



DT Series Amplifiers



MIDI Implementation Guide

Accessing DT50™ & DT25™ Amplifier Parameters
via an External MIDI Controller Device

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OVERVIEW

The revolutionary Line 6 DT50™ & DT25™ are not only full-featured tube amplifiers, but also offer numerous circuitry parameters to customize their sound and feel. In this guide we'll cover how you can utilize a standard external MIDI controller device to access this multitude of DT amp options for maximum tweakability. This effectively allows you to fully customize your DT amplifier so that each of its Voicing switch settings (I, II, III & IV) for both Channel A and Channel B recall your own customized preamp and power amp configurations.

You may first want to review the *Pilot's Guide* that came with your DT Series amplifier to be familiar with all its features - available in PDF form at www.line6.com/support/manuals/.

Note: This Guide covers DT50 & DT25 amplifiers with Flash Memory version 2.0 (or later) installed. Use the Line 6 Monkey software to download and apply the latest updates for your DT Series amp - available free at <http://line6.com/software/>.

MIDI or L6 LINK™?

In case you are asking yourself this question regarding how to best access your DT amp settings...

Line 6 POD® HD Pro, HD500, HD300 & HD400 devices include the unique L6 LINK functionality, which allows complete integration and control with DT amplifiers. If you are wanting control over your DT amp in a live setting, then using a POD HD with a L6 LINK connection to the DT amp is the way to go. This allows 2-way communication, control over amp models, amp parameters, effects, knob settings, volume levels and more. The ability to store all these settings and recall Presets makes L6 LINK the preferred choice for real-time performance control.

The DT amps' MIDI implementation is offered primarily for customization of your DT amp and to access "hidden" settings not found on the amp's front panel. Once you send MIDI CC messages to your DT amp, your changes are retained on the amp. For example, if you set your DT amp to Channel A and the Voicing switch position "I," you can then send MIDI CC messages to determine the specific preamp and power amp configuration - which will then be recalled when you set the DT amp to Channel A, Topology I. You'll see more details about this functionality in the following sections.

Note: For more info about L6 LINK, please see the *POD HD Advanced Guide* and *L6 LINK Connectivity Guide* PDFs, available at <http://line6.com/support/manuals/>.

MIDI Connectivity

Your DT Series amplifier will respond to specific MIDI CC messages to configure preamp, power amp, switch amp channels, control tone knobs, etc. (See the MIDI CC tables in the following chapter for the list of specific parameters & commands.) You can use any manufacturer’s external MIDI controller device that is capable of configuring MIDI CC commands and values, and that includes a standard 5-pin MIDI OUT jack. Connect a standard MIDI cable from the controller device’s MIDI OUT to the 5-pin MIDI IN port on the back of your DT Series amp. There is no other configuration of the DT amp necessary for MIDI control - it will respond to valid MIDI CC messages on MIDI Channel 1.



The 5-pin MIDI In & OUT ports on the back of the DT Series amplifiers

Got a POD HD500 or POD HD Pro? These devices are capable of functioning as MIDI controllers, where you can configure the specific MIDI CC messages to be sent from its footswitches & pedals. See the POD HD *Advanced Guide* PDFs at <http://line6.com/support/manuals>.

Or, if you have an Apple® iPhone®, iPod touch® or iPad®* ... Check out the Line 6 MIDI Mobilizer™ II, the mobile app & MIDI interface that lets you take control of MIDI devices anywhere! See <http://line6.com/midimobilizer/mmii/> for details.

DT Amplifier Factory Reset

As mentioned in the above sections, when customizing any settings via MIDI, your changes remain “saved” internally on the DT amplifier. This includes changes made to the preamp and power amp per Voicing switch value, Reverb and more. To return all settings back their factory default state, you’ll need to perform a “Reset” of the DT amp. To perform the Reset, start with the DT amplifier powered “Off,” then simultaneously hold the Voicing toggle switch DOWN and the Pentode/Triode toggle switch UP while powering the amp “On.” Continue to hold these toggle switches in this position until you see the Voicing “I” indicator light up (this takes about 15 seconds). The DT factory default settings are then fully restored and your DT amp is ready to play.



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MIDI CC REFERENCE TABLES

This chapter includes tables showing the MIDI CC messages required to control specific functions on your Line 6 DT Series amplifier. Configure your MIDI controller device to transmit the MIDI CC number and specific values as listed in these tables. The MIDI CCs listed are supported by both DT50™ and DT25™ amplifiers, except where noted.

Please consult the manufacturer’s documentation included with your external MIDI control device for its instruction on how to configure it to send the necessary MIDI CC messages.

Global Parameters Table

The parameters in this table are “Global,” meaning they are not specific to the DT amp’s Channel A or B, or to any Voicing switch setting. Once changed, the state for each of these settings persist on the amp until changed again either via MIDI, or via the DT amp panel options.

Global Parameters		
Parameter & Description	MIDI CC	Value
Channel A/B Select <i>Selects Channel A or B</i>	19	0 - 63 = Channel A 64 - 127 = Channel B
Channel A/B Toggle <i>Sending any Value 0 - 127 toggles to the opposite Channel A or B</i>	66	0 - 127
XLR Direct Out Mic Emulation <i>Selects the speaker cabinet’s Mic type, applied to the audio signal heard from the DT amp’s XLR Direct Output</i>	82	0 = None 1 = 57 Dynamic 2 = 57 Dynamic, Off Axis 3 = 409 Dynamic 4 = 421 Dynamic 5 = 4038 Ribbon 6 = 121 Ribbon 7 = 67 Condenser 8 = 87 Condenser

Global Parameters		
Parameter & Description	MIDI CC	Value
Low Volume Mode: Bypass / Enable <i>Selects the Normal or Low Volume Mode. See “Low Volume and Normal Modes” on page 2•2 for behavior details.</i>	85	0 - 63 = Normal Mode 64 - 127 = Low Vol. Mode
Voicing <i>Directly selects the DT amp Channel (A or B) and Voicing position (I, II, III or IV)</i>	122	0 = Channel A Voicing I 1 = Channel A Voicing II 2 = Channel A Voicing III 3 = Channel A Voicing IV 4 = Channel B Voicing I 5 = Channel B Voicing II 6 = Channel B Voicing III 7 = Channel B Voicing IV

Global Parameter Behaviors

Low Volume and Normal Modes

Way beyond a traditional master volume, switching to Low Volume Mode lets you take your DT amp down to whisper-quiet levels for recording or late-night jamming. Since tubes distort less at low volumes, Low Volume Mode utilizes HD technology to pick up the slack and fill out the tone with rich power amp modeling so it still feels and sounds like it's cranked up, even at low levels.

Channel A & B Parameters Table

The following table lists DT Series amplifier parameters that are specific to the amp's Channel A and B, and the MIDI CC commands required to access them via your external MIDI controller device. Once changed, the state for each of these parameters persist on the amp Channel until changed again. Note that changes made to the parameters that are described as "for the current Voicing" (such as changing the HD Amp or Cab selection, for example) will remain the setting in use for the current Channel and I, II, III or IV Voicing position.

Channel A & B Parameters			
Parameter & Description	Channel A MIDI CC	Channel B MIDI CC	MIDI CC Value
HD Amp Select <i>Selects the HD Amp type for the current Voicing position</i> See "HD Amps & Cabs" on page 2•7 for details.	11	91	0 = None 1 = Blackface Double Normal 2 = Blackface Double Vib 3 = Hiway 100 4 = Super O 5 = Gibtone 185 6 = Tweed B-Man Normal 7 = Tweed B-Man Bright 8 = Blackface 'Lux Normal 9 = Blackface 'Lux Vib 10 = Divide 9/15 11 = Phd Motorway 12 = Class A-15 13 = Class A-30 14 = Brit J-45 Normal 15 = Brit J-45 Bright 16 = Brit Plexi 100 Normal 17 = Brit Plexi 100 Bright 18 = Brit P-75 Normal 19 = Brit P-75 Bright 20 = Brit J-800 21 = Bomber Uber 22 = Treadplate 23 = Angel F-Ball 24 = Line 6 Elektrik 25 = Flip Top 26 = Solo 100 Clean 27 = Solo 100 Crunch 28 = Solo 100 Overdrive 29 = Line 6 Doom 30 = Line 6 Epic

Channel A & B Parameters			
Parameter & Description	Channel A MIDI CC	Channel B MIDI CC	MIDI CC Value
<p>HD Amp with Defaults</p> <p>Selects the HD Amp + the default Cab, Power Amp Operating Class & Tube Configuration, and additional amp parameter settings for the current Voicing position</p> <p>See “HD Amps & Cabs” on page 2•7 for details.</p>	12	89	0 = None 1 = Blackface Double Normal 2 = Blackface Double Vib 3 = Hiway 100 4 = Super O 5 = Gibtone 185 6 = Tweed B-Man Normal 7 = Tweed B-Man Bright 8 = Blackface ‘Lux Normal 9 = Blackface ‘Lux Vib 10 = Divide 9/15 11 = Phd Motorway 12 = Class A-15 13 = Class A-30 14 = Brit J-45 Normal 15 = Brit J-45 Bright 16 = Brit Plexi 100 Normal 17 = Brit Plexi 100 Bright 18 = Brit P-75 Normal 19 = Brit P-75 Bright 20 = Brit J-800 21 = Bomber Uber 22 = Treadplate 23 = Angel F-Ball 24 = Line 6 Elektrik 25 = Flip Top (Bass) 26 = Solo 100 Clean 27 = Solo 100 Crunch 28 = Solo 100 Overdrive 29 = Line 6 Doom 30 = Line 6 Epic

Channel A & B Parameters			
Parameter & Description	Channel A MIDI CC	Channel B MIDI CC	MIDI CC Value
<p>Cab Select</p> <p>Selects Speaker Cab type for the current Voicing position</p> <p>See “HD Amps & Cabs” on page 2•7 for details.</p>	71	110	0 = None 1 = 2x12 Blackface Double 2 = 4x12 Hiway 3 = 1x(6x9) Super O 4 = 1x12 Gibtone F-Coil 5 = 4x10 Tweed B-Man 6 = 1x12 Blackface ‘Lux 7 = 1x12 Brit 12-H 8 = 2x12 PhD Ported 9 = 1x12 Blue Bell 10 = 2x12 Silver Bell 11 = 4x12 Greenback 25 12 = 4x12 Blackback 30 13 = 4x12 Brit T-75 14 = 4x12 Uber 15 = 4x12 Tread V-30 16 = 4x12 XXL V-30 17 = 1x15 Flip Top (Bass)
Drive Knob	13	92	0 - 127
Bass Knob	14	93	0 - 127
Mid Knob	15	94	0 - 127
Treble Knob	16	95	0 - 127
Channel Volume Knob	17	103	0 - 127
Presence Knob	21	102	0 - 127
<p>Topology / Negative Feedback Loop type</p> <p>Selects from four different analog power amp topology types</p>	77	114	0 = Tight NFL 1 = Loose NFL 2 = Zero NFL 3 = Resonant NFL
<p>Power Amp Operating Class: A - A/B</p> <p>Selects the Operating Class type for the current Voicing position</p>	73	115	0 - 63 = Class A 64 - 127 = Class A/B

Channel A & B Parameters			
Parameter & Description	Channel A MIDI CC	Channel B MIDI CC	MIDI CC Value
Power Amp Tube Configuration: Triode / Pentode <i>Selects the Tube Configuration type for the current Voicing position</i>	75	116	0 - 63 = Triode 64 - 127 = Pentode
12AX7 Boost Mode: Bypass / Enable <i>Toggles a volume boost On/Off (DT50 amplifiers only, and functional only when Low Volume Mode is Off)</i>	74	117	0 - 63 = Normal 64 - 127 = Boost Enabled
Phase Inverter B+ Voltage: Low / High (DT50 amplifiers only)	78	86	0 - 63 = Low B+ 64 - 127 = High B+
Feedback Capacitor Type: Cap X / Y (DT50 amplifiers only)	79	87	0 - 63 = Capacitor X (Tight) 64 - 127 = Capacitor Y (Smooth)
Reverb: Bypass / Enable	36	105	0 - 63 = Bypassed 64 - 127 = Enabled
Reverb Type <i>Selects the Reverb type for the current Voicing position</i>	37	107	0 = None 1 = Spring 2 = '63 Spring 3 = Plate 4 = Room 5 = Chamber 6 = Hall 7 = Cave 8 = Ducking 9 = Octo 10 = Tile 11 = Echo 12 = Particle Verb
Reverb Decay	52	56	0 - 127
Reverb Pre Delay	53	57	0 - 127
Reverb Tone	54	58	0 - 127

Channel A & B Parameters			
Parameter & Description	Channel A MIDI CC	Channel B MIDI CC	MIDI CC Value
Reverb Mix <i>(This is the same parameter as controlled by the REVERB knob on each channel of the DT amp.)</i>	55	59	0 - 127

Channel A & B Parameter Behaviors

HD Amps & Cabs

As of the DT amplifier version 2.0 firmware, we've expanded the sonic palette with 30 modern and vintage HD Amps, and allowed you to mix and match them with any combination of dynamic topologies to create your own unique voicings, all via MIDI CC commands! For details about the legendary amps & speakers upon which these tones are based, please check out the additional DT Series Amplifier documentation, available at <http://line6.com/support/manuals/>.

“Hidden” Parameters

There are several internal DT amplifier parameters that we've exposed via MIDI control. These are “hidden” settings - that is, you won't see any controls for them on the front or back panel of your DT amp. Note that the audible effect of some of these parameters may be subtle in some configurations, and more pronounced in others, since they interact with your DT amp's other settings (Drive, Presence & Tone knobs, Amp type, etc.). Therefore, the idea is to experiment with combinations of settings to fine-tune the nuances of your DT amp's tone and feel! The values you configure for each of these parameters are retained individually, per Voicing.

- 12AX7 Boost (on DT50 amplifiers only)
- Phase Inverter B+ Voltage (on DT50 amplifiers only)
- Feedback Capacitor type (on DT50 amplifiers only)
- Negative Feedback Loop Topology type
- Reverb Parameters - Type, Decay, Pre Delay, and Tone

