

GT-10 Guitar Effects Processor



Realtime Effects Control

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GT10WS01

About the Workshop Booklets

The GT-10 Guitar Effects Processor is BOSS' most powerful floor-based effects unit to date, packing over 30 years of industry-leading tone know-how under one hood. Onboard is a history of BOSS effects, COSM® vintage amps and stumps, studio-quality A/D-D/A conversion, and much more. There's even a real BOSS looper built in, with up to 38 seconds of sound-on-sound recording. The GT-10 is truly the ultimate portable tone machine for guitarists, from stage to studio and beyond.

Each GT-10 Workshop Series booklet focuses on one GT-10 topic, and is intended as a companion to the *GT-10 Owner's Manual*.

About This Booklet

The GT-10 offers many different ways to control its extensive arsenal of effects in real time as you're performing. We'll tell you all about them in this booklet.

Understanding the Symbols in This Booklet

Throughout this booklet, you'll come across information that deserves special attention—that's the reason it's labeled with one of the following symbols.



A note is something that adds information about the topic at hand.



A tip offers suggestions for using the feature being discussed.



Warnings contain important information that can help you avoid possible damage to your equipment, your data, or yourself.

Some Notes About the GT-10's Display

The Play Screen

The Play screen is the GT-10's "home" screen. It's the screen that's displayed after the GT-10 finishes its power-up sequence.

You'll usually want to return to the Play screen when you're done editing any GT-10 functions. This is accomplished by pressing EXIT one or more times.



Throughout this Workshop booklet, we'll usually start procedures from the Play screen.

Setting the Display Mode

The GT-10 offers a number of different display modes, allowing you to choose how various information is shown. To scroll through the available display modes, press the DISPLAY MODE button.



When you're on the Play screen, each press of the DISPLAY MODE button scrolls through eight different Play screen variations. For the purposes of this booklet, we'll be using Play Screen 1 (shown to the right), which is the GT-10's factory default.



When you're on an editing screen for an effect or a control assignment, pressing DISPLAY MODE toggles between an icon-based screen and a list-based screen. For the purposes of this booklet, we'll be using the list-based screen, as shown to the right.



Once you're familiar with operating the GT-10, feel free to use whatever display modes you wish.

Realtime Effects Control Overview

The GT-10 has a staggering number of onboard effects, including COSM preamps, distortions and overdrives, delays, reverbs, modulation effects like chorus, flanger, and phaser, and tons more. Every effect has parameters for adjusting its sound and turning the effect on and off.



Realtime effects control allows you to adjust one or more of an effect's parameters as you play. This is accomplished using the foot switches and pedal on the GT-10 itself, or with an external pedal, external foot switches, or MIDI devices connected to the GT-10. Any device that's used for realtime effects control is called, suitably, a "realtime controller."

You're probably already very familiar with using one of the GT-10's realtime controllers: the onboard expression pedal. In most preset patches, the expression pedal is assigned to a function called "foot volume," and this allows you to control a patch's volume with the pedal. You may have also noticed that, in many cases, you can step on the pedal's toe switch and turn the expression pedal into a wah or pitch bend pedal.

Foot volume is the GT-10's version of a "stompbox" volume pedal, and its position in the effects chain can be adjusted, just as you'd use a hardware volume pedal in conjunction with a bunch of stompboxes. This is in contrast to an overall volume control, which controls the patch volume *after* all the effects. You can have the expression pedal control foot volume, the overall volume, or many other things, as you'll discover reading through this booklet.

These are all great examples of your ability to control GT-10 effects in real time. However, they only scratch the surface of the amazing things you can do, because nearly *any* effect parameter in the GT-10 can be controlled as you play. Using some creative thinking, you can use this power to create a massive arsenal of flexible and innovative guitar sounds that are custom-made for your music.

Types of Realtime Controllers

The GT-10 offers many different realtime control options, both built in and external.

Onboard the GT-10

Foot Switches

The GT-10 provides three different onboard foot switches for controlling effects. These are used to turn effects on/off, toggle between two different parameter values, and more. All provide LED status indicators.

- *CTL 1 and CTL 2*—These foot switches are located on the front panel, to the right of the number foot switches used to select patches.



- *EXP PEDAL SW ON/OFF*—Also called the "expression pedal switch," this foot switch is located under the toe of the onboard expression pedal. To operate the switch, press down firmly on the pedal's toe.



The foot switches can be used either in a "toggle" mode—where the switch holds the assigned parameter value after it's pressed—or in a "momentary" mode, where the assigned parameter's value changes only while the switch is held down.



When assigning parameters to the expression pedal switch, it's referred to as "EXP PEDAL SW" or "EXPSw" in the GT-10's display.

Expression Pedal

In most cases, you'll use the onboard expression pedal to control the GT-10's PEDAL FX group. Effects in this group include foot volume, pedal bend, and wah.

The pedal can also be used to continuously vary other effect parameters, such as the timing or level of a delay effect, the speed of a modulation effect, or the amount of overdrive—nearly anything you can imagine.

As with the foot switches, you can also use the pedal to turn effects on/off, toggle between parameter values, and more.



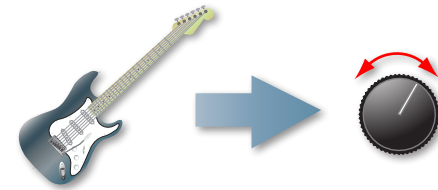
The wave pedal continuously varies—or “modulates”—a parameter between two assigned values. The speed of the value change can be set manually or synced to the GT-10's master tempo.



The wave pedal continuously adjusts a parameter between two assigned values.

Input Level

For the ultimate in expression, the GT-10 allows you to control parameters simply with the dynamics of your playing. When you play soft, hard, and anything in-between, the GT-10 senses these dynamic changes as changes in input level. Thus, by assigning a parameter to be controlled via input level, you can adjust it with how hard or soft you play.

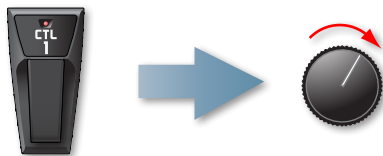


With the input level assignment, you can continuously adjust a parameter with your playing dynamics.

The Internal Pedal and Wave Pedal

These pedals are “virtual” pedals that live inside the GT-10. They control parameters assigned to them automatically.

The internal pedal functions like an automatic expression pedal, moving a parameter from one value to another over a predetermined period of time. To initiate an internal pedal assignment, you trigger it manually with another realtime controller, like a foot switch. Alternately, you can trigger the internal pedal at the moment a patch is selected.



Triggering the internal pedal with a foot switch like CTL 1 (or another controller) adjusts an assigned parameter from one value to another over a predetermined time.

External Control

EXP PEDAL 2/CTL 3,4

On the GT-10's rear panel, there's a jack labeled EXP PEDAL 2/CTL 3,4. Here, you can connect either an optional expression pedal or up to two optional foot switches. When connected, these devices can be used to supplement the onboard expression pedal and foot switches.



Expression pedals that will work here include the BOSS FV-500H/-500L and the Roland EV-5.



BOSS FV-500L



Roland EV-5



When assigning parameters to an external expression pedal, it's referred to as "EXP2" in the GT-10's display.

BOSS foot switches that can be used include the FS-6, a two-button foot switch, or the FS-5U, a single-button foot switch.



BOSS FS-6



BOSS FS-5U



You can connect two FS-5Us to the EXP PEDAL/CTL 3,4 jack with a special "Y" cable (such as the Roland PCS-31).



When assigning parameters to a connected FS-6 or two connected FS-5Us, the two switches are referred to as "CTL3" and "CTL4" in the GT-10's display. If a single FS-5U is connected, use the "CTL3" assignment.



To learn more about connecting an external expression pedal or external foot switches to the GT-10, refer to the *GT-10 Owner's Manual*.

MIDI

GT-10 effect parameters can also be controlled via MIDI using Control Change—or "CC"—messages sent from an external device. To control the GT-10 in this way, connect the MIDI OUT jack of the sending device to the GT-10's MIDI IN jack.



To learn more about using MIDI devices with the GT-10, refer to the *GT-10 Owner's Manual*.

Cool Things You Can Do with Realtime Effects Control

To get your brain around some of the creative possibilities for using the GT-10's realtime control options, here are just a few things that you can do:



- *Turn effects on/off within a patch*—By assigning one or more foot switches to the on/off parameter of one or more effects, you can turn them on and off without switching patches.
- *Switch between two different COSM preamps*—Assign the Preamp A/B function to a foot switch to toggle between two different COSM amps within a single patch.
- *Kick on the SOLO boost*—Assign SOLO to a foot switch for a volume boost during solos.
- *Tap in the tempo*—Assign a foot switch to the Tap function, and then tap in a song's tempo as you play to synchronize the GT-10's time-based effects to your song.
- *Switch channels on your amp*—By assigning a foot switch to the GT-10's AMP CTL function and connecting the AMP CONTROL jack to the foot switch jack on your channel-switching guitar amp, you can toggle between its channels from the GT-10. (Refer to your amp's owner's manual to learn more about its channel-switching functions.)
- *Extend your control of the GT-10's built-in looper*—The GT-10's BANK pedals control the basic operation of the Phrase Loop function. Using realtime control assignments, you can gain additional control over the looper.

- *Control unconventional effects parameters with the expression pedal*—The standard use of the expression pedal is to control guitar effects such as volume, wah, and even whammy-style pitch bend. But you can also control a ton of other neat things with the pedal, such as delay level or time, the gain of a COSM preamp or a distortion effect, or the rate of the flanger effect—even all of them at once. Nearly anything is possible!
- *Create sophisticated effect sounds with a sense of motion*—Using the internal and wave pedals, you can create all sorts of “automatic” effects that would be difficult or impossible to accomplish manually. For example, you can assign the internal pedal to gradually increase or decrease the rate of a tremolo or slicer effect with one press of a foot switch. Or, you can use the wave pedal to continuously vary the filter of the auto wah or an EQ frequency to create realtime filter effects.

These suggestions only scratch the surface of the things you can do with realtime effects control. The only limit is your imagination!

GT-10 Preset Patches That Use Realtime Controllers

Before we show you how to make your own realtime control assignments, let’s examine some of the GT-10’s preset patches that make use of realtime controllers. This will give you a good hands-on overview of what’s possible with realtime effects control.



When the GT-10 ships from the factory, all of its realtime controllers are assigned to follow settings made in each individual patch. However, you have the ability to override the patch settings for individual controllers with system-wide settings, so that they react the same no matter what patch is selected. If you’ve set your GT-10 in this way, some of the following examples may not behave as described. We’ll show you how to set patch and system-wide preferences in “Setting Realtime Controllers to the Same Function for All Patches” near the end of this booklet.



To select patches from the GT-10’s front panel, turn the dial while the Play screen is displayed.

P01-3: AMERICAN LEGEND

This patch combines a classic American tweed amp with some stompbox-type effects. It also includes two effects—tremolo and spring reverb—that were built into vintage American “Blackface” amps.



Effects used in this patch:

- *OD/DS*
- *FX-1 (PARA EQ)*
- *REVERB (Spring)*
- *PREAMP (Channels A and B)*
- *FX-2 (TREMOLLO)*
- *PEDAL FX (FOOT VOLUME/WAH)*

When the patch is first called up, PREAMP A, FX-1, and PEDAL FX (FOOT VOLUME) are on. Use the onboard realtime controllers as follows:

- *CTL 1*—When this foot switch is pressed, two things happen at once: the OD/DS effect toggles on/off, and PREAMP toggles between Channel A and Channel B.
- *CTL 2*—When this foot switch is pressed, both FX-2 and REVERB are toggled on/off.

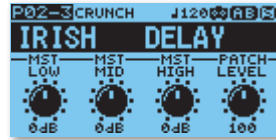


As you can see in the two examples above, a foot switch can be assigned to control more than one parameter with a single action. In fact, the GT-10 allows you to adjust up nine different parameters at once with a single realtime control action!

- *EXP PEDAL SW ON/OFF*—Pressing this switch toggles the expression pedal function between controlling FOOT VOLUME and WAH.
- *Expression pedal*—Controls FOOT VOLUME or WAH, depending on the EXP PEDAL SW ON/OFF setting.

P02-3: IRISH DELAY

This patch combines two vintage British combo amps with a timed delay effect, creating a sound first popularized by UK bands in the '80s.



Effects used in this patch:

- *PREAMP (Channels A and B)*
- *CHORUS*
- *DELAY*
- *REVERB*
- *PEDAL FX (FOOT VOLUME/WAH)*

When this patch is selected, PREAMP A and B (both channels), CHORUS, REVERB, and PEDAL FX (FOOT VOLUME) are on. Use the onboard realtime controllers as follows:

- *CTL 1*—This switch is assigned to BPM Tap, allowing you to set the speed of the GT-10's master BPM (beats per minute) rate by “tapping” in time on the foot switch. The delay effect is assigned to follow the master BPM with a dotted eighth-note delay time, creating a cool rhythmic effect.



When CTL 1 or CTL 2 are set to control BPM Tap, the switch's LED flashes in time with the master BPM rate.

- *CTL 2*—When this foot switch is pressed, DELAY is toggled on and off.
- *EXP PEDAL SW ON/OFF*—When this switch is pressed, the expression pedal function toggles between controlling FOOT VOLUME and WAH.
- *Expression pedal*—Controls FOOT VOLUME or WAH, depending on the EXP PEDAL SW ON/OFF setting.

P03-4: ROTARY CONTROL

Here, we have a classic British stack-type amp combined with a rotary speaker effect.



Effects used in this patch:

- *PREAMP (Channels A and B)*
- *EQ*
- *FX-1 (TONE MODIFY)*
- *FX-2 (ROTARY)*
- *PEDAL FX (FOOT VOLUME/PEDAL BEND)*

When this patch is called up, PREAMP A, EQ, FX-1, FX-2, and PEDAL FX (FOOT VOLUME) are on. Use the realtime controllers as follows:

- *CTL 1*—When this foot switch is pressed, PREAMP toggles between Channel A to Channel B.
- *CTL 2*—When this foot switch is pressed, the speed of the ROTARY effect toggles between FAST and SLOW.



The GT-10's ROTARY effect emulates the sound of a vintage “rotating speaker” cabinet. When the speed control is toggled, the speed change is gradual, just as it is when adjusting the motor speed on an actual rotating speaker cabinet.

- *EXP PEDAL SW ON/OFF*—When this switch is pressed, the expression pedal function toggles between controlling FOOT VOLUME and PEDAL BEND.
- *Expression pedal*—Controls FOOT VOLUME or PEDAL BEND, depending on the EXP PEDAL SW ON/OFF setting.

P12-4: LEAD+CTL FLANGE

This patch combines a classic British stack-type amp with modulation, delay, and reverb effects.



Effects used in this patch:

- *PREAMP (Channels A)*
- *DELAY*
- *FX-1 (PHASER)*
- *FX-2 (FLANGER)*
- *REVERB (Room)*
- *PEDAL FX (FOOT VOLUME/WAH)*

When the patch is selected, PREAMP B, DELAY, REVERB, and PEDAL FX (FOOT VOLUME) are on. Use the realtime controllers as follows:

- *CTL 1*—When this foot switch is pressed, FX-1 toggles on/off.
- *CTL 2*—Here, this foot switch is set to the “momentary” setting. When CTL 2 is pressed, FX-2 turns on. When the switch is released, FX-2 turns off again.



Using foot switches with the momentary setting is great for adding brief, expressive effects as you play.

- *EXP PEDAL SW ON/OFF*—When this switch is pressed, the expression pedal function toggles between controlling FOOT VOLUME and WAH.
- *Expression pedal*—Controls FOOT VOLUME or WAH, depending on the EXP PEDAL SW ON/OFF setting.

P32-3: PEDAL UNI-V

This patch blends two different vintage American amps with chorus, delay, and reverb effects. Featured is the UNI-V effect, with its rate controlled by the expression pedal.



Effects used in this patch:

- *PREAMP (Channels A and B)*
- *DELAY*
- *FX-1 (UNI-V)*
- *CHORUS*
- *REVERB (Plate)*

When the patch is selected, all the above effects are on. Use the realtime controllers as follows:

- *CTL 1*—Just like in P02-3: Irish Delay, this foot switch is assigned to BPM Tap, so you can set the speed of the GT-10's master BPM by tapping in time on the foot switch. In this patch, however, the delay effect is set to follow the master BPM with a quarter-note delay time.
- *CTL 2*—When this foot switch is pressed, DELAY is toggled on and off.
- *EXP PEDAL SW ON/OFF*—When this switch is pressed, the expression pedal function toggles between controlling UNI-V rate or nothing.
- *Expression pedal*—Controls the UNI-V rate or nothing, depending on the EXP PEDAL SW ON/OFF setting.

P47-4: A=CL+MOD | B=OD

In this patch, pressing CTL 1 switches between two radically different sounds. When listening to the GT-10 in stereo, you'll hear each sound toggle between the left and right outputs.



Effects used in this patch:

- *PREAMP (Channels A and B)*
- *EQ*
- *FX-1 (T.WAH)*
- *FX-2 (ROTARY)*
- *DELAY*
- *REVERB (Spring)*
- *PEDAL FX (FOOT VOLUME/WAH)*
- *CTL 1*—When this foot switch is pressed, PREAMP toggles between two different PREAMP settings. In one setting, Channel A's volume is turned down, while Channel B's volume is turned up. In the other setting, the opposite occurs: Channel A's volume is turned up, while Channel B's volume is turned down.
- *CTL 2*—When this foot switch is pressed, DELAY is toggled on/off.
- *EXP PEDAL SW ON/OFF*—Pressing this switch toggles the expression pedal function between controlling FOOT VOLUME and WAH.
- *Expression pedal*—Controls FOOT VOLUME or WAH, depending on the EXP PEDAL SW ON/OFF setting.

P49-1: MANY EFFECTS CLN

As its name suggests, this is a clean patch that combines many effects together. We've included it here to show you the internal pedal in action.



Effects used in this patch:

- *COMP*
- *PREAMP (Channels A and B)*
- *FX-1 (AUTO WAH)*
- *FX-2 (PHASER)*
- *DELAY*
- *CHORUS*
- *REVERB (Modulate)*
- *PEDAL FX (FOOT VOL/PEDAL BEND)*

When the patch is selected, all the above effects are on. Use the realtime controllers as follows:

- *CTL 1*—When pressed, CTL 1 activates the internal pedal, which is assigned to control the time of the DELAY effect. The switch is set for momentary action, so you only have to press it briefly to initiate the internal pedal’s assigned parameter adjustment.



To see what the internal pedal is doing, press the DELAY button on the GT-10’s front panel, and watch what happens to the DLY TIME parameter in the display each time you press CTL 1.

- *CTL 2*—This switch triggers a second internal pedal assignment that adjusts the PEDAL BEND effect.
- *EXP PEDAL SW ON/OFF*—Pressing this switch toggles the expression pedal function between controlling FOOT VOLUME and PEDAL BEND. (When the patch is selected, PEDAL BEND is on.)
- *Expression pedal*—Controls FOOT VOLUME or PEDAL BEND, depending on the EXP PEDAL SW ON/OFF setting. (Moving the pedal with PEDAL BEND on manually controls the same parameter as that assigned to CTL 2. When CTL 2 is pressed, the internal pedal automatically cycles PEDAL BEND through its assigned range.)

Assigning Realtime Controllers



This section discusses assigning realtime controllers in patches. After you make an assignment, you’ll need to save the patch to a user patch location by using the WRITE procedure, otherwise your changes will be lost when you select another patch or turn off the GT-10. If you don’t know how to save user patches, see Chapter 3, “Saving a Tone” in the *GT-10 Owner’s Manual*.



Saving a patch overwrites the data in the selected destination patch. If the destination patch contains data you want to keep, select a different patch, or back up its data to a computer via USB before proceeding. To learn more, see the *GT-10 Owner’s Manual*.



The current state of any realtime control assignments are saved when you save a patch. For example, let’s say that you’ve assigned CTL 1 to turn DELAY on/off. If DELAY is on when the patch is saved, it will be on the next time the patch is recalled. Even if you use CTL 1 to turn DELAY off and then switch to another patch without saving, DELAY is still automatically turned on again the next time the patch is recalled, since it was originally saved in that state.

Patch Settings Versus System Settings

Before we talk about making your own custom control assignments, let’s discuss the difference between patch and system assignments.



Every patch has its own unique set of realtime control assignments. This gives you the ability to completely reconfigure all realtime controllers with a single patch change.

If you like, you have the option of setting realtime controllers to follow system-wide settings instead of patch settings. When you do this, the realtime control assignment remains the same no matter what patch is selected.

The following realtime controllers can be independently configured to follow either patch or system-wide settings:

- *EXP 1*
- *EXP 2*
- *CTL 2*
- *CTL 4*
- *EXP PEDAL SW*
- *CTL 1*
- *CTL 3*



When the GT-10’s are at its factory default settings, all the above controllers are set to follow the settings made in each patch.

Choosing a system-wide setting is great when you know you want to use an assignment the same way in every patch. For example, you may want to set PEDAL FX to FOOT VOLUME or use CTL 2 for tap tempo in every patch. Setting a controller to system-wide status saves you from having to make the same settings over and over in all your patches.

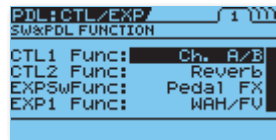


System-wide settings are also a great way to temporarily override patch control settings for a special application. Setting a particular realtime controller for system-wide use doesn't alter the settings stored for that controller in each patch; it only ignores them.

We'll show you how to set a realtime controller to system-wide status a little later. For now, we'll just focus on making realtime controller assignments in patches.

Quickly Assigning Common Functions to Realtime Controllers

On the SW&PDL FUNCTION screen, you can quickly assign commonly used effects parameters and other functions to the onboard pedal and switches. These include things like assigning a foot switch to turn a particular effect group on/off, setting a foot switch for tap tempo, or setting the function of PEDAL FX.



For most basic effects adjustments, these "shortcut" assignments will be all you'll ever need to set. Following are tables that show the available assignments.

SW&PDL FUNCTION Assignments: CTL 1, CTL 2, and EXP Sw

Function	What it Does
Off	No assignment.
Ch. A/B	Switches between Preamp CHANNEL A and B.
OD Solo	Switches OD/DS SOLO on/off.

Function	What it Does
Solo	Switches Preamp SOLO on/off for the currently selected channel: A or B.
A&B Solo	Simultaneously switches Preamp SOLO on/off for both CHANNEL A and B.
Comp	Switches COMP on/off.
OD/DS	Switches OD/DS on/off.
Preamp	Switches PREAMP on/off.
EQ	Switches EQ on/off.
FX-1	Switches FX-1 on/off.
FX-2	Switches FX-2 on/off.
Delay	Switches DELAY on/off.
Chorus	Switches CHORUS on/off.
Reverb	Switches REVERB on/off.
Pedal FX	Switches PEDAL FX on/off.
Send/Return	Switches SEND/RETURN on/off.
Amp Ctl	Switches Amp Control on/off.
Tuner	Switches the tuner on/off.
Manual	Switches Manual mode on/off.
PL	Switches PHRASE LOOP on/off.
PL Rec/Play	Record/play toggle for PHRASE LOOP.
PL Clear	Clears the current phrase in PHRASE LOOP.
PL Mute/Play	Mute/play toggle for PHRASE LOOP.
BPM Tap	For tap input of MASTER BPM.
Delay Tap	For tap input of the delay effect's Dly Time parameter.
MIDI Start	Controls MIDI Start/Stop on an externally connected MIDI device such as a drum machine or sequencer.
MMC Play	Toggles Play/Stop on an externally connected MIDI device that responds to MMC messages.
Lev +10	Increases the Patch Level parameter by a value of 10.

Function	What it Does
Lev +20	Increases the Patch Level parameter by a value of 20.
Lev -10	Decreases the Patch Level parameter by a value of 10.
Lev -20	Decreases the Patch Level parameter by a value of 20.
Num Inc	Switches the next-highest patch number.
Num Dec	Switches the next-lowest patch number.
Bank Inc	Switches the next-highest patch bank.
Bank Dec	Switches the next-lowest patch bank.
LED Moment	The switch's LED is turned on when the switch is pressed, and turned off when the switch is released. (Available for CTL 1 and CTL 2 only.)
LED Toggle	The switch's LED is turned on when the switch is pressed, and stays on until the switch is pressed again. (Available for CTL 1 and CTL 2 only.)



The “LED Moment” and “LED Toggle” assignments don’t control any effects; they only control how the status LEDs on CTL 1 and CTL 2 behave. This can be useful when making more detailed control assignments on the ASSIGN 1-8 screens, as described in a bit.

SW&PDL FUNCTION Assignments: EXP 1

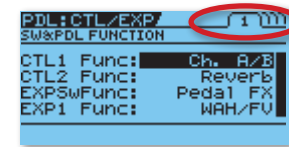
Function	What it Does
Off	No assignment.
Foot Volume	Assigns EXP 1 to PEDAL FX: Foot Volume.
Pedal Bend	Assigns EXP 1 to PEDAL FX: Pedal Bend.
WAH	Assigns EXP 1 to PEDAL FX: WAH.
PB/FV	Assigns EXP 1 to toggle between PEDAL FX: Pitch Bend and PEDAL FX: Foot Volume.
WAH/FV	Assigns EXP 1 to toggle between PEDAL FX: WAH and PEDAL FX: Foot Volume.



If you’re setting EXP1 to the dual-function assignments PB/WAH or WAH/FV, make sure you set one of the switches to “Pedal FX” so you can toggle between the two settings. (Setting EXP PEDAL SW for this purpose usually makes the most sense.)

Making Assignments on the SW&PDL FUNCTION Screen

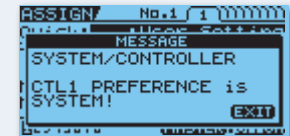
- From the Play screen, press MASTER/PEDAL FX.
- Turn the dial to select PDL FX, and then press ENTER.
- If necessary, use the ◀ and ▶ buttons to navigate to the SW&PDL FUNCTION screen (Page 1 in the display). If the screen is not displayed in list view as shown below, press DISPLAY MODE so it is.



- Use the PARAMETER 1-4 knobs under the display to set the desired function for CTL1, CTL2, EXP1, and EXP2. (If you don’t want to assign a function to a particular foot switch or pedal, select “Off.”)



If you see a warning message that says “XXX PREFERENCE is SYSTEM!” when performing Step 4 above, it means that the particular controller you’re trying to adjust is currently set to system-wide operation. To set the preference back to Patch, press EXIT, and then follow the procedure described in “Setting Realtime Controllers to the Same Settings for All Patches” on Page 17 in this booklet.



- When you’re done, press EXIT twice to return to the Play screen. To save the settings you’ve just made, don’t forget to save your patch to a user patch location.

Using the ASSIGN Screens to Make Detailed Realtime Control Assignments

On the ASSIGN screens, you can have some real fun creating sophisticated realtime control assignments. This is where you make settings for all the GT-10's realtime controllers: the onboard foot switches and pedal, the wave and internal pedals, input level, external foot switches, an external pedal, and MIDI.



There are eight different ASSIGN screens (ASSIGN 1-8), allowing you to make eight different realtime control assignments. Additionally, you can specify how the realtime controllers behave. Here are just a few examples of things you can do on the ASSIGN screens:

- Assign a single foot switch to turn multiple different effects on/off with a single press
- Assign a foot switch to toggle between two different parameter values in a single effect (or many effects)
- Assign an effect (or multiple effects) to turn on/off only when a foot switch is pressed and held
- Continuously control any effects parameter (or multiple parameters) with the onboard expression pedal or an expression pedal
- Assign a foot switch to the internal pedal and vary an effects parameter over time when the foot switch is pressed
- Have an effects parameter vary continuously with the wave pedal
- Assign a parameter to be adjusted by varying your picking dynamics
- Assign parameters to respond to incoming MIDI CC messages

Using the ASSIGN screens, you can control your GT-10 effects to an unprecedented degree, giving you an amazing amount of expressive control over your guitar tone.



Any realtime control assignments you make on the ASSIGN screens are in addition to the controls assignments made in the previous section, “Quickly Assigning Common Functions to Realtime Controllers.”

ASSIGN Screen Functions

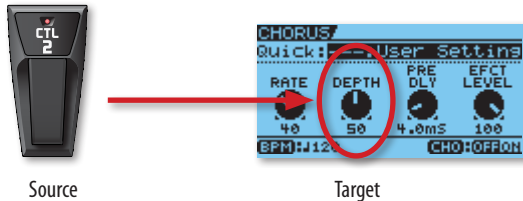
The following table shows all the available functions in the ASSIGN screens.

Function	Label	What It Does
Primary Target	Target	This determines the effect or function you want to control.
Secondary Target	None	This determines which of the primary target's parameters is to be controlled.
Minimum Value	Min	This sets the minimum value for the secondary target.
Maximum Value	Max	This sets the maximum value for the secondary target.
Control Source	Source	This determines the GT-10 realtime controller that will control the target.
Control Source Mode	Src Mode	This determines how the source controller behaves (momentary or toggle). This setting only has an effect when a foot switch is selected as the control source.
Active Range Low	ActRngLo	This sets a secondary minimum value for the secondary target, based on the current “Min” setting. (Normally, you'll want to leave this set at 0.)
Active Range High	ActRngHi	This sets a secondary maximum value for the secondary target, based on the current “Max” setting. (Normally, you'll want to leave this set at 127.)
Internal Pedal Trigger	Int Trig	When INTERNAL PDL is selected as the control source, this setting determines what action or controller initiates the internal pedal's assigned parameter adjustment.
Internal Pedal Time	Int Time	When INTERNAL PDL is selected as the control source, this setting determines the speed of the internal pedal's assigned parameter adjustment.

Function	Label	What It Does
Internal Pedal Curve	IntCurve	When INTERNAL PDL is selected as the control source, this setting determines the response curve of the internal pedal's assigned parameter adjustment.
Wave Pedal Rate	WaveRate	When WAVE PEDAL is selected as the control source, this setting determines the speed at which the wave pedal modulates the target parameter. (The speed can be a fixed value or a note value that's synced to the GT-10's master BPM.)
Wave Pedal Waveform	Waveform	When WAVE PEDAL is selected as the control source, this setting determines the smoothness with which the wave pedal adjusts the target parameter.

About the Target and Source

When working with control assignments, the “target” is what you want to control, while the “source” is the mechanism with which you control the target.



When working in the ASSIGN screens, the primary target is the effect or function you wish to control, while the secondary target is the particular parameter within that effect or function.

For example, let's say that you'd like to control a parameter in the chorus effect. For the primary target, you'd choose "CHORUS." For the secondary target, you'd choose the desired chorus parameter, such as On/Off, Rate, Depth, etc.

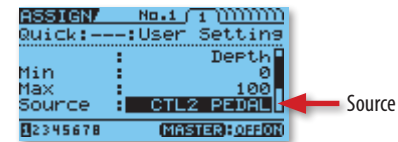


Primary and secondary target locations on an ASSIGN screen. Scroll down to set the source controller.



We're using the terms “primary target” and “secondary target” only for the purposes of this booklet, to help you categorize the many control assignments that are available. In the GT-10's display and the *GT-10 Owner's Manual*, both are simply referred to as “Target.”

On the ASSIGN screens, the source is the realtime controller—CTL1, CTL2, EXP1, etc.—that you wish to use to control the chosen target parameter.



Source location on an ASSIGN screen.



On each of the eight ASSIGN screens, there is a single target/source relationship. If you want to use a specific source to control multiple targets at once—or if you want to control a specific target with multiple sources—simply set up those relationships one by one using multiple ASSIGN screens.

Available Targets

On the ASSIGN 1-8 screens, you can target nearly any GT-10 effects parameter or function for realtime control. For a detailed listing of every available parameter and function, see the TARGET PARAMETER tables in the “Parameters Guide” chapter in the *GT-10 Owner's Manual*.

Another way to see them is on the GT-10 itself: just scroll through the Target parameters on an ASSIGN screen to see every available parameter and function, as described in Step 5 of “Making Settings in the ASSIGN Screens” (coming up on Page 15).

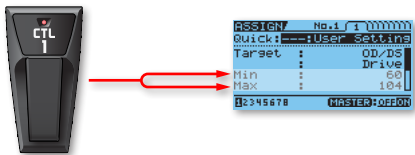
About Minimum and Maximum Values

On the ASSIGN screens, the “Min” (minimum) and “Max” (maximum) values represent the range over which you can adjust the target parameter with the source. How these values behave depends on whether you’re using a foot switch or a “continuous controller” (like an expression pedal) as the source for controlling the target.

Parameter Adjustment with Foot Switches

When a foot switch is assigned as the control source, it toggles between the minimum and maximum values you’ve set. For two-way parameters, such as “on” and “off,” this is a no-brainer. Just set the minimum value to Off and the max value to On (or vice versa), and you’re good to go.

However, when a parameter is a numeric value (as is the case most of the time), the foot switch will toggle between the numeric values that you’ve set. For example, if you’ve targeted the drive parameter in a distortion effect and you’ve selected a foot switch as the source, you can use it to toggle between the two different drive values. Or, if you’ve targeted the rate in the flanger effect, you can toggle between the two different rate values.



Each press of a foot switch that’s assigned as the source toggles between the minimum and maximum values assigned to the target.

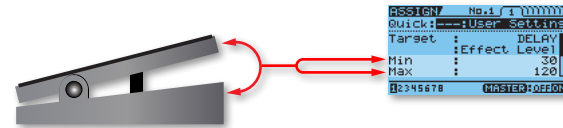


Most of the time, you’ll probably want a foot switch to hold a parameter after it’s pressed. To set this behavior, select “Toggle” on the Src Mode line in an ASSIGN screen. If you want to execute the assigned parameter change only while the foot switch is held down, select “Moment” (momentary) instead.

Parameter Adjustment with Continuous Controllers

A “continuous controller” is a realtime controller that continuously varies a parameter through the entire range between the minimum and maximum target values. On the GT-10, any realtime controller that’s not a foot switch—expression pedals, MIDI CC messages, the internal and wave pedals, and input level—is considered a continuous controller.

Let’s say that you’ve targeted the delay level in a delay effect, and you’ve selected the onboard expression pedal (EXP1) as the source. When you operate the pedal, it will continuously vary the delay level between the minimum and maximum values you’ve set. Or, if you’ve selected the wave pedal as the source instead, the delay level will automatically vary between the minimum and max values, with the speed of the value adjustment determined by the rate that you’ve set.



Operating an expression pedal (or other continuous controller) that’s assigned as the source continuously varies the target parameter between the minimum and maximum values.



Continuous controllers aren’t just for numeric parameter values; you can also use them as the source when you wish to control two-way parameters like on and off. In such cases, the parameter value will toggle at the controller’s midpoint.



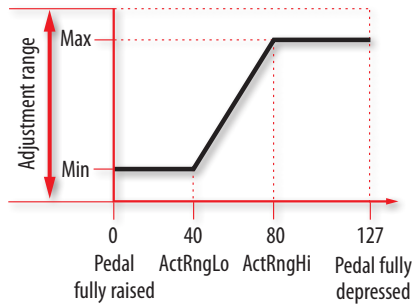
In the case of numeric parameters, the maximum value doesn’t *have* to be greater than the minimum value. In practice, this means that you’re not limited to, say, moving the expression pedal forward to *increase* a value, as you might in most cases; you can alternately move the pedal forward to *decrease* a value instead, if you wish.

Continuous Controllers and the Active Range Settings

The Active Range settings on the ASSIGN screens are for realtime control power users. They allow you to condense the active range of a continuous controller when you've assigned it as a source, so that you can "tighten up" the feel of the controller when it's used.

For example, let's say you've targeted a delay's level to be controlled by the onboard expression pedal, as we discussed above. By setting "ActRngLo" and "ActRngHi" to values other than 0 and 127 respectively, you confine the minimum and maximum value adjustment over a smaller pedal range when the pedal is operated.

This principle is illustrated in the following diagram. Here, ActRngLo is set to 40 and ActRngHi is set to 80, while Min is set to 0 and Max is set 127.

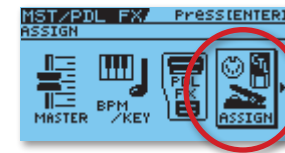


Pedal action with Active Range settings.

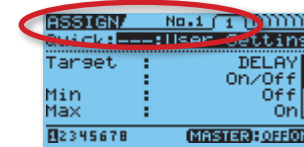
Active Range settings are really only useful when the control source is an expression pedal or input level. (Even then, the effect of Active Range settings can be quite subtle.) For all other control sources—or if you don't want to set a smaller active range for an expression pedal or input level source—we recommend setting ActRngLo to 0 and ActRngHi to 127.

Making Settings in the ASSIGN Screens

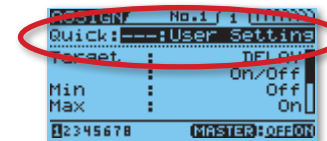
- 1 Press MASTER/PEDAL FX.
- 2 Turn the dial to select ASSIGN, and then press ENTER.



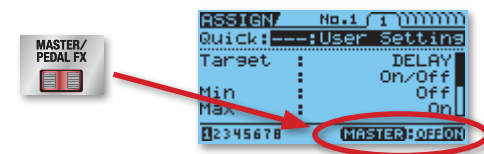
- 3 If necessary, use the ◀ and ▶ buttons to navigate to the ASSIGN 1 screen. (If the screen is not displayed in list view as shown below, press DISPLAY MODE so it is.)



- 4 Highlight the "Quick" line, and turn the dial counter-clockwise to select "User Setting" (if it isn't already selected).



- 5 Use the ▲ and ▼ buttons and dial to make the desired settings.
- 6 To enable the realtime controller assignment, press the MASTER/PEDAL FX button so that ON is highlighted in the lower right hand corner of the display. If you want to disable the controller assignment, choose OFF instead.

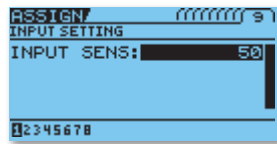


- 7 If you wish to make additional realtime controller assignments, use the ◀ and ▶ buttons to navigate to other ASSIGN screens, and then repeat Steps 4-6.
- 8 When you're done, press EXIT twice to return to the Play screen. To save the settings you've just made, don't forget to save your patch to a user patch location.

When Source is Set to INPUT LEVEL

If you've set Source to INPUT LEVEL in Step 5 above, you can adjust the input sensitivity to match the dynamics of your playing.

- 1 Access the ASSIGN screens as described in Steps 1 and 2 above.
- 2 Use the ◀ and ▶ buttons to navigate to the INPUT SETTING screen.



- 3 Turn the dial to set the desired value: 0-100.
- 4 When you're done, press EXIT twice to return to the Play screen.

Using Quick Settings in the ASSIGN Screens

Quick Settings let you quickly set up a realtime control assignment by calling up one of 10 Quick Setting presets, or by calling up the control assignments used in any other GT-10 patch. You can also save your own favorite realtime control assignments in 10 user Quick Setting locations.

- *To call up a user or preset Quick Setting*—select the “Quick” line in any ASSIGN screen, and turn the dial to choose the desired preset: U01-U10 or P01-P10. Then, press MASTER/PEDAL FX to enable or disable the assignment.
- *To call up a controller assignment from another patch*—select the “Quick” line in any ASSIGN screen, and turn the dial to choose the patch and one of its eight assignments. Then, press MASTER/PEDAL FX to enable or disable the assignment.



You may find the icon-based ASSIGN display to be easier to navigate when choosing Quick Settings. As a reminder, press DISPLAY MODE to toggle between list-based and icon-based displays.

Saving the Current ASSIGN Settings as a User Quick Setting

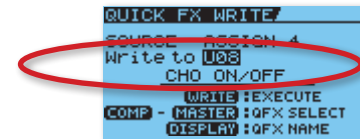


Saving a Quick Setting overwrites the data in the selected destination Quick Setting. If the destination Quick Setting contains data you want to keep, select a different Quick Setting, or back up Quick Settings to a computer via USB before proceeding. To learn more, see the *GT-10 Owner's Manual*.

- 1 In any ASSIGN screen, make the desired settings as described in “Making Settings in the ASSIGN Screens.” Alternately, you can call up any Quick Setting as described above.
- 2 Press WRITE.
- 3 Press MASTER/PEDAL FX to select the QUICK FX WRITE screen.
- 4 With the “SOURCE” field highlighted, turn the dial to display the ASSIGN screen (ASSIGN 1-8) whose settings you wish to save as a Quick Setting.



- 5 Use the ▲ and ▼ buttons highlight the “Write to” field.



- 6 Turn the dial to choose the desired user location: U01-U10.

- If you wish to give your user Quick Setting a unique name, press DISPLAY MODE to display the QUICK FX NAME screen. If not, skip to Step 9.



- Use the ◀, ▶, ▲, and ▼ buttons, the PARAMETER knobs, and dial to name your Quick Setting. When you're done, press DISPLAY MODE to return to the QUICK FX WRITE screen.
- To save the Quick Setting in the location chosen in Step 6, press WRITE. To exit without saving anything, press EXIT to return to the Play screen.



Quick Settings are also available for all the GT-10's effects, making it easy for you to instantly set up all the parameters in an effect at one time. To learn more about using them, see the *GT-10 Owner's Manual*.

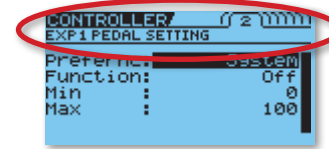
Setting Realtime Controllers to the Same Function for All Patches

As we discussed earlier in "Patch Settings Versus System Settings," you can set each of the built-in and external pedals/switches to control the same functions in all patches, ignoring the settings made in each individual patch. Here's how:

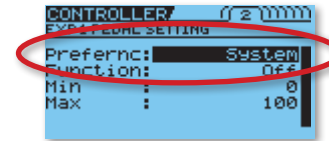
- Press SYSTEM.
- Turn the dial to select CONTROL, and then press ENTER.



- Use the ◀ and ▶ buttons to navigate to the screen for the desired realtime controller. The controller name is shown near the top of the display.



- Use the ▲ and ▼ buttons to select the "Prefernc" line.



- Turn the dial to select System.
- Use the ▲ and ▼ buttons to highlight the "Function" line, and then turn the dial to select a realtime control assignment. (If you don't want the realtime controller to control anything, select "Off.")
- Use the ▲ and ▼ buttons and dial to make the desired settings for the assignment made in Step 6.
- Repeat Steps 3-7 to make additional system settings as desired.
- Press EXIT twice to return to the Play screen.



We mentioned this earlier, but it bears repeating: setting a control assignment for system-wide use doesn't affect the settings stored in each patch; it only ignores them. To revert back to the settings stored in each patch for a particular realtime controller, simply select Patch in Step 5 above.

An Extra Onboard System-Wide Controller

The GT-10 has one more onboard system-wide controller we haven't mentioned yet: the number foot switch for the currently selected patch.



As you're probably aware, GT-10 patches are organized in banks of four patches each. Patches within the currently selected bank can be chosen by foot using the four numbered foot switches on the front panel (shown above). When a particular patch number (1-4) is selected, the LED on its corresponding numbered foot switch lights.

As long as a particular patch is selected, its foot switch is idle. BOSS engineers smartly recognized this, and they've given you the ability to assign your choice of a few often-used functions to that idle switch.



If you're not familiar with using the BANK and 1-4 switches to select patch banks and patches on the GT-10, refer to the *GT-10 Owner's Manual*.

The following table shows the functions that are available for assignment.

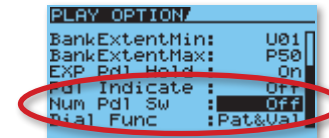
Function	What it Does
Off	No assignment.
Tuner	Turns the tuner on and off.
Ch. A/B	Switches between Preamp CHANNEL A and B.
OD Solo	Switches OD/DS SOLO on/off.
Solo	Switches Preamp SOLO on/off for the currently selected channel: A or B.
A&B Solo	Simultaneously switches Preamp SOLO on/off for both CHANNEL A and B.

Assigning a Function to Be Controlled By a Numbered Foot Switch

- 1 Press SYSTEM.
- 2 Turn the dial to select PLAY OPTION, and then press ENTER.



- 3 Use the ▲ and ▼ buttons to select the "Num Pdl Sw" line.



- 4 Turn the dial to select a realtime control assignment. If you don't want a numbered foot switch to control anything, select Off.
- 5 Press EXIT twice to return to the Play screen.

To use the realtime control assignment you've just made, simply press the numbered foot switch for the currently selected patch number (it's the one with the lit LED).

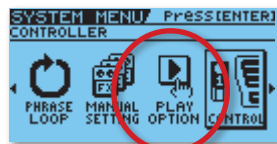
Carrying Over the Current Expression Pedal Value While Switching Patches

If you use a particular expression pedal function in a number of different patches—such as foot volume or wah—you may want to have the current pedal position (and its subsequent controller value) carry over when changing patches. This is accomplished with the Expression Pedal Hold function.

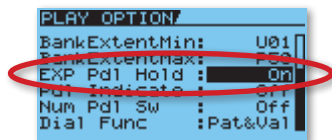


Expression Pedal Hold is particularly useful when the expression pedal is assigned to a volume function, such as foot volume or patch volume. This eliminates volume jumps when switching between patches.

- 1 Press SYSTEM.
- 2 Turn the dial to select PLAY OPTION, and then press ENTER.



- 3 Use the ▲ and ▼ buttons to select the “Exp Pdl Hold” line.



- 4 Turn the dial to choose the desired setting: On or Off.
- 5 Press EXIT twice to return to the Play screen.



At the GT-10’s factory default setting, the Expression Pedal Hold switch is turned on.

Display Modes and Realtime Control Assignments

At the top of this booklet, and at various times throughout, we’ve talked a bit about the GT-10’s different display modes. After you’ve made some of your own control assignments—or if you just want to quickly see what’s assigned in any patch—the following screen variations can help you quickly see what’s assigned.

Play Screen

To select these variations, press the DISPLAY MODE button while the Play screen is displayed.



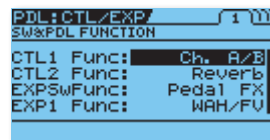
Play Screen 4



Play Screen 5

SW&PDL FUNCTION Screen

To toggle between these two variations, press the DISPLAY MODE button while the SW&PDL FUNCTION screen is displayed.



ASSIGN Screens

To toggle between these two variations, press the DISPLAY MODE button while any ASSIGN screen is displayed.



The End

We hope you’ve found this workshop helpful. Keep an eye out for new GT-10 updates and support documents, available as free downloads at www.BOSSUS.com and www.RolandUS.com.