



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:

Line 6, Vetta II, POD, Variax and Flextone are trademarks of Line 6, Inc. All other product names, trademarks, and artists' names are the property of their respective owners, which are in no way associated or affiliated with Line 6. Product names, images, and artists' names are used solely to identify the products whose tones and sounds were studied during Line 6's sound model development for this product. The use of these products, trademarks, images, and artists' names does not imply any cooperation or endorsement.

Welcome to Vetta 1•1

Really Quick Start Guide 2•1

Knobs, Buttons, Flashing Lights

Front Panel: The Big Picture 3•1
Navigation 3•2
Amp Controls 3•3
Effects..... 3•4
Functions 3•5
Global Controls 3•6
Main Display 3•7
Vetta Combo Rear Panel Power and Speaker Outs 3•8
Vetta HD Rear Panel Power and Speaker Outs 3•9
Vetta Combo & HD Common Rear Panel Connections 3•10
Vetta Digital Interface Card 3•11

Basic Operations

Selecting Factory/User Memory 4•1
Selecting a Channel 4•1
Editing Amps, Cabs & Variax 4•2
Effects 4•9
The Effects Loops..... 4•14
Saving 4•24
Output Setup..... 4•32
Foot Control 4•37
System Setup 4•39
Running External Speakers with Vetta Combo 4•43
Running External Speakers with Vetta HD..... 4•45
Vetta and MIDI 4•52

The Amps & Cabs

General Notes About the Models	5•1
Line 6 Original Models	5•2
Musings on Tone Controls	5•8
Models Based On	5•9
The Cabinets	5•32

The Stompboxes

About the Stompboxes	6•1
Distortions and Overdrives	6•1
Modulation Effects	6•6
Delays	6•12
Dynamics Processors.....	6•18
Synth/Filter.....	6•21

Post Effects

About the Effects	7•1
Tremolo	7•1
Gate	7•4
Compressor	7•5
EQ	7•7
Pitch Shift	7•9
Mod	7•10
Delay.....	7•14
Reverb	7•15
Double Tracker	7•20

Hints & Tips

Building a New Tone	8•1
Using Two Amps at Once	8•4
Effects Tips & Tricks	8•8
Making The Factory Bank Your Own	8•9
Using Variax with Vetta.....	8•10

Using FBV Foot Controllers

Exercising Your Options	9•1
Setting Up Your FBV	9•2
Punching Your Buttons	9•3
Wagging Your Toes	9•4

Appendices

Amp Models	10•1
Cabinet Models.....	10•3
Effects Models.....	10•4
A.I.R. II Mic Options	10•9
Signal Flow Diagram	10•10
MIDI Functions	10•11
Line 6 Contact (Customer Service / Warranty Information).....	10•13

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

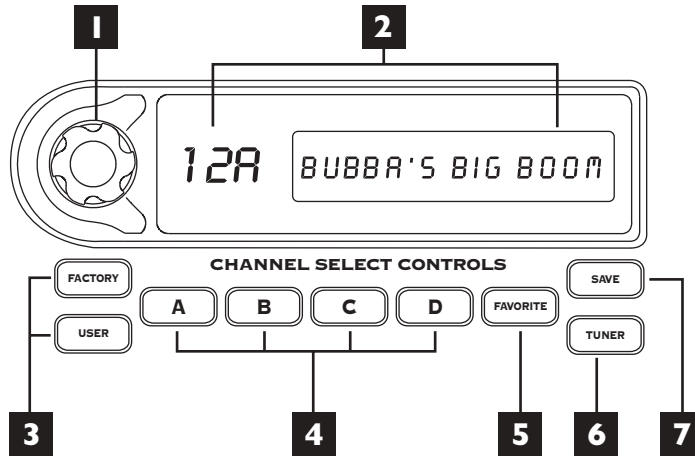
Front Panel: The Big Picture

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.

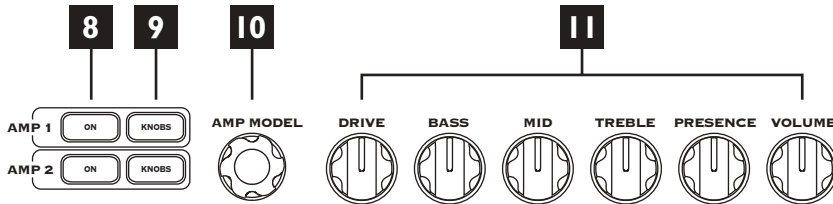
Navigation



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.

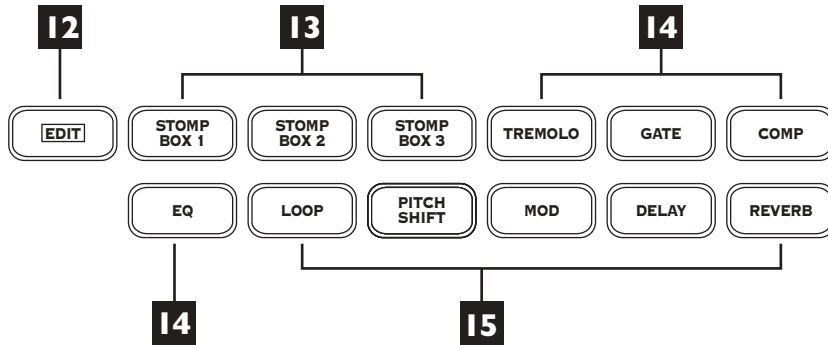
Amp Controls



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.

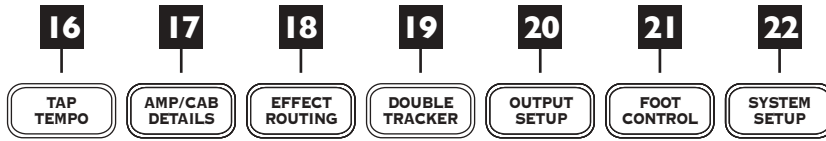
Effects



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.

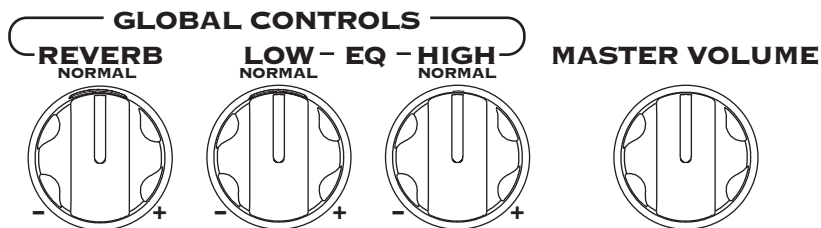
Functions



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



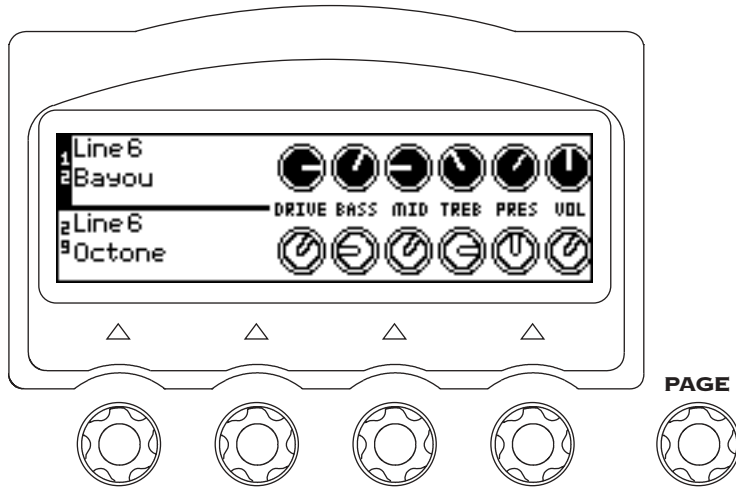
These knobs give you control over Reverb, your overall bass and treble, and volume. Unlike most other things on Vetta, the positions of these knobs are NOT saved when you save a channel.

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.

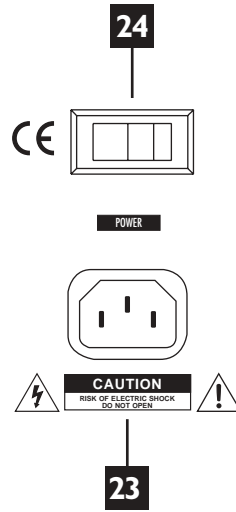
At other times, the red arrow lights between the little knobs and the display will light to show that one or more of the knobs is ready to do something. When editing a stompbox, for instance, the display will look something like this, and the little arrow lights will be lit to show that their knobs set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



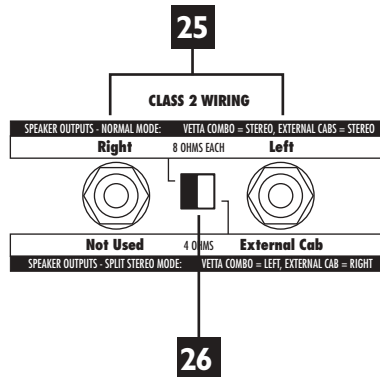
The words 'Page 1/2' at the top right box tell you this is the first of two different Edit Pages for this stompbox. The Page knob moves you through these pages. These versatile knobs and display make frequent appearances in the Basic Operations chapter.

Vetta Combo Rear Panel Power and Speaker Outs

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



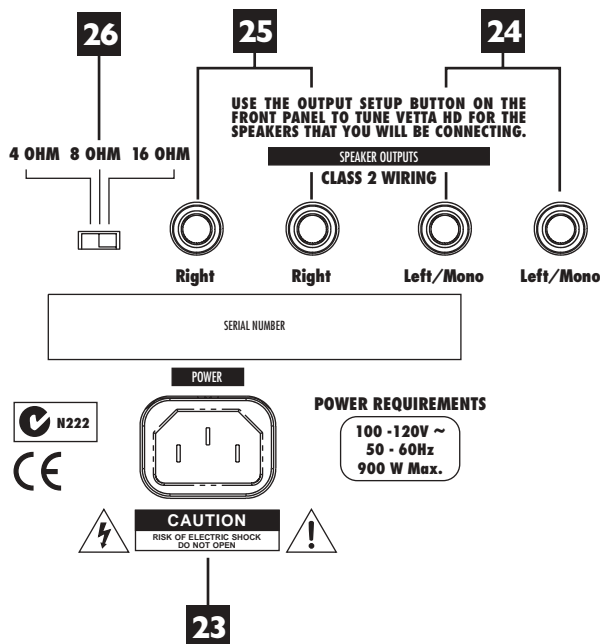
- 23. **Power Connector:** Where the power cable goes. We'll let you decide which end.
- 24. **Power Switch:** The original digital control: one finger determines on or off.



- 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

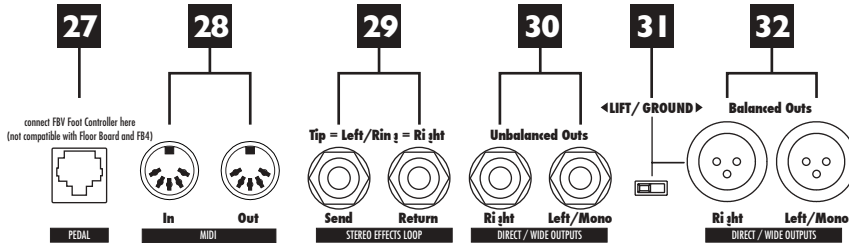
Whereas the Vetta HD has things arranged somewhat differently:



- 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:



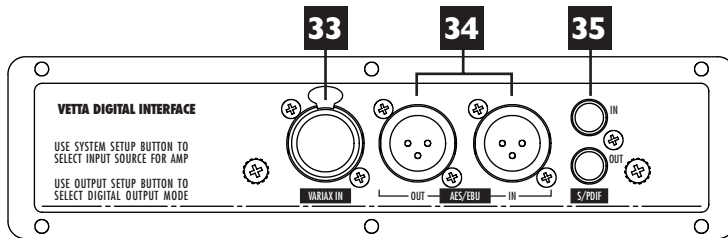
- 27. Pedal Connector:** Connect your FBV foot controller here.
- 28. MIDI In/Out:** Hook up MIDI cables for doing MIDI stuff here. Like the rest of your cables, you should get some decent ones for the job, with nice molded plastic ends.
- 29. Stereo Effects Loop Send/Return:** Stereo Send and Return 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

3 • 11



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

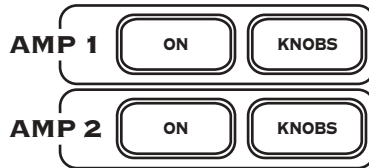
Vetta responds to MIDI Patch Change commands. Patch Changes 0-63 select the User Channels. 64-127 select the Factory Channels.

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

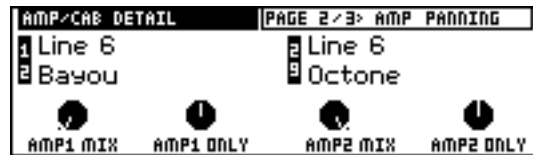
Switching between Amps

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.

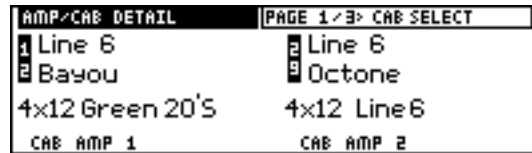
Thus, the two amps' controls can move together in harmony, even as each retains its own individual tonal identity. It's the kind of harmonious relationship management that we all wish we could attain, isn't it?

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.

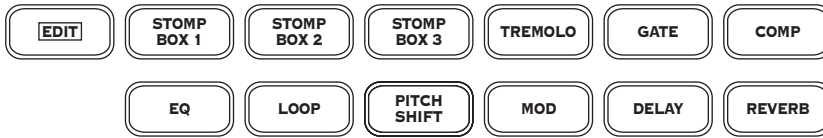


The MODEL parameter is where you choose which Variax instrument model you wish to recall with the Vetta channel. The first choice you have for the MODEL parameter is “None.” With this setting the Vetta will not change your Variax’s MODEL or TONE when this Vetta channel is recalled. The setting is also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

4 • 9

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.

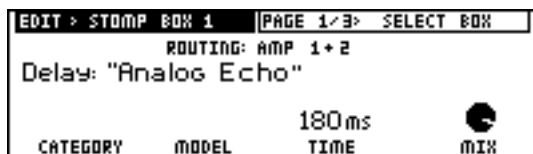
Vetta gives you three stompboxes, but not just any three—you get *any* three. Each of the internal stompboxes in Vetta can be assigned to be any of the numerous choices available. They can all be different, they can all be the same, and they can be mixed and ordered however you want. They can even be 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.

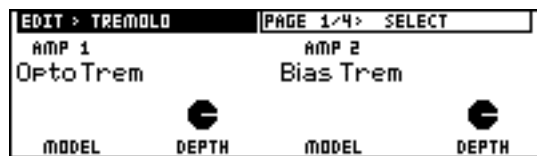
Delay and Modulation stompboxes include settings for Tap Tempo on their last edit page. There's a complete discussion of all the exciting details coming up that you definitely need to read if you plan to make Tap Tempo a part of your life. But first...



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:



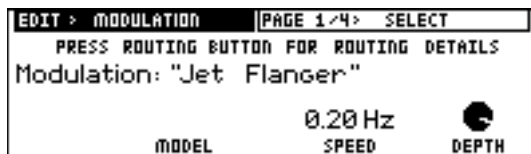
Tremolo also includes Tap Tempo as is about to be described, right after...



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.

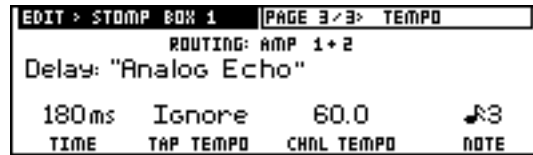
You may find it helpful to think of these time-based effects in Vetta as a band. You want them to all play in time—at the same tempo—although that doesn't mean they all are going to play exactly the same thing. You may want your stompbox delay doing quarter notes while your post delay effect does half 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.

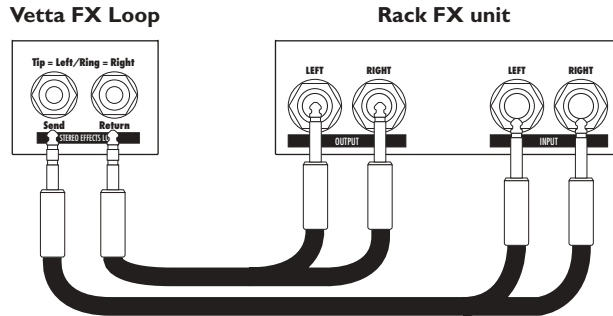
The Effects Loop

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.

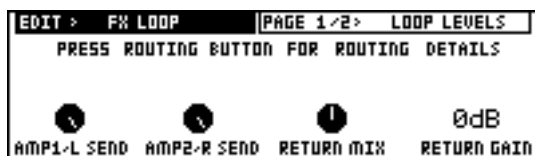


Page 4 of Output Setup is where you will make these settings. The first parameter is FORMAT. This is where you set the bit depth and sample rate coming from the Vetta. Use the soft knob under FORMAT to change this parameter. You have the choice of

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:

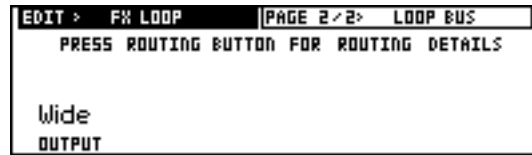


The left most knobs, labeled AMP1/L SEND and AMP 2/R SEND control your signals differently depending on how your loop is routed. You'll want to check out Effect Routing on page 4•18 in order to get your loop properly set for the particular sonic madness you have in mind. When the loop is first in the 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.

4 • 18

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.

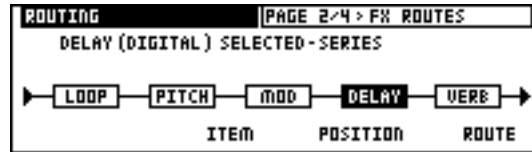
ITEM allows you to choose which of the five effects blocks you want to edit.

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:

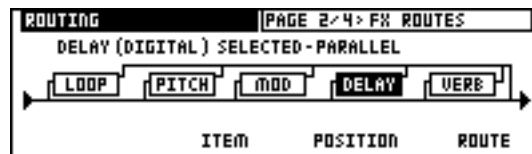


Series means that an effect in the chain gets the full output of the previous effect, so that your reverb, for example, is applied to both your amp signal *and* the effected signal coming from the delay and modulation effects that are in front of it.

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.

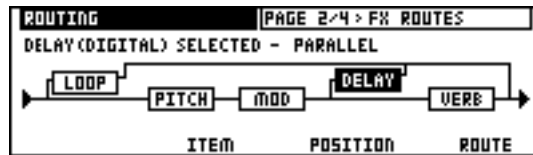
Basic Operations • The Effects Loop

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.

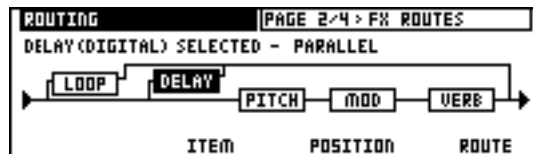
On the other hand, let's look what happens if the delay is routed in *parallel*. This means that the delay gets its input independently of the chorus, so what it's processing is the non-chorused version of the signal. Play a note, and what you'll hear is chorused guitar, followed by a non-chorused delayed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

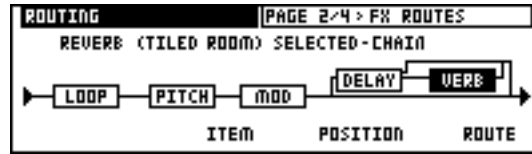
To move the DELAY block use the soft knob below ITEM to select DELAY. Then use the soft knob below POSITION to move the DELAY block before PITCH. Now in this example, both the inputs and outputs of LOOP and DELAY are in



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.

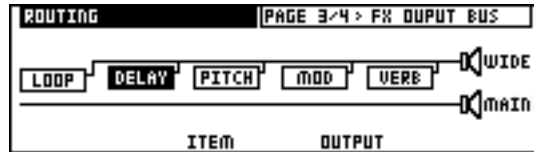
So, what's it for? In this example, since Reverb is routed as a Chain effect, it's getting its input from the wet signal of the delay only. Assume all the other effects (Loop, Pitch, Mod) are turned off and you've got the Mix for the Delay set to 50%. When you play a note, you'll first hear it without 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.

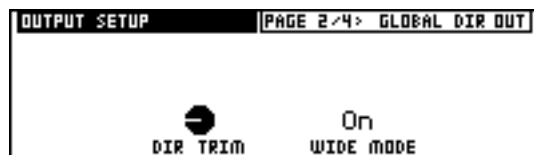


4 • 22

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:

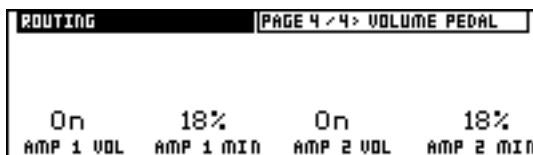


This minimum value determines how much volume you'll hear when the volume pedal is at the heel position. The heel position normally turns the volume off (a setting of 0% for the MIN value), but you may find it preferable to set it so the heel position is not all the way off. This comes in handy, for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

4 • 24



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.

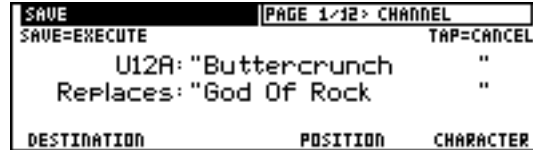
Saving a Channel

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.

4 • 25



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.

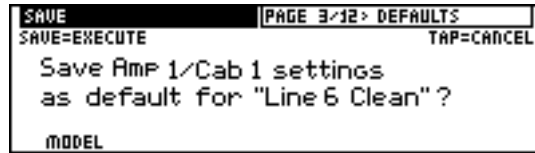
Note that Favorite Channel is not an additional channel. It's just a pointer to one of the regular Factory or User channels. This makes it very easy if, fickle guitarist that you are, you suddenly decide that something else is your favorite. You just point Favorite Channel at something else, but you 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?

4 • 27

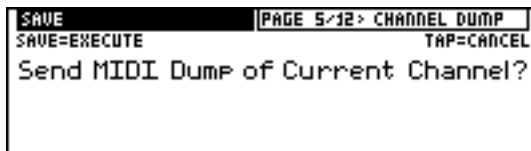
Backing Up Your Channel Memories

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

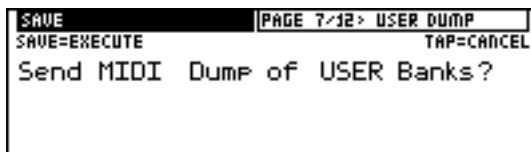
One way to build your personal MIDI-based library of sounds is to save them individually, so each backup file can have its own name. Hook Vetta's MIDI out to your MIDI device's MIDI in, and set the MIDI device or program to receive a sysex dump. Then press Vetta's Save button, and turn the Page knob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

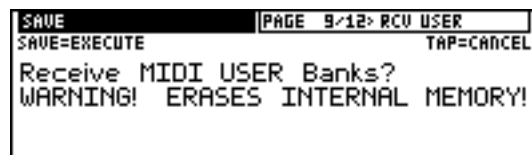
Restoring a Single Channel from MIDI

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:



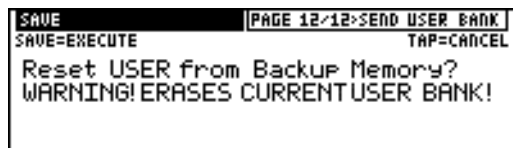
Now you have to clear Vetta's internal, compressed memory backup so it has the memory space required to receive the MIDI dump (as described on page 4•28). This doesn't affect the Factory memory, model defaults, or other information that Vetta stores.

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

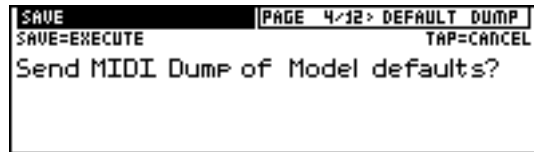
You may have noticed, as you've gotten familiar with the various Save pages, that pages are also included for Sending the Factory banks as a MIDI Dump, receiving the Factory memory as a MIDI dump, and expanding the Factory banks from memory (pages 6, 8, and 11 respectively). While the normal thing is 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:

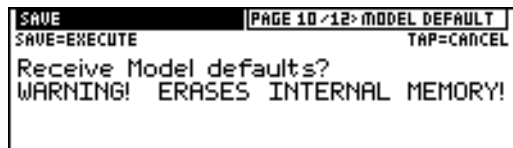


Press the Save button a second time to do the deed. When Vetta finishes sending the sysex dump, be sure to save the dump on your MIDI setup, and you're done.

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.

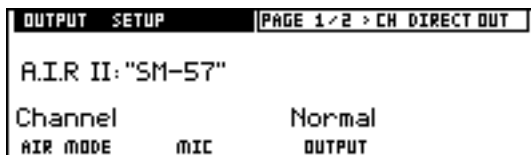
Now press Vetta's Save button and turn the Page knob to this page:



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.

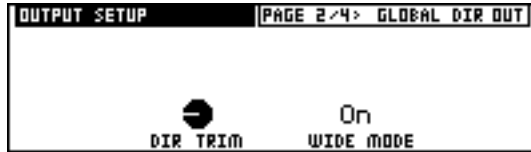
Output

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.



4 • 34

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.

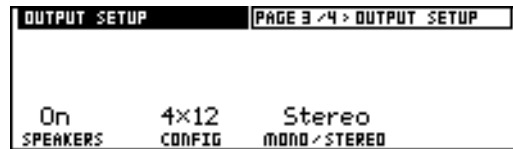
Vetta pumps enough level out of its direct outs to light up the input meters for +4 pro recording. For live sound systems, as well as many recording setups designed to work with lower levels, this can sometimes be overkill. The DIR TRIM knob lets you roll back the Direct Out level, and keep your sound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

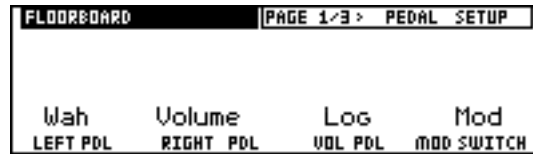
A setting of LOOP is used when you wish to connect to an external effect processor digitally. In this mode, the Digital inputs and outputs replace the analog effects loop on the rear panel.

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.

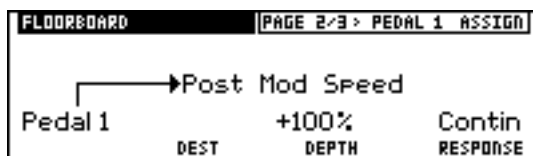
With a LINEAR setting, the volume pedal has a fast rise and reacts very quickly. This can be handy when using the pedal for a “volume swell” effect. This is also the best choice when the Volume Pedal is placed after the amps.

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.



4 • 38

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.

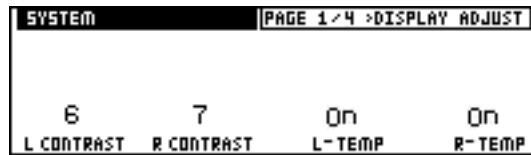
To understand how this works from a mathematical perspective (just skip to the next paragraph if you think math is as much fun as a trip to the dentist), let's say that the destination parameter is the mix of an effect, which you've got saved in this channel with a setting of 20%. With the pedal at its 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.



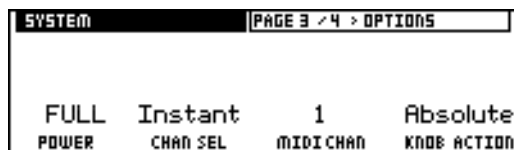
The VARIAX control turns the rear panel Variax In on or off.

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.

4 • 40

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.

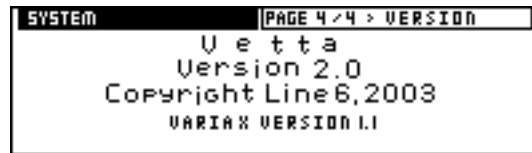
4 • 41

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.

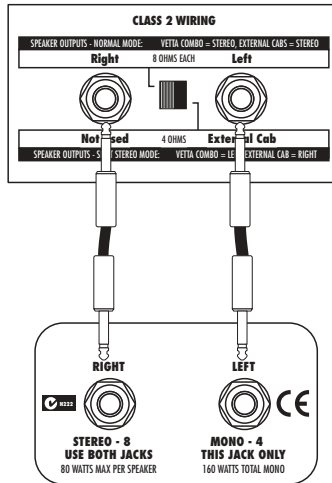
The digital input enters the signal path right at the beginning just like the guitar input. So you can add cool stomp effects like the synth/filters. Try running a vocal track through one of the synth/filter stomps for a crazy effect! You can run a drum loop through two of the 75 amp models. Pan one 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

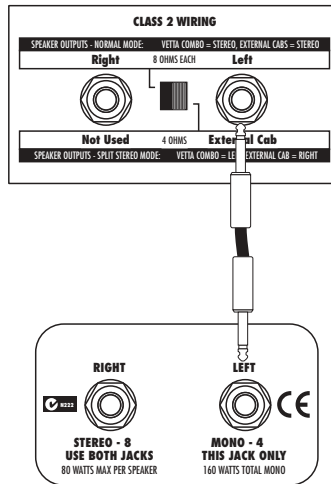
Basic Operations • Running External Speakers with Vetta Combo

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).

4 • 44

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-cabing.

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.

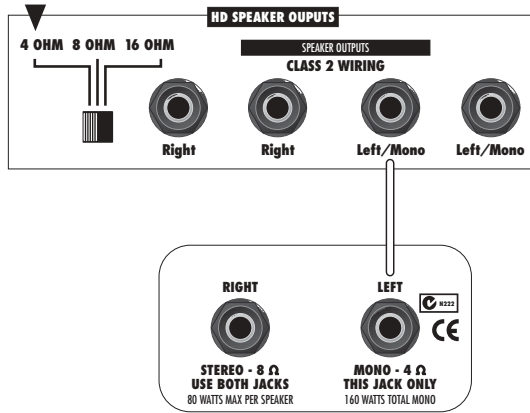
Most 4x12 cabinets are loaded with 16 ohm speakers. When they operate in mono, their internal wiring is generally done in a combination parallel/series configuration that adds up to a 16 ohm load. If they have a stereo option, this configures the speakers left/right so that each side acts as an 8 ohm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

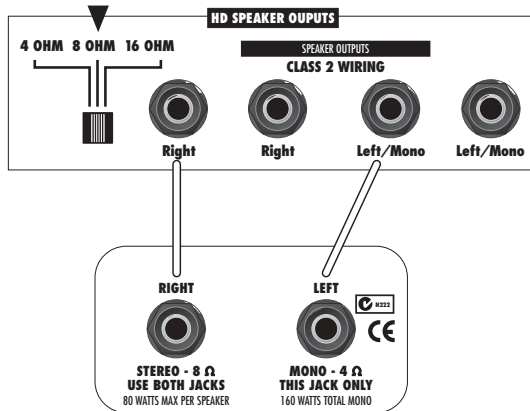
Hooking up your Vetta HD to a single 2x12 in mono.



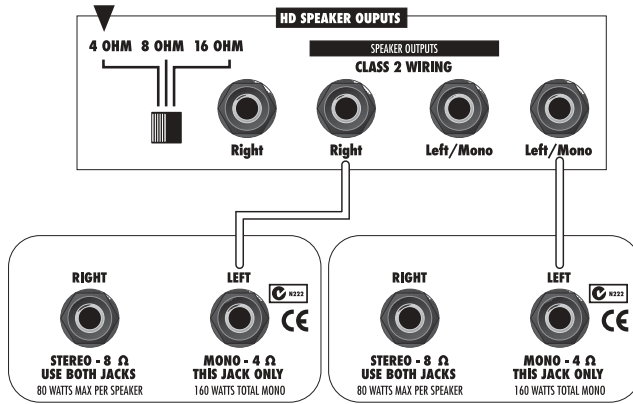
4 • 48

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

