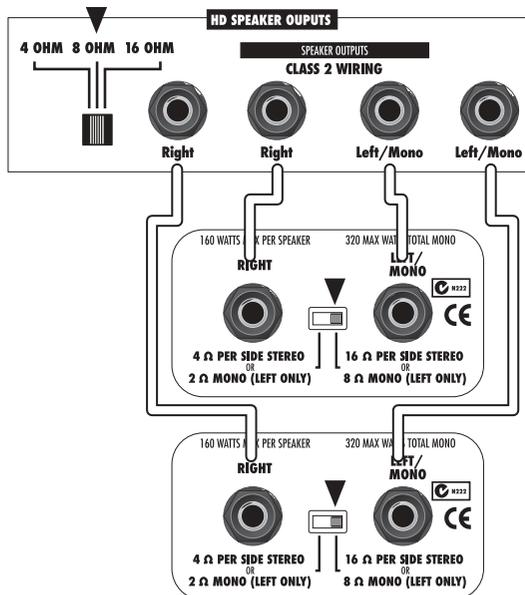
Hooking up your Vetta HD in stereo with single 4x12



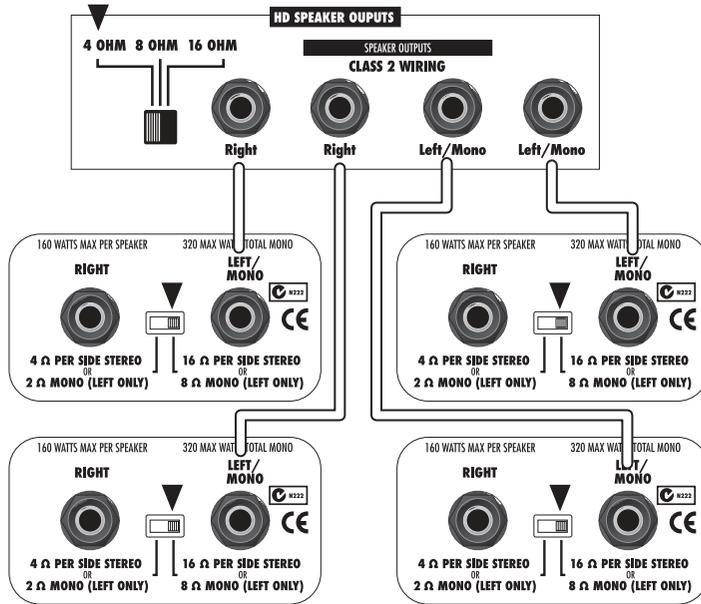
Hooking up your Vetta HD in side by side stereo with two 4x12s



Hooking up your Vetta HD in stacked stereo with two 4x12s



Feeling psycho? Running Vetta HD through four 4x12s



Vetta and MIDI

For those of you who are wondering: yes, you can use a MIDI foot controller with Vetta. Vetta responds to MIDI program change commands as well as continuous controller messages. See the MIDI Functions Appendix, page 10•11.

THE AMPS & CABS

General Notes About the Models

As you may know (or have guessed by now), we're tone fanatics here at Line 6. Once we've set our sights on creating a software emulation of a particular kind of amp, we go to great lengths to be sure that we've gotten our hands on the very best example of this amp that we can find to study. We will (and have) scoured the globe in search of just the right specimen—that one, very particular amplifier that has the magic. In fact, we pride ourselves on hand selecting each and every one of the amps and speaker cabinets that we studied to create the software models in Vetta and all Line 6 amps and PODs.

We are also intensely mindful of the fact that, although amp model names may stay the same over the years, the circuit designs sometimes change radically (it's all those circuit revisions and part substitutions that serious amp freaks are constantly arguing about). Amps from '57, '62, '65, '67, '75, and 2001 may all bear the same model name, yet sometimes have totally different sound and response, and quite often a different look as well. This may be why, over the years, the dedicated legions of amp fanatics have developed a verbal and visual vocabulary that identifies the units that were built during certain periods of a particular amp model's history and thereby communicate the uniqueness of different versions of the same model.

And as we all know, even two amps with the same circuit design, from the same era, can sound radically different, just on the basis of variance in component tolerances, as well as how the wiring harness was dressed, and maybe even what the amp assembler had for lunch that day. Plus, there's the fact that every amp has its own special way of settling in over the years. And, just like people, some of them only get better with age. That's exactly why we went to so much trouble to find the very best examples we could of every amp that we wanted to model for Vetta. And it's why, when describing the software amp models that are emulations of other amplifiers, we've included photos here of the actual, individual amps that we lovingly selected, studied and measured—so that you'll know *exactly* which amp we're talking about.

So, now that you know what's in store, let's take a tour of the amp models that live inside your Vetta, and the original equipment that helped to make them possible.

Line 6 Original Amp Models

The first few dozen amp models in Vetta are inspired by our studies into the 50 year history of guitar amplification, and the important question “What if?” Since Vetta’s tubes and tone “circuitry” are all in software, what could we make if we started mixing and matching the circuits, or wiring things up in new ways? The results of these experiments range from subtle variations to never-heard-before marvels. Take a spin through these amps and you’re sure to find some new inspiration.

1. Bypass (no amp)

OK, this one’s not technically an amp at all, so why is it here? Well, Vetta provides so much effects versatility, we wanted to allow its processing power to be utilized without having to go through an amp model at all. Since it’s not a model, there are no model controls. The Drive, Bass, Mid, Treble and Presence knobs won’t do anything while the Bypass model is selected. The Volume knob does still function as a channel volume control, so that this model’s level can be matched with other models. The Bypass model can be useful when processing external digital signals in a mix via the digital inputs (S/PDIF or AES/EBU), or when you just want to experiment with the sound of your guitar “direct.”

2. Line 6 Tube Preamp

This model is also useful for a direct sound, but includes a tube model in its circuitry. Add more drive and the tube warmth shines through. The tone controls are active as well for setting the tone color to taste.

3. Line 6 Variax Acoustic

One of the great features of the Variax Digital Modeling Guitar is its models of acoustic instruments. These sounds are best appreciated through a full range monitor or P.A., due to its high frequency content. This amp model was created in order to allow the Variax’s acoustic models to sound as full-range as possible through Vetta’s guitar speakers. This can come in handy when there is no other P.A. or full-range amp available or when you want to have some stage volume while simultaneously passing the Variax signal to the house through Vetta’s XLR direct outputs. Keep in mind that since this model provides a large amount of high frequency boost (to compensate for the natural roll-off of Vetta’s guitar speakers) and that overdriving a model playing an acoustic guitar is not usually a desired thing, this model will likely appear softer than most of its compatriots. If you need more gain, the Drive knob can be used to add some tube preamplification.

4. Line 6 Piezacooustic 1

Since there are plenty of other instruments that try to amplify acoustic sounds with piezo pickups, we figured we'd create a model to help enhance these types of signals as well. This model was tuned for use with acoustic guitars with piezos, but of course, feel free to play your electric pickups through this model as well for some interesting tonalities.

5. Line 6 Piezacooustic 2

This piezo-tuned model is tailored to work best with the solidbody electrics that have piezo pickup bridges. Since these types of guitars are less susceptible to acoustic feedback than an acoustic guitar with a pickup, we were able to accentuate more low-mids and low frequencies. As above, don't feel any obligation to restrict yourself to acoustic sounds for this one. Layer it with Line 6 Sparkle, for example, for a great big, fat jazz tone.

6. Line 6 Clean

This model was based on essentially grafting the preamp and tone stack of a JC-120 (Roland's popular "Jazz Chorus" solid state combo) onto the poweramp and transformer of a classic Marshall JTM-45 tube head, thereby giving you the crisp and clear front end typical of a solid state amp, but with a rich, satisfying tube amp-style bite as you turn it up.

7. Line 6 Super Clean

Forget what you know about how clean or how bright a guitar amplifier can go. Line 6 Super Clean goes farther, adding a *lot* of brightness. While this model certainly is Clean, it has two other fun tricks up its sleeve as well: Setting the Drive knob at max gives a really broken "small amp on 10 about to die" sound. FUN! And the bass knob has an extreme effect when set to minimum— for sweet AM radio sounding tone.

Caution: Because Super Clean adds so much brightness, it generally won't work so well with distortion pedals, since they usually add lots of high frequencies, too. The combination may produce unnatural artifacts—or just rip your head off. Plug an undistorted guitar in here, though, and we're talking super happy shiny bright.

8. Line 6 Sparkle

We love tweed Fenders. We love blackface Fenders. We love 'em both so much, we can never really decide which one we like more. Luckily, we were able to come up with the perfect way to share the love. We took the preamp and tone stack from our model based on the '58 Tweed Bassman, and we wired (in the virtual world) our model of a blackface Bandmaster poweramp and transformer onto it. Voilà! Line 6 Sparkle.

9. Line 6 Super Sparkle

You know how all great amps have a certain sweet spot — a particular setting where they sound magical — dripping with tone? Super Sparkle captures that organic vibe with a new twist: its voiced in the clean/low gain realm where everything usually sounds too clinical or too dark. Super Sparkle is an edgy tone that will sparkle and shimmer if you treat her right. So play nice.

10. Line 6 Sparkle Clean

Need Lots of Sparkle? Need lots of clean? You've come to the right place. Plenty of high end zing.

11. Line 6 Twang

Here's the flip side of the Sparkle formula. Graft the preamp and tone stack from our model based on a '65 blackface Deluxe onto the poweramp and transformer based on a '58 Bassman. Whaddya know? It ends up being a great roots and rockabilly amp (like we should be surprised).

12. Line 6 Bayou

Another Line 6 original model, this is the result of our quest to capture the fondly remembered tone of a harp player blowing through a beat up old Fender Deluxe, as heard in a roadhouse in Baton Rouge, Louisiana.

13. Line 6 Class A

One of the most satisfying tonal experiences as a guitarist is to play through an amp that's driven to the point where the poweramp is just starting to distort, but before it achieves full clipping. For many players, this is the coveted 'sweet spot' they look for on an amp. Because we're not limited to physical reality when we're creating amps in the digital world, our goal for this one was to make an amp model that was nothing but sweet spot. One of the great side effects is the ease of coaxing feedback out of this one.

14. Line 6 JTS-45

Since the design of early Marshalls was based on the Fender Tweed Bassman circuitry, we wondered what it would be like if we took the preamp and tone stack based on a JTM 45 and ran it into the power amp and transformer based on a '58 Tweed Bassman. What we got was way happening, as JTS-45 will attest. Great grind and nice punch. A tone the whole family can enjoy.

15. Line 6 Mood

And here we give you a fantasia tone, based on our memories of grunge guitar tones we have known and loved. You can almost hear the Seattle rain tapping on a practice room window somewhere.

16. Line 6 Purge

Like '80s shred guitar? Well, then, you're gonna love Line 6 Purge. We took our model of a Marshall JMP-1 preamp and hot-rodged it. It was hard work sticking in that digital dual overhead cam and hooking up the virtual glasspacks, but when we were done, we had the ultimate shred machine. Look out world, here you come.

17. Line 6 Crunch

Just like a good chef, our Sound Designers are always experimenting with new recipes. They added a pinch of plexi, hardwired four inputs for increased gain, and then rounded it off with a dash of Secret Sauce. The result is this model really cooks. Just turn up the Drive and tweak to taste.

18. Line 6 Throttle

Pedal to the metal, this Line 6 original is a medium-high gain tone with a nice throaty growl. Grab the Drive knob to give it some gas.

19. Line 6 Chemical X

Just like those secret ingredients that detergent companies used to crow about (Now! Contains Ingredient X-27!), the Line 6 sound design guys wouldn't tell us anything about what the inspiration for this one was or who it might have belonged to (no matter what type of bribery we attempted). Suffice to say that it's a very punchy hi-gain sound that also cleans up quite nicely when you roll your volume back.

20. Line 6 Smash

Got an axe to grind? Dial up Smash to take it way over the top with an obscene helping of gain. Smash delivers a tight bottom end, and a serious mid range void that'll render Hi-Fi, butt-kicking rhythm tone every time.

21. Line 6 Spinal Puppet

The monster truck of tone. Big, powerful, tight and fast. We studied some of the best stock and modded Marshalls in the world to create this hybrid monster that goes way past 11. This is all about serious amounts of gain for discerning high gain players.

22. Line 6 Fuzz

Although not technically an amp, we loved the unique tonal qualities of the classic 1960's Arbiter Fuzz Face enough to base a special amp model on it. This fuzz box used broad frequency, transistor-based clipping. The result is a buzzing kind of distortion that has become popular again with the alternative and grunge set. Jimi Hendrix was among the first guitarists to popularize the Fuzz Face in the States, but our model is considerably dirtier than the tones found on "Are You Experienced." Try playing "Satisfaction" by the Stones, or the lead from "American Woman" by The Guess Who. Liberal use of the Bass, Mid, and Treble controls will let you go beyond the tones that the Fuzz Face could deliver, enabling you to discover your own unique recipe for those elusive fuzz tones in your head. Just a note: when recording Purple Haze, Jimi didn't even use an amp – he just went straight from a Fuzz Face to an Orange power amp to a 4x12 cabinet. Which is the same sort of tone you find here....

23. Line 6 Chnk Chnk

The name says it all. Your guaranteed to feel your pants flapping with this model. Plenty of low end with a tight response. This high gain model has lots of beef so start shredding.

24. Line 6 Big Bottom

Just can't seem to get enough bottom end out of your cabinet? Try punishing it with Big Bottom. We crossed a Boogie Triple Rectifier with a Rivera Los Lobottom sub rig and dialed it in for serious disembowelment. But it's not just about the bass. A super wide midrange control and an extra presence high midrange maintain articulation and power throughout the tonal range of this amp.

25. Line 6 Treadplate

The original POD had a popular amp model that was our best attempt at the time to pay homage to the Mesa Boogie Rectifier series of amplifiers. In addition to the Boogie vibe, that model had some unique qualities that were all its own, and which we've captured here. In a way, Treadplate marks the first time we've actually modeled another Line 6 product! Here is an excerpt from the old POD manual to describe it: "...modeled after a 1994 Mesa Boogie Dual Rectifier Tremoverb. You can use this Amp Model to get that tight, high gain sound used by bands like Dream Theater or Metallica."

26. Line 6 Lunatic

High gain with lots of high mids and no mud. Great for layering with other amps to cut through on the high end. A wide range of top is available with the Treble and Presence controls (maybe to the edge of lunacy).

27. Line 6 Agro

An aggressive high gain amp with a unique Mid control that will take you though the entire gamut of tone on one knob. How did we do it? The mid knob for this model changes the character of the distortion. When set to minimum the distortion exhibits Fuzz pedal characteristics. When the Mid is set to noon it creates creamy modern high gain amp tones a la Soldano. And when the Mid knob is turned up to Max it's very much reminiscent of that Class A Vox sound. Of course, then there are all the places in between...

28. Line 6 Insane

Imagine running your Soldano SLO-100 as a preamp for your Boogie Dual Rectifier, and you've got a pretty good picture of just how much sheer gain is involved in Line 6 Insane. It's entirely possible to get completely out of control with this one, and we heartily encourage you to do just that.

29. Line 6 Octone

Now here's something we hope you'll really like. What would it be like if you built a tube-based Octave Distortion preamp for a Class A poweramp? Line 6 Octone provides the answer. You'd get an Octave box that tracks better than anything you've ever used, deals with consonant intervals with a degree of panache that just wasn't possible before, and kicks some major rock and roll butt!

Musings on Tone Controls

As we are about to present the Vetta models that were created through our meticulous study of other manufacturers' amplifier designs, it's appropriate for us to make a few remarks regarding tone controls.

As we mentioned at the beginning of this chapter, we're more than a little obsessive about the quality of the amps we model. And we pride ourselves on the accuracy with which we model them, and the effort we go to in capturing the individual quirks and idiosyncrasies that make each of the amps we study unique. On the other hand, we also put all the software Amp Models that result from our modeling efforts into an amp with a fixed set of tone knobs that have to serve every amplifier. What to do when Vetta's got more knobs than the original equipment we modeled (as is especially often true for the Vetta models based on vintage amps)?

Here's what. Once we've done our absolute best to re-create the tone controls of the original equipment in our software Amp Model, if there are any knobs left over, we make them do something useful in a way that also makes it easy to "neutralize" them and stick to the classic tone possibilities.

Here are our rules of thumb:

1. If an amp had only a single tone control (and that will almost always be a treble roll-off) it will be assigned to the Treble knob and the Bass and Mid knobs will become post-amp EQ (rather like the EQ you'd use on a mixing board). If there was no tone control, like on the '61 Tweed Champ model, all the tone controls will be post-amp.
2. If the original amp had a Presence control, the Presence knob of Vetta's model will operate as the original did (usually a poweramp feedback circuit). In all other cases, Presence is a post-amp shelving tone control, and setting it to 0 disables it so you get classic Presence-free tone.
3. All post-amp tone controls are cut/boost controls and the 12 o'clock position is effectively a bypass or 'flat' setting. So if you want historical accuracy, set the knobs that weren't on the original straight up, and have at it with the others!

30. '02 Bomber X-TC: Based on a Bogner Extacy



Reinhold Bogner was good enough to personally select and deliver a Bogner Extacy for use in crafting this model. Reinhold was designing and building amplifiers long before he left Germany in 1989 to move to Los Angeles. Once in the US, he quickly gained the trust of many influential players including Steve Stevens, Dann Huff, Allan Holdsworth, Mike Landau and Steve Vai. They all sought out his skill at modifying and custom-building their amps. Eddie Van Halen entrusted Reinhold to overhaul and revitalize Eddie's #1 Marshall Plexi. We hear that Eddie was pleased.

The Extacy covers a wide range of tone, and you'll find that your Vetta's Bomber X-TC model lets you do much the same as you work the Drive knob, as well as your guitar's volume knob. On the top end, this one'll bark like a Plexi, or you can take it down through swampy crunch and finally arrive in the realm of lush clean tone. The Extacy is a really versatile amp from a really great guy, and we're pleased that he helped us model it for your Vetta.

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31. '02 Bomber Uber: Based on a Bogner Uberschall



Much like the Bogner Extacy, the Uberschall dishes up serious tone for high gain players. This is a fabulous boutique amp with a focused high gain tone that'll cut through the band and soar overhead for days.

The Uberschall has a very unique Presence control that we did our best to model here. Unlike most presence controls that tend to shave off very high frequencies, the Uberschall presence knob messes with the whole recipe. Mids, treble, bass and presence will come in and out, effecting both the pre gain and post gain tonality. A tonal roller coaster ride brought to you by one of the tube amp world's finest designers.

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32. '01 Zen Master: Based on the Budda 2001 Twinmaster



This model is based on a Budda Twinmaster 2x12 combo. The Budda has a great, warm, Class A/B, sound. The Budda philosophy is all about power tube distortion. Simplicity is the key. With relatively low front end gain, highly interactive tone controls, and tube rectifier “sag,” it’s great at getting a classic cranked sound for small gigs and recording (it’s all of 18 watts). Since the original Twinmaster has no mid control, we’ve added a little bonus to our model in the form of some post-Amp Model mid contouring available via Vetta’s Mid control. As is true for all such “bonus” tone controls

on Vetta’s models, you should set this control to 12 o’clock to get groovy with the unadorned Budda-style vibe. We used the Twinmaster’s Input 2, which is lower gain, when creating this model.

33. Connor 50: Based on a Cornford mk50h



The Cornford mk50h is a fine, British-made boutique amplifier that our very own Line 6 UK lads tipped us onto. The Cornford has a fair amount of gain and breaks up like a Marshall Plexi, but retains a certain clarity that is more typical of Vox amplifiers.

One odd thing about the Cornford is the fact that it actually runs its drive channel in series with the Clean channel. This provides for some unique interaction that we captured during our modeling process by sweeping both controls though their range at the same time, and tying all of this to your Vetta’s Drive knob. Lower Drive settings give you a tone dominated by the clean channel tonalities. As you turn the knob up past noon, you’ll be moving it into more progressive high gain territory.

34. '03 Deity Crunch: Based on a Diezel VH4 Channel 3



What is it about Deutschland and high gain guitar amplifiers? When we met Peter Diezel, and opened up the VH4 we new we were in the presence of a serious tone fanatic. The VH4 is the Ducati of high performance guitar amplifiers. Meticulous attention to every detail, and enough tone and power to not only take on but seriously destroy any competitor.

Some of the most serious players in the Metal genre have come to depend on their VH4's for tight, focused and perfectly refined tone. Our model captures channel 3 on this sublime beauty.

35. '03 Deity Lead: Based on a Diezel VH4 Channel 4

But wait, there's more! This model of channel 4 of the Diezel has even more gain than channel 3 (Crunch). It is perfect for lead work, and when the drive is brought back to noon, affords some excellent rhythm tones as well.

36. '03 Deity's Son: Based on a Diezel Herbert



After messing with the VH4 we knew you'd get into another amp from Peter Diezel. Herbert is one of those simple, ingenious designs. It is unique among amps in its ability to achieve an incredibly wide range of tone on a single channel. Your Vetta's model is very faithful to the original in tone, but due

to a couple extra knobs on the Herbert, we had to make a few choices for you. Our model tackles Channel 3 with the Deep control preset to 2 O'Clock. The original also had a Mid Cut Intensity knob — this is the magic control that affords this amp its serious tonal range. To bring you this same joy, we set Herbert's Mid knob to about 2 o'clock when modeling the tone stack. That allowed us to offer you control of Herbert's unique Mid Cut Intensity with your Vetta's Mid knob.

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37. '02 ANGEL P-Ball: Based on the ENGL Powerball



Designed by Edmund Engl in Bartholoma, Germany. The ENGL Powerball uses a combination of 12AX7, ECC 83 and 6L6GC tubes for this 100 watt monster. Courtesy of its ability to crank out tight, focused low end, glossy top end and jaw-dropping sound, it is a favorite of such

artists as Matthis Jabs and Rudolph Schenker of The Scorpions, Phil Campbell of Motor Head and Ritchie Blackmore.

The Powerball is a four-channel amplifier. We modeled channel 2 (soft lead.) All aspects of the presence control were modeled. This amp has a “Depth/Punch” control which we set at 7 o’clock. This control shapes the low frequency response in the power amp stage.

38. '53 Fn Tweed Small Tweed: Based on the Fender Tweed Deluxe



Modeled after a 1953 “wide panel” Fender Tweed Deluxe, this Amp Model will snarl with the best of them. The original amp had only a single tone control, essentially a Treble roll off. We set up Vetta’s Treble knob to give you this Treble roll off when using this Amp Model. Which left us with the Bass and Mid knobs just sitting there. That just didn’t seem right, so we figured out a way to put those knobs to work without messing with the authenticity of this Amp Model’s treble tone control. We set up the Bass and Mid as post-Amp Model controls, which essentially lets you EQ up your tone as you would do on a mixing console after recording your amp. Set the Bass and Mid knobs at halfway to put them in ‘neutral’, turn the Presence to 0, and try the Treble knob somewhere above halfway for a classic Tweed sound. We used the Instrument 1 input on the Deluxe when crafting this model.

39. '58 Fn Tweed B-Man: Based on the Fender Tweed Bassman



The classic '58 Fender Bassman 4x10 combo was the amp that started it all—instant rock and roll tone. Originally a bass guitar amp, the Bassman became a Blues staple for 6-string guitarists. It has the fat bottom end you'd expect from a bass amp but also has the Fender twang on the top. Incidentally, when Jim Marshall built his first amps with Ken Bran they were heavily influenced by the early Bassman. One of the interesting things about the Bassman is just how interactive the Mid and Treble controls are. The Mid control isn't a bandpass, as in most tone control setups. Instead, it's almost like a second treble control. The two are additive, so if you're running Vetta's Mid knob higher than halfway up with this model, you'll find that the Treble control might give you more bright than you really want. On the other hand, when you turn the Mid knob down, you'll probably want to boost the Treble. The Bassman, like many of the amps modeled for Vetta, didn't have a master volume. So to get the kind of tone that the Bassman can deliver at higher gain settings, you had to crank it up loud enough to do some serious damage to anyone who might be standing close by. With Vetta, you can get that kind of tone at a bedroom or studio level — or through your headphones even! Try a Drive setting of about 4 or 5—it's guaranteed to dredge up the best R&B licks you know. We made our model using the Bassman's Normal Channel 1 input.

40. '61 Fn Tweed Tiny Tweed: Based on the Fender Tweed Champ



Modeled after a 1961 Tweed Champ, this model has a great sound when the Drive is cranked (not bad clean, either). These amps were originally designed to be sold to beginners, but rock and rollers quickly discovered that you could get a great distorted sound at fairly low volume levels. Many of the classic guitar solos of the 50's were recorded through a Champ. The Champ had no tone control, only volume. With your Vetta, it's easy to get a classic Champ tone. Just leave the Bass, Mid and Treble controls parked at 12 o'clock, which means they are "flat," making no contribution to the tone. Set Presence to 0, and it will also be letting the unadorned classic Champ tone through. When you're ready to explore further sonic territory, spin those and work your magic. Since the Champ's only got one input jack, that's what we plugged into as we burned the midnight oil making our model based on this puppy.

41. '63 Fn Black Vib Verb: Based on the Fender Vibroverb 6G16



In early 1963 the Fender 2x10 brown tolex Vibroverb was introduced and later that same year it was replaced by the 1x15 blackface Vibroverb made famous by SRV only to be discontinued in 1964. The Vibroverb was introduced right before Fender decided to change the look of the entire amp line to what guitarists now call "Blackface Fenders". The Vibroverb we studied to create this model has the two 10-inch speakers and transitional cosmetics. There's black tolex, a dark brown numbered faceplate and brown barrel knobs. Like other Vibroverb 2x10 amps, it's 40 watts of pure heaven. These were the first guitar amps with on-board reverb and also utilized a vibrato circuit that modulates the bias of the power tubes for creamy smooth tremolo sounds. It all added up to great tone with the latest guitar effects built-in... sort of like your Vetta! The electronically-inclined will also appreciate the fact that this version of the Vibroverb also used a tapped treble control and a 7025 phase inverter (as opposed to a 12AT7). The Vibroverb had no Mid or Presence controls, so these are both "extras" on our model. You can set Mid to 12 o'clock and Presence to minimum for the unadulterated Vibroverb-style sound.

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42. '64 Fn Black Lux: Based on the Fender Deluxe Reverb



The Holy Grail for many blues, country, and “roots” players has been a blackface Fender Deluxe Reverb. (Of course, now that Vetta’s here, that may all change.) After listening to quite a few candidates back when we were seeking the ultimate Deluxe Reverb to model during our development of Flextone and POD, we stumbled upon an extremely cool '64 Deluxe. We still haven’t found one better.

Most players love a Deluxe when it’s turned up to about 7 for a nice gritty sound that cleans up when you back off your guitar’s volume knob just a little. Notice how the tone control response changes as this Amp Model’s Drive is changed: clean settings are crisp and present, while more driven settings will mellow the high end. This is typical of what you get from a Deluxe and is nicely captured here. The Deluxe itself has only Bass and Treble controls, leaving us, once again, with the prospect of a couple knobs with nothing to say for themselves. But fear not; in this case, we’ve set up Vetta’s Mid knob so you can add some post-Amp Model Midrange contouring for a little more flexibility, while Presence adds, well, Presence. Once again, set the Mid knob to its “neutral” 12 o’clock position and the Presence knob to 0 for the classic Deluxe sound. Tweaked up right, this tone will cut through and sing. We jacked into Input 1 of the Vibrato Channel to get this model cooked up for Vetta.

43. '65 Fn Black Double: Based on the Fender Twin Reverb



The classic blackface Fender Twin (in this case, a 1965 Twin) was a real workhorse. Everybody used it, from jazz and country players to serious rockers. I myself remember seeing Johnny Winter at a concert where both he and Rick Derringer—am I dating myself or what?—were using six Twins stacked in a pyramid. Each. We were in the second balcony and it was REALLY loud even all the way back there. The Twin has a lot of tonal flexibility and is at home in a great many different situations. It never gets extremely overdriven and dirty, mostly just louder—a lot louder.

This is a great choice for the classic surf sound. Dial up the spring reverb, switch on the model of the Opto tremolo, crank up the volume, and shake the sand out of your flip-flops. Like most everyone who owns one, we plugged into Input 1 of the Normal Channel for modeling purposes.

44. '67 Fn Black Dual Show: Based on the Fender Dual Showman



This sound was made famous by Dick Dale and his brilliant surf tunes. We modeled the tremolo channel with the bright switch off. This channel uses two 7025 preamp tubes and the 85 watt power amp uses four 6L6GC tubes. The Dual Showman was sold as a “piggy back” system, an amp head and a 2x15 cabinet. We added a MID knob with a center frequency of 750Hz. You can cut or boost 10dB. Leave this setting at 12 noon for the classic sound. We also added a Presence knob. Set this control to minimum for the classic sound.

45. '72 Fn Silver Bass Head: Based on the Fender Bassman Head



Paul McCartney used this amp during the Let It Be sessions, as well as the famous rooftop performance. He also used this amp in the early years of Wings. This amp has a very pronounced midrange response. We modeled the Bass channel, which uses two 7025 preamp tubes. The “Deep” switch was on. The poweramp uses two 6L6GC tubes. The original amp has no Mid knob, so for the classic sound set the Mid control to 12 noon.

46. '96 Fn Mini Double: Based on the Fender Mini-Twin



There are times when you find yourself in a unique position to do something other than what people might have expected, and when our gaze came to rest on the little plastic Mini Twin, we knew it was one of those times...

Based on the little battery powered, dual 2-inch speaker Fender novelty item, this model really shows its mettle when you make it part of a dual amp setup on your Vetta. There are also hours of fun to be had when you unhitch the cab model from this amp, and assign it to a different amp in a dual amp blend. Plus, you might as well admit it, you've always wondered what a Dual Rectifier would sound like through a pair of 2-inch speakers, haven't you? The Mini Twin's only got one input, so that's where we plugged in to make our model.

47. '60 Gibtone Explorer: Based on the Gibson Explorer



This one is based on a 1960 Gibson Model GA-18T Explorer (little brother to the Gibson “Les Paul” GA40T). The particular amp we modeled originally belonged to the father of one of the high school buddies of Line 6’s Artist Relations guru, Tim Godwin. It was sitting in a crawlspace for years, until Tim happened to ask his friend if he still had the amp, and whether he was interested in selling it. When Tim finally got his hands on it, the amp still had the original Gibson branded tubes in it!

Some time passed, Tim brought his little treasure into the office one day, some of us played through it and we cried out as one voice, “We’ve got to model this one!”

Working from codes found on the pots and speaker, we were able to date this amp’s build to the week of May 21, 1960. 14 watts, with a 10-inch Jensen speaker, the amp runs Class A with 6SJ7 preamp tubes, 6V6 Power tubes, and a 5Y3 rectifier—just in case you were interested.

48. '60 G-Brand Two-Tone: Based on the Gretsch 6156



Just by coincidence, we happened to get this one from Tim Godwin as well. (What can we say, he obviously has a well-exercised fetish for tiny, old, low wattage amps.) Another amp made by Valco/Supro, one of its curiosities is that the output transformer is actually mounted on its single 10-inch speaker, rather than on the amp chassis. It also has a lovely wraparound grill cloth, for a real futuristic look (or what passed for it in the '50s).

49. '73 Hiwatt 100 Custom: Based on the Hiwatt Custom 100



Based on a Hiwatt DR-103, this model gives a great, punchy sound that will cut through almost anything and retains great definition even when cranked. That's exactly what designer Dave Reeves was looking for when he left the Sound City division of Dallas Arbiter in 1966 to form HyLight Electronics. Though his first designs were more reminiscent of the Vox and Selmer amps of the day, it wasn't long before Reeves had started producing the amps that '60s Brit-Rock fans have become familiar with. Renowned for their 'tank-like' construction (due in part to Reeves' hiring of 'mil-spec' wiring specialist Harry Joyce), it was small wonder this amp was the choice of Pete Townshend for so many years. It wasn't just Townshend using Hiwatt, either. Many of the then-current crop of British rockers like Pink Floyd, The

Moody Blues, Manfred Mann, and Jethro Tull were also Hiwatt endorsees. Crank this one up and you can see for miles. We used Input 1 (and did windmills) as we modeled this one.

50. '65 Brit Plexi J-45: Based on the Marshall JTM-45



This Amp Model is based on a '65 'block logo' JTM-45 head, complete with a gold Plexiglas front panel (although the sound that many guitarists associate with 'Plexi' amps comes from the late 60's, 100-watt Super Lead that was the inspiration for the next in Vetta's line up of Amp Models). When the royal agents we had dispatched to the U.K. found this particular amp, we instantly fell in love. The amp even has the original KT-66s in it, still in great shape! It's one of the finest examples of a JTM-45 we've ever heard, and it's a constant battle at Line 6 to see who gets to take it home for the weekend.

Those interested in the genealogy of tone will be interested to note that the JTM-45 marked the beginning of Marshall's transition from a mellower Fender-like tone to the distinctive, bright "crunchy" sound of the later Marshalls. We plugged into Input I (and thanked our lucky stars for the privilege) to model it.

51. '68 Brit Plexi Lead 100: Based on the Marshall Super Lead



Modeled after the infamous Marshall 'Plexi' Super Lead—coveted by tone connoisseurs the world over. We literally scoured the world for this particular amp, finally finding a great example of a Super Lead languishing (we like to think fate preserved it for us) in Holland. By the time this amp was built (ca. 1968), Marshall had completely changed the circuitry away from the Fender 6L6 power tube heritage and moved to an EL34 tube. Another major tone difference was due to the necessary output & power supply transformer changes. (See, we told you we spent some time looking into all this stuff.) All this mucking about added up to create a tone forever linked with Rock Guitar. Amps of this era didn't have any sort of master volume control, so to get *the* sound you'd have to crank your Super Lead to max—just the thing to help you really make friends with the neighbors. Hendrix used Marshalls of this era; a decade later Van Halen's first two records owed

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their “brown sound” to a 100-watt Plexi (Our Super Lead, in fact, has the ‘lay down’ transformer that was unique to ‘68 models, the same as Hendrix and Van Halen’s Marshalls.). To get a crunch sound out of a Plexi, you would likely crank the input volume and tone controls (to 10!). You’ll find that, in keeping with our “make-it-sound-a-whole-lot-like-the-original” concept, Vetta’s model is set up to do pretty darned near the same thing. Once again, we used Input I for modeling.

52. '68 Brit Plexi Bass 100: Based on the Marshall Super Bass



Based on a '68 Super Bass Plexi head, the principal differences between the '68 Super Bass and the '68 Super Lead are some small changes in the tone stack. What look like minor differences in a schematic, though, can add up to larger differences in actual tone (like a bass control that actually seems to do something at higher levels).

A number of '60s British rock icons actually preferred the Super Bass to the Super Lead for these exact reasons. Check it out for yourself. You may find this is the bottom end you've been searching for.

You guessed it, Input I was the one we connected our high tech modeling tools to.

53. '68 Brit Plexi Jump Lead: Based on the Marshall Jumpered Super Lead



Guitar playing is all about experimentation, isn't it? That, and finding all the possible ways to get more distortion out of whatever gear you have at hand.

One of the fun things you can do with a Plexi is take a short guitar cable and jumper channel I and channel II (as they're frequently numbered) together for a little extra saturation. Some guys loved this sound so much that they pulled the chassis and permanently wired a jumper into the amp.

Being the obsessive/compulsive tone freaks we are, we just had to give you a model of this setup, too.

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54. '68 Brit Plexi Variac: Based on the Marshall Variac'd Super Lead



Ahhh, the stuff of legend. According to the stories, part of the magic behind Edward Van Halen's 'Brown Sound' was a Marshall 100 watt Super Lead being purposely run at higher voltage through the auspices of a Variable AC Transformer (aka a 'Variac').

While we don't generally recommend experiments with high voltage sources, especially ones that might blow up precious gear, we felt it was our duty to see if the stories were true. So we cranked the Variac up to 140v AC and gave the '68 Super Lead a power workout. (Don't worry, it survived to rock again.) We're thinking those stories must not be too far wrong.

Like most all the other Marshalls, we used Input I for the modeling effort.

55. '69 Brit Plexi Lead 200: Based on the Marshall Major



Where do you go when a 100 watt Super Lead just isn't enough? Jim Marshall's answer was to design a 200 watt amp called the Major, on which we based this model. This amp became a favorite of many bassists of the era. Plus a number of guitar players, including Ritchie Blackmore, who had his Major modified so that the channels cascaded together, with one channel becoming, in essence, a preamp for the other channel. Leslie West also made the scene with his Major, and whoever was playing, one thing was always certain: these amps were LOUD. They had so much output, in fact that, according to Michael Doyle's book, "History of Marshall", production had to stop in 1974 when it was no longer possible to get the extra heavy-duty tube sockets required to handle the Major's power. Your Vetta model brings you the flavor of the Major, plus the option to keep the decibels less than deafening, if you so choose.

We used Input I on the Major to create this model.

56. '87 Brit Gain J-800: Based on the Marshall JCM 800



Turn to this Amp Model to conjure up tones of the coveted JCM 800, one of Marshall's most universally-acclaimed modern amps. This updated version of the Plexi continued Marshall's heritage with added gain and edge for a new generation of rock guitarists. One of the biggest differences here is that the tone controls are located after the preamp tubes.

Incidentally, some versions of JCM 800's get their distortion by clipping a diode. The amp we modeled uses a tube for distortion.

The JCM 800 is, of course, the metal sound Marshall made famous. And although not many people play Marshalls clean, it is a great tone, so you should also be sure to check out this model with a low Drive setting. Of course, you can always pump up the drive and rage... Input I, once again, was given the modeling treatment.

5 • 23

57. '87 Brit Gain Silver J: Based on the Marshall Silver Jubilee



In 1987, to commemorate 25 years in the amp business, Jim Marshall introduced a limited edition collection of tube amps based on the 2203 and 2204 master volume designs. They were very distinctive products, with silver vinyl covering and chrome panels, known simply as the "25/50 Silver Jubilee" Series models. The Silver Jubilee models used a unique diode clipping stage for extra gain and a redesigned tone block to offer much more tonal variation than previous Marshalls.

Guns N' Roses' lead guitarist, Slash, was way into this amp. So much so, in fact, that Marshall reintroduced the 100 watt model as the "Slash Limited Edition Signature Amplifier" in 1996.

58. '96 Brit Gain JM Pre: Based on the Marshall JMP-1



Marshall's entry into the rackmount preamp world, the JMP-1, has been a favorite of 'big-hair' metal guitarists as well as many others looking for a tight, highly saturated tone without the compression of poweramp 'sag.' It was also one of the first MIDI-controllable preamps.

The overdrive flavor of the JMP is somewhat "Boogie-esque" and many people saw the JMP as Marshall's answer to the ADA MP-1 and Mesa Boogie preamps. First introduced in the early nineties, the JMP has enjoyed a recent surge of popularity with new metal bands looking for a really tight, aggressive, well focused tone without being overly scooped. Your seven string is gonna love our model developed from our careful study of the JMP-1.

59. '92 Brit Gain J-900 Clean: Based on the Marshall JCM-900



This is what we consider to be the first true modern high gain amp from Marshall. Through out history guitar players have been modifying their Marshall amps to enhance the gain and tone. It seems like Marshall took a look at some JCM-800s with popular modifications and armed with that knowledge created the JCM-900. The tone knobs are all "post" distortion and the amp uses 6550 power tubes. Bravo Marshall! This is a model of the clean channel.

60. '92 Brit Gain J-900 Dist: Based on the Marshall JCM-900

Given that the JCM-900 has two channels, naturally we figured you might want a model of each. This model is based on the Lead channel of the JCM-900. It uses a fixed bandpass before the distortion, and adds some diode clipping. It's sort of like having an onboard Rat pedal. Nice mid tone with lots of gain.

61. '03 Brit J-2000: Based on the Marshall JCM2000



The JCM2000 captures the modern Marshall tone, by refining the JCM series into a multi-channel power house. Our recreation captures the OD2 channel, with the Deep switch kicked in on a 60W TSL. The JCM2000 uses a quartet of ECC83 pre-amp tubes and a pair of EL34 output tubes.

62. '96 Match Chief: Based on the Matchless Chieftain



We crafted this model from our studies of the Matchless Chieftain.

The Chieftain was designed by Mark Sampson at Matchless to blend a Fender/Marshall type front end with a classic 'spongy' and very reactive Class A power section.

With higher gain than the DC-30 (which is next in our hit parade), the Chieftain is a great roots-music amp. It also features the incredibly sexy feature of a light up front logo name plate, which may not affect tone, but it sure does look cool.

When, sad to say, Matchless went out of business, both the Chieftain and the DC-30 became highly collectable pieces of gear, with used ones often fetching up to a thousand dollars more than their original price. We're happy to do our part to keep the original Matchless legacy alive with the Matchless models in your Vetta.

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63. '93 Match D-30: Based on the Matchless DC-30



The DC-30 was the amp that really put Matchless on the map. Mark Sampson, the amp's designer (who was generous enough to tell us the story of this amp's creation straight from the source), set out to create a road-worthy Class A amp that could cover a wide range of tones.

Built like a tank (and weighing nearly as much), the DC-30 paid tribute to early Vox amps, so if you like a Vox AC-30 (or Vetta's model based on one), you'll also want to check out Vetta's model of the DC-30. We modeled Channel 1 to create this model.

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64. '85 California Crunch: Based on the Mesa Boogie Mark IIc+



Mesa Engineering started out with Randall Smith souping up old Fender Princeton amps for SF Bay area musicians. Over the years, the amps evolved, adding effects loops, switchable channels, and Randall's Simul-Class design, in which one pair of output tubes is run Class AB and the second pair run Class A. Boogies were really the first modern guitar amplifiers and were quickly adopted by many players looking for more 'oomph' in a smaller package. We used the Drive channel to do our modeling.

65. '01 California Treadplate: Based on the Mesa Dual Rectifier



This Amp Model is based on a 2001 3 Channel Mesa Boogie Dual Rectifier Solo Head.

The Dual Rectifier was part of Boogie's more modern, high gain approach for that "big hair" sound. In contrast to the earlier Boogies, the Dual Rectifier's tone controls have more influence at high gain settings, so you can scoop the mids and increase the bottom end. We used Channel 3 on the Modern setting for this one with the rear switches set to Bold and Tube Rectifier, respectively.

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66. '01 California DiamondPlate: Based on the Mesa Triple Rectifier



Here's a model based on the Channel 3 'Modern' setting of a 2001 Mesa Boogie Triple Rectifier Solo Head.

Rock and roll is all about excess, now, innit? If two are good, three have got to be better, especially if you like the spongy feel of sagging rectifier tubes. No need to be bashful. Plug in, dial up some volume, and have some fun.

As with the Treadplate model, we used Channel 3, with the rear switches set to Bold and Tube for this.

67. '02 Mississippi Criminal: Based on the Peavey 5150 MkII



No doubt, Eddie Van Halen will forever be known as one of the premier rock guitarists of all time. His technique and tone inspired legions of young guitar players, a couple of EVH custom guitars and this Peavey amp. Apparently Eddie committed some serious time to tweaking the distortion, tone and control range of this amp until it played and sounded just right. Interesting enough, it goes way beyond the classic "brown sound" that Eddie famously coaxed out of walls of Marshalls, and takes you into some serious rhythmic shredding territory. This is the model of the Lead channel.

68. '87 Jazz Clean 120: Based on the Roland JC-120



This Amp Model is modeled after the classic Roland JC-120.

This transistor amp was known for a strident clean sound and built-in stereo chorus. When using the Jazz Clean model, try cranking up the Treble for a shimmering clean sound that'll cut through just about any mix. It's also perfect for that 80's "new wave" sound (after all, it was Andy Summers' favorite amp with The Police).

You should also try setting all the tone controls at 12 o'clock for a darker jazz tone. It'll give you an essentially flat response, providing a balanced tone across the fret board for jazz chord melodies or single-line phrasing.

69. '67 Wishbook Silver 12: Based on the Silvertone Twin Twelve



We modeled this one on the Silvertone Twin Twelve head and cabinet combination that lives in one of the guy's offices here at Line 6.

One of the interesting features of this two 6L6, Class AB amp is that it was designed so you could store the head inside the cabinet for transport. What more would you expect from the company that also brought you the guitar with the amplifier built into the case?

The original lacked a Mid control, so, as is our custom, our Mid knob is placed after the amp model, so you can simply set it to 12 o'clock for the classic tone.

70. '93 Hi Gain Solo 100: Based on the Soldano SLO-100



Mike Soldano first came to fame as the guy who could do all the really cool mods to your Marshall. It wasn't long before he started building his own 'hot-rod' amps—sporting chromed transformers and chassis, no less. Mike's amps are also famous for their bullet-proof construction and military spec wiring and components.

While primarily known for its high gain personality, the SLO-100 has a great clean tone as well. Eric Clapton put Soldano on the map when he played "Saturday Night Live" with his Soldano SLO-100.

71. '63 Super O Pawnshop: Based on the Supro 6x9 S6616



Yet more of the stuff of legend. Jimmy Page has admitted to using his '58 Tele and a Supro amp to record most of the first two Led Zeppelin albums. The only problem is, he's never really copped to *which* Supro model he used, since his simply saying the word 'Supro' caused a run on pawnshops and music stores everywhere, making it virtually impossible to find another one of whichever model it *was* that he used.

We went so far as to impose on our friendship with people we know who were actually present during the recording of "Led Zeppelin II" to see if they remembered anything about that particular amp. They didn't recall the specific model number, only that it was "a grey and silver tiny little bastard." Other sources have claimed that it was the 1x12-inch version. So, until Pagey speaks, the mystery remains, but, whatever the truth of those Zep sessions may be, we're confident that this model can be a fine entrance ticket to the Houses of the Holy.

By the way, that's a 6x9-inch speaker in this amp, just like in your car stereo.

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72. '62 Super O Thunder: Based on the Supro Thunderbolt



Speaking of unusual speaker configurations...

The Supro Thunderbolt, with its 1x15-inch cabinet, may have originally been intended as a bass amp, but it found much use as a guitar amp. We've heard from a number of sources that Jimi Hendrix was known to use a Thunderbolt in the studio, which is good enough reason for us to have included it here.

Supro amps, by the way, were made by the Valco company, who made amplifiers for Fred Gretsch that were sold under the Gretsch Guitars brand, as well as solid-body electric guitars sold under the National brand (the infamous 'map' body style).

73. '61 Class A C-15: Based on the Vox AC-15



This model is based on Channel 1 of a wonderful 1960 AC 15. The sound is similar to the Vox AC 30, but this is a smaller amp (one, instead of two, 12-inch speakers) with a warmer, more "woody" sound.

Once again, the original amp had only a single tone control—a treble cut. We faithfully modeled that and then slipped in some post-Amp Model Bass and Mid contouring. Set the Bass and Mid in neutral (12 o'clock, or halfway up), Presence to 0, and play with the Treble control to get yourself some of those classic British invasion sounds.

To model this, we plugged into Input 2, which is slightly darker than Input 1, and gives you more of that classic warm sound that the AC 15 is famous for.

74. '67 Class A C-30 TB: Based on the Vox AC-30 Top Boost



Music was changing in the early '60s and guitarists were asking for more brilliance & twang. So the Jennings Company, makers of Vox amps, decided to add Treble and Bass controls (and an extra 12AX7 gain stage, incidentally) in addition to the Treble Cut knob it already had (which in actuality was a sliding bandpass filter that always seemed like it was working backwards); this additional circuit became known as Top Boost.

The AC 30 with Top Boost was the amp made famous by many British invasion bands. Much of the unique character of the Vox sound can be attributed to the fact that Class A amps overdrive in a very different way than Class AB. Brian May of Queen, Mike Campbell of Tom Petty's Heartbreakers, and The Edge of U2 have all used classic AC 30s to make their music. Although usually played fairly clean, a cranked AC 30 has a great saturated lead tone, a la Brian May on the early Queen albums.

On this Amp Model, Vetta's Mid control acts like the original Cut knob on the AC 30.

For this model, we used the Hi gain input of the Brilliant channel. We also turned the tone controls around, since original Top Boost amps had the bass and treble turned all the way down when the knob was all the way up. Go figure.

The Cabinets

While we're not going to bore you with complete descriptions of each cabinet that's modeled in Vetta ("...and with the change from 12 ply Finnish Spruce to 13 ply Baltic Birch in October of 1973, the resonant frequency of this cabinet dropped to 113.7Hz"), here's a list of all the available speaker cabinet models you've got on hand.

Display Names	The model was based on careful study of this actual cabinet:
1x6 Super O	1x6x9 Supro '60s S6616
1x8 Tweed	1x8 Fender '61 Tweed Champ
1x10 Gibtone	1x10 Gibson '59 GA-18 Explorer
1x10 G-Brand	1x10 Gretsch '60 6156
1x12 Tweed	1x12 Fender '53 Tweed Deluxe
1x12 Blackface	1x12 Fender '64 Deluxe
1x12 Line 6	1x12 Line 6 Cabinet
1x12 California	1x12 Mesa Boogie '85 Mark IIC+
1x12 Class A	1x12 Vox '61 AC-15
1x15 Thunder	1x15 Supro '62 Thunderbolt
2x2 Mini T	2x2 Fender '96 Mini Twin
2x12 Zen Master	2x12 Budda '01 Twinmaster
2x12 Blackface	2x12 Fender '65 Twin Reverb
2x12 Line 6	2x12 Line 6 Cabinet
2x12 Match	2x12 Matchless '96 Chieftain
2x12 Jazz	2x12 Roland '87 Jazz Chorus
2x12 Wishbook	2x12 Silvertone '67 Twin Twelve
2x12 Class A	2x12 Vox '67 AC-30 Top Boost
4x10 Tweed	4x10 Fender '58 Bassman
4x12 Hiway	4x12 Hiwatt '73 Custom 100 Cabinet
4x12 Line 6	4x12 Line 6 Cabinet
4x12 Green 20's	4x12 1967 Marshall Cab w/ Celestion Greenbacks
4x12 Green 25's	4x12 1968 Marshall Cab w/ Celestion Greenbacks
4x12 Brit T75	4x12 Marshall Cab with Celestion G12-T75's
4x12 Brit V30's	4x12 1967 Marshall Cab w/ Celestion Vintage 30's
4x12 Treadplate	4x12 2001 Mesa Boogie Cabinet
4x12 HiGn SOLO	4x12 Soldano Cabinet

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THE STOMPBOXES

About the Stompboxes

What guitarist doesn't like Stompboxes? Vetta's got a bunch of great stompbox models adapted from Line 6's DM4 Distortion Modeler, MM4 Modulation Modeler, and DL4 Delay Modeler pedals, some brand spankin' new models that are only available in Vetta, *and* a whole new category of stompbox compressors and Filter/Synths! Who says you can get too much of a good thing?

In this chapter, we're not only going to take a look at just which stompbox effects are modeled. We'll also be talking about how you go about tweaking them. So hold onto your hats and glasses, and please keep your hands and feet inside the car at all times.

6 • 1

Distortions and Overdrives

Back before fuzzes, distortions, and overdrives existed, guitar players used to do stuff like slice their speakers with a razor blade to get that raunchy, distorted, lovely sound (check out Link Wray's 'Rumble' for an example). While it sounded great, it did make it impractical to turn around and play a nice smooth ballad on the same amp.

Enter the 'fuzz' box. Legend has it that the first such devices were designed to duplicate the sound of a faulty mixer input strip. Whether this story is true or not, soon everybody was getting some 'Satisfaction' through the modern miracle of floor-based distortion.

Basic Distortion Editing

All of Vetta's Distortion Stompboxes share a similar interface. Edit page 1 looks something like this:



The Stompboxes • Facial Fuzz :Based on the Arbiter Fuzz Face

As with all of the Stompboxes, the first two knobs below the display allow you to choose the effect CATEGORY (Distortion, Modulation, Delay, Dynamics or Synth/Filter) and MODEL. For Distortion effects, the second two knobs are always DRIVE and GAIN. Drive allows you to control how much distortion you'll get, GAIN sets the output volume of the stompbox.

The Page knob gets you to page 2:



Here you've got tone controls (BASS, MID, and TREBLE) for each distortion. As you'll notice in the descriptions that accompany the list of models below, some of these controls model the behavior of controls from the original box that we studied to create our models, and some add new functionality.

6 • 2

Facial Fuzz :Based on the Arbiter Fuzz Face



Sometime in late 1966, an infamous circular stompbox hit the London music scene. Designed and built by Arbiter Music, the Fuzz Face would soon begin its famous association with guitar legend Jimi Hendrix.

Like all stompboxes from the early era, the Fuzz Face would see many design changes, as well as re-issues. Our model is based on the germanium diode-powered treasure pictured here.

All Vetta Distortion Stompboxes feature BASS, MID and TREBLE controls. Since the original Fuzz Face has no tone controls, you'll want to set Bass, Mid and Treble to 12 o'clock for the classic sound.

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Tube Drive: Based on the Chandler Tube Driver



Designed by keyboardist Brent Butler, the first Chandler Tube Driver was born to add grind and girth to his Farfisa. Brent was also the father of one of the rarest overdrive boxes—the Mini Matrix (aka Mini Boogie). But it’s his Tube Driver that drives us crazy.

Utilizing a single 12AX7 preamp tube, the original Chandler Tube Driver delivers the sweet singing sustain craved by guitarists worldwide, and has been a staple of Eric Johnson’s rig since the mid ’80s.

Our model of this classic offers sweet tone, with our BASS and TREBLE emulating the Hi and Lo EQ controls of the original. To further enhance your tone shaping options, we added an optional MID control that allows you to boost or cut the mids to tailor the tone for you and your guitar. MID in the 12 o’clock position has no effect.

6 • 3

Fuzz Pi: Based on the Electro-Harmonix Big Muff Pi



Not to be outdone by the Brits, the colonies came up with their own twist on the fuzz rage. Mike Mathews and his band of merry men at Electro-Harmonix had been cooking up all sorts of nifty effects when their attention turned to the distortion/fuzz pedal. Their most popular offering was the Electro-Harmonix Big Muff Pi, known more for its sweet sustain than for its buzz.

Electro-Harmonix was famous for their use of surplus parts, and the results of this practice were ever-changing circuit designs and parts specs. As you can see in the picture of our collection of Big Muffs, these pedals had several looks determined by the parts that Mike and the gang found at hand. The sweetheart of the bunch is the one in the middle, known as the “triangle knob pattern” model. We know you’ll agree, there’s nothing like a slice of Pi.

MID functions like the original Big Muff tone control. Set BASS and TREBLE to 12 o’clock for the classic sound.

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The Stompboxes • Screamer: Based on the Ibanez Tube Screamer

Screamer: Based on the Ibanez Tube Screamer



From Stevie Ray Vaughan to Michael Landau, the simple Ibanez Tube Screamer is the overdrive heard 'round the world. This medium-gain pedal was introduced in the early '80s, and in many blues circles, you're not allowed to solo without one.

Over the years, Ibanez issued several variations of the venerable Tube Screamer, but none have reached the fabled status of the TS-808. Of course, we obsessed over which of our vintage 808s to model, and in the end we think you'll agree that our model of this green jewel makes a precious addition to Vetta.

True to the original, the MID control acts like the Tube Screamer's tone knob. In addition, you can shape your tone using the BASS and TREBLE controls. Or leave these in the 12 o'clock position, and they'll have no effect.

6 • 4

Octave Fuzz: Based on the Tycobrahe Octavia



The Octavia is an example of a fuzz+octave effect. One pioneering user of this type of effect was Jimi Hendrix. The Tychobrahe Octavia in particular was used by Jeff Beck, and continues to be an essential part of Michael Landau's tone making tool kit.

The Octavia uses an audio output transformer and two germanium diodes to rectify (a fancy word for whack) the guitar signal, thus creating the high octave type sound. For our model, we studied the sweet-sounding original pictured here.

Set BASS, MID and TREBLE to 12 o'clock for the classic sound.

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Classic Dist: Based on the ProCo Rat



Born and bred in the late '70s, the ProCo Rat was the beginning of a new generation of distortion boxes. It has a sound that was angrier and more aggressive than a fuzz.

Through its life span, the Rat has seen several changes, and the unanimous choices for tone are the originals pictured here. Inside, these two Rats use the same board, and their circuits are identical. (For those that need to know, we modeled the smaller one.)

The MID knob on Vetta's Rat model functions like the original Rat's "filter" control, which gives you brighter tone at lower settings, and darker tone at higher settings.

Set BASS and TREBLE to 12 o'clock for classic sound.

Metal Z: Based on the BOSS Metal Zone MT-2



Since about 1989 the BOSS Metal Zone MT-2 has been the industry standard distortion pedal for metal players. Equipped with a dual gain circuit, the MT-2 provides amazing sustain plus heavy mids and lows similar to a stack of overdriven amps. With a semi parametric EQ, a wide range of distortion textures are at your command.

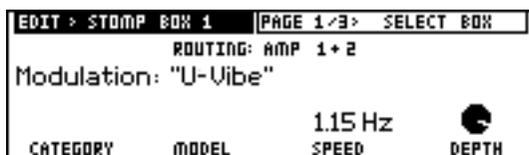
Since the MT-2 has so much tone control, we figured we'd throw it into our model too. Instead of the standard three bands of tone found on Page 2 of the other Distortion Stompboxes, this model gives you a sweepable mid-band control as well. MID GAIN controls the amount of mid frequency boost or cut, and MID FREQ lets you sweep the mid frequency.

MODULATION EFFECTS

Modulation effects are things that swoosh, pulse and warble—from phase shifters to flangers to choruses. Why are they called modulation effects? Well, if we consult a dictionary, we discover that ‘modulate,’ in the electronic world means to “alter the amplitude or frequency of (a wave) by (using) a wave of a lower frequency to carry a signal” (definition courtesy of ‘The Oxford Encyclopedic English Dictionary, Third Edition’). That modulating wave is what causes all that swooshing, pulsing, and warbling.

Basic Modulation Editing

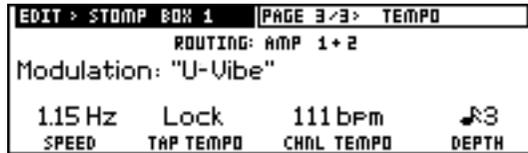
The Modulation effects all have a common interface:



As with all of the Stompboxes, the first two knobs beneath the display allow you to choose the effect CATEGORY (Distortion, Modulation, Delay, Dynamics or Synth/Filter) and MODEL, respectively. For Modulation effects, the second two knobs are always SPEED and DEPTH. Speed controls how fast (or slow) the modulating waveform sweeps. Depth controls the overall amplitude of the modulating wave, which usually determines just how intense the effect will be.

The second edit page for modulation effects will vary from effect to effect. There's always a Mix control, and sometimes there are also other controls as well. Refer to the individual effects listed in the following pages of this chapter for details.

The third edit page for modulation stompboxes is all about speed. Specifically, speed as it relates to Vetta's Tap Tempo features:



Most every effect in Vetta that has a time element, whether it's a sweep rate or delay time, can be locked to the Channel Tempo that's stored with each channel (page 4•12 sings the praises and tells the tale of Tap Tempo).

The SPEED control shown here is the same one as on the first edit page. We put it in both places just to keep you from having to flip back and forth.

The knob below the label TAP TEMPO lets you decide whether this stompbox will 'Ignore' Tap Tempo or 'Lock' to it.

The knob underneath CHNL TEMPO lets you dial in the Channel Tempo manually (say you already know that a song is 114bpm). This tempo can also be set by tapping the Tap Tempo button on Vetta, or the footswitch on the optional FBV foot controller. If you do that, you'll see the tempo updated here.

Finally, the knob below NOTE knob lets you dial in the note value you want the effect to use when locking to tempo, from a sixteenth note triplet to a whole note.

Jet Flanger: Based on the A/DA Flanger



This is our model of the A/DA “studio quiet” Flanger. Introduced in 1977, this stompbox has a sweep range of 35-to-1 and a built-in compressor that work together with the tone circuitry to give the A/DA its signature jet-like sweep. It can be very dramatic with its unique wave shape and ability to create almost ring modulator-like effects at extreme settings.

When the model of the A/DA Flanger is selected for editing on Vetta, the knob below DEPTH controls the sweep range. FEEDBACK adjusts feedback (in other words, how much of the effected signal is fed back to the input of the effect), and the MANUAL knob controls the length of the very short delay that’s applied to the sweep to make the flanging effect happen. Plug in, spin up the depth and feedback, and get ready for take-off!

6 • 8

Analog Chorus: Based on the Boss CE-1 Chorus Ensemble



The Vetta wouldn’t be complete without paying homage to the original stompbox chorus, the Boss CE-1 Chorus Ensemble. The CE-1 came onto the music scene in 1977 and made waves with its big, warm and groovy chorus tones. It quickly found its way onto Andy Summers’ pedal board and then into our homes via the classic albums recorded by The Police. The CE-1’s Controls included Speed, Depth and a switch to go from chorus to vibrato mode (see below). The CE-1 is spacious, and sounds great feeding into a distorted amp.

The Vetta CE-1 model is every bit as warm and gooey as its inspiration. Dial up some lush landscape and enter into chorus heaven. We’ve also added BASS and TREBLE controls that are available on the second editing page.

“Hey, wait a second!” you say, “The original CE-1 had a cool pitch vibrato mode, too. Whatcha gonna do about that?” Well, no worries, mate, we’ve got you covered. Since a chorus is, when you come right down to it, a pitch vibrato mixed with a dry signal, what the vibrato mode switch on a CE-1 did was simply turn off the dry signal. To get that

effect here, just set the MIX knob to 100% wet (in other words, crank it all the way up), and, presto change-o, you've got vibrato. You can use the DEPTH knob to get as seasick as you want, too.

Phaser: Based on the MXR Phase 90



The unassuming metal box pictured here is the phaser that changed the world—the MXR Phase 90. The Phase 90 is relatively subtle compared to other phasers, and when you use it, it becomes part of the overall guitar tone rather than trying to grab the spotlight all to itself. Its lush, organic, and groovy swirl can be heard all over the first two Van Halen albums, as well as Jimmy Page's work on *Physical Graffiti*.

The Phase 90 is a four stage phaser; its single knob controls only speed. Our model stays true to the original, with only the addition of a MIX knob on page 2. Sometimes, its best not to mess with perfection.

U-Vibe: Based on the Uni-Vibe



The now-legendary Uni-Vibe was put on the map in 1969 by Jimi Hendrix. Essentially a four-stage phase shifter, the Uni-Vibe is best known for its watery texture and sultry tones. One listen to “Machine Gun” and you’ll know what we mean.

As with the CE-1 model's stealth vibrato mode, you can recreate the effect of the original Uni-Vibe's vibrato switch by turning the MIX control to 100% wet. (That's what the switch did on the original.)

Lumpy Phase

A Line 6 original, Lumpy Phase is exactly that—‘lumpy.’ Kinda like a Uni-Vibe, but more radical. It also has some built in overdrive and more of a ‘flange-y’ type of sound due to our clever blending of a short delay into the swept signal. BASS and TREBLE knobs on page 2 give you extra flexibility.

Sine Chorus

Your basic digital chorus (as opposed to the analog type vibe of the CE-1 chorus model), with a sine wave as the modulator. Smooth going down, with BASS and TREBLE controls for bassing and trebling.

Square Chorus

A basic digital chorus, like the Sine Chorus, only in this case there’s a square wave acting as the magical modulator. As you’ll hear, using a square wave gives you more sudden changes in the chorusing, and is slightly less smooth than the sine wave. Try ’em both and see what suits you. The BASS and TREBLE controls make yet another appearance here on page 2.

Expo Flanger

Another Line 6 creation, the “Expo” in this flanger stands for exponential, which is a fancy way of saying that the sweep of the flanging spends extra time in the ‘swooshy’ part of the Flanger. The FEEDBACK and PRE-DELAY knobs on Page 2 can help you keep it in check or make it as strange as you want. We think you know which way we’re leaning on that one.

Random Chorus

This chorus uses three different modulating filters all running randomly. A very busy chorus sound to be sure.

Analog square

Not quite as smooth as the Square Chorus. It also adds a bit of grit to the sound. Great for country chickin’ pickin’ licks.

POD Purple X

This is definitely a “sound effect.” We wanted something crazy that had a “broken” sound to it. If played properly you can emulate the sound of a Pod Racer from Star Wars Episode I.

Random S&H (Sample and Hold)

This has a similar effect as the old Oberheim Voltage Controlled Filter. It creates changes in tone by randomly emphasizing certain frequencies. Try locking this effect to the tap tempo and playing single chords to that tempo. This effect is so inspiring, you’ll probably write a few new tunes based around the effect.

Tape Eater

If you’ve ever had a cassette player eat a tape before you’ll know what we’re talking about. After fixing the tape (if you’re lucky!) and reinserting it in to the player it always had a warbled sound on that section of the tape. Now think of your guitar tone being recorded on that section of the tape! That’s the crazy effect we were after. Try this with a slow speed setting and a 100% wet mix.

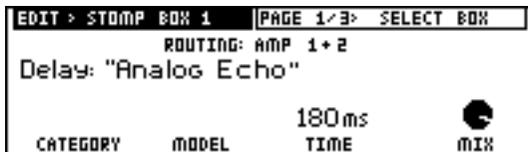
Opto Trem and Bias Trem

These are the same tremolos as in the post effects, but by placing it in the Modulation Stomp Boxes, it can be used before the amps (or other Stompboxes) for creating interesting tremolo variations. See page 7•1 for details on the Tremolo parameters.

DELAYS

Basic Delay Editing

They all look pretty much like this:

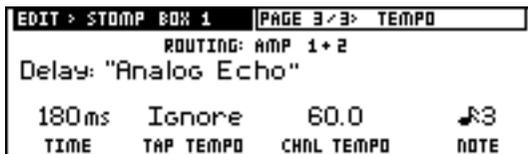


You know the drill on CATEGORY (Distortion, Modulation, Delay, Dynamics or Synth/Filter) and MODEL select. For delay effects, the other two knobs are always TIME and MIX. Just in case it's not obvious: Time sets the delay time, Mix sets the level of the echoes.

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The second edit page for delay effects always includes a FEEDBACK control to determine the number of delay repeats. See the descriptions of the individual effects on the following pages to find out what other controls appear on this page on a model-by-model basis.

The third edit page for delay stompboxes is all about time and the Tap Tempo features:



Most every effect in Vetta that has a time element, whether it's a sweep rate or delay time, can be locked to the Channel Tempo that's stored with each channel (page 4•12 sings the praises and tells the tale of Tap Tempo).

Analog Echo: Based on the Boss DM-2



Analog echo units like the DM-2 were designed as improvements over the tape echoes that came before them, using “bucket brigade” electronics to give guitarists echo units that were more reliable than the tape-based delays, with the added advantage of a low power circuit that can be run on batteries.

Analog delays are treasured for the warm, distorted tones they produce, and Vetta’s model based on the Boss DM-2 gets you the same sort of thing in a new digital realm of existence.

Page 2 gives you BASS and TREBLE controls.

Analog w/Mod: Based on the Electro-Harmonix Deluxe Memory Man



Here’s a model based on the Electro-Harmonix Deluxe Memory Man which is a pedal that uses the “bucket brigade” electronics of other analog echoes, and adds a chorus circuit to boot. This adjustable chorus is applied to the echoes only, leaving the direct sound unaffected.

The Memory Man, with its warm, distorted tone and swimming echoes, became an important tool for many guitarists, and was an essential part of the guitar sounds for the first U2 album.

Part of the Deluxe in Deluxe Memory Man was the increased delay time of 500 milliseconds. Your Vetta’s Memory Man emulates that classic Memory Man tone with the added advantage of 2 seconds of delay time.

On page 2, you’ll find the MOD SPEED and MOD DEPTH control to set up the chorus on the delays.

Tube Echo: Based on the Maestro EP-1 Echoplex



The classic 1963 Maestro EP-1 was the first of a series of “Echoplex” designs distributed by the company, and made by Harris-Teller in Chicago. As touted in a Maestro advertisement, the Echoplex’s “...special effects range all the way from a controlled high speed reverberation to a full, throbbing echo”!

The main feature of the Echoplex design is a special cartridge of looped 1/4-inch audio tape that wraps past separate record and playback heads. The position of the playback head can be moved to adjust the delay time from 60 to 650 milliseconds. Vetta’s EP-1 model emulates the classic Echoplex tone with the extra advantage of up to 2 seconds of delay time.

On page 2, you’ll find WOW/FLUTTER and DRIVE controls so that you can not only dial up some tube warmth like the original, but add that unique sound of a slipping, dirty capstan as well.

Tape Echo: Based on the Maestro EP-3 Echoplex



After the tube-based EP-1 and EP-2, Maestro introduced the solid state EP-3, with transistors instead of tubes for the sound electronics. The EP-3 uses the same basic mechanical design as the original Echoplex, including the looped 1/4-inch tape, but does not have the tube distortion sound of the EP-1. EP-3s contributed to many classic recordings of the ’70s, with a large list of avid users including Eddie Van Halen and Jimmy Page.

Unlike our EP-1 model, which gives you control of wow, flutter and distortion, our EP-3 emulation is designed to give you a less distorted tape emulation with adjustable BASS and TREBLE controls on page 2.

Multi-head: Based on the Roland RE-101 Space Echo



Long before Boss pedals, the Space Echo was Roland's first venture into the world of effects processing. Instead of having one movable playback head (like the Echoplex) this machine has multiple stationary heads. You change delay times by switching amongst these heads, and then fine-tune delay time with a motor speed control. The groovy part is that you can play back on multiple heads at the same time to get multi-tap delay effects.

Page 2 controls includes a control for HEADS, which enables you to choose from the 9 available combinations of the Space Echo model's 4 virtual tape heads. There's also a WOW/FLUTTER control like the Echoplex EP-1 model.

Echo Platter: Based on the Binson EchoRec



The Vetta EchoRec model was inspired by the type of magnetic platter echo used by psychedelli-clinicians like Pink Floyd. These units had a spinning metal platter, a record head, and multiple playback heads that floated on the platter. (Hey, it's kinda like a really primitive hard drive!)

This delay is somewhere between the tube and solid-state Echoplexes in tone, with a different type of wow and flutter than tape delays have.

Page 2 controls give you access to WOW/FLUTTER and configurations of the HEADS.

Digital

This model is a straight up digital delay with BASS and TREBLE tone controls (located on Page 2, of course). Nothing fancy here, just basic echo-cho-cho-cho. After all, it's good to cleanse the palate every once in a while.

Reverse Delay

!seltaeB eht dna xirdneH imij ekil tsuJ – Take a step back in time with your cool new reverse delay. Whatever you play in comes back out at you backwards, delayed by the time you set (up to 2 seconds). To use this little wonder most effectively, try playing a legato lick, ignoring the reverse playback as well as you can. Longer licks can translate into very cool reverse phrases. We've seen Tom Petty guitarist Mike Campbell taking advantage of the Reverse Delay in the Line 6 DL4 Delay Modeler stompbox to play a backwards guitar solo live—on a worldwide TV broadcast, no less.

When using Reverse, try setting the MIX knob to full (100% wetness) so all you hear is the reversed sound—instant backwards guitar solo fun. We also added, as on our Memory Man model, a chorus that lives just on the delayed signal.

The MOD SPEED and MOD DEPTH controls for the delays' chorus modulation are to be found on Page 2, as is the FEEDBACK.

Lo-Rez

The first digital delay units were introduced in the early '80s. These pedals and rack boxes took advantage of emerging digital technology to provide guitarists with longer delay times. Unlike the 16 bit digital of today's CDs, and the even higher resolution provided by some audio gear (like the 32 Bit processing of your Vetta), these early digital units generally had only 8 bit resolution. Low bit resolution can create a unique sort of grunge and noise that is sometimes just the sound you're looking for, and that's why these old delays are still used to give a particular shape to the sounds that are run through them. Early model digital samplers are sometimes used in modern-day industrial and electronica to achieve these effects as well. Try this model on a low resolution setting to get that characteristic digital grunge.

The BITS knob, on Page 2, lets you adjust the delay anywhere from its normal 'sparklin', pristine 32 bit resolution down to as few as 6 truly nasty bits. Bear in mind that as you turn the knob clockwise, you're *reducing* the bit resolution, so maximum bit

reduction is achieved when the knob is all the way up (think of it as a more control for how many less bits you want). Your direct sound, of course, stays full resolution. Tone control of the delay is also provided, via the appropriately labeled TONE knob.

Phaze Eko

This is a new-fangled delay dreamed up by the free thinking sound design crew here at Line 6. Starting with the basic tone of our EP-1 tape delay emulation, they've added something very much like a Uni-Vibe to the delay repeats. The result is an echo unit that gives you unique new creative possibilities for adjusting the tone of your delays. It's more subtle than the next two models (yeah, it's a cheap way to keep you reading, we know), and has a beautiful, burbling texture. If we do say so ourselves.

Page 2 gives you access to MOD SPEED and MOD DEPTH.

Sweep Echo

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Like the Phaze Eko, this model is a Line 6 original. It first appeared on our DL4 Delay Modeler and has turned out to be a special favorite amongst the many DL4 users that we've spoken to. As a matter of fact, it's very much like Phaze Eko, except that, instead of the Phaser, there's a filter sweep applied to the delayed signal.

The Page 2 knobs adjust the speed and depth of the sweeping filter part of the effect. SWEEP SPEED sets how fast the filter sweeps, and SWEEP DEPTH sets the range of frequencies that the filter affects, allowing you to create and explore your own shifting landscape of tonal possibilities. There's both subtle texture and serious weirdness to be found in this one. Try assigning one of the FBV pedals to control the Mix, and use a relatively short delay for some fun.

Bubble Echo

The last of our triumvirate of new echo effects, Bubble Echo has a Sample and Hold filter on the repeats. A Sample and Hold filter, if you haven't run across one before, takes a filter sweep (like the one on Sweep Echo), chops it up into little bits, and rearranges them semi-randomly, so that it sounds like sudden little bits of wah pedal randomly sprinkled about. Crazy, huh?

Page 2 lets you get busy with the SWEEP SPEED and SWEEP DEPTH.

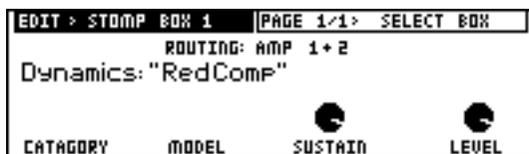
DYNAMICS PROCESSORS

Dynamics processing (usually in the form of compression) is used for many things, and is especially often used in the studio—smoothing out dynamic changes in a vocal track, maximizing level without clipping, ducking music under narration. It's the one thing you really need for most everything.

Guitarists, on the other hand, generally have only one thing in mind when they stick a stompbox compressor in front of their amp—more sustain! Because a compressor can be set to keep boosting the level of your guitar signal as a note dies away, it can give your guitar a longer note decay. It also has the benefit of evening out your attacks and enabling you to make up some gain (just in case you want to hit the front end of your amp a bit hotter, but without extra distortion). We've provided you with a number of stompbox compression options in Vetta, so you can squash your signal 'til the cows come home (or at least until they call collect and ask you to come and get them).

Vetta's stompbox compressors are great examples of the power of simplicity, as well as the philosophy that guided us as we developed Vetta's design. The way we see it, there are times you want simple, and times you want sophisticated, and the ultimate tool is one that gives you both of them. Vetta's post compressor is sophistication. Threshold, ratio, attack, release—all that fancy studio compressor type stuff, and just the kind of thing we figure you're gonna want when you're applying compression to fine tune the details of your carefully crafted tones. But in the world of stompboxes, it's all about simple, isn't it?

Basic Dynamics Editing



There's only one editing page for the dynamics stompboxes. In addition to the by now familiar CATEGORY and MODEL knobs, you'll find, with a single exception, a LEVEL control and either a SUSTAIN or a SENS knob. As always, take a peek at the pages to follow for individual model details.

Blue Comp: Based on the Boss CS-1 Compression Sustainer



Roland/Boss jumped on the compressor stompbox bandwagon with this one. It has a fixed ratio, so the Vetta model based on it has the SUSTAIN control varying the threshold of the compressor circuitry. LEVEL does what you'd expect.

Blue Comp Treb: Based on the Boss CS-1 Treb

The CS-1 also had a treble boost switch (as you can see from the picture). We flipped the little sucker on, set the modeling machines for compression capture, and here you are! Aside from the trebley thing, it's the same as the regular CS-1 model, with SUSTAIN and LEVEL.

Red Comp: Based on the MXR Dynacomp



Probably the most widely used stompbox compressor, and pretty much the standard against which others are judged, the Dynacomp has a fixed compression ratio with variable threshold and gain, which is what you get in the Vetta model.

The SUSTAIN knob varies your compression threshold, and LEVEL varies your (wait for it) level.

Vetta Comp

A Line 6 original, Vetta Comp has a fixed ratio (2.35:1, in case you're asking) with the threshold (that would be your SENS knob) adjustable from -9dB to -56dB and up to 12dB of gain available at the LEVEL knob. In other words, turn the Sens knob 'til you like the way your signal's compressed, then set the volume with Level.

Vetta Juice

Another Line 6 original, the 'Juice' in Vetta Juice comes from the 30dB of available gain in the LEVEL knob. Holy smokes, this thing's packin' some heat! It's got a fixed threshold of -40dB with the SENS knob varying compression ratio from 1.5: 1 all the way up to 20:1 (which is a whole heck of a lot). This combination of design features gives you the option of cranking the level enough to get some serious gain boost, or setting the gain lower and dialing up a smooth, clean sustain. Take your pick, and dial away.

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Auto Swell

Take a compressor that has a fixed ratio and threshold with the gain set for unity and add an adjustable attack triggered volume swell in front of it, and you've got Auto Swell. You can dial in the ramp time here to give you the kind of 'bowed' attacks that might otherwise require you to have your pinky rolling the volume knob on your guitar with every pick attack. Longer ramp times in combination with delay and reverb can keep you occupied for a pleasant hour or two, seeing what kind of chords you can come up with to blend into each other. You've got RAMP TIME to set over how long the swell takes to happen, plus DEPTH to determine how much the volume of your attacks is reduced.

SYNTH/FILTER

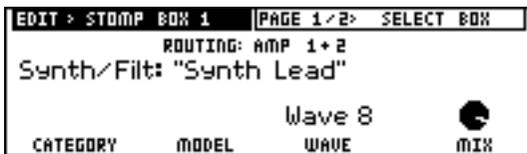
A lot of strange things can happen when you spend long, intimate hours alone with a room full of guitars, synths, filters and modern software development tools! The Synth/Filter stompers are all 100% brand new sounds developed by Line 6 for your enjoyment. These sounds were all inspired by some of our favorite old synths from the past like the ARP Omni, ARP Solina String Ensemble, Elka Synthex, Mini Moog, Sequential Circuits Prophet V and others. To be clear, none of these vintage instruments were “modeled.” The Synth/Filter effects are all 100% Line 6 creations.

There are many presets in Vetta II that show off these new toys. Have a listen and see what kinds of interesting sounds are possible. All though there are no “right” ways to use these tools, here are a couple of tips.

1. These effects are made to be used with single notes, NOT chords. You may notice that some effects work better on higher pitched notes, while other effects sound better on lower pitched notes. Rather than trying to play your normal guitar licks through these effects, try playing parts that really show off the effects. Try to think of your guitar as a completely different instrument when you use the synth/filter effects and you'll find that you can make music that you never knew was possible.
2. Use the neck pickup of your guitar when using the Synth/Filter effects.
3. Although you can load a different synth/filter effect in to each of the three stomp pedals and run them in series, you can achieve more satisfying results by running one synth/filter stomp in to amp 1 and another synth/filter stomp in to amp 2. Then try experimenting with different amp models and different post effects.

Basic Synth/Filter stomp editing

Most of the synth/filter parameters look pretty much like this:



All of the synth/filter effects that have a WAVE parameter here allow you to choose between 8 different waves. These are basically 8 different presets of the style of synth the name infers. The MIX control is the same as all other effects, a wet to dry ratio.



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Page 2 of most of the synth/filter parameters look like the example above.

The FILTER is a “low pass” filter. Meaning that frequencies above the low pass filter frequency are cut. The FILTER control changes the frequency of the low pass filter. Turning the control to the left lowers the frequency of the filter meaning less high frequencies get through. Turning the control to the right raises the frequency of the filter meaning more high frequencies get through.

The ATTACK has a minimum setting of 10ms and a maximum setting of 300ms. A lower setting makes for a faster attack, while a higher setting makes for a slower attack. The higher the setting, the more substantial the affect. For more staccato style scales, try setting the attack to the minimum value.

Let’s take a look at the individual synth/filter stomp effects.

Synth Lead

These are styled after popular analog monophonic synth lead sounds from Moog, ARP and Sequential Circuits.

Synth String

This emulates classic synth string sounds like those found in the ARP Solina String Ensemble and the Elka Synthex. The harder you pick, the brighter the sound.

Synth Analog

These are great for funky synth bass lines! These sounds were made popular by Moog and ARP.

Synth FX

These sounds aren't really designed to be musical. These are more "special effects" sounds. You'll hear a lot of these kinds of sounds in movie sound tracks.

Buzz Wave

These are cool combinations of saw and square waves with fast vibrato. The 8 different WAVE parameters offer different vibrato speeds and different pitches.

Rez Synth

These are all sweeping low pass filter effects with the resonance set high. Resonance is a peak at the frequency of the low pass filter.

Saturn 5 Ring Modulator

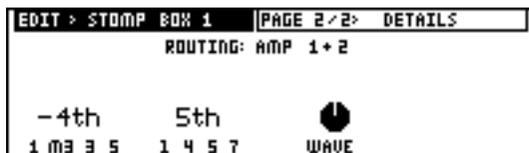
Ring modulators take two signals (one supplied by your guitar, the other supplied by the effect) then adds and subtracts similar frequencies. Electro Harmonix makes a ring modulator pedal called the Frequency Analyzer that is a popular guitar effect. The only limiting factor is that the pitch of the signal provided by the effect is constant. Meaning you have to play only in the key of that pitch to be musical. The Saturn 5 RM "tracks" the pitch of your guitar signal. This allows you to use the effect in ANY key. This is a GIANT leap forward for ring modulator effects! The RM/AM parameter on page 2 controls the amount of ring modulation.

Double Bass

This effect has two oscillators that track the pitch of your guitar. One square wave tuned one octave down, and one saw tooth wave two octaves down. The parameters on page 2 are gain controls for each oscillator.

Synth Harmony

There are two waves at work here. The WAVE control is different on this effect, so it has been moved to page 2 to call attention to that fact. Here, the WAVE parameter controls the gain of the saw wave, while the square wave gain remains constant. The other parameters on page 2 allow you to choose the harmony interval for each wave. See the example below.



Auto Wah

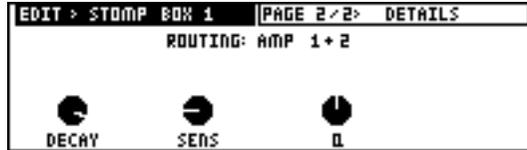
This is an effect made popular by the Mutron III. This effect sounds very much like a standard wah pedal, except here the sweep is done automatically for you rather than using your foot to sweep back and forth. Listen to the guitar solo in Edie Brickell and the New Bohemians song “What I am” for a perfect example of a well used auto wah effect.

Dingo Tron

This is similar to the sound made by a Mutron III when you flip the “down” switch. It’s kind of like a reverse auto wah. Pick hard to get the most out of this effect.

Sparkle Sweep

This is a wide range sweeping filter with a slow decay. This is similar to Auto Wah, but with a band pass filter shape. Try setting the DECAY all the way up, the SENSITIVITY half way up and the Q all the way down.



POST EFFECTS

About the Effects

Electric guitarists have always used stompboxes (well, at least since stompboxes were first developed) to modify their sound and come up with new tones in live performance. In the studio, though, even though the stompboxes can still get a workout, there's a whole other world of 'post' effects applied to the signal after the guitar and amp (and often after the guitar track has been recorded). These can range from compressors that smooth out volume level differences as needed to get a guitar track to properly fit into a mix, to incredibly expensive reverbs. Some of them are the same effects that are available in stompboxes, but they take on a whole new character when they're run *after* you've mutated your guitar signal by running it through a cranked amplifier.

Vetta's Post Effects offer you a whole studio's worth of processing to further craft the tone that you've created with the stompboxes, amp and cab models.

Tremolo

Tremolo—it's one of the most basic effects there is. A simple, steady pulse that raises and lowers the volume of a sound. This is an effect that many amps have built right in and where, we ask, would Bo Diddley, Creedence Clearwater Revival, or surf music be without it? In fact, the two tremolos that Vetta provides are both models that we developed through our careful study of the tremolo circuits built into classic amplifier designs.

So what's Tremolo doing here in post effects land, you ask? Well, to start with, when tremolo is built into amps, it's usually at the end of the internal signal chain in the amp. And to end with, there have also been stand-alone tremolo units available for years that can be applied to the signal you might record from an amp. But just to be complete, we've also given you stomp box versions of these in the modulation group, so if you'd like your tremolo before your amps, be our guest.

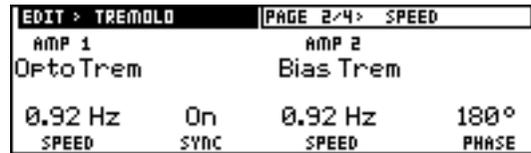
You've got an independent tremolo for each amp, with a choice of models.

Basic Tremolo Editing

There are four Editing pages for tremolo. Let's step through them one at a time:



Page 1 lets you pick the tremolo MODEL to be used with each amp, and set the DEPTH of the tremolo—how much the tremolo brings the volume down with each pulse. At 100% Depth, the volume goes all the way off with each pulse. 0% Depth is off, so you can easily have tremolo on one amp and not on the other.



On page 2, you set the SPEED of each tremolo independently, or turn on SYNC to make the tremolo for Amp 2 match the tremolo of Amp 1. Once they're sync'd, turning either speed knob will adjust both. You also get to set the PHASE relationship between the two tremolos from 0 (in phase) to 180 (180 degrees out of phase). If this sounds like trigonometry to you, here's a gross oversimplification that should, nonetheless, work. Think of running two tremolos like running two volume pedals, one on each amp. When they're in phase, it's like you've got one foot astride both pedals at once and the volumes go up and down together. When they're 180 degrees out of phase, it's as if you've got one volume pedal under each foot, and you're doing an interpretative dance exercise moving your feet in opposite directions (since "180 degrees" means "opposite" in the world of phase calculation) at exactly the same speed, so that when your left foot is heel back (volume off), your right foot is toe down (volume full). Phase settings between 0 and 180 mean that your left foot and right foot will still be moving at the same speed but they'll be that many degrees apart (for example, 45 degrees out of phase would mean that one foot would start 1/4 of the way through the volume pedal travel, while the other started at the beginning). It also means that if you can actually do this

at home without falling over, you really should really consider joining Twyla Tharp's dance company, because your talents are being wasted dancing on volume pedals.



Page 3 and 4 are identical, except that page 3 controls the tremolo for Amp 1 and Page 4 controls the tremolo for Amp 2. They're where you set the tremolo's relation to the Tap Tempo, just like the other Tap Tempo-savvy Vetta effects (see page 4•12).

Vetta's got two models to offer the tremolo lover:

Opto Trem

This one is based on the optical tremolo circuit that was used in the blackface Fender amps, like the '64 Deluxe and '65 Twin Reverb. Basically a light bulb and a photo-resistor, when the light got brighter, the tremolo got louder. It's a very smooth, even tremolo, and the obvious choice for use with the amp models that are based on Fender originals.

Bias Trem

This Tremolo is modeled after the circuits found in Vox amps like the AC-30. One of our long time favorite pieces of 'Rube Goldberg' engineering, the old Vox tremolo (and a similar circuit in some blonde and brown Fender amps) got its pulse by literally varying the bias of the power amp tubes. While this tended to reduce the life span of the output tubes in these amps, it gave a beautifully liquid, uneven, and rather 'lumpy' sound that bears a distinct resemblance to a Uni-Vibe or other phase shifters (mainly because treating the tube bias in such a cavalier manner actually caused some phase shift to occur).

Gate

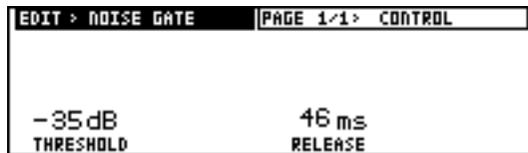
OK, we're gonna come clean with you. The noise gate in Vetta is not, in fact, a post effect. It operates right at the very beginning of the signal flow, eliminating the source of noise before it's introduced into the system. Not only that, but it's not really even a gate. Technically, this is a downward expander. The way it works is that when your input signal drops below a certain level (because you've stopped playing, or the note that was sustaining has now pretty well died out), Vetta detects this and increases the reduction in the input volume so that less noise comes into the system.

Regardless of all this, the experience of Vetta's Gate button is that when you turn this on, it "gates" the noise once your levels drop to a certain point, just like a gate does. So we figured the easiest thing was to call it a noise gate, and its button happened to fit in nicely near the other post effects, so we figured we'd let it just hang out with the group rather than having it be excluded to have to play all by itself in its own little world.

Basic Gate Editing

We've kept things simple:

7•4



The knob below THRESHOLD determines how far your signal has to drop before the noise reduction kicks in, and how you set the knob below RELEASE determines how long it takes for the volume reduction to kick in once that threshold is reached. Extreme settings, such as higher thresholds and shorter release times, can start to get downright strange (not that that's a bad thing), so this can be used as an effect as well as a sonic clean up tool.

Compressor

With Vetta, you've got compression pre (in the stompboxes) and post. The post compressor can be particularly valuable to adjust the response of two different amps that you're using at the same time with greatly differing amounts of gain. Compressors are also very valuable in the studio, where they are often used to reduce the dramatic dynamics that might be appropriate for a live sound, and get them into a more controlled range that fits better into the mix for a recorded track. Vetta's Comp button gives you on/off and editing control for two independent compressors, one for each amp.

Compressor Editing

The first page gives you the most important settings for each amp:

EDIT > COMPRESSOR		PAGE 1 / 3 > LEVEL	
1 Line 6	2 Line 6		
2 Bayou	3 Octone		
- 15dB	+6dB	- 5dB	+6dB
THRESHOLD	GAIN	THRESHOLD	GAIN

For many uses, you can set just these controls with no need to bother with the other pages that give you access to further compressor details. The Amp 1 stuff is on the left, and Amp 2 is on the right. THRESHOLD sets the level where compression will start to kick in; signals louder than this will be compressed. The basic idea is that with more negative numbers, you get more compression, and more of a reduction in the volume differences between the loudest and quietest notes that you play. GAIN lets you turn your level up (or down) once you've got the relative loud/soft dynamics dialed in via the threshold.

Like we say, this is often all you need to concern yourself with to get the compression you need. But if fine control is required, you *know* we provided you the option. Just spin the Page knob to get to page 2.

Page 2 lets you dig deeper into the fine points of compression:

EDIT > COMPRESSOR		PAGE 2 / 3 > RATIO	
1 Line 6	2 Line 6		
2 Bayou	3 Octone		
		2.0:1	2.0:1
		RATIO	RATIO

One again, Amp 1 on the left, Amp 2 on the right. RATIO has range of 1:1 (no compression) to infinity:1 (unbelievable amounts of compression). The way a compressor works is to turn down sound by a certain ratio versus what the sound would be without the compression. A 2:1 (read as “2 to 1”) ratio, for instance, means that it takes twice as much volume input to the compressor to get a given output level as it would if the compressor wasn’t there. If you set a ratio of 2:1 and play, though, you’ll probably notice that your sound didn’t get twice as quiet. This is because the volume reduction is occurring only in the volume range that’s above the threshold level.

If you’re having trouble getting a clear idea of what’s going on, you’re not alone. Compression is one of the most misunderstood things in music (it’s right up there with reouppables), but maybe this can help:

Imagine you’ve got a helpful friend that goes to your gig. You’re up on stage playing with your band, to a crowd of 50,000 people who absolutely adore you (as long we’re imagining, let’s imagine really good stuff). Your friend notices that, while the tone that you and your Vetta are making is positively spectacular, your volume level jumps a little too high relative to the band each time you really dig into the strings. In fact, your friend specifically notices that when you lay back, it’s all good, and it’s only when you spank out a chord or note above a certain level that things get a little out of hand.

Your quick acting and nimble footed friend springs over the bouncer at the stage’s edge to leap up next to you and your Vetta. He grabs Vetta’s volume knob, watches your body language, and every time he sees that you’ve spanked another overly loud bit out, he turns down the volume knob just a bit, and then turns it right back up again. The net affect is that your levels are reduced, but only when they go above a certain volume level. And this makes your overall performance sound more consistent and controlled, and drops into the perfect mix position relative to the rest of the band. That, basically, is what Vetta’s compressor does for you.

Now, if you’re the type that *really* wants to obsess about compression, page 3 is for you:



ATTACK lets you adjust how quickly the compressor kicks in to do its thing, and RELEASE controls how long before the compression ‘lets go’. Setting a quick attack and quick release time lets you control attack transients without affecting the decay of your notes, whereas a slow attack and long release time keeps your attack, but will shape the decay of your notes more profoundly. If you don’t have much experience with this type of compressor, it’s a good idea to poke around and see how the compressors have been saved in the Factory channels. And, as with all things, it never hurts to experiment and use your ears. If you set up your GAIN (on the first compressor page) so that you get about the same average volume with the compressor on or off, you can use the compressor on/off button while you’re experimenting to help you hear what the compression is doing.

EQ

Vetta has two options available from EQ page 1:



Twist the knob below MODE to select either the Graphic EQ or the 4-Band EQ. Whichever mode you choose, you’ve got independent processing for each of the two amp models.

Graphic EQ

A graphic EQ divides the frequency spectrum up into several slices, or ‘bands’, and allows the volume of each one to be turned up or down in relation to the others. Graphics got their name from the fact that early designs (and most modern ones, too) used faders to set the cut and boost levels and that the fader positions would give you a graphic representation of the EQ ‘curve’.

Post Effects • EQ

When you're using Vetta's Graphic EQ, you have two edit pages, one for each amp in a channel. Here's the edit page for Amp 1 (Amp 2 looks just the same):

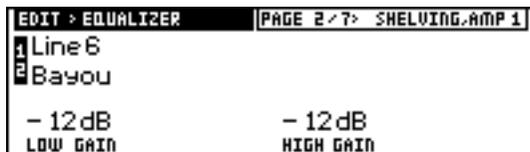


Each band has $\pm 12\text{dB}$ of range available. Set a knob to 12 o'clock for no boost or cut for that band. The center frequencies for the 4 bands are 80 Hz, 200 Hz, 800 Hz, and 3 kHz.

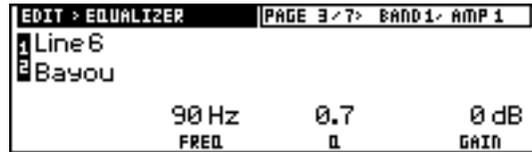
4-Band EQ

A powerful type of EQ commonly used in studios is 'parametric' EQ, so called because it offers you multiple parameters beyond simple cut and boost. A fully parametric EQ gives you control over the center frequency of the EQ band, the width of the band (also known as resonance or 'Q'), and the amount of cut or boost. Vetta's 4-Band EQ has two bands of fully parametric EQ plus high and low shelving EQs. These last two are similar to normal bass and treble controls on something like a stereo system. They're called 'shelving' EQs because they boost or cut all frequencies above or below a particular frequency. When this boost of frequencies is visually represented, it looks like a shelf.

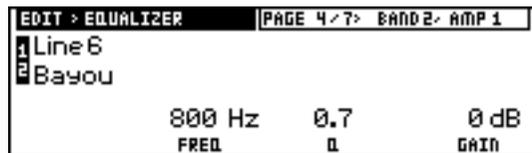
The 4-Band EQ has 3 edit pages for each amp in a channel. We'll show you the edit pages for Amp 1 here:



That's the Shelving EQ: LOW GAIN and HIGH GAIN each have ± 12 dB range.



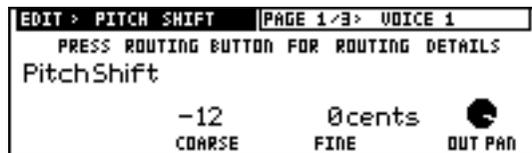
That's Band 1 of Parametric EQ. FREQ sets your center frequency, which is where the EQ's boosting or cutting will be focused, from 40Hz to 2000Hz. Q sets the width from .1 octave to 2 octaves—lower numbers focus the EQ tightly on the selected frequency, and higher ones broaden the effect. GAIN gives you ± 12 dB of boost.



That's Band 2 of Parametric EQ. All the controls have the same ranges as Band 1.

Pitch Shift

Vetta's Pitch Shift lets you dial in subtle detuning, or up to a full octave of pitch shift. As one of the Routable Post Effects (see page 4•11), Pitch Shift is a mono in, stereo out effect. The signals routed to it first get summed to mono, then run through two independent voices of pitch shifting, and are finally sent out in stereo, with each voice having its own output pan control.



This page provides the controls for voice 1. COARSE sets the pitch shift interval in half steps, with a ± 12 half step range (12 half steps equals one octave). FINE adjusts the pitch by cents (hundredths of a half step) with a ± 50 cents range. OUT PAN lets you send this voice of pitch shift left, right or anywhere in between.

Post Effects • Mod

Page 2 looks just like page 1, with the controls for voice 2.

Page 3 sets the inputs and outputs to the effect:



Depending on the Routing that you've chosen (see page 4•11), AMP1/L IN and AMP2/R IN determine either (1) how much of each amp feeds the pitch shift or (2) how much of the left and right outputs of the previous effect feed the pitch shift. The OUTPUT knob determines whether the pitch shift will be sent to the Main outs or the Wide outs, if Wide Mode is on (page 4•34). MIX determines (surprise!) how much of the pitch shifted signal is mixed in relative to the rest of your signal.

Note: Pitch Shift and Post Modulation cannot be used simultaneously.

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Mod

Most of the modulation effects available as post effects are also available as stompboxes, so we've already discussed the details of them in the chapter 'The Stompboxes' on page 6•1. There are a couple of modulation effects that are only available as post effects, and we've provided details below.

Editing Post Mod Effects

The only real change in editing modulation effects when they're in the post position is the addition of a fourth page:



These controls all work just like their cousins on the Pitch Shift's page. In fact, all the Routable Post Effects share this same last page for adjusting the inputs and outputs for the effect.

Models for Post Mod Effects

In addition to eight post-only effects we're about to describe, all the stompbox modulation effects are also available here in the post section. The chapter 'The Stompboxes' on page 6•1 has the details on each of these. In case you missed any one in particular, here are the pages where you'll find them:

Jet Flanger: Based on the A/DA Flanger on page 6•8

Analog Chorus: Based on the Boss CE-1 Chorus Ensemble on page 6•8

Phaser: Based on the MXR Phase 90 on page 6•9

U-Vibe: Based on the Uni-Vibe on page 6•9

Lumpy Phase on page 6•10

Sine Chorus on page 6•10

Square Chorus on page 6•10

Expo Flanger on page 6•10

Random Chorus on page 6•10

Analog square on page 6•10

POD Purple X on page 6•11

Random S&H (Sample and Hold) on page 6•11

Tape Eater on page 6•11

Rotary Drum+Horn: Based on a Leslie 145



Fine furniture and cool tones—the Leslie 145 gave you both at once. This tube-driven behemoth (you definitely *don't* want to try picking one up on your own) features a belt-drive rotating high frequency horn along with a downwards facing 15-inch speaker that had a segmented drum spinning over it to disperse the sound. It was originally designed to be used with electric organs like the Hammond B3, but once guitarists (and even vocalists!) heard it, they just had to get in on the rotate-o-rama. Our model gives you all that whirligig glory, without giving you a herniated disc.

The Page 1 DEPTH knob for our model based on the Leslie controls the amount of Doppler effect pitch shift.

Page 2 gives you TONE and MIX settings. For the truly authentic kind of spin that a Leslie delivers, you'll want to set the MIX knob to max, since a Leslie had no 'dry' path.

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Rotary Drum: Based on a Fender Vibratone



When they noticed that guitar players had started using Leslies, Fender decided to come out with its own, guitar specific whirling dervish of a tone machine. Dubbed the Vibratone, it used a styrofoam baffle spinning in front of a 12-inch speaker, kicking all the sound out the sides of the box. One of the best known examples of a Vibratone tone is Stevie Ray Vaughan's classic 'Cold Shot'.

The editing controls for the Vibratone are the same as for the Leslie 145. Take it for a spin!

Stereo Chorus

All of the Stompbox chorus effects are mono, while this effect has a stereo output. This effect has a “Wave Shape” parameter. Your choices are Sine, Square and exponential, which changes the shape of the chorus detuning. The PRE-DELAY controls the amount of delay the chorused signal has, and the FEEDBACK lets you send the chorused signal back into itself for a more dramatic effect.

Stereo Flange

You guessed it, a stereo version of a Flanger. This effect also has a “Wave Shape” parameter, along with PRE-DELAY, and FEEDBACK.

Hi-Talk

This effect kind of adds a human “Vowel” vocal sound echo to your sound. It almost sounds like a pseudo talk box. Your first instinct will be to solo with it, but try it with some rhythm playing too. The Q control accentuates the vowel tone.

L6 Sweeper

This effect is similar to a rotary speaker, but with a filter sweeping around instead of the volume.

Warble-Matic

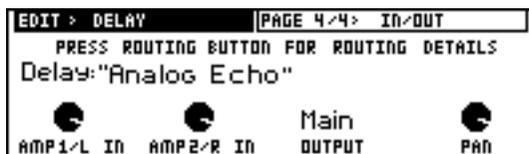
Similar to Line 6 Sweeper, but with a vowel sound that becomes a cool kind of pulse that you can control. Try this on a clean amp with your speed at 2.00Hz, depth at 50% and Q at 50%.

Auto Pan

Pretty self explanatory. Your signal is automatically panned from one speaker to the other. Using an external cabinet to widen your stereo field will really take this effect over the top. For maximum effect, make sure the MIX control is set to 100% (fully wet).

Delay

The Delay button lets you run any of the models that run as the stompbox delays. Only, in this case, they're working as Routable Post Effects (see page 4•11). Post Delay is mono in, stereo out, meaning that the signals routed to it first get summed to mono, then run through the delay, and are finally sent out in stereo, with adjustable panning. We gave you the basic lowdown on delay editing in the stompbox chapter (page 6•1). The only change for the post position is the addition of a fourth page that controls the input and output for the effect:



Depending on the Routing Configuration that you've chosen (see page 4•18), AMP1/L IN and AMP2/R IN determine either (1) how much of each amp feeds the delay or (2) how much of the left and right outputs of the previous effect feed the delay. The OUTPUT knob determines whether the delay will be sent to the Main outs or the Wide outs, if you've got Wide Mode turned on (page 4•34). MIX determines how much of the delayed signal is mixed in relative to the rest of your signal.

Models for Post Delay Effects

The stompbox chapter describes most of the available delays, on the following pages:

Analog Echo: Based on the Boss DM-2 [on page 6•13](#)

Analog w/Mod: Based on the Electro-Harmonix Deluxe Memory Man [on page 6•13](#)

Tube Echo: Based on the Maestro EP-1 Echoplex [on page 6•14](#)

Tape Echo: Based on the Maestro EP-3 Echoplex [on page 6•14](#)

Multi-head: Based on the Roland RE-101 Space Echo [on page 6•15](#)

Echo Platter: Based on the Binson EchoRec [on page 6•15](#)

Digital [on page 6•16](#)

Reverse Delay [on page 6•16](#)

Lo-Rez [on page 6•16](#)

Phaze Eko [on page 6•17](#)

Sweep Echo [on page 6•17](#)

Bubble Echo [on page 6•17](#)

Ping Pong Delay



The Ping Pong Delay is one of the delays that can be run as a Post Delay Effect but not as a stompbox (since this kind of delay requires a stereo output to do its stuff). It has two separate channels of delay, with the output of each channel flowing into the other, going back and forth like a game of ping pong.

The TIME knob on Page 1 sets the time for the left side delay line.

The OFFSET knob on Page 2 sets the time for the right side delay line, as a percentage of the left delay's TIME. And SPREAD sets the stereo spread of the delays from mono to hard panned left and right.

Sound too tricky? Just use the TIME knob (or Tap Tempo button, if you want to set that up) to set the longer delay time you hear, and then turn OFFSET to adjust the shorter delay time. If you set Offset straight up at 12 o'clock, your left and right delays are evenly spaced. Then, once you've got your delay times set, use the SPREAD knob to adjust where the delay repeats appear in the stereo field.

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Stereo Delay

This delay is actually two delays, one panned left and the other right. The TIME knob (or Tap Tempo) sets the left delay's time. The right delay's time is controlled by the OFFSET knob, again as a percentage of the left delay time. If OFFSET is all the way up, the left and right delay times are the same. Turn it down to shorten the right delay. Each of the delays also has their own FEEDBACK controls, on Page 2.

Reverb

You already know that we obsess over every detail with our amp models, crafting uniquely powerful software to deliver tone that can go head to head with the best amps ever made. When we set out to create Vetta, we devoted that same fanatical energy and innovation to developing truly no compromise reverb effects. The spring reverbs in particular are, in our humble opinion, the best digital emulations ever achieved for these classics. And while we're tooting our own horn here (it's OK in moderation,

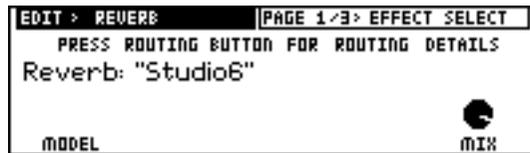
Post Effects • Reverb

right?), we also invite you to compare the rooms, halls and plates with the best that digital reverbs have to offer (as we have) and we think you'll agree that Vetta's reverbs are pretty darn fabulous.

Vetta's collection of reverb models emulate physical environments (rooms and halls), plate reverbs (which generally feature a big steel plate or sheet of gold foil with some sort of speaker driving it, and usually multiple pickups to pick up the vibrations of the plate), spring reverbs (the kind guitar players know best), and even a couple of unique new models that you'll have to hear to appreciate.

Editing Reverb

All the reverbs in Vetta share the same interface, to make editing just that much easier. Here's a quick walk through:



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The first reverb page lets you choose which reverb MODEL you want to use and determine its over all level in the MIX. Remember that Vetta's Global Reverb knob works to adjust the overall more or less experience (see 'Global Controls' on page 3 • 6). When you're setting up your own new sounds, you're probably going to want to leave the Reverb knob parked at 12 o'clock. If, on the other hand, you've decided you really like the sound of all the channels in Vetta when the reverb knob is at a particular position, then you'll want to make sure you've got the knob set there when you're creating your own new sounds, too.

Page 2 has two different incarnations, one for spring reverbs, and one for non-spring reverbs. What's the difference? We're glad you asked:



For spring reverbs, Page 2 gives you control over DWELL, which determines how hard the virtual springs are driven. The harder you drive them, the longer the decay time. Plus you've got a TONE control.



For non-spring reverbs, Page 2 gives you control over DECAy, PRE-DELAy (how long before you hear the reverb kick in), and TONE.



Page 3 is the standard one you've seen with all Post Effects. Depending on the Routing that you've chosen (see page 4•11), AMP1/L IN and AMP2/R IN determine either (1) how much of each amp feeds the reverb or (2) how much of the left and right outputs of the previous effect feed the reverb. The OUTPUT knob determines whether the reverb will be sent to the Main outs or the Wide outs, if you're Wide Moding (page 4•34). MIX determines how much of the reverbed signal is mixed in relative to the rest of your signal.

And now, it's time for the model specifics.

Springs

Ahh, the 'spring' of a good spring reverb tank. Ya say you wanna play surf music, neighbor? Well sir, you've come to the head of the stream! The only thing missing is the ugly crash when the bass player stumbles over your amp.

Lux Spring

This model is based on a blackface Fender Deluxe amp, which had a two spring reverb tank.

Std Spring

This model is based on the spring reverb of a blackface Fender Twin Reverb. One of the many things that people have loved about this reverb over the years has been its rich, dense reverb sound. The three spring tank offered a more complex sound than Fender's earlier spring reverbs. Go find yourself a bevy of bikini-clad beauties, wax up your board, and dig in.

King Spring

A Line 6 original, inspired by the Sealy Posturepedic. If three springs are cool, how about a whole mattress full of Slinkies? Richer, denser, wigglier. A good night sleep guaranteed, or we'll give you your money back.

Rooms

Over the years, inventive recording engineers have pressed all sorts of rooms into service as reverb chambers. Stairwells, hallways, and basements have been some of the popular choices. We've tried to present a good cross-section in your Vetta.

Small Room

Back in the day, there was no such thing as digital reverb. But people still wanted to be able to add more 'room' to the sounds they were recording. Someone got the bright idea of building a big empty room where sound bounced around nicely. They stuck a speaker in there, fed the sounds that needed loving through said speaker, and arranged microphones to pick up all the resulting ambience so it could be mixed back in with the music. These early reverb chambers all had a different personality, and some studio's reputations were made based on their individual reverb sound. Vetta's Small Room model is typical of the type of reverb chamber that would have been available at a decent mid-sized studio in the '60s.

Large Room

You can think of this model as either a big time studio's big reverb chamber, or a lonely nightclub where nobody showed up for your gig. We try and think of it as the former.

Studio 6

Literally one of the sound development studios here at Line 6 Central. Just so you can get a taste of what it's like to work here.

Tiled Room

Think of this one as recording your guitar in the hall bathroom. All that porcelain has always made for great reverb, and lots of classic recordings were done by making the saxophone player stand in the ‘necessary’ and wail. Or at least that’s what they told him. Sax players can be so naive.

Plates

Plate reverbs were the first type of ‘mechanical’ reverb. The basic design includes a big steel plate or sheet of gold foil with some sort of speaker driving it, and usually multiple pickups to capture the vibrations of the plate.

Memphis Plate

This reverb dishes up the vibe of early rock and roll recordings, like Sam Phillips’ great work at Sun Studios. Thank you very much.

Foil Plate

Our model of a gold foil plate. Gold foil plates, since they were using a much thinner piece of metal, tend to be more responsive to attack than steel plate reverbs (not to mention a little pricier).

Blue Plate

A very special Line 6 original reverb. Once again, we just turned the sound developers loose for this one. (Okay, we admit it. They came in at 3am and did this one on their own time. But once we heard it, who could say no?)

Halls

We’re not talking about the passageway between your living room and bedroom. We’re talking large, cavernous spaces here.

Bingo Hall

We actually used to have our company meetings in this place. A very reflective, sort of medium large hall.

Concert Hall

Our friend Pete Anderson called this one, “a really pretty reverb”. That’s certainly good enough for us. This one’s fairly intimate (for a concert hall), with a lovely ‘tail’.

War Memorial

Your basic stadium. Dial this one up and imagine 25,000 screaming fans hanging on your every note for some vicarious thrills.

Hangar 18

No, it's not where they stashed the alien bodies after the autopsy. It's a *really* big reverb.

None of the Above

What can we say. Sometimes our sound development team has a little bit too much Pepsi (we're trying to get them to go caffeine free but it's an uphill battle) and they just drop this stuff in there. Once we hear it, though, we generally end up stocking up on more Pepsi.

Propellerverb

Dark and fluttery, with a big wooshy kind of sound to it. Kind of like a big high school gymnasium, but there are these long, wide pieces of fabric hanging everywhere keeping down the high frequencies. And you're standing there in your skivvies, trying to scream, but no sound comes out.

Radioverb

Spend some time soaking up the vibe here at Line 6, and there's a decent chance you're gonna hear someone spinning some Radiohead as they work the day away. We figured we'd cook up a reverb that they'd hopefully like to use, and hopefully they actually will use it, and we'll hear it one day, and that'll make us smile. As one of our superstar product demonstration guys likes to say, "This is a good sound to use when you want to play a song about your feelings."

Double Tracker

When we were starting to work on creating Vetta, one of the questions we kept asking was "What's the one studio recording effect or technique that everybody loves but has never been able to get live?" After deciding that a built in industrial coffee maker probably wasn't going to be possible, the revelation that came to us was double tracking.

After all, almost everybody has used it in the studio to thicken up a track, and a number of effects that have become classics in their own right (like chorus) started out as attempts to emulate double tracking. Vetta's Double Tracker is, we think, the first

effect to really give you the feeling of double tracked guitars, thanks in large part to Vetta's ability to provide you with two amps at once (after all, studio double tracking is frequently done with different amp settings or different amps for each track). It's especially impressive when used with physically separated speaker cabinets, like a couple of 412s spread a few feet apart, or a Vetta combo in Split Stereo Mode (see page 4•35) with a Vetta 212S Extension Cab purring away beside it. At extreme settings, Double Tracker also becomes a totally new type of time/pitch/dynamics mangling effect.

Double Tracker Editing

When you press the Double Tracker button (see 'Double Tracker' on page 4•17), the Main Display should look like this:



TIMING controls just how tightly the 'virtual' second guitarist will track to your playing. We also sometimes refer to this as the 'Drunk' knob, since the farther up you turn it, the more beers that other guitarist has had.

PITCH controls the amount of pitch variance between you and your virtual partner. Like the Timing knob, radical settings on this might make you wish you could fire the 'other' guitar player, or at least get them to play a guitar with decent intonation.

DYNAMICS controls how well that second guitarist matches your picking dynamics. A rule of thumb is, since high gain sounds tend to be somewhat compressed, the more distortion in the tone, the higher you'll need to have the Dynamics knob to get the best out of Double Tracker.

HINTS & TIPS

Building a New Tone

When setting up sounds on your Vetta, it's helpful to approach things just the way you would if you had all the actual physical gear that was studied to create the models in your Vetta. Start out by using a single amp and then, once you've got that down, you can add a second amp and dial up combinations that work well together. You'll also get great insights by picking some Factory channels that you like, and then poking around, looking at the details to see how we set them up.

To help you reach tone tweaking guru status with your Vetta, let's walk through the process of setting up a tone, starting with the basics:

Start With The Basic Amp Tone

The first step is to dial up a good basic amp tone. Press the effects buttons to turn off all their lights, and turn on Amp 1 only. Choose an amp model, and dial up a tone that sounds good to you. It's good if you can dial up your tones at (or close to) the volume you'll typically use them at, since the human ear's way of reacting to volume affects your impression of how things sound, especially in terms of the relative amount of high and low frequencies. And if you're gonna be gigging with the sounds you create, the best thing is to dial them up while working with the rest of your band, since you'll then be able to hear how your tone sounds in context. If you don't have other musicians hanging around, you may also find it helpful to play along with recorded tracks to get some idea of where your tone will sit in a mix. Tones you dial up in isolation may sound great when you're the only one playing, but they may not play well with others, so to speak.

OK, that was a lot of advice. Hopefully there's something in there that you'll find helpful. Anyhow, once you've got a basic amp tone you're happy with, it's time to...

Add Stompbox Effects

Even if you don't intend to save a channel with the stompboxes turned on, you might want to go ahead and make sure something decent is running in each one. Because you never know when you may decide, in a momentary bout of tonal passion, that you really *need* a fuzz box. In cases like this, it's nice to have something all dialed up and waiting for you to unleash it.

Stompbox Routing

As you probably know from, the Basic Operations chapter, stompboxes can be set up to feed Amp 1, Amp 2 or both amps (for a refresher, see page 4•10). Set up the stompboxes to feed the amp however you'd like. To keep things simple, you may find it helpful to set them up like this:



Setting Up a Stompbox

At this point, you may want to follow our little rule of thumb of putting Distortion in Stompbox 1, Modulation in Stompbox 2 and Delay in Stompbox 3. But if you're looking to do something more adventurous with the routing or the ordering of the stompboxes, that's great too, and it's why we provided you all the flexibility there is here.

When you're dialing in the setting for a stompbox, it's good to A/B between the stompbox on and stompbox off states to make sure that you've got the levels where you want them for each situation. For modulation and delay effects, you may also want to set the effect to be locked to tap tempo, and set the note value it will use. Once again (and this is the last time we're gonna bring it up, we promise), tweaking at level and with other musicians is recommended. Also, as you're tweaking it's a good idea to save various versions of the tone along the way. This way, if things start out well, but then you wander off in a direction that doesn't pan out, you don't have to go all the way back to the beginning. You may want to treat one bank as your "tone workshop", using the A, B, C, D channels in the bank to save various versions of a tone, and then switching back and forth to hear the differences between them.

Add Post Effects

Okay, you've now done all you could do with a traditional amp and stomp box setup, but Vetta's still got a lot more to offer. Tremolo, Compression and EQ are ready and waiting, though it's often good to leave the EQ, and sometimes the post Compression, for a last step of refinement, in order to help yourself avoid overdoing it with either one.

For the post Mod, Delay, Reverb, Loop and Pitch Shift, a visit to the Routing Setup button is once again the first step, as you probably got hip to in the Basic Operations chapter (page 4•11). Remember that series, parallel, and chained routings can have very different results, as can the order of the effects in the post-amp model signal chain. Do you want delayed modulation or modulated delays? Reverb on that echo? Will you be running in Wide mode? If so, do you want all the effects to go to the Wide bus, or do you want to keep some in the main signal? As you can see, it helps to have a mental picture of your sound before you begin and, of course, your Vetta's graphic display can help you create this picture as you go. And while you're at it, you may want to remind yourself that too many effects *can* sonically blur the guitar image—less can be more. On the other hand, sometimes less really is just less than you want, and more is what you want. So have at it!

EQ and Finalize

We're almost there, now. The finishing touches are to listen and decide if you really need to add any EQ, compression, or other tweaks to the final sound. It's really easy to over-EQ a tone, so be sure to A/B between the EQ'd and non-EQ'd sound to make sure you're actually making it sound better (isn't that what it's all about, anyway?). You'll also want to press the Output Options button to choose the A.I.R. II setting if you're going to be running direct.

Play It

If you created your new tone during your own private practice time, you'll really learn what it can do when you're playing with other musicians or doing some recording. This is the time to keep your ears open, and make some final tweaks to perfect things. Are the effects really in balance? When you kick in that delay, is the volume level of the repeats right where you want it? If not, just twiddle the appropriate knobs or tap the appropriate buttons, and give the Save button a couple of presses to commit it all to memory.

Using Two Amps at Once

Since one of the most powerful features of Vetta is the ability to use two amps at the same time, we figured we should show you how to create a two amp setup, and then spend a little time talking about some strategies for using two amps. Here goes.

Two Heads (or Combos) Are Better Than One

Let's begin by walking through building a sound with two amps. If you've been reading through the manual, you should already know the basics of how this all works, so consider some of this a review session (Don't worry, there's no pop quiz in the making.)

1. Find a channel that you're willing to overwrite.

Always a good place to start. If you do this first, you don't have to think twice about just pressing Save twice when you're finished.

2. Select which amps you want to use.

In the Mad Scientist world of Vetta, experimentation is good, and many things that were difficult or downright impossible before become pretty easy and fun to experience. In this example, we're going to pull out all the stops to create a dual-amp setup that sounds as if it's about to go into feedback while spreading across the stereo image. Our amp test subjects will be the Line 6 Class A and Line 6 Octone.

Start by assigning Line 6 Class A to Amp 1, and Line 6 Octone to Amp 2. If you've forgotten how to do this, you might want to review "Working With Two Amps" on page 4•3 in the Basic Operations Chapter.

Then dial in the tone. Let's start with the Amp 1 Drive knob at about 2 o'clock and Amp 2 Drive at about 1 o'clock. Use the Amp Volume knob to balance the two so they're approximately equal loudness.

3. Set the amp panning.

For this particular sonic adventure, let's have Amp 1 panned hard left and Amp 2 panned hard right. Press the Amp/Cab Details button, use the Page knob to go to page 2, and adjust the panning appropriately (page 4•3 tells how).

4. Set up the Stompbox effects routing.

We're going to use the Auto Swell effect only on the Octone to make it seem as if the guitar is travelling across the stereo image as the octave smoothly moves in. As a matter of fact, we're going to use two Auto Swells, one each in the Stompbox 2 and 3 positions, so you can choose a variety of attacks just by kicking stompboxes on and off with the FBV foot controller. First, let's route the stompboxes so that both 2 and 3 are feeding only Amp 2 (Line 6 Octone). Press the Effects Routing button and use the Page knob to get to page 1 (if you're not already there). Use the Item knob to select Stompbox 2 and the Position knob to move it in front of Amp 2 only. Now do the same with Stompbox 3.

5. Assign Stompboxes.

Now we'll make Stompbox 2 and 3 both become the Auto Swell. Start by pressing the Edit button in the Effects section ("Effects" on page 3•4). Now press Stompbox 2. Use the Category knob under the display to select Dynamics and the Model knob to select Auto Swell. Set Ramp Time to about 8:30 and Depth to about 10 o'clock. Now press Stompbox 3 in the effects setting, select Auto Swell, and set Ramp Time to 11 o'clock and Depth straight up. Setting the two up like this gives you three different ramp times. Stompbox 2 by itself will be a fairly quick swell, Stompbox 3 alone a longer swell, and both stompboxes together will give an even longer swell. When you play, you should hear a fairly normal guitar sound on the left (that's the audience's left when facing the amp, by the way) while an octave tone swells in on the right, with the tone seeming to be moving across the stereo field.

6. Set up Post effects (optional).

Try Ping Pong Delay and Concert Hall reverb on this sound to add some extra movement, or go for whatever else you want.

7. Make it even bigger (optional).

If you've got the Vetta 212S Extension Cab, you can set this up as split stereo (see "Running External Speakers with Vetta Combo" on page 4•43), for a really dramatic effect.

Now that you've spent some time playing with this sound (and when you're able to stop your head from spinning if you did use the Ping Pong Delay and Split Stereo Mode), let's talk a little bit about some overall strategies for using Vetta's two amps at once feature.

A Variety of Strategies

There are a number of different ways you can approach having two amps available at once in a channel.

1. Use the same amp model for both amps, but with different settings.

Using this approach, you can turn any amp we model into a channel switching amp, even if the original couldn't do that. You can also turn them both on at once for a double helping of the amp model's tone. With the optional FBV foot controller for Vetta, you can do all this with your feet.

2. Use the same model for each amp, with the same tone settings, but different cabs.

Can be subtle or blatant, depending on which cabinets you use. One tasty amp-cab combination is Line 6 Twang with a 4x12 cabinet and the drive knob cranked up a bit. Try this in one channel, played off against the Twang with the Line 6 1x12 in the other channel. This works well either layered or switching between them. Another neat trick is to route the volume pedal in any of its positions other than at the very start or very end of the signal flow (see page 4•18), and then set the Volume pedal to Reverse response on one of the amps (see page 4•23). This enables you to cross fade between the two. This is especially effective if you use radically different cabinets like the 1x8 cabinet on one side, and a 4x12 on the other.

3. Use different models for each amp, but only one at a time.

This gives you the equivalent of an A/B switch box to get one amp or another. Once again, the FBV lets you do it with your feet while your hands are strumming.

4. Use different models for each amp, layering them together.

Had we the time, we could lay out a whole world of different sub-categories here, but the ideas behind them are similar. The basic thing is to take two sounds with different characteristics, maybe one clean and one distorted, or one big and one little, or one nice and one nasty, or maybe even just some EQ difference. Then, once you've got the two amps all picked out, you combine them to get something new and different. This is similar to the approach that's been taken by artists who can afford to tour with several different amps plus a custom mixing/switching setup built by those really committed, hard-working guitar techs behind the scenes.

So there are just a few ideas about two amps. We're sure that you'll be able to come up with plenty of other scenarios on your own. There are a few common threads with all these approaches, though.

Common Considerations for 2 Amps At Once

First, you'll want to pay some attention to the relative volumes you're setting for the two amps. As with all things related to dialing in tones, you're best off with your Vetta's Master Volume set close to your normal performing levels (see "Start With The Basic Amp Tone" on page 8•1).

Second, check how the channel sounds with the different volume settings that you might use on your guitar's knob. If you're one of those guitar players who never touches the volume knob on the guitar, you don't have to worry about this, but if, like some of us, your little finger is always being put to work adjusting your volume, it can be important. Since Vetta's different modeled amps have different dynamics (just as the original amps we modeled do), you'll notice that sometimes a channel that's perfectly balanced when the guitar volume is all the way up will change when you roll the guitar volume back. Sometimes, you may find a different combination of amps gets more of the effect you want.

Third, be careful with how you dial up the tone settings on the two amps. Two amps that both have the low end dimed will most likely sound very muddy when they're layered together, especially if you pan them on top of each other. Complementary EQ settings can work really well, like scooping the Mids and turning up the Bass and Treble on one amp while keeping the Bass and Treble down and emphasizing the Mids on the other.

Last, remember that the stompboxes you set up in a channel will react differently with different amp models. You may find that the Screamer model, for example, will make one of the amps louder than the other, even though the tone is well balanced when the stompbox is off. This happens because Vetta's amp models, like the originals they're based on, have different amounts of headroom and 'sag,' and so, respond differently to increased and decreased input.

Effects Tips & Tricks

Using Custom Settings

One of the ways you can put your own brand on your Vetta is to store your own custom Default Settings for any or all of the amp models and effects. As you find settings for particular models that sound best with your playing and your guitars, save them as described in “Saving Model Default Settings” on page 4•26. This way, every time you dial up one of those models in a new sound, it can start out just where you’d most like it to be. And eventually, once you’ve found and saved personal voicings for your favorite things in Vetta, you’ll have a truly custom amp.

Using Compressor (Post)

The dedicated Post Compressor effect can be very handy if you’re running two amps that have very different perceived volume levels (say an extremely clean amp layered with very high gain amp) and you need to get a bit more level from the one that sounds too quiet. Try the compressor at a low setting—1.3:1 or 1.6:1, maybe— and then turn its gain up several dB to get the levels better matched. Or, if you just want to do some level matching without adding any compression, use the 1:1 ratio—that’s what it’s there for. When adding gain via the compressor, don’t go too far or you’ll get distortion (the bad kind). Use your ears.

Using EQ

EQ is one of those things that it’s very easy to overdo. We recommend frequently A/B’ing between the EQ’d and un-EQ’d tone, so you can make sure that you’re actually making it sound better, and not worse.

Using Double Tracker

If you’re using higher gain amps, you’ll need to run the Dynamics knob of the Double Tracker a little bit higher, since those amps tend to be more compressed and have fewer dynamics than clean amp sounds.

Extreme settings on the Double Tracker can be interesting as a new effect in their own right. If you’re looking for a realistic doubled tracked sound, though, subtlety is the key. When you’re dialing up a Double Tracker effect, ask yourself if you’d hire that ‘other’ guitar player if he really played *that* sloppily.

Using the Effects Loop

We're sure that you've got lots of cool stompboxes that you like, and the temptation to run them in Vetta's loop might be overwhelming. We trust that you'll resist, since the loop in your Vetta is designed for line level devices only. Stompboxes will not react well in the loop and your signal will be seriously degraded (and not in a good way).

Stupid Effects Tricks

Well, maybe not stupid, but you can do some interesting things if you use your imagination. Here's a quick example of something to try.

1. Create a basic sound that you like, but don't add post delay or reverb yet.
2. Go to Effects Routing Page 2 and set the Reverb in Chain mode after the Delay.
3. Pick a Delay, any Delay. Set it up for a fairly long (400ms or so) delay and a couple of repeats with the Mix set to 100% wet (Mix knob all the way up). Go to the last Delay edit page and set the Out Pan knob hard left.
4. Choose a reverb. Set it up however you want, but, on the last Reverb edit page, set Out Pan hard right. Remember that since this is a chain routing with the delay output sent into the reverb, if the delay is off, you won't hear any reverb.
5. Play. What you should hear is the delay repeats on the left hand side and reverb on the delay, and only the delay, on the right side.

If you now start playing with delay times, you can get a variety of stuff going on. With very short delay times and a single repeat, you can make the original guitar sound appear in the center then quickly move left and kinda bounce right (Which gives the added amusement of watching some of your audience get whiplash, if you're into that kinda thing.). Add Wide mode, and suddenly you've got all sorts of movement happening when you play just a single note.

Making The Factory Bank Your Own

Since Vetta is all about options, we've even given you the option to change the stuff that's not supposed to change. For those people who hate presets and want to fully populate their Vetta with their own sonic favorites, or for whom 64 channel memories

just aren't quite enough, we've provided a way to customize your Factory Bank (in which case, it's not really the Factory Bank anymore, but we're sure that you'll be able to cope). Although you can't write over individual Factory channel settings, you can replace the entire Factory Bank via MIDI. See "Things to Know About Vetta's Memory" on page 4•28) for the nitty gritty.

Using Variax with Vetta

Line 6's Variax is the world's first digital modeling guitar, containing a collection of 28 electric and acoustic instruments all available at the touch of a button. As you've certainly noticed, Vetta comes with a Variax Input on its rear panel, and even includes the locking RJ-45 cable to connect your Variax up with. Using this connection opens up a number of capabilities never before available in a guitar system.

One Cable

Through the single included Variax cable the Vetta is able to provide power to the Variax (eliminating the need for the XPS supply), provide bi-directional communication between the Variax and the Vetta, and feed a direct digital audio signal from the Variax into the Vetta's input.

Digital Audio

The Variax converts each of its six strings to digital signals through 24-bit Analog to Digital converters. When using Variax with a "traditional" amp (or plugged into Vetta's guitar input), the signal is converted back to analog in order to come out the 1/4" guitar jack on Variax. With the direct digital connection to Vetta, the Variax's digital models remain in the digital domain for the highest possible quality of signal connection to Vetta.

To turn on the Variax digital input, go to System Setup's Page 2.

System Integration

Here's the best part: Thanks to the digital communication between Vetta and Variax, they get to know what the other is doing. This means that for each channel you save in Vetta, your Variax can be programmed to select whatever Guitar Model and Tone setting automatically. You can also program the Vetta to not change your Variax's settings on a channel by channel basis, or set it to leave the Variax selection to you manually.

You can select what Guitar Model and Tone that you want for each channel by just changing the setting on your Variax and saving the Vetta channel, or by setting it all up on the Vetta display on Amp/Cab Details Page 3. This page is also where you decide if you want your Vetta to control the Variax. If the MODEL setting is None, then whenever that channel is selected your Variax will remain on whatever setting it was already at. If you want to turn off all control of Variax from Vetta, just set the CONTROL parameter to Off.

Variax Acoustic Models

Since Variax can also produce models of acoustic instruments, it might seem odd to run these sounds through an electric guitar amplifier. But of course, Vetta is not an ordinary amplifier, and has provided a number of features to manage this situation. First off, one of Vetta's models (Variax Acoustic, to be precise) is designed to make Variax's acoustic sounds more realistic through Vetta's guitar speakers. Of course a full range P.A. or acoustic guitar amp will provide a wider frequency response (thanks to the tweeters), but this model can certainly do the job in a pinch.

Additionally, Vetta can be programmed per channel to run its sound through its speakers, its direct outputs, or both. This is controlled by the OUTPUT parameter on Page 1 of Output Setup. Normally, this setting should be left on Normal, which leaves the speakers on and also sends the signal out the direct outputs. This setup works well with the Model described above, and can be used to have the Vetta's speakers on for stage monitoring, and also send your signal out to the house P.A. If you'd like to have your acoustic models sent out only to the P.A., then set up a Vetta channel with the amp model on Bypass (no amp), and the cabinet model set to No Cab. Set the OUTPUT parameter to Direct, which turns off Vetta's speakers. In this case, you would hear your Variax through the P.A.'s stage monitors. Remember that all of Vetta's processing capability is at your disposal, so feel free to throw on some compression, EQ, delay, reverb, or whatever else suits your fancy.

Since the OUTPUT setting is saved per channel in Vetta, you can switch between an acoustic model that only plays through the P.A., to a single-coil electric running into Vetta and its speakers, at the touch of a button. Truly total control.

Variax Software Version

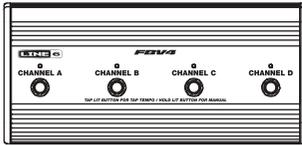
Some of the capabilities mentioned here require that Variax have software version 1.1 or above in order to be fully utilized. System Setup Page 4 can tell you what version of software is in your Variax. The current version can be downloaded at www.line6.com and loaded into your Variax through Vetta's MIDI jacks. See the website for more details.

USING FBV FOOT CONTROLLERS

Exercising Your Options

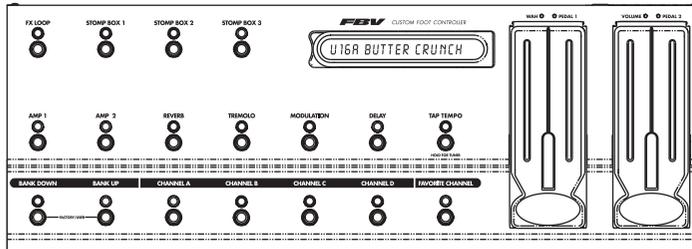
There are three different Line 6 FBV Foot Controllers that you can use with the Vetta.

FBV4



The FBV4 has 4 switches labeled A, B, C and D. These switches allow you direct access to any of the four channels in the current bank. An LED will light showing you the currently selected channel. Repeatedly pressing the currently selected channel switch will result in changing the tap tempo time in the Vetta.

FBV



The optional FBV foot controller gives you a greatly expanded range of control over your Vetta, especially in live performances. The FBV provides foot switches for virtually every function of Vetta, as well as a pair of pedals that can be used for Wah or Volume or assigned to control other parameters like Reverb Mix, Mod Speed, or Delay Time.

Setting Up Your FBV

There are several settings on Vetta that affect how the FBV functions. All of these settings get stored with individual channels, so you can literally reconfigure many of the FBV functions for each tone you create.

For each stored channel in your Vetta, you can save parameters for:

Whether the MODULATION button on the FBV will control the Modulation or the Pitch Shift.

What parameters the FBV pedals will control (Wah, Volume, or some other parameter like delay time or modulation mix) and how those parameters should respond to the pedals;

as well as minimum volume pedal level, whether the volume pedal response is normal or reversed and whether the volume pedal uses a Linear, Log or Double Log taper.

Most of these options are set via the Foot Control button (see “Foot Control” on page 4•37), except for “minimum volume” which is a Routing function (see “Setting the Volume Pedal’s Minimum Volume” on page 4•23).

Punching Your Buttons

The switch layout of the FBV groups switches by function. The bottom row, which you'll probably be using most often, is for bank up/down and channel select:



Let's say you've got F1A selected (the 'F' in 'F1A' is Factory, the '1' is Bank 1, and the 'A' is Channel A). The light above the A switch will be lit. F1A will show on the FBV display with the name that was saved for this channel.

BANK UP/DOWN: Step on Bank Up to 'cue' Factory Channel 2A; the FBV display flashes the name that's been saved for F2A so you know what's there, but it hasn't switched you out of F1A yet.

LOAD CHANNEL: Press A to load Channel F2A (you could also have pressed B to load F2B, C to load F2C, etc.).

FAVORITE CHANNEL: Press Favorite Channel. The channel assigned to be the favorite (see "Setting Your Favorite Channel" on page 4•26) loads and shows on the display. Press Favorite Channel again to return to the previous channel—in this case, F2A.

FACTORY/USER: Press Bank Down and Bank Up at the same time to switch from the Factory Banks to the User Banks.

The middle row of FBV switches are for amp switching and Effects on/off:



Lights above each switch shows what is on/off; Tap Tempo flashes at the current channel's tempo.

Using FBV Foot Controllers • Wagging Your Toes

AMP 1 OR 2: If only Amp 1 is on, stepping on the Amp 1 switch will toggle Amp 1 off and Amp 2 on. This allows A/B box style instant amp switching.

AMP 1 AND 2: If only Amp 1 is on, stepping on the Amp 2 switch will toggle Amp 2 on, so that both amps are now on.

AMP OFF: If both AMP 1 and AMP 2 are on, stepping on either switch will turn that amp off. One amp will always remain on.

TAP TEMPO: Taps on the Tap Tempo switch set Channel Tempo on Vetta. The light above the Tap Tempo switch flashes.

TUNER: Hold Tap Tempo switch for two seconds to activate Tuner. FBV display shows note detected and tuning status.

The top row switches toggle the Stompboxes and Effects Loop on/off:



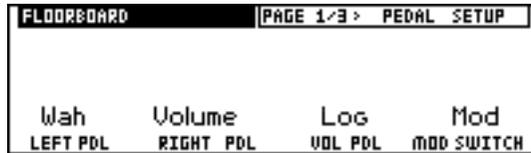
FX LOOP: If nothing is connected to Vetta's Effect Loop, the FX Loop light will flash if you try to kick the FX Loop on.

Wagging Your Toes

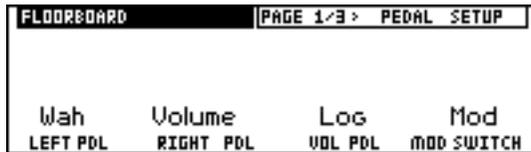
The two pedals on the FBV each have a secret identity. They can be normal, unassuming, everyday wah and volume pedals, or they can throw off their street clothes, put on the Spandex tights, fasten a cape about their shoulders, and become expression pedals, offering you superpower control over aspects of your sound like delay time, modulation speed, tremolo depth, and the like. All of these settings are customizable on a per channel basis, so you can have a different setup for every channel you use (if that's the kind of thing that appeals to you).

As an example, let's walk through the process of setting up the left pedal to control the post Modulation Speed (very handy for the rotary speaker models). Turn on Vetta's Mod effect, select the "RotaryDrum+Horn" model, set Speed to 5 Hz and Mix to 100%.

Now, to tell Vetta that you want to make the left pedal stop behaving like a wah pedal and start behaving like an expression pedal, press the Foot Control button on Vetta. Turn the Page knob if necessary to show page 1:



Now turn the knob below LEFT PDL so the display reads “Pedal 1” instead of “Wah”, as shown below:



The next step is telling Vetta what you want Pedal 1 to control. Turn the Page knob to page 2 (you’d go to page 3 if you were working with the Volume Pedal/Pedal 2):



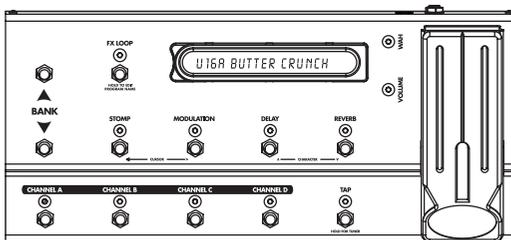
Turn the knob below DEST until the Display reads “Post Mod Speed.” Turn the knob below DEPTH to set it to 100%. You should now have:



Using FBV Foot Controllers • Wagging Your Toes

These means with the pedal at the heel position your “post mod speed” will be just as it is set in the Mod edit menu. Pushing the pedal all the way to the toe position causes the “Post Mod Speed” parameter to go to its maximum value. A DEPTH setting of 75% would take the parameter to 75% of that parameters maximum value. A setting of 0% would do nothing. You can also set the DEPTH to negative settings. For instance if on a “Sine Chorus” you have a speed set to 4.60Hz, the -100% setting would take you to 0.10Hz. Finally, use the MODE knob to choose between “Continuous” and “Switch.” Continuous will make the pedal move smoothly from your minimum to maximum values, hitting all points in between. The minimum value would be what the parameter is set to on the effect edit page. For instance if you’re using a “Sine Chorus” with a speed setting of 4.60Hz, that is the minimum value. A 100% setting would move the value to the maximum of 15.00Hz. “Switch” will cause the pedal to simply switch from the minimum to maximum values as you pedal from heel-back to toe-down. See “Foot Control” on page 4•37 for more details.

FBV Shortboard



The FBV Shortboard is a smaller version of the standard FBV. It functions exactly the same way as the FBV, it just has less pedals and switches. Pressing on the pedal at the toe position toggles the pedals function between Volume and Wah. There is an LED for both Volume and Wah next to the pedal so you can always see which function is active.

There is jack on the back of the FBV Shortboard where you can connect an external expression pedal, such as the Line 6 EX-1. When an expression pedal is attached to this jack, it becomes the Volume pedal while the Shortboard pedal becomes the Wah pedal. Vetta allows you to assign other functions to these pedals on page 1 of the Foot Control menu. The Wah pedal can be changed to “Pedal 1” and the Volume pedal can become “Pedal 2.” Pages 2 and 3 of this menu allow you to assign specific parameters to these

pedals. Using the FBV Shortboard, the built in pedal functions as Pedal 1 while the external expression pedal functions as Pedal 2. These assignments can be made per channel, allowing for amazing flexibility.

Hooking up the FBV Foot Controllers

All of the FBV Foot controllers come complete with the necessary hookup cable (in case you ever need to replace it, it's a standard CAT-5 Ethernet hookup cable that's available just about everywhere these days), so all you have to do is plug it into the jack on the back of your Vetta that's labeled PEDAL. Since the FBV is powered over the cable, there's no need for a 'wall-wart' or other external power supply. One cable, and you're done!

APPENDICES

Amp Models

#	Amp Models	Based on
1	Bypass (no amp)	No Amp Model
2	Line 6 Tube Preamp	Line 6 Original
3	Line 6 Variax Acous	Line 6 Original
4	Line 6 Piezacustic1	Line 6 Original
5	Line 6 Piezacustic2	Line 6 Original
6	Line 6 Clean	Line 6 Original
7	Line 6 Super Clean	Line 6 Original
8	Line 6 Sparkle	Line 6 Original
9	Line 6 Super Sparkl	Line 6 Original
10	Line 6 Sparkle Clean	Line 6 Original
11	Line 6 Twang	Line 6 Original
12	Line 6 Bayou	Line 6 Original
13	Line 6 Class A	Line 6 Original
14	Line 6 JTS-45	Line 6 Original
15	Line 6 Mood	Line 6 Original
16	Line 6 Purge	Line 6 Original
17	Line 6 Crunch	Line 6 Original
18	Line 6 Throttle	Line 6 Original
19	Line 6 Chemical X	Line 6 Original
20	Line 6 Smash	Line 6 Original
21	Line 6 Spinal Puppet	Line 6 Original
22	Line 6 Fuzz	Line 6 Original
23	Line 6 Chnk Chnk	Line 6 Original
24	Line 6 Big Bottom	Line 6 Original
25	Line 6 Treadplate	Line 6 Original
26	Line 6 Lunatic	Line 6 Original
27	Line 6 Argo	Line 6 Original
28	Line 6 Insane	Line 6 Original
29	Line 6 Octone	Line 6 Original
30	'02 Bomber X-TC	Bogner '02 Ecstasy
31	'02 Bomber Uber	Bogner '02 Uberschall
32	'01 Zen Master	Budda '01 Twinmaster
33	'03 Connor 50	Conford '03 mk50h
34	'03 Deity Crunch	Diezel '03 VH-4 Crunch
35	'03 Deity Lead	Diezel '03 VH-4 Lead

Appendices • Amp Models

#	Amp Models	Based on
36	'03 Deity's Son	Diezel '03 Herbert
37	'02 ANGEL P-Ball	ENGL '02 Powerball
38	'53 Fn Tweed Small Tweed	Fender '53 Tweed Deluxe
39	'58 Fn Tweed B-Man	Fender '58 Bassman
40	'61 Fn Tweed Tiny Tweed	Fender '61 Tweed Champ
41	'63 Fn Black Vib Verb	Fender '63 Vibroverb
42	'64 Fn Black Lux	Fender '64 Deluxe
43	'65 Fn Black Double	Fender '65 Twin Reverb
44	'67 Fn Black Dual Show	Fender '67 Dual Showman Head
45	'72 Fn Silver Bass Head	Fender '72 Bassman Head
46	'96 Fn Mini Double	Fender '96 Mini Twin
47	'60 Gibtone Explorer	Gibson '60 GA-18 Explorer
48	'60 G-Brand Two-Tone	Gretch '60 6156
49	'73 Hiway 100 Custom	Hiwatt '73 Custom 100
50	'65 Brit Plexi J-45	Marshall '65 JTM-45
51	'68 Brit Plexi Lead 100	Marshall '68 Super Lead
52	'68 Brit Plexi Bass 100	Marshall '68 Super Bass
53	'68 Brit Plexi Jump Lead	Marshall '68 Super Lead (jumped)
54	'68 Brit Plexi Variac	Marshall '68 Variac Plexi
55	'69 Brit Plexi Lead 200	Marshall '69 Major
56	'87 Brit Gain J-800	Marshall '87 JCM-800
57	'87 Brit Gain Silver J	Marshall '87 Silver Jubilee
58	'96 Brit Gain JM Pre	Marshall '96 JMP-I
59	'92 Brit Gain J-900 Clean	Marshall '92 JCM-900-Clean ch
60	'92 Brit Gain J-900 Dist	Marshall '92 JCM-900-Dist ch
61	'03 Brit Gain J-2000	Marshall '03 JCM-2000
62	'96 Match Chief	Matchless '96 Cheftain
63	'93 Match D-30	Matchless '93 DC-30
64	'85 California Crunch	Mesa Boogie '85 Mark II C+
65	'01 California Treadplate	Mesa Boogie '01 Dual Rectifier
66	'01 California DiamondPlate	Mesa Boogie '01 Triple Rectifier
67	'02 Mississippi Criminal	Peavey '02 5150 II
68	'87 Jazz Clean 120	Roland '87 Jazz Chorus
69	'67 Wishbook Silver 12	Silvertone '67 Twin Twelve
70	'93 Hi Gain Solo 100	Soldano '93 SLO
71	'63 Super O Pawnshop	Supro '60s S6616
72	'62 Super O Thunder	Supro '62 Thunderbolt
73	'61 Class A C-15	Vox '61 AC-15
74	'67 Class A C-30 TB	Vox '67 AC-30 Top Boost

Cabinet Models

#	Cab Models	Based on
1	Bypass (no amp)	No Cab Model
2	1x6 Super O	1x6x9 Supro '60's S6616
3	1x8 Tweed	1x8 Fender '61 Tweed Champ
4	1x10 Gibtone	1x10 Gibson '60 GA-18 Explorer
5	1x10 G-Brand	1x10 Gretsch '60 6156
6	1x12 Tweed	1x12 Fender '53 Tweed Deluxe
7	1x12 Blackface	1x12 Fender '64 Deluxe
8	1x12 Line 6	1x12 Line 6 Cabinet
9	1x12 California	1x12 Mesa Boogie '85 Mark II C+
10	1x12 Class A	1x12 Vox '61 AC-15
11	1x15 Thunder	1x15 Supro '62 Thunderbolt
12	2x2 Mini T	2x2 Fender '96 Mini Twin
13	2x12 Zen Master	2x12 Budda '01 Twinmaster
14	2x12 Blackface	2x12 Fender '65 Twin Reverb
15	2x12 Line 6	2x12 Line 6 cabinet
16	2x12 Match	2x12 Matchless '96 Cheiftain
17	2x12 Jazz	2x12 Roland '87 Jazz Chorus
18	2x12 Wishbook	2x12 Silvertone '67 Twin Twelve
19	2x12 Class A	2x12 Vox '67 AC-30 Top Boost
20	4x10 Tweed	4x10 Fender '58 Bassman
21	4x12 Hiway	4x12 Hiwatt '73 Custom 100 cabinet
22	4x12 Line 6	4x12 Line 6 cabinet
23	4x12 Green 20's	4x12 Marshall '67 Cab w/ Celestion Greenbacks
24	4x12 Green 25's	4x12 Marshall '68 Cab w/ Celestion Greenbacks
25	4x12 Brit T75	4x12 Marshall Cab w/ Celestion G12-T75's
26	4x12 Brit V30's	4x12 Marshall Cab w/ Celestion Vintage 30's
27	4x12 Treadplate	4x12 Mesa Boogie '01 Rectifier cabinet
28	4x12 HiGn SOLO	4x12 Soldano '93 Cabinet

Effects Models

STOMPBOXES - DISTORTION

#	Distortion Model	Based on
1	Facial Fuzz	Arbiter Fuzz Face
2	Tube Drive	Chandler Tube Driver
3	Fuzz Pi	Electro Harmonix Big Muff Pi
4	Screamer	Ibanez TS-808 Tube Screamer
5	Octave Fuzz	Tycobrahe Octavia
6	Classic Dist	Pro Co Rat
7	M Zone	Boss Metal Zone MT-2

STOMPBOXES - MODULATION

#	Modulation model	Based on
1	Jet Flanger	A/DA Flanger
2	Analog Chorus	Boss CE-1 Chorus Ensemble
3	Phaser	MXR Phase 90
4	U-Vibe	Univox Uni-Vibe
5	Lumpy Phase	Line 6 Original
6	Sine Chorus	Line 6 Original
7	Square Chorus	Line 6 Original
8	Expo Flange	Line 6 Original
9	Random Chorus	Line 6 Original
10	Analog Square	Line 6 Original
11	Purple POD X	Line 6 Original
12	Random S&H	Line 6 Original
13	Tape Eater	Line 6 Original
14	Opto Trem	Fender '65 Twin Tremolo
15	Bias Trem	Vox '67 AC-30 Tremolo

STOMPBOXES - DELAY

#	Delay model	Based on
1	Analog Echo	Boss DM-2 Analog Delay
2	Analog w/ Mod	Electro-Harmonix Deluxe Memory Man
3	Tube Echo	Maestro EP-1 Echoplex
4	Tape Echo	Maestro EP-3 Echoplex
5	Multi-Head	Roland RE-101 Space Echo
6	Echo Platter	Binson EchoRec
7	Digital	Line 6 Original
8	Reverse Delay	Line 6 Original
9	Low Rez	Line 6 Original
10	Phaze Eko	Line 6 Original
11	Sweep Echo	Line 6 Original
12	Bubble Echo	Line 6 Original

STOMPBOXES - DYNAMICS

#	Dynamic model	Based on
1	Blue Comp	Boss CS-1 Compression Sustainer
2	Blue Comp Treb	Boss CS-1 with Treble switch on
3	Red Comp	MXR Dynacomp
4	Vetta Comp	Line 6 Original
5	Vetta Juice	Line 6 Original
6	Auto Swell	Line 6 Original

STOMPBOXES - SYNTH/FILTER

#	Synth/Filter model	Based on
1	Synth Lead	Moog Lead
2	Synth String	ARP/Solina Strings
3	Synth Analog	Moog and ARP
4	Synth FX	Line 6 Original Synth
5	Buzz Wave	Line 6 Original Synth
6	Rez Synth	Line 6 Original Synth
7	Saturn 5 Ring M	Line 6 Original Synth
8	Double Bass	Line 6 Original Synth
9	Synth Harmony	Line 6 Original Synth
10	Auto Wah	Mutron III Up
11	Dingo-Tron	Mutron III Down
12	Sparkle Sweep	Line 6 Original Filter

POST EFFECTS - TREMOLO

#	Tremolo model	Based on
1	Opto Trem	Fender '65 Twin Tremolo
2	Bias Trem	Vox '67 AC-30 Tremolo

POST EFFECTS - EQ

#	EQ	Based on
1	Graphic EQ	4-Band Graphic EQ per amp
2	4 Band EQ	4-Band Parametric EQ per amp

POST EFFECTS - MODULATION

#	Modulation model	Based on
1	Jet Flanger	A/DA Flanger
2	Analog Chorus	Boss CE-1 Chorus Ensemble
3	Phaser	MXR Phase 90
4	U-Vibe	Univox Uni-Vibe
5	Lumpy Phase	Line 6 Original
6	Sine Chorus	Line 6 Original
7	Square Chorus	Line 6 Original
8	Expo Flange	Line 6 Original
9	Random Chorus	Line 6 Original
10	Analog Square	Line 6 Original
11	Purple POD X	Line 6 Original
12	Random S&H	Line 6 Original
13	Tape Eater	Line 6 Original
14	RotaryDrum+Horn	Leslie 145 rotary speaker
15	RotaryDrum	Fender Vibratone
16	Stereo Chorus	Line 6 Original
17	Stereo Flange	Line 6 Original
18	Hi-Talk	Line 6 Original
19	L6 Sweeper	Line 6 Original
20	Warble-Matic	Line 6 Original
21	Auto Pan	Line 6 Original

POST EFFECTS - DELAY

#	Delay model	Based on
1	Analog Echo	Boss DM-2 Analog Delay
2	Analog w/ Mod	Electro-Harmonix Deluxe Memory Man
3	Tube Echo	Maestro EP-1 Echoplex
4	Tape Echo	Maestro EP-3 Echoplex
5	Multi-Head	Roland RE-101 Space Echo
6	Echo Platter	Binson EchoRec
7	Digital	Line 6 Original
8	Reverse Delay	Line 6 Original
9	Low Rez	Line 6 Original
10	Phaze Eko	Line 6 Original
11	Sweep Echo	Line 6 Original
12	Bubble Echo	Line 6 Original
13	Ping Pong Delay	Line 6 Original
14	Stereo Delay	Line 6 Original

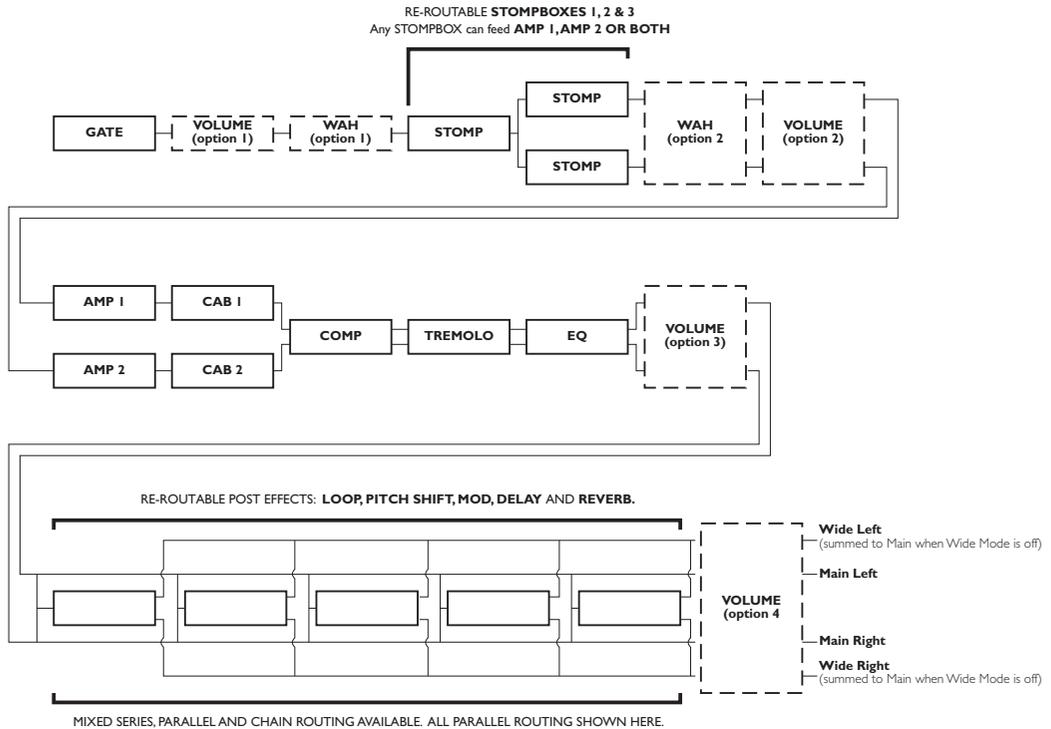
POST EFFECTS - REVERB

#	Reverb model	Based on
1	Lux Spring	Fender '64 Deluxe Spring Reverb
2	Std Spring	Fender '65 Twin Spring Reverb
3	King Spring	Line 6 Original
4	Small Room	Line 6 Original
5	Large Room	Line 6 Original
6	Studio 6	Line 6 Original
7	Tiled Room	Line 6 Original
8	Memphis Plate	Line 6 Original
9	Foil Plate	Line 6 Original
10	Blue Plate	Line 6 Original
11	Bingo Hall	Line 6 Original
12	Concert Hall	Line 6 Original
13	War Memorial	Line 6 Original
14	Hanger 18	Line 6 Original
15	Propellerverb	Line 6 Original
16	Radioverb	Line 6 Original

A.I.R. II Mic Options

#	Mic model	Based on
1	SM-57	Shure SM 57 On Axis
2	SM-57 Off Axis	Shure SM 57 Off Axis
3	MD-42I	Sennheiser MD 42I On Axis
4	MD-42I Off Axis	Sennheiser MD 42I Off Axis
5	U-67	Neumann U 67 On Axis
6	U-67 Off Axis	Neumann U 67 Off Axis
7	off	No D.I. Mic or Cab Sim

Signal Flow Diagram



MIDI Functions

Vetta sends and receives MIDI Program Change Messages, as well as several MIDI Controllers.

When selecting Vetta Channels via MIDI, MIDI Program Change Messages 0-63 call up Vetta's User Channels, and 64-127 select the Factory Channels:

Vetta MIDI Program Changes											
Channel	User	Factory									
1A	0	64	5A	16	80	9A	32	96	13A	48	112
1B	1	65	5B	17	81	9B	33	97	13B	49	113
1C	2	66	5C	18	82	9C	34	98	13C	50	114
1D	3	67	5D	19	83	9D	35	99	13D	51	115
2A	4	68	6A	20	84	10A	36	100	14A	52	116
2B	5	69	6B	21	85	10B	37	101	14B	53	117
2C	6	70	6C	22	86	10C	38	102	14C	54	118
2D	7	71	6D	23	86	10D	39	103	14D	55	119
3A	8	72	7A	24	88	11A	40	104	15A	56	120
3B	9	73	7B	25	89	11B	41	105	15B	57	121
3C	10	74	7C	26	90	11C	42	106	15C	58	122
3D	11	75	7D	27	91	11D	43	107	15D	59	123
4A	12	76	8A	28	92	12A	44	108	16A	60	124
4B	13	77	8B	29	93	12B	45	109	16B	61	125
4C	14	78	8C	30	94	12C	46	110	16C	62	126
4D	15	79	8D	31	95	12D	47	111	16D	63	127

Here's the detail on the Program Changes and other MIDI features:

Vetta/FBV Function	MIDI Message	What Happens
Channel Select	Program Change	<p><i>Transmit:</i> Send MIDI Program Change Message when channel is selected from Vetta, FBV or MIDI.</p> <p><i>Receive:</i> Select Channel on Vetta when MIDI Program Change Message is received. 0-63 = User Channels. 64-127 = Factory Channels.</p>

Appendices • MIDI Functions

Vetta/FBV Function	MIDI Message	What Happens
Pedal 1	1	<p><i>Transmit:</i> Full range is always transmitted, heel=0 to toe=127.</p> <p><i>Receive:</i> Any received MIDI Controller 1 message will adjust the Pedal 1 controlled parameter, even if the FBV left Pedal is assigned to Pedal 1 and toggled off. The on/off state of the FBV pedal will not be affected by the operation of the MIDI Controller, nor will the assignment of Wah or Pedal 1 to the right pedal of the FBV.</p>
Pedal 2	2	<p><i>Transmit:</i> Full range is always transmitted, heel=0 to toe=127.</p> <p><i>Receive:</i> Any received MIDI Controller 2 message will adjust the Pedal 2 controlled parameter, even if the FBV left Pedal is assigned to Pedal 2 and toggled off. The on/off state of the FBV pedal will not be affected by the operation of the MIDI Controller, nor will the assignment of Volume or Pedal 2 to the right pedal of the FBV.</p>
Wah	3 or 4	<p><i>Transmit:</i> Controller 4 is transmitted when FBV Wah pedal is operated. Full range is always transmitted, heel=0 to toe=127.</p> <p><i>Receive:</i> Any received Controller 3 or 4 message will toggle the wah effect on if it is currently off. If the left FBV pedal is assigned to control wah, its on/off LED will light if a received MIDI Controller message toggles the wah on.</p>
Volume	7	<p><i>Transmit:</i> Controller 7 is transmitted when FBV Volume pedal is operated. Full range is always transmitted, heel=0 to toe=127.</p> <p><i>Receive:</i> Any received Controller 7 message will adjust the volume, even if the FBV right Pedal is assigned to Volume and toggled off. The on/off state of the FBV pedal will not be affected by the operation of the MIDI Controller, nor will the assignment of Volume or Pedal 2 to the right pedal of the FBV.</p>
Wah Off	43	<p><i>Transmit:</i> Transmit 0 when FBV switch toggles Wah OFF. Transmit Controller 4, value 127 when toe switch of FBV toggles Wah effect on.</p> <p><i>Receive:</i> 0-63 received = toggle Wah effect OFF if currently on; if already off, ignore. Always ignore 64-127.</p>
Tap Tempo	64	<p><i>Transmit:</i> Transmit 127 when Vetta or FBV TAP is pressed.</p> <p><i>Receive:</i> 0-63 received = ignore. 64-127 received = respond as if TAP was pressed on Vetta or FBV to set Channel Tempo.</p>

LINE 6 CONTACT

Customer Service

Before contacting the Line 6 Customer Service team, please take the time to look through the documentation that was included with your product to see if it can answer your questions. Additional helpful information is on the Support page of the Line 6 web site (www.line6.com), including the searchable FAQTRAQ system which is often the fastest and easiest way to get answers. If you need to talk to a member of the Line 6 Customer Service team by phone, take notes before calling to ensure that you remember everything you want to ask about. In the USA or Canada, you can contact Line 6 at (818) 575-3600, 8AM to 5PM Monday through Friday (Pacific Time). Outside the USA and Canada, please contact your distributor directly to arrange service. The list of Line 6 distributors is available on the Internet at www.line6.com.

To obtain factory service:

If you live in the United States, call 818-575-3600 (or you can log an incident in our support FAQ system available at www.line6.com) and we will help you find the best way to get your unit repaired, whether it be returning the unit to Line 6 or finding an Authorized Service Center. If you live in Europe, contact Line 6 U.K. at: Line 6 Europe Rugby, Warwickshire United Kingdom Butlers House, Clifton Road 44 (0) 178 882 1600 euoinfo@line6.com. If you live outside of these areas contact your local distributor. If you do not know whom your distributor is, either call us at 818-575-3600 or there is a distributor locator in the support area of www.line6.com.

Appendices • To obtain factory service:

LINE 6 LIMITED WARRANTY INFORMATION

Sending in your registration card allows us to register key information so that we may handle problems faster and inform you of advance information, upgrades and other news. Thanks in advance for filling out your registration card and sending it to us. And good luck in your music!

Line 6, Inc. (hereinafter "Line 6") warrants that your new Line 6 product, when purchased at an authorized Line 6 dealer in the United States of America ("USA") or Canada, shall be free of defects in materials and workmanship for a period of one (1) year from the original date of purchase. Please contact your dealer for information on warranty and service outside of the USA and Canada.

During the warranty period, Line 6 shall, at its sole option, either repair or replace any product that proves to be defective upon inspection by Line 6.

Line 6 reserves the right to update any unit returned for repair and to change or improve the design of the product at any time without notice. Line 6 reserves the right to use reconditioned parts and assemblies as warranty replacements for authorized repairs.

This warranty is extended to the original retail purchaser. This warranty can be transferred to anyone who may subsequently purchase this product provided that such transfer is made within the applicable warranty period and Line 6 is provided with all of the following items: (i) all warranty registration information (as set forth on the registration card) for the new owner, (ii) proof of the transfer within thirty (30) days of the transfer purchase, and (iii) a photocopy of the original sales receipt. Warranty coverage shall be determined by Line 6 in its sole discretion.

This is your sole warranty. Line 6 does not authorize any third party, including any dealer or sales representative, to assume any liability on behalf of Line 6 or to make any warranty for Line 6.

Line 6 may, at its option, require proof of original purchase date in the form of a dated copy of original authorized dealer's invoice or sales receipt.

Service and repairs of Line 6 products are to be performed only at the Line 6 factory or a Line 6 authorized service center. Line 6 may require advanced authorization of repairs to authorized service centers. Unauthorized service, repair or modification will void this warranty.

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