Pilot's Handbook

An in-depth exploration of the revolutionary
technologies and tonal pleasures of the HD 147.

The serial number can be found on the back panel of your HD 147. It's the number that begins with "(21)". Please note it here for future reference:

SERIAL NO: _____

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 HD 147, carefully read the applicable items of these operating instructions and safety suggestions:

1. Obey all warnings on the HD 147 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 HD 147 when not in use for extended periods of time.

7. Do not perform service operations beyond those described in the HD 147 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:

WELCOME TO HD 147

Register

Thanks for buying a HD 147! Please send in that included registration card or click on over to www.line6.com to get registered. We'll wait right here...

Line 6 and HD 147

You probably know Line 6 as a technological innovator in the guitar world—first to put digital software modeling technology to work in guitar combo amps, pioneering direct recording technology in POD and other products, and capturing the soul of classic pedals in modern stomp boxes. We make gear that's packed with features and hi-tech breakthroughs, and bring new value and capabilities to guitarists.

Like all Line 6 products, the HD 147 is packed with tone—full of refined models of premier guitar amps and effects from the past five decades.

What sets the HD 147 apart from other amplifiers of its stature are the 14 custom Line 6 custom amp models that put you on the forefront of a new wave of Line 6 innovation. You see, after carefully modeling a plethora of coveted vintage and modern amps, our tone craftsmen have picked up a thing or two about what makes great amps magical. Armed with this knowledge, our hardy band of adventurers has tunneled deep into the "Middle Earth" of guitar tone on a tireless quest to bring you awesome new gems of sonic power.

By bringing you these unique tonal treasures along side a bevy of premier amp models ranging from punishing high gain tone to crystal clear cleans, HD 147 gives you a trove of tonal riches you can't get from anywhere but Line 6.

HD 147 also includes Line 6's signature A.I.R. II direct outs, so you of course get your tone to its destination without compromise or complication in every situation. And, of course, it's all ready to dazzle your audience with its other worldly chromed chassis and glowing black lights.

So flip the page, you lucky devil. And let's take your hot new tone buggy for a spin!

1 • 2 Connect at www.line6.com

Join the thriving community at **www.line6.com**. It's the place for ToneTransfer, the expanding online tone library for Line 6 products. It's also the place to get free Line 6 Edit software that lets you tweak every last detail of you're HD 147's sound, backup its memory, and build up your own tone library on your computer! The discussion boards are humming with Line 6ers sharing insights to get the most from their gear and the great adventure of making music. And you can also learn what's new from the artists that rely on Line 6, be the first to hear about new products, and tap into Customer Support via the powerful FAQTRAQ system.

WORKING IT

In a rush? Well, then, just read this page and come back for the rest later:

Quick Start Guide

POWER: Connect the power cord from HD 147's rear panel to your power outlet. *But don't turn the power on yet.*

PLUG IN: Connect your speaker cabinet and set the impedance switch on the back of the amp to match the impedance of your cab. Jack your guitar into HD 147's **Input**. Turn HD 147's **Master** knob (on the far right) all the way down, and kick the **Power** switch to fire that bad boy up. Spin **Master** up to 9 o'clock or so. Rock on!

MODELS KNOB: Spin this to select from the 16 amp flavors, each with two variations, for 32 Amp Models total.

DRIVE, BASS, MID, TREBLE, PRESENCE, VOLUME KNOBS: What you see is what you get here—turn knobs 'til things sound good!

DELAY: Press the button to the left of the **Delay** knob to pick one of the Delay effects. Tap in a tempo for the delay, and turn the **Delay Tweak** knob to get more or less of the effect.

MOD: Press the button to the left of the **Mod** knob to pick one of the Mod effects. Turn the **Mod Tweak** knob to adjust the amount of the selected effect.

COMP/GATE: Press **Comp** and/or **Gate** to engage each effect. The Compressor will smooth out your dynamics and add sustain. The Gate will mute the inherent noise common to high gain amp tones when you're not playing.

CHANNEL MEMORIES: These are like the buttons on a car radio that remember your favorite stations. Press A, B, C or D to recall one of the 4 Channel Memories. Press that button again to get back to "manual mode." You're in manual mode if none of the A, B, C, or D buttons are lit. And just like a car radio, hold any of the buttons for 3 seconds to save your current settings to that memory for later recall.

Front Panel Features
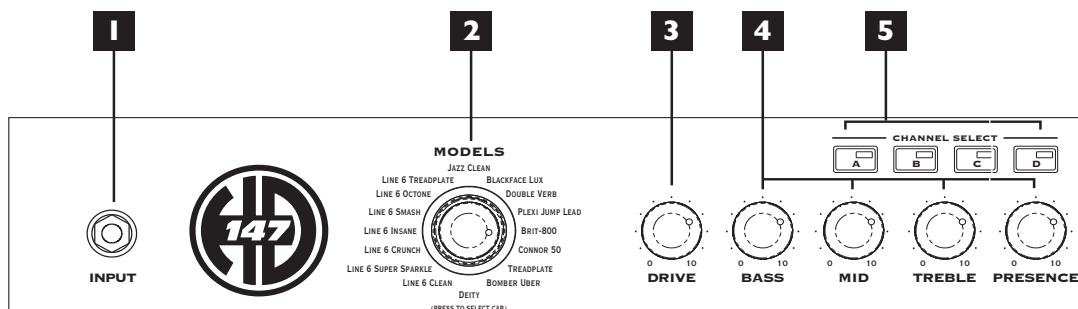
1. **Guitar Input:** Plug your guitar in here.

2. **Models - Amps:** As you turn this knob, one of the lights surrounding it will light. An AMBER (yellow) light next to one of the Model names tells you that you've selected that Amp Model. Turn the knob one more click to get a RED light, and you've got a whole new amp model within a similar genre. **Chapter 3** describes all 32 Amp Models.

   Models - Cabs: When you select an Amp Model, your HD 147 is selecting an appropriate Cab Model to go with it behind the scenes. Many of the amp models on the HD 147 use the "No Cab" cabinet model. "No Cab" bypasses the additional cabinet coloration to allow the natural character of your speaker cabinet to come though. To choose a different cabinet from the 16 available models, press and hold the Model knob while turning it; you'll see GREEN lights. The cabs run from smallest to largest, so selecting green lights from "Line 6 Super Sparkle" through "Deity Lead" takes you all the way from petite combo amp cabinets to ferocious 4x12s. Turn to "Line 6 Clean" to bypass the cab modeling.

3. **Drive:** Turn this knob to set how hard you're driving the chosen Amp Model. Similar to the input volume control on a non-master volume amp, the higher the setting, the more "dirt."

4. **Tone Controls – Bass, Mid, Treble and Presence:** These controls are made to behave like the controls of the amps that were modeled for HD 147. Twist them round until things sound just the way you like. See **Chapter 3** for details.
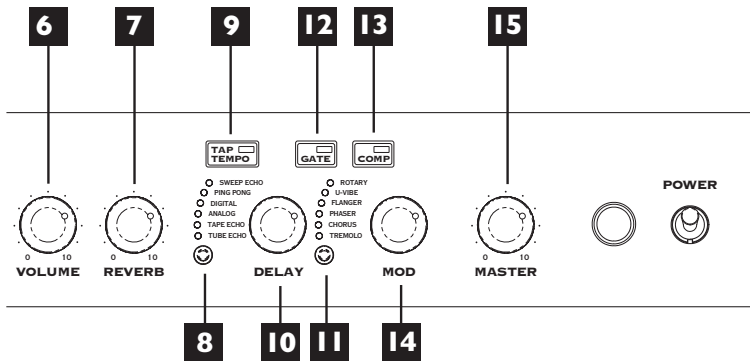
5. **Channel Select Buttons – A, B, C, D:** HD 147 uses these buttons to remember your favorite settings—no more need to mark up the front of your amp with grease pencil to note your favorite settings! Each memory is pre-set with delicious tone when an HD 147 leaves the factory—press a button to hear the saved setting. As you do, notice that HD 147's lights indicate which Amp Model is used in the Channel Memory, which effects are on, etc. To get back to the "manual mode," just press the lit button again to turn it off. Plus...

   As you come across your own favorite settings that you'd like to keep, you can save them to the A, B, C and D buttons to replace the factory presets. Just hold down any of A, B, C or D buttons for about 3 seconds until it flashes and presto—HD 147 has now memorized your custom tone for easy recall! See **Using The Channel Memories** on page 2•6 for more detail. The Line 6 FBV class foot controllers let you select these Channel Memories with your feet—and expand the number of memories recallable to a total of 36. **Chapter 5** has got the details.

6. **Volume:** This knob controls the relative volume level of the "channel" you are playing through — thus, Channel Volume. Use this to balance levels between the sounds you store in two different HD 147 Channel Memories (say between your rhythm and lead tones).
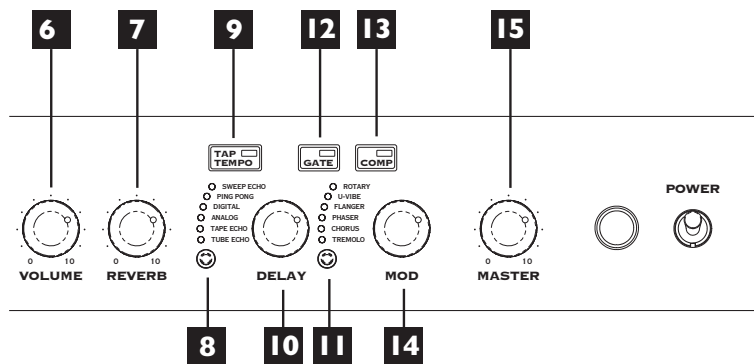
7. **Reverb:** Just turn the knob to get the amount of reverb you'd like. Turn the knob fully counter-clockwise for no reverb.

   Bonus Feature: Reverb Tweak- To adjust the type and decay of the Reverb, press and hold the Tap Tempo button and turn the **Reverb** knob. There are three different Reverb types accessible throughout the range of the knob. The first third of the knob is a spring, the second third a Room, and the final third a Plate, each with a range of decays, from short to long.

8. **Delay Select:** Press this to step though the Delay effects listed to the left of the Delay knob, or to turn off the Delay (all lights off). Press and hold the **Delay Select** button to bypass the current model without losing your place in the effects list. The next press of the **Delay Select** button restores the model you had previously selected. (The bypass feature works with the **Mod Select** button too!)

9. **Tap Tempo:** Tap the button at the tempo you'd like—the delay time switches to match that tempo.

10. **Delay (Tweak):** Dynamically adjusts multiple delay parameters, including mix, feedback and tone. Spin it to get more or less delay.

    Delay Time - To set the delay time without having to deal with tapping, press and hold the **Tap Tempo** button while turning the **Delay** knob. For shorter delays, dial counter-clockwise. Longer delays, clockwise.

Bonus Features: Delay Feedback - To adjust only the Delay Feedback, press and hold the **Delay Select** button and turn the **Delay** knob. *Note: Turning the Delay knob after tweaking the feedback will override your feedback setting. So it's best to first get the general Delay set with the Delay knob, and then fine-tune the feedback if necessary.*

11. **Mod:** Press this to step though the Mod effects listed to the left of the Mod knob, or to turn off the Mod (all lights off).

12. **Gate:** Engages the on-board gate. The gate kicks in when your guitar signal drops below a certain "threshold," and is intended to mute the noise that you might otherwise hear at that time. To adjust the Gate threshold, press and hold the **Gate** button while turning either the **Delay** or **Mod** knob. The lower the threshold (clockwise), the more the sustain of your notes will tend to get chopped off.

13. **Comp:** Engages the on-board Compressor. The compressor will add sustain to your guitar sound, and smooth out your dynamics. To set the amount of compression, press and hold the **Comp** button while turning either the **Delay** or **Mod** knob. The higher the setting, (clockwise) the more your notes will sustain.

14. **Mod (Tweak):** Dynamically adjusts multiple modulation parameters, including rate and depth.

    Bonus Feature: Modulation 2nd Function - Each modulation model can be fine-tuned by pressing and holding the Mod Button while turning the **Mod** Knob. The list below shows which fine-tuning is available for each effect.

MOD Effect	Fine-Tune
Rotary	Tone
U-Vibe	Depth
Phaser	Feedback
Flanger	Rate
Chorus	Rate
Tremolo	Waveform (sine – square)

15. **Master:** Sets the overall volume of your HD 147. Adjust this to set your basic loudness, then use the **Volume** knob to balance the relative volume of the sounds you store with the A, B, C, D buttons.

Manual Mode: What You See Is What You Get

When *none* of the **A, B, C, D Buttons** are lit, HD 147 is operating in **Manual Mode**, meaning that all of the controls are active and the sound of the amp is determined by the current knob settings. Just like a regular amplifier, right?

If you are not in **Manual Mode** and would like to be, simply give the lit **A, B, C,** or **D Button** a quick press.

Using The Channel Memories

HD 147 can store and recall your favorite settings using the **A, B, C, D Buttons**.

Save: Any time you've dialed up a sound that you'd like to save for later recall, all you have to do is hold down button **A, B, C** or **D** for 3 seconds. At the end of that 3 seconds, the button you held will flash to let you know that you've successfully stored your present setting of all the controls to that button.

Recall: When you tap one of the **A, B, C, D Buttons** to light it up, HD 147 recalls the settings that were stored in that button's Channel Memory. This includes your choice of Amp and Cab **Models**, the **Drive**, **Bass**, **Mid**, **Treble**, **Presence, Reverb** and **Channel Volume** settings, plus your **Mod** and **Delay** settings. *Note: The Master Volume setting is not stored with each Channel. Instead, it acts as a global volume that controls the overall level of all channels.*

The various front panel lights will show the recalled settings, but the knobs will not. Turning any knob or operating any button will override the recalled setting for that control only. To override all the recalled settings and get the sound determined by the current setting of all the knobs, press the lit **A, B, C,** or **D Button**. You're now back in what-you-see-is-what-you-get **Manual Mode**.

See **Chapter 5** for details on how to store and recall a total of 36 HD 147 Channel Memories using your feet.

To reset all the Channel Memories (including all 36 available from an FBV and MIDI) to their factory state, hold the **A** and **D Buttons** while powering up your HD 147.

Creating Amp Defaults

Amp Defaults are simply snapshots of all the important Amp Model controls that are automatically recalled when you select a model via the **Model** knob. Every time you select a model, HD 147 loads the associated Amp Default to expedite your trip to tone nirvana.

You can edit any or all of the Amp Defaults, and pack your HD 147 with all the special amp-tweaking genius that only you possess. This brilliance will then be available instantly at the turn of the **MODEL** knob. For instance, when you turn the **MODEL** knob to load the Plexi-45 model, you'll get *your* personal Plexi-45, with all the controls set for your very own version! Here's how it works:

Choose an Amp Model, change the cab if you like, dial in the amp controls, etc. When you're happy with what you've got, press and hold the **MODEL** knob *being careful not to turn it*. After about 5 seconds, the light for the selected model will start to blink and you can let go. Your custom settings have been saved.

Using MIDI, you can customize a whole bunch of other controls and store them with the Amp Setup. Download the free Line 6 Edit software from www.line6.com to do all this with software customized for your HD 147. The MIDI Appendix gives detail on the continuous controller messages that drive each of these parameters. After making tweaks via MIDI, you can save the result as the Amp Default.

Amp parameters accessible via MIDI and Line 6 Edit software include:

Drive	Compression Gain	Reverb Model
Bass	Compression Threshold	Reverb Decay
Mid	Comp Enable	Reverb Tone
Treble	Gate Threshold	A.I.R. II Model
Presence	Gate Decay Time	Cabinet Model
Channel Volume	Noise Gate Enable	Volume PRE/POST

Rear Panel Features
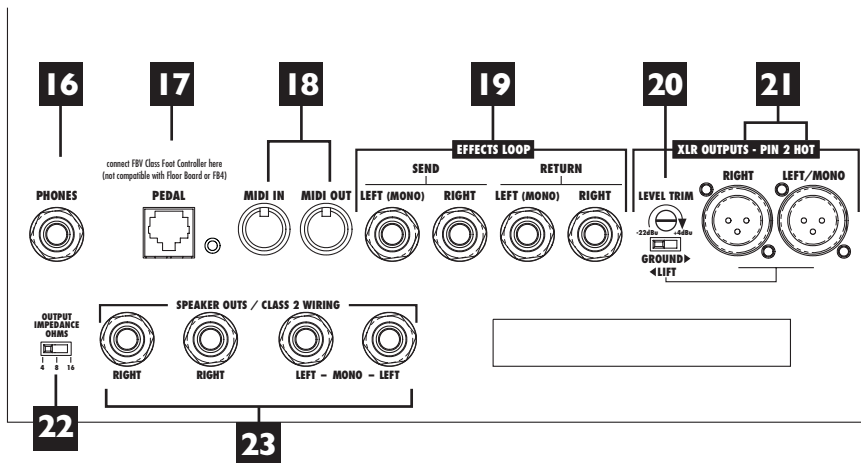
16. **Phones:** Keep it quiet around the house by connecting headphones to the **Phones** jack—plugging in headphones disables your speaker outputs. The **Master** knob sets the output level while you're using headphones—be sure you turn the knob down as you switch between headphones and the speakers to make sure you don't unexpectedly blast yourself with volume.

17. **Pedal:** Connect the RJ-45 cable supplied with your FBV or FBV Shortboard here. **Chapter 5** has the full details.

18. **MIDI In & MIDI Out:** Connect standard MIDI cables here. HD 147 always sends and receives on MIDI Channel 1. Use MIDI with the free **Line 6 Edit** software from **www.line6.com**. See the MIDI appendix for more MIDI details.

19. **Effects Loop:** Use the Left(Mono) Send and Return for a mono rack effect. Connect stereo effects as shown. Generally, stomp boxes go before the amp, *not* in this loop.
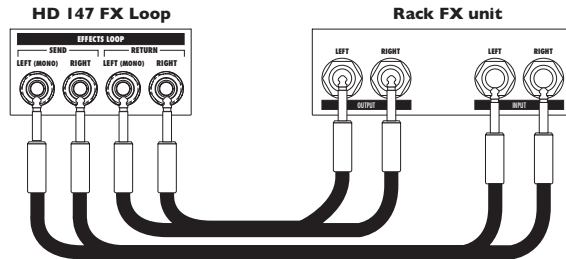
20. **Level Trim:** The level of the XLR Outputs is set by the small rear panel trim, and is not affected by the **Master** knob.

21. **XLR Balanced Outputs & Ground Lift:** These versatile connections are designed with Line 6's exclusive A.I.R. II technology to give you the perfect pair of direct connections for live performance and studio recording sessions. See **Using Your Direct XLR Outputs** on page 2•15 for details. Try flipping the Ground Lift switch if you are experiencing buzzing or hum when connected to other equipment via the **Direct XLR Outs**.

   Please Note: there can be an audible 'pop' on the XLR outputs when powering your HD 147 on or off. We recommend that you either disconnect the direct outputs or power down whatever the direct outs are connected to before turning your HD 147 On or Off.

   Power Switch & Connector (not shown in diagram): These are on the side of the rear panel that's not included in the illustration. Connect the supplied power cable to your wall outlet, then flick the power switch to let the electrons in to do their stuff.

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 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 HD 147 without a load is OK! You do not need to have speakers connected to the amplifier in order to use the balanced Direct Outputs.

Volume Levels
Exercise some common sense about volume levels. The HD 147 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 HD 147'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 and some regard for y our speakers.

Setting the 4/16/18 Ohm Switch
It's important that you set your HD 147'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.

Sometimes the correct setting of the 4/8/16 OHM switch may not be immediately obvious. While most modern speaker cabinets (Like the Line 6 4x12) 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 147 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 147.

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 147 with this typical 2x12 cabinet in mono, you'd set the HD 147's 4/8/16 OHM switch to 4 ohms and connect only the HD 147's left/mono output to the single mono input of the cabinet.

- For stereo HD 147 operation with this typical 2x12 cabinet, you'd set the HD 147's 4/8/16 OHM switch to 8 ohms and connect cables from HD 147's left output to the speaker cabinets left input, and from HD 147'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 your HD 147 or the two right jacks (but not one each to left and right), that side of the HD 147'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 your HD 147, the impedance of the combined cabinet setup is 8 ohms, and you should set the HD 147 rear panel 4/8/16 OHM switch to this setting.

See the following pages for illustrations of typical setups.

Hooking up your HD 147 in mono with single 4x12
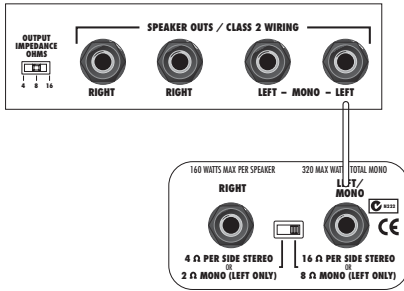
Hooking up your HD 147 in stereo with single 4x12
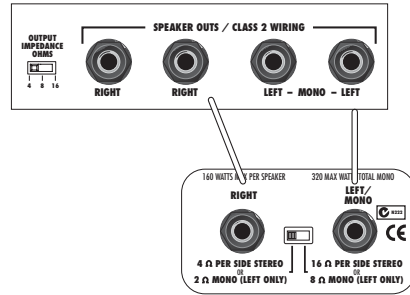
Hooking up your HD 147 in side by side stereo with two 4x12s

Hooking up your HD 147 in stacked stereo with two 4x12s
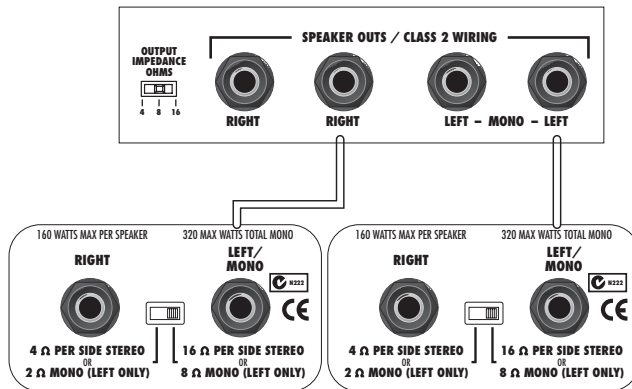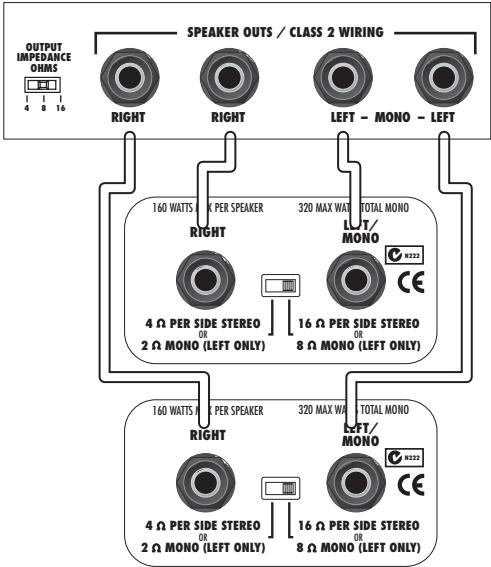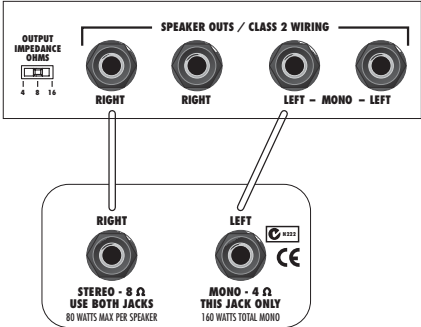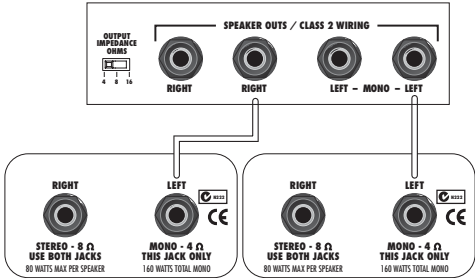
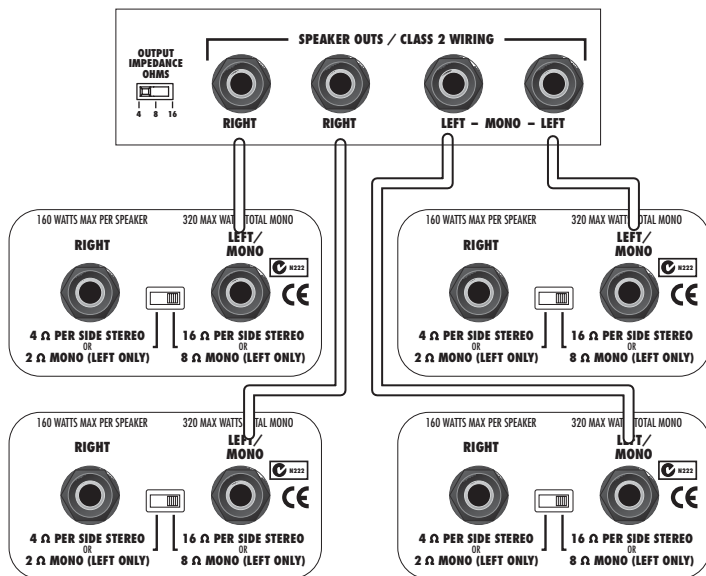Hooking up your HD 147 to a single 2x12 in stereo.

Hooking up your HD 147 in side by side stereo with two 2x12s.

HD 147 through four 4x12s

Using Your Direct XLR Outputs

One of the nifty features inside your HD 147 is Line 6's exclusive A.I.R. II technology that enables you to get that great mic'd up sound out of your amplifier without the microphone! Your Direct outputs can be used either in the studio or as a direct feed to the house sound system for a live performance.

The **Master** knob on your HD 147 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 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. And any adjustments you make to your on-stage level during the gig don't send the sound man scrambling to compensate on his end. 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, and adjustments you make to your level don't interfere with the levels in the control room.

HD 147 can send enough direct out level to light up the input meters for +4 dBu pro recording. For live sound systems, as well as many recording setups designed to work with lower levels, this can sometimes be overkill. The **Level Trim** knob on HD 147's rear panel lets you roll back the direct out level and keep your sound guy or lower-level recording system happy.

If you're setting the levels yourself, and want to make sure you don't overdo it, you can follow these basic steps. First, plug the hottest output level guitar you plan to use into your HD 147, switch to your hottest pickup setting, and crank the guitar's output volume (or put it as high as you ever set it). If you plan to change sounds on your HD 147 during the gig, start by selecting the HD 147 sound that seems to have the loudest output level. You can set your **Master** knob on HD 147 low as you do all this so you don't blow yourself out; it won't affect the direct output level. Now, with this guitar and HD 147 setup, play hard (so you're sending maximum volume out those direct outputs) and have someone adjust HD 147's rear panel **Level Trim** knob until a good healthy level is being received by the equipment you're sending sound to. The level shouldn't be so hot that it's causing input distortion or clipping on that receiving equipment. If the receiving equipment has an input level adjustment, you'll probably get your best signal-to-noise ratio by setting it as *low* as possible while setting your HD 147's **Level Trim** as *high* as possible.

THE AMPS & CABS

HD 147's heart is its collection of Amp and Cab Models—resulting from Line 6's meticulous study of a dream collection of vintage and modern amplifiers and cabinets. Each position of HD 147's **Model** knobs calls up a particular Amp/Cab combination, powered by many of the same coveted models that appear in the Line 6 Vetta series amps as well as PODXT.

3 • 1

What's In There

Line 6 Clean
To create this Amp Model, we essentially grafted the preamp and tone stack of a JC-120 (Roland's popular "Jazz Chorus" solid state combo) onto the power amp and transformer of a classic Marshall JTM-45 tube head, thereby giving you the crisp and clear front end typical of a solid state amp, but with a rich, satisfying tube amp-style bite as you turn it up.

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

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

Line 6 Super Sparkle
You know how all great amps have a certain sweet spot — a particular setting where they sound magical — dripping with tone? Super Sparkle captures that organic vibe with a new twist: its voiced in the clean/low gain realm where everything usually sounds too clinical or too dark. Super Sparkle is an edgy tone that will sparkle and shimmer if you treat her right. So play nice.

Line 6 Mood (Red alternate model for "Line 6 Super Sparkle")

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

Line 6 Crunch

While having cousins marry is not such a good idea in real life, in the amp world, it can have a great payoff. Since the design of some early Marshall amps had a lot in common with the Fender Tweed Bassman circuitry, we wondered what it would be like if we took the preamp and tone stack of our JTM-45 and ran it into the power amp and transformer of our '58 Tweed Bassman. Point, click, cut, paste (it would be nice if it were really that easy, huh? We'd sure be able to get more sleep). What we got was *way* happening, as Line 6 Crunch will attest. Great grind and nice punch. A tone that the whole family can enjoy.

Line 6 Spinal Puppet (Red alternate model for "Line 6 Crunch")

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

Line 6 Insane

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

Line 6 Purge (Red alternate model for "Line 6 Insane")

We took our model of a Marshall JMP-1 preamp and hot-rodded it. It was hard work sticking in that digital dual overhead cam and hooking up the virtual glasspacks, but when we were done, we had the ultimate shred machine. Look out world, here you come.

Line 6 Smash

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

Line 6 Big Bottom (Red alternate model for "Line 6 Smash")

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

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

Line 6 Agro (Red alternate model for "Line 6 Octone")

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

Line 6 Treadplate
The original POD had a popular amp model simply called Rectified. It was our best attempt at the time to pay homage to the Mesa Boogie Rectifier series of amplifiers. In addition to the Boogie vibe, that model had some unique qualities that were all its own, and which we've captured here. In a way, Treadplate marks the first time we've actually modeled another Line 6 product! Here is an excerpt from the old POD manual to describe it: *"…modeled after a 1994 Mesa Boogie Dual Rectifier Tremoverb. You can use this Amp Model to get that tight, high gain sound used by bands like Dream Theater or Metallica. Boogie made their mark in the late 70's and early 80's by adding master volumes and more gain stages to amps with Fender-style circuitry. You can hear the Fender heritage but with more "punch" in the mids. The Boogie Dual Rectifier's tone controls are post-distortion and, as with the tone sections of most of the amps we based our models on, the individual controls interact with each other and with the Drive."*

Criminal based on the Peavey 5150 MkII

This is the alternate, "red light" model at the Line 6 Treadplate spot on the Model knob.

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

Jazz Clean - based on a Roland JC-120

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

This transistor amp was known for a strident clean sound and built-in stereo chorus. When using the JC-120 model, try cranking up the Treble for a shimmering clean sound that'll cut through just about any mix. It's also perfect for that 80's "new wave" sound (after all, it was Andy Summers' favorite amp with The Police).

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

Class A-30 TB – based on a 1967 Vox AC-30 Top Boost

This is the alternate, "red light" model at the Jazz Clean spot on the Model knob.

Music was changing in the early '60s and guitarists were asking for more brilliance & twang. So the Jennings Company, makers of Vox amps, decided to add Treble and Bass controls (and an extra 12AX7 gain stage, incidentally) in addition to the Treble Cut knob it already had (which in actuality was a sliding bandpass filter); this additional circuit became known as Top Boost. On this Amp Model, HD 147's Mid control acts like the original Cut knob on the AC 30.

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

Blackface Lux – based on a 1964 Fender Deluxe Reverb

The Holy Grail for many blues, country, and "roots" players has been a blackface Fender Deluxe Reverb. The particular amp we studied for modeling was built in 1964, and is truly one of the finest examples of what a Deluxe Reverb can be.

Most players love a Deluxe when it's turned up to about 7 for a nice gritty sound that cleans up when you back off your guitar's volume knob just a little. Notice how the tone control response changes as this Amp Model's Drive is changed: clean settings are crisp and present, while more driven settings will mellow the high end. This is typical of what you get from a Deluxe and is nicely captured here.

The Deluxe itself has only Bass and Treble controls. The Mid knob of HD 147's Blackface model lets you add some post-Amp Model midrange contouring when you want to expand on the Deluxe Reverb's capabilities for a little more flexibility. And Presence adds, well, Presence. Set the Mid knob to its 12 o'clock position and the Presence knob to 0 for the classic Deluxe sound. Tweaked up right, this tone will cut through and sing.

Fender 1961 Tweed Champ

This is the alternate, "red light" model at the Blackface Lux spot on the Model knob.

Modeled after a 1961 Tweed Champ, this model has a great sound when the Drive is cranked (not bad clean, either). These amps were originally designed to be sold to beginners, but rock and rollers quickly discovered that you could get a great distorted sound at fairly low volume levels. Many of the classic guitar solos of the 50's were recorded through a Champ. The Champ had no tone control, only volume. With your HD 147, it's easy to get a classic Champ tone. Just leave the Bass, Mid and Treble controls parked at 12 o'clock, which means they are "flat," making no contribution to the tone. Set Presence to 0, and it will also be letting the unadorned classic Champ tone through. When you're ready to explore further sonic territory, spin those and work your magic.

Since the Champ's only got one input jack, that's what we plugged into as we burned the midnight oil making our model based on this puppy.

All product names are trademarks of their respective owners, which are in no way associated or affiliated with Line 6. These product names, descriptions and images are provided for the sole purpose of identifying the specific products that were studied during Line 6's sound model development.

Double Verb – based on a 1965 Fender Twin Reverb

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

With HD 147's killer spring reverb model, this is a great choice for the classic surf sound. Goose the reverb, crank up the volume, and get ready to party with Annette Funicello and the rest of the gang!

Tweed B-man – based on a 1958 Fender Tweed Bassman

This is the alternate, "red light" model at the Double Verb spot on the Model knob.

The classic '58 Fender Bassman 4x10 combo was the amp that started it all—instant rock and roll tone. Originally a bass guitar amp, the Bassman became a Blues staple for 6-string guitarists thanks to its fat bottom end and the Fender twang on the top.

An interesting thing about the Bassman—and HD 147's Tweed 410 model—is just how interactive the Mid and Treble controls are. The Mid control isn't a bandpass, as in most tone control setups. Instead, it's almost like a second treble control. The two are additive, so if you're running the Mid knob higher than halfway up, you'll find the Treble control might give you more bright than you really want. On the other hand, when you turn the Mid knob down, you'll probably want to boost the Treble.

The Bassman, like many of the amps modeled by HD 147, didn't have a master volume, and you had to really crank it up to get the great tone it delivers at high volume. With HD 147, you can get that kind of tone at a bedroom or studio level—or through your headphones even—by cranking up the Drive knob. Give your best R&B licks a try with Drive set to about 4 or 5.

Plexi Lead 100 - based on "Jumped"1968 Marshall Super Lead

We literally scoured the world for this particular amp, finally finding a great example of a Super Lead languishing (we like to think fate preserved it for us) in Holland. One of the fun things you can do with a Plexi is take a short guitar cable and jumper channel I and channel II (as they're frequently numbered) together for a little extra saturation. Some guys loved this sound so much that they pulled the chassis and permanently wired a jumper into the amp. We modeled the Super Lead this way.

Hendrix used a Super Lead with the 'lay down' transformer unique to the 68 models, and Van Halen's first two records also owed their "brown sound" to a '68 Plexi. To get a nice crunch sound out of a Plexi, you crank all the volume and tone controls to 10. In keeping with our "make-it-sound-a-whole-lot-like-the-original" concept, diming all your knobs with HD 147's Plexi Lead gets you pretty darned near the same thing.

Plexi 45 – based on a 1965 Marshall JTM-45

This is the alternate, "red light" model at the Plexi Lead 100 spot on the Model knob.

When the royal agents that we had dispatched to the UK found this particular amp, we instantly fell in love. The amp even has the original KT-66 tubes in it, still in great shape! It's one of the finest examples of a JTM-45 we've ever heard, and it's a constant battle at Line 6 to see who gets to take it home for the weekend.

Those interested in the genealogy of tone will be interested to note that the JTM-45 marked the beginning of Marshall's transition from a mellower Fender-like tone to the distinctive, bright "crunchy" sound of the later Marshalls.

Brit J- 800 – based on a 1987 Marshall JCM 800

Turn to this Amp Model to conjure up tones of the coveted JCM 800, one of Marshall's most universally-acclaimed modern amps. This updated version of the Plexi continued Marshall's heritage with added gain and edge for a new generation of rock guitarists. One of the biggest differences here is that the tone controls are located after the preamp tubes, giving them more tone-sculpting effect at high gain settings. Some versions of the JCM 800, by the way, get their distortion by clipping a diode. The amp we modeled uses a tube for distortion.

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

All product names are trademarks of their respective owners, which are in no way associated or affiliated with Line 6. These product names, descriptions and images are provided for the sole purpose of identifying the specific products that were studied during Line 6's sound model development.

Brit J-2000 – based on a Marshall JCM2000

This is the alternate, "red light" model at the Brit J-800 spot on the Model knob.

The JCM2000 captures the modern Marshall tone, by refining the JCM series into a multi-channel power house. Our recreation captures the OD2 channel, with the Deep switch kicked in on a 60W TSL. The JCM200 uses a quartet of ECC83 pre-amp tubes and a pair of EL34 output tubes.

Connor 50 – based on a Cornford mk50h

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

One odd thing about the Cornford is the fact that it actually runs its drive channel in series with the Clean channel. This provides for some unique interaction that we captured during our modeling process by sweeping both controls though their range at the same time, and tying all of this to your HD 147's Drive knob. Lower Drive settings give you a tone dominated by the clean channel tonalities. As you turn the knob up past noon, you'll be moving into it more progressive high gain territory.

Brit Silver – based on 1985 Marshall Silver Jubilee

This is the alternate, "red light" model at the Connor 50 spot on the Model knob.

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

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

Treadplate – based on a 2001 Mesa Boogie Dual Rectifier

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

The Dual Rectifier was part of Boogie's more modern, high gain approach. In contrast to the earlier Boogies, the Dual Rectifier's tone controls have more influence at high gain settings, so you can scoop the mids and increase the bottom end. This is a great model to try if you're looking for the aggressively high gain sound of much of today's modern rock.

Diamond Plate – based on a Mesa Boogie 2001 Triple Rectifier

This is the alternate, "red light" model at the Recto Dual spot on the Model knob.

This model is based on the Channel 3 'Modern' setting of a 2001 Mesa Boogie Triple Rectifier Solo Head. Rock and roll is all about excess, now, innit? If two are good, three have got to be better, especially if you like the spongy feel of sagging rectifier tubes. No need to be bashful. Plug in, dial up some volume, and have some fun.

As with the Dual Rectifier model, we used Channel 3 in its Modern mode, with the rear switches set to Bold and Tube for this.

Bomber Uber – based on a Bogner Uberschall

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

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

Bomber X-TC – based on a Bogner Extacy

This is the alternate, "red light" model at the Bomber Uber spot on the Model knob.

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

The Extacy covers a wide range of tone, and you'll find that your HD 147's Bomber X-TC model lets you do much the same as you work the Drive knob, as well as your guitar's volume knob. On the top end, this one'll bark like a Plexi, or you can take it down through swampy crunch and finally arrive in the realm of lush clean tone. The Extacy is a really versatile amp from a really great guy, and we're pleased that he helped us model it for your HD 147.

Deity Lead – based on a Diezel VH4

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

Some of the most serious players in the Metal genre have come to depend on their VH4's for tight, focused and perfectly refined tone. The VH4's tone lies somewhere between a Soldano SLO 100 and a Mesa Boogie Dual Rectifier. It is perfect for lead work, and when the drive is brought back to noon, affords some excellent rhythm tones as well. Our model captures channel 4 on this sublime beauty.

Deity's Son – based on a Diezel Herbert

This is the alternate, "red light" model at the Deity spot on the Model knob.

After messing with the VH4 we knew you'd get into another amp from Peter Diezel. Herbert is one of those simple, ingenious designs. It is unique among amps in its ability to achieve an incredibly wide range of tone on a single channel. Your HD 147'smodel is very faithful to the original in tone, but due to a couple extra knobs on the Herbert, we had to make a few choices for you. Our model tackles Channel 3 with the Deep control preset to 2 O'Clock. The original also had a Mid Cut Intensity knob — this is the magic control that affords this amp its serious tonal range. To bring you this same joy, we set Herbert's Mid knob to about 2 o'clock when modeling the tone stack. That allowed us to offer you control of Herbert's unique Mid Cut Intensity with your HD 147's Mid knob. Treble, Bass, Presence and Gain all work as the original.

The Cabinets

Here's the list of speaker Cabinet Models you've got in HD 147:

Cab Size	The model was created through careful study of this actual cabinet:	Model Knob Position
0	Cabinet Modeling Bypass	Line 6 Clean
2x2	2 x 2" Fender Mini Twin	Line 6 Super Sparkle
1x8	1 x 8" Fender '61 Champ	Line 6 Crunch
1x12	1 x 12" Fender '64 Deluxe	Line 6 Insane
2x12	2 x 12" Roland JC-120	Line 6 Smash
2x12	2 x 12" Vox '67 AC-30	Line 6 Octone
2x12	2 x 12" Fender '65 Twin	Line 6 Treadplate
4x10	4 x 10" Fender '58 Bassman	Jazz Clean
4x12	4 x 12" Marshall '67 with Greenbacks 20's	Blackface Lux
4x12	4 x 12" Marshall '68 with Greenbacks 25's	Double Verb
4x12	4 x 12" Marshall with Celestion T75's	Plexi Lead 100
4x12	4 x 12" Marshall with Celestion V30's	Brit J-800
4X12	4 x 12" Marshall with 2 V30's & 2 T75's	Connor 50
4X12	4 x 12" Mesa Boogie with Extended Low End	Treadplate
4X12	4 x 12" Line 6 Custom	Bomber Uber
4x12	4 x 12" Mesa Boogie with Celestion V30's	Deity Lead

As described in Chapter 2, you can select a Cab Model by pressing and holding the **Model** knob. A green light will come on in the ring around the knob to show you what cab is currently selected. Turning the knob *while still pressing and holding it* will change the cabinet selection. The cabinets are organized from small to large. It all starts out small with the cab at the "Line 6 Super Sparkle" position and gets bigger as you go clockwise to the "Deity Lead" spot. Turn the knob to "Line 6 Clean" to disable the cab modeling. As you select Amp Models via the **Model** knob, HD 147 is loading an appropriate cab for each amp in the background so you don't have to. See **Creating Amp Defaults** on page 2•7 to learn how to change which cab will load with a particular Amp Model.

All product names are trademarks of their respective owners, which are in no way associated or affiliated with Line 6. These product names, descriptions and images are provided for the sole purpose of identifying the specific products that were studied during Line 6's sound model development.

THE EFFECTS

About the Delay and Modulation Effects

Welcome to the Effects section of our manual. Against our accountant's better judgment, we took the liberty of adapting a bunch of great stomp box models from Line 6's MM4 Modulation Modeler and DL4 Delay Modeler pedals, and stuffed them all into your HD 147.

Now you may be wondering, how it is that we were able to take all of the controls associated with cool effects like a Flanger or an Analog Delay and distill them down to a single Delay or Mod control? Well, we asked around and discovered that a lot of people like to run their effects in similar ways. For example, it's common when setting up a slap echo to turn the feedback down, while long delay times usually are accompanied by increased feedback. Similarly, with modulation its generally accepted that as the rate is increased, the depth needs to decrease in order for the perceived intensity of the effect to remain the same.

We used this knowledge to make the Delay and Mod knobs 'smart,' with each controlling a number of parameters as needed to give you a full range of usable sounds via just one control. Then, as described on page 2•5 and page 2•5, we threw in the ability to further fine-tune Delay Feedback as well as various aspects of the Mod effects. The result is great sounding effects that are also really easy to use!

So, why don't we learn about each of the effects in detail...

Delays

As detailed on page 2•5, you've got these controls for Delay:

Delay Select Button chooses from the Delay Models or turns Delay off

Delay Knob gives you more/less of the selected delay effect

Tap Tempo Button sets the delay time when you tap it

Or press and hold **Tap Tempo** and turn the **Delay Knob** to set delay time

For extra tweakability, press and hold the **Delay Select Button** and turn the **Delay Knob** to fine-tune just the Delay Feedback

Tube Echo - Maestro EP-1 Echoplex

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

The main feature of the Echoplex design is a special cartridge of looped 1/4-inch audio tape that wraps past separate record and playback heads. The position of the playback head can be moved to adjust the delay time from 60 to 650 milliseconds.

If you listen closely, you can hear some wow and flutter in the delay sound of this model, just like you'd get on the wonderfully organic-sounding original.

Tape Echo - Roland RE-101 Space Echo

Long before Boss pedals, the Space Echo was Roland's first venture into the world of effects processing. Rather than the single movable playback head of the Echoplex, this machine has multiple stationary heads that can all play back at the same time to create its signature multi-tap delay effects. The Tape Echo in your HD 147 recreates this classic sound.

Analog - Electro-Harmonix Deluxe Memory Man

This model is based on the Electro-Harmonix Deluxe Memory Man and its classic analog echo "bucket brigade" electronics. This classic effect also has a chorus circuit that is applied to the echoes only, leaving the direct sound unaffected. The resulting warm, distorted tone and swimming echoes of the Memory Man appealed to many guitarists, and were an essential part of the guitar sounds for the first U2 album.

4 • 3

Digital

Straight up mono digital delay here, for basic echo-cho-cho-cho.

Ping-Pong

Ping pong Delay bounces the delays all around the stereo field. Our Ping Pong delay has two modes: when the Delay Knob is turned counter-clockwise past noon, your delay time is set to quarter notes on the left and straight eighth notes on the right for a more traditional stereo ping pong delay. Turning the delay Knob past noon gives you quarter notes on the left and dotted-eighths on the right for a classic U2 Edge sound.

Sweep Echo

Sweep Echo is a Line 6 original. It first appeared on our DL4 Delay Modeler and has turned out to be a special favorite amongst the many DL4 users that we've spoken to. It's kind of like a garden variety digital delay line with the unique addition of a sweeping resonant filter applied to the delayed signal. The Filter's Sweep rate is tied to Tap Tempo and will complete a cycle every two bars. "Warp speed, Scotty!"

Modulations

As detailed on page 2•5, you've got these controls for Mod:

Mod Select Button chooses from the Mod Models or turns Mod off

Mod Knob gives you more/less of the selected mod effect

For extra tweakability, press and hold the **Mod Select Button** and turn the **Mod Knob** to fine-tune a **Modulation 2nd Function.**

Tremolo
This is based on the smooth, even-sounding tremolo circuits of blackface Fender amps like the '64 Deluxe and '65 Twin Reverb. They have a light bulb and a photo-resistor: when the light gets brighter, the tremolo gets louder. Adjusting the **Mod Knob** will change the speed and depth of the Tremolo from a smooth Fender sound to Ginsu knife-style chopping. The **Mod 2nd Function** adjusts the Depth.

Chorus
Here's big, beefy, extra wide, stereo sine wave modulated-chorus. This custom bad boy take cues from the greats like the Roland CE-1 and the TC Electronic SCF. Adjusting the **Mod knob** will affect the amount of Chorus, and scale the depth appropriately. Use the **Mod 2nd function** to adjust the Chorus Rate independently.

Flanger - A/DA Flanger
This is our model of the A/DA Flanger. Introduced in 1977, this stomp box's 35-to-1 sweep range and built-in compressor work together with the tone circuitry to create a signature jet-like sweep. It can be very dramatic with its unique wave shape and ability to create almost ring modulator-like effects at extreme settings. The **Mod knob** changes the amount of Flange and scales depth and feedback though the range of subtle to extreme. Use the **Mod 2nd function** to adjust the Modulation Rate independently.

All product names are trademarks of their respective owners, which are in no way associated or affiliated with Line 6. These product names, descriptions and images are provided for the sole purpose of identifying the specific products that were studied during Line 6's sound model development.

Phaser - MXR Phase 90

The unassuming metal box pictured here is the phaser that changed the world—the MXR Phase 90. The Phase 90 is relatively subtle compared to other phasers, and when you use it, it becomes part of the overall guitar tone rather than trying to grab the spotlight all to itself. Its lush, organic, and groovy swirl can be heard all over the first two Van Halen albums, as well as Jimmy Page's work on Physical Graffiti. The **Mod knob** adjusts the rate. Use the **MOD 2nd function** to adjust the Feedback independently.

U-Vibe - Uni-Vibe

The now-legendary Uni-Vibe was put on the map in 1969 by Jimi Hendrix. Essentially a four-stage phase shifter, the Uni-Vibe is best known for its watery texture and sultry tones. One listen to "Machine Gun" and you'll know what we mean. Adjusting the **Mod knob** changes the rate. Use the **MOD 2nd function** to adjust the Depth independently.

Rotary - Leslie 145

Fine furniture and cool tones—the Leslie 145 gave you both at once. This tube-driven behemoth (you definitely *don't* want to try picking one up on your own) features a belt-drive rotating high frequency horn along with a downwards facing 15-inch speaker that had a segmented drum spinning over it to disperse the sound. It was originally designed to be used with electric organs like the Hammond B3, but once guitarists (and even vocalists!) heard it, they just had to get in on the rotate-o-rama. The Leslie's sole control is a fast/slow switch labeled Tremolo/Chorale. Setting the **Mod knob** below 12 O'Clock selects the slow setting, above noon, the fast. The **2nd function** adjusts the Tone.

USING YOUR FEET

FBV Class Foot Controllers

The optional FBV series of foot controllers includes the original FBV, with its extensive effects controls for the Line 6 Vetta amps, and the more-compact FBV Shortboard, which includes all the controls needed for the HD 147. Both give you Wah and Volume pedals plus the ability to name, store and recall 36 HD 147 Channel Memories. The Shortboard comes with a sticker that re-labels some of the controls that are used for non-HD 147 functions on other Line 6 products. We'll assume you've got that in place as we describe the Shortboard's functions here.

The FBV series also includes the simple FBV4, which lets you choose between the four HD 147 channels, and tap tempo.

Note that the Line 6 Floor Board and FB4 foot controllers will not work with HD 147.

Connecting an FBV

Your FBV comes with an included RJ-45 cable. Connect this cable between the rear panel of the HD 147 and the rear panel of the FBV. The cable supplies power as well as communication, so there's no separate power supply required for the pedal.

If you ever need a replacement cable, look for a **Category 5, 10 Base-T or RJ-45 cable with male connectors on both ends**.

- "Category 5" refers to a 1 to 5 grading system for cable quality, with 5 being the highest quality. Get the good one.
- "10 Base-T" is a kind of computer network that uses these same cables.
- "RJ-45" is what you call the connectors on the ends of the cable.

If you're unsure if you've got the right thing, note that RJ-45 connectors basically look like a wide version of standard US telephone line connectors, with eight contacts instead of four.

So What Do All These Buttons and Pedals Do?
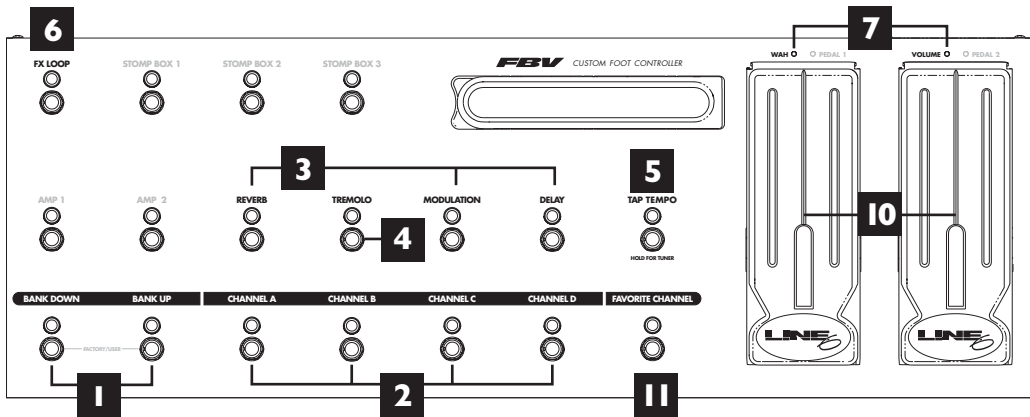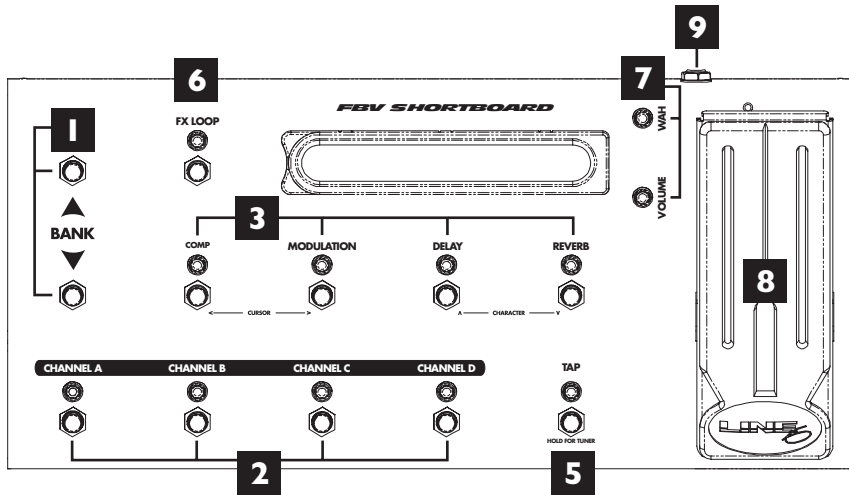
1. **Bank Up - Bank Down:** Use these two switches to choose any of the 9 Banks of your HD 147's Channel Memories. Bank 1 is the same four memories you get from the front panel **A, B, C, D Buttons** when no FBV is connected, or an FBV4 is used.

2. **Channel A, B, C & D:** Select from the four Channel Memories in the current Bank.

3. **COMP/MOD/DELAY/REVERB:** You guessed it! These switch the HD 147 effects COMP, MOD, DELAY and REVERB on and off kinda like they were stomp boxes on a pedal board. *Note: FBV Shortboard includes a sticker labeled "COMP" to place over the STOMP graphic on the pedal.*

4. **TREMOLO (FBV only):** The Tremolo button on the FBV will turn HD 147's Compressor on/off. Contact our Customer Service department if you'd like a handy dandy sticker to re-label your FBV.

5. **Tap/Tuner:** Tap a couple beats to set the tempo. Or press and hold this switch until you see the tuner on the pedal's display. Press it again to exit tuner mode.

6. **FX Loop:** Turns HD 147's Effects Loop on or off.

7. **Wah and Volume Lights:** These light to show that a pedal is ready to control Wah or Volume. The FBV's Pedal 1 and Pedal 2 lights are not used with the HD 147.

8. **FBV Shortboard Pedal:** Press the pedal fully forward to click the toe-switch, switching the pedal to control Wah or Volume. If a separate expression pedal is connected to the Shortboard's rear panel 1/4-inch jack, the Shortboard pedal controls Wah only, with the toe switch toggling the Wah on/off.

9. **External Pedal Jack:** You can connect an expression pedal (such as the Line 6 EX-1) to the Shortboard's rear panel 1/4-inch jack, and the connected pedal will control Volume, while the Shortboard pedal controls Wah only.

10. **FBV Pedals:** Press a pedal forward to click the toe-switch, turning the pedal on/off.

11. **Favorite Channel (FBV only):** Recalls a channel of your choice no matter what bank you are currently using. To make a channel your favorite, select that channel, then press and hold the favorite switch until the display shows **"SAVING"**—that's it!

    Note: Any switches not being used by your HD 147 do send MIDI messages and can be used to control other devices. See the MIDI Appendix for details.

5 • 3

Flip the page for details on saving and naming HD 147 sounds with your FBV....

Saving and Naming with an FBV

*You can't name with an FBV4. But you can with the free **Line 6 Edit** software downloadable from **www.line6.com**!*

To prepare for saving, it's a good idea to browse through the various factory-stored preset sounds to decide which you can do without. Make a note of their Bank number and Channel letter so you can save your own sounds there instead.

1. **Save:** Step on the **FX LOOP** switch until **"name edit"** is displayed.

2. **FBV SHORTBOARD users - Name:** The Shortboard's **COMP** and **MOD** switches (labeled **Cursor** in small text) select one of the characters of the channel name so you can edit it. The **DELAY** and **REVERB** switches (labeled **Character** in small text) choose from the available letters, numbers and symbols. Once you've got a name you're happy with, jump ahead to step 3.

2. **FBV Users - Name:** The **REVERB** and **TREMOLO** switches select which character of the channel name you would like to edit. The **MODULATION** and **DELAY** switches choose from the available letters, numbers and symbols. Once you've got a name you're happy with...

3. **Pick a Bank: Bank Up** and **Bank Down** switches pick a Bank you'd like to save to.

4. **Complete the Save:** Press the **A, B, C** or **D** switch to store to that Channel Memory in the chosen Bank. The display will show **"saving"**.

Congratulations, you're all done!

APPENDIX A: AMP MODELS

#	Amp Model	Based On	Cab Model	Mic	Vol Pre/Post	MIDI CC
1a	Line 6 Clean	Line 6 21st Century Clean	No Cab	SM-57 Off Axis	Pre	0
1b	Line6 Super Clean	Line6 Super Clean	No Cab	SM-57 Off Axis	Pre	16
2a	Line 6 Super Sparkle	Line 6 Super Sparkle	No Cab	SM-57 Off Axis	Pre	1
2b	Line 6 Mood	Line 6 Mood	No Cab	SM-57 Off Axis	Pre	17
3a	Line 6 Crunch	Line 6 Crunch	No Cab	SM-57 Off Axis	Pre	2
3b	Line 6 Spinal Puppet	Line 6 Spinal Puppet	No Cab	SM-57 Off Axis	Post	18
4a	Line 6 Insane	Line 6 Insane	No Cab	SM-57 Off Axis	Post	3
4b	Line 6 Purge	Line 6 Purge	No Cab	SM-57 Off Axis	Post	19
5a	Line 6 Smash	Line 6 Smash	No Cab	SM-57 Off Axis	Post	4
5b	Line 6 Big Bottom	Line 6 Big Bottom	No Cab	SM-57 Off Axis	Post	20
6a	Line 6 Octone	Line 6 Octone	No Cab	SM-57 Off Axis	Post	5
6b	Line 6 Agro	Line 6 Agro	No Cab	SM-57 Off Axis	Post	21
7a	Line 6 Treadplate	Line 6 Treadplate	No Cab	SM-57 Off Axis	Post	6
7b	Criminal	'02 Peavey 5150 Mk II	No Cab	SM-57 Off Axis	Post	22
8a	Jazz Clean	'87 Roland JC-120	2x12 Jazz	SM-57 Off Axis	Pre	7
8b	Class A-30 TB	'63 Vox AC 30 with Top Boost	2x12 Class A	SM-57 Off Axis	Pre	23
9a	Blackface Lux	'64 Fender Deluxe	1x12 Blackface	SM-57 Off Axis	Pre	8
9b	Tiny Tweed	'61 Fender Champ	1x8 Tweed	SM-57 Off Axis	Pre	24
10a	Double Verb	'65 Blackface Fender Twin	2x12 Blackface	SM-57 Off Axis	Pre	9
10b	Tweed B-Man	'58 Fender Bassman	4x10 Tweed	SM-57 Off Axis	Pre	25
11a	Plexi Lead 100	'68 Marshall 'Plexi' Super Lead	No Cab	SM-57 Off Axis	Post	10
11b	Plexi 45	'65 Marshall JTM-45	No Cab	SM-57 Off Axis	Pre	26
12a	Brit J-800	'90 Marshall JCM-800	No Cab	SM-57 Off Axis	Post	11
12b	Brit J-2000	'00 Marshall TSL60	No Cab	SM-57 Off Axis	Post	27
13a	Connor 50	'02 Cornford mk50h	No Cab	SM-57 Off Axis	Post	12
13b	Brit Silver	'85 Marshall Silver Jubilee	No Cab	SM-57 Off Axis	Post	28
14a	Treadplate	'01 Mesa Boogie Dual Rectifier	No Cab	SM-57 Off Axis	Post	13
14b	Diamond Plate	'02 Mesa Boogie Triple Rectifier	No Cab	SM-57 Off Axis	Post	29
15a	Bomber Uber	Bogner Uberschall	No Cab	SM-57 Off Axis	Post	14
15b	Bomber X-TC	Bogner Extacy	No Cab	SM-57 Off Axis	Post	30
16a	Deity Lead	Diezel VH4	No Cab	SM-57 Off Axis	Post	15
16b	Deity's Son	Diezel Herbert	No Cab	SM-57 On Axis	Post	31

All product names are trademarks of their respective owners, which are in no way associated or affiliated with Line 6. These product names, descriptions and images are provided for the sole purpose of identifying the specific products that were studied during Line 6's sound model development.

APPENDIX B: CABINET MODELS

#	Cab Model	Based On	MIDI CC
1	No Cab	Cabinet Modeling Bypass	0
2	2x2 Mini	2 x 2'' Fender Mini Twin	1
3	1x8 Tweed	1 x 8'' Fender '61 Champ	2
4	1x12 Blackface	1 x 12" Fender '64 Deluxe	3
5	2x12 Jazz	2 x 12" Roland JC-120	4
6	2x12 Class A	2 x 12" Vox '67 AC-30	5
7	2x12 Blackface	2 x 12" Fender '65 Twin	6
8	4x10 Tweed	4 x 10" Fender '58 Bassman	7
9	4x12 Green 20's	4 x 12" Marshall '67 with Greenbacks 20's	8
10	4x12 Green 25's	4 x 12" Marshall '68 with Greenbacks 25's	9
11	4x12 Celest T75	4 x 12" Marshall with Celestion T75's	10
12	4x12 Celest V30	4 x 12" Marshall with Celestion V30's	11
13	4X12 X-Load	4 x 12" Marshall with 2 V30's & 2 T75's	12
14	4X12 Big Bottom	4 x 12" Mesa Boogie with Extended Low End	13
15	4X12 Custom	4 x 12" Line 6 Custom	14
16	4x12 Treadplate	4 x 12" Mesa Boogie with Celestion V30's	15

APPENDIX C: MIDI

MIDI Channel

HD 147 always communicates on MIDI Channel 1.

MIDI Program Changes

MIDI Program Change Messages 0-36 can be used to select HD 147's Channel Memories or Manual Mode, and are sent by HD 147 to control MIDI effects, etc.:

MIDI Program Change	HD 147 Channel Memory	MIDI Program Change	HD 147 Channel Memory
0	Manual Mode	19	5C
1	1A	20	5D
2	1B	21	6A
3	1C	22	6B
4	1D	23	6C
5	2A	24	6D
6	2B	25	7A
7	2C	26	7B
8	2D	27	7C
9	3A	28	7D
10	3B	29	8A
11	3C	30	8B
12	3D	31	8C
13	4A	32	8D
14	4B	33	9A
15	4C	34	9B
16	4D	35	9C
17	5A	36	9D
18	5B	37	Tuner

Notes:
MIDI PC 0 puts the HD 147 in Manual mode. (See Chapter 2 for a description of Manual Mode).
MIDI PC37 toggles tuner mode on and off. This is only useful if you have a FBV series controller attached to your HD 147.

MIDI Sysex (Memory Dumps)

There are 3 special hidden functions on the Flextone III that will transmit a Sysex message that can be recorded by a MIDI application, or sent to another Flextone III amplifier.

1. Presets & Amp Setups – To transmit all of your custom presets and Amp Defaults: press and hold the **Tap Tempo**, **Comp** & **Mod Select** buttons while powering up the amp. Connect the MIDI out of the source amp to the MIDI In of your computer or another amp. (If you are connecting to another HD 147, you can power up the target amp normally.) Press the **Delay Select** button to send the message.

2. The Whole Enchilada – To transmit the entire memory of the amplifier including your custom presets, amp setups, and DSP software, (the brains behind the operation): press and hold the **Tap Tempo, Gate** & **Mod Select** buttons while powering up the amp. Connect the MIDI out of the source amp to the MIDI In of your computer or another amp. (If you are connecting to another HD 147, you can power up the target amp normally.) Press the **Mod Select** button to send the message.

3. The Edit Buffer – To transmit the current state of the amp, press and hold the **Tap Tempo** and any of the **A**, **B**, **C** or **D** buttons.

APPENDIX D: MIDI CONTINUOUS CONTROL

Amp Parameter	MIDI		MIDI CC Range			Notes
	TX	RX	CC#	Min	Max	
Amp Settings						
Amp Model Select	√	√	12	0	31	Loads Amp Model without Amp Model Defaults. Amp Models list gives CC values.
Amp Select		√	11	0	31	Loads Amp with Amp Defaults. Amp Models list gives CC values.
Drive	√	√	13	0	127	
Bass	√	√	14	0	127	
Mid	√	√	15	0	127	
Treble	√	√	16	0	127	
Presence	√	√	21	0	127	
Channel Volume	√	√	17	0	127	
Reverb Level	√	√	18	0	127	
A.I.R. Settings						
Cabinet Model	√	√	71	0	15	Cab Model list gives CC numbers.
A.I.R. II Model		√	70	0	127	Range = 0~6. See Note 1
Compressor						
Compression Gain		√	5	0	127	0 to +31dB
Compression Threshold	√	√	9	0	127	-63dB to 0dB
Comp Enable	√	√	26	0	127	0-63=Off, 64-127=On
Noise Gate						
Gate Threshold	√	√	23	0	96	0 to -96dB
Gate Decay Time		√	24	0	127	0=.1msecs; 127=2000msecs
Noise Gate Enable	√	√	22	0	127	0-63=Off, 64-127=On
Modulation						
Modulation Model	√	√	58	0	5	See note 2
Mod Tweak		√	3	0	127	Same as adjusting the Mod knob
Mod Param 1 (Speed)		√	29	0	127	Mod Speed
Mod Param 1 Dbl Precision		√	61	0	127	Mod Speed, Double Precision
Mod Param 1 Note value		√	51	1	13	See note 3
Mod Param 2		√	52	0	127	See note 4
Mod Param 3		√	53	0	127	See note 4
Mod Param 4		√	54	0	127	See note 4
Mod Volume/Mix		√	56	0	127	0 to 100%
Mod Pre/Post		√	57	0	127	0-63=Pre, 64-127=Post
Mod Enable	√	√	50	0	127	0-63=Off, 64-127=On

Note 1 - A.I.R. II Models: 0=A.I.R. II Off, 1=Shure SM 57on axis, 2=Shure SM 57off axis, 3=MD 421 on axis, 4=MD421 off axis, 5=U-67 on axis, 6= U-67 off axis

Note 2 - Modulation Models: 0= Tremolo, 1= Chorus, 2= Flanger, 3= Phaser, 4= U-Vibe, 5= Rotary

Note 3 - Note Values: 0 = Note Off, 1 = Whole, 2=Dotted Half, 3 =Half, 4=Half Triplet, 5=Dotted Quarter, 6 =Quarter, 7 =Quarter Triplet, 8 =Dotted Eighth, 9 =Eighth, 10 =Eighth Triplet, 11 =Dotted Sixteenth, 12=Sixteenth, 13=Sixteenth Triplet

Note 4 - Modulation Parameters: Some Mod models have unique parameters. All use P1(parameter) for Speed. For Tremolo P2= Waveform; Chorus P2= Depth, P3= Bass, P4= Treble; Flanger P2= Depth, P3= Feedback, P4= Manual; Phaser P2= Feedback; U-Vibe P2= Depth; Rotary P2= Tone.

Amp Parameter	MIDI		MIDI CC Range			Notes
	TX	RX	CC#	Min	Max	
Delay						
Delay Model	√	√	88	0	5	See Note 5
Delay Tweak		√	2	0	127	Same as adjusting the Delay knob
Delay Param 1 (Time)		√	30	0	127	Delay time
Delay Param 1 Dbl Prec		√	62	0	127	Delay time, double-precision
Delay Param 1 Note value		√	31	1	13	See note 3
Delay Param 2 (Feedback)		√	33	0	127	See note 6
Delay Param 3		√	35	0	127	See note 6
Delay Param 4		√	85	0	127	See note 6
Delay Volume/Mix		√	34	0	127	0 to 100%
Delay Pre/Post		√	87	0	127	0-63=Pre, 64-127=Post
Delay Enable	√	√	28	0	127	0-63=Off, 64-127=On
Tempo Settings						
Tap Tempo MSB	√	√	89	0	127	30.0-960.0 BPM
Tap Tempo LSB	√	√	90	0	127	
Tap	√	√	64	0	127	64-127= a Tap
Reverb						
Reverb Enable	√	√	36	0	127	0-63=Off, 64-127=On
Reverb Model		√	37	0	15	Range = 0~15, see note 7
Reverb Decay		√	38	0	127	0.1 to 9.0sec
Reverb Pre-Delay		√	40	0	127	0 to 100ms
Reverb Tone		√	39	0	127	0 to 100%
Performance Controllers						
FX Loop Enable	√	√	107	0	127	0-63=Off, 64-127=On
Tuner Enable	√	√	69	0	127	0-63=Off, 64-127=On
Wah Enable	√	√	43	0	127	0-63=Off, 64-127=On
Wah Position	√	√	4	0	127	
Vol Pedal Position	√	√	7	0	127	
Volume PRE/POST	√	√	47	0	127	0~63 = Pre, 64~127 = Post
FBV Series Foot Controllers						
(FBV) Stomp Box 1	√		25	0	127	0-63=Off, 64-127=On
(FBV) Stomp Box 2	√		109	0	127	0-63=Off, 64-127=On
(FBV) Stomp Box 3	√		110	0	127	0-63=Off, 64-127=On
(FBV) Amp 1	√		111	0	127	0-63=Off, 64-127=On
(FBV) Amp 2	√		112	0	127	0-63=Off, 64-127=On
(FBV) Pitch/Tremolo	√		113	0	127	0-63=Off, 64-127=On
(FBV) Modulation	√		50	0	127	0-63=Off, 64-127=On
(FBV) Delay	√		28	0	127	0-63=Off, 64-127=On
(FBV) Reverb	√		36	0	127	0-63=Off, 64-127=On
(FBV) Tap	√		64	0	127	TX127

Note 5 - Delay Models: 0= Tube Echo, 1=Tape Echo, 2=Analog, 3=Digital, 4=Ping Pong, 5=Sweep Echo
Note 6 - Delay Parameters: All use P1 for Delay Time, P2 for Feedback; Tube Echo P3=Flutter, P4= Drive; Tape Echo P3= Heads, P4= Flutter; Analog & Digital P3= Bass, P4= Treble; Ping Pong P3= Offset, P4= Spread; Sweep Echo P3= Sweep Rate, P4= Sweep Depth **Note 7- Reverb Models:** 0= Deluxe Spring, 1= Twin Spring, 2= King Spring, 3= Small Room 1, 4= Tiled Room 5= Bright Room 1, 6= Dark Hall 1, 7= Medium Hall, 8= Really Large Hall, 9= Rich Chamber 1, 10= Rich Chamber 2, 11= Cavernous Chamber, 12= Slap Plate 1, 13= Plate, 14= Large Plate 1

APPENDIX E: CUSTOMER SERVICE

Before contacting the Line 6 Customer Service team, please take the time to look through this publication to see if it can answer your questions. Additional helpful information is on the Support page of the Line 6 web site (www.line6.com), including the searchable FAQTRAQ system which is often the fastest and easiest way to go answers.

Need to talk to an actual human on the Line 6 Customer Service team by phone? Have your serial number handy and take some notes for yourself before you call, so you remember everything you want to ask about. In the USA or Canada, you can contact Line 6 at (818) 575-3600, 8AM to 5PM Monday through Friday (Pacific Time). Outside the USA and Canada, please contact your distributor directly to arrange service. The list of Line 6 distributors is available on the Internet at www.line6.com.

To obtain factory service:
If a member of the Line 6 Customer Service Team determines that your HD 147 needs to be sent to Line 6 for service, you will be given a return authorization (RA) number. Products returned without an RA number will be returned to you at your sole expense. Pack the product in its original shipping carton and attach a description of the problem along with your name and a phone number where Line 6 can contact you if necessary. Ship the product insured and freight prepaid to Line 6 Customer Service, 6033 De Soto Avenue, Woodland Hills, CA 91367.

APPENDIX F: WARRANTY INFORMATION

LINE 6 LIMITED WARRANTY INFORMATION

Sending in your registration card allows us to register key information so that we may handle problems faster and inform you of advance information, upgrades and other news. Thanks in advance for filling out your registration card and sending it to us. And good luck in your music!

Line 6, Inc. (hereinafter "Line 6") warrants that your new Line 6 product, when purchased at an authorized Line 6 dealer in the United States of America ("USA") or Canada, shall be free of defects in materials and workmanship for a period of one (1) year from the original date of purchase. Please contact your dealer for information on warranty and service outside of the USA and Canada.

During the warranty period, Line 6 shall, at its sole option, either repair or replace any product that proves to be defective upon inspection by Line 6.

Line 6 reserves the right to update any unit returned for repair and to change or improve the design of the product at any time without notice. Line 6 reserves the right to use reconditioned parts and assemblies as warranty replacements for authorized repairs.

This warranty is extended to the original retail purchaser. This warranty can be transferred to anyone who may subsequently purchase this product provided that such transfer is made within the applicable warranty period and Line 6 is provided with all of the following items: (i) all warranty registration information (as set forth on the registration card) for the new owner, (ii) proof of the transfer within thirty (30) days of the transfer purchase, and (iii) a photocopy of the original sales receipt. Warranty coverage shall be determined by Line 6 in its sole discretion.

This is your sole warranty. Line 6 does not authorize any third party, including any dealer or sales representative, to assume any liability on behalf of Line 6 or to make any warranty for Line 6.

Line 6 may, at it's option, require proof of original purchase date in the form of a dated copy of original authorized dealer's invoice or sales receipt.

Service and repairs of Line 6 products are to be performed only at the Line 6 factory or a Line 6 authorized service center. Line 6 may require advanced authorization of repairs to authorized service centers. Unauthorized service, repair or modification will void this warranty.

LINE 6 LIMITED WARRANTY INFORMATION

Sending in your registration card allows us to register key information so that we may handle problems faster and inform you of advance information, upgrades, and other news. Thanks in advance for filling out your registration card and sending it to us. And good luck in your music!

Line 6, Inc., warrants this product when purchased at an Authorized Line 6 Dealer in the United States of America or Canada, to be free of defects in materials and workmanship for a period of one year from the date of original purchase only upon completion and return of the Line 6 Warranty Registration form within 30 days from date of purchase. Please contact your distributor for information on warranty and service outside the USA and Canada. During the warranty period Line 6 shall, at its option, either repair or replace any product that proves to be defective upon inspection by Line 6. Line 6 reserves the right to update any unit returned for repair, and reserves the right to change or improve the design of the product at any time without notice. This warranty is extended to the original retail purchaser. This warranty can be transferred to anyone who may subsequently purchase this product within the applicable warranty period by providing Line 6 with all Warranty Registration information for the new owner and proof of transfer within 30 days of the purchase. Final determination of warranty coverage lies solely with Line 6. This is your sole warranty. Line 6 does not authorize any third party, including any dealer or sales representative, to assume any liability on behalf of Line 6 or to make any warranty for Line 6. Line 6 may, at its option, require proof of the original date of purchase in the form of a dated copy of the original authorized dealer's invoice or sales receipt. Service and repairs of Line 6 products are to be performed only at the factory (see below) unless otherwise authorized in advance by the Line 6 Service Department. Unauthorized service, repair or modification will void this warranty.

DISCLAIMER AND LIMITATION OF WARRANTY

THE FOREGOING WARRANTY IS THE ONLY WARRANTY GIVEN BY LINE 6 AND IS IN LIEU OF ALL OTHER WARRANTIES. ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE, EXCEEDING THE SPECIFIC PROVISIONS OF THIS WARRANTY ARE HEREBY DISCLAIMED AND EXCLUDED FROM THIS WARRANTY. UPON EXPIRATION OF THE APPLICABLE EXPRESS WARRANTY PERIOD (1 YEAR), LINE 6 SHALL HAVE NO FURTHER WARRANTY OBLIGATION OF ANY KIND, EXPRESS OR IMPLIED. LINE 6 SHALL IN NO EVENT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES SUFFERED BY THE PURCHASER OR ANY THIRD PARTY, INCLUDING WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS OR BUSINESS, OR DAMAGES RESULTING FROM USE OR PERFORMANCE OF THE PRODUCT, WHETHER IN CONTRACT OR IN TORT. LINE 6 SHALL NOT BE LIABLE FOR ANY EXPENSES, CLAIMS, OR SUITS ARISING OUT OF OR RELATING TO ANY OF THE FOREGOING. Some states do not allow the exclusion or limitation of implied warranties so some of the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary, from state to state. This warranty only applies to products sold and used in the USA and Canada. Line 6 shall not be liable for damages or loss resulting from the negligent or intentional acts of the shipper or its contracted affiliates. You should contact the shipper for proper claims procedures in the event of damage or loss resulting from shipment.