

## RC-50 Loop Station



## Using Multi Mode

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**RC50WS02**

## About the RC-50 Workshop Booklets

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The BOSS RC-50 Loop Station sets a new standard for performance loopers. With 49 minutes of mono recording time (or 24 minutes in stereo), onboard storage for up to 297 phrases, and massive realtime control, the RC-50 is a powerful realtime performance tool. While looping is its primary function, it can be used in many other ways as well: as a sampler, a backing track player, a practice aid, and more.

Each RC-50 Workshop booklet focuses on a specific topic to help you get the most out of your RC-50 and spark some ideas for its creative use. RC-50 Workshop booklets are intended as companions to the *RC-50 Owner's Manual*.

### About This Booklet

Each RC-50 patch contains three phrases. The patch's Play mode setting—Single or Multi—determines how you can use these phrases in your performances. Both Play modes have their advantages, with each being best-suited for different looping scenarios.

This booklet focuses on using Multi mode, including pedal operations, important patch settings, and some suggested performance applications. To learn about Single mode, see the RC-50 Workshop booklet *Using Single Mode*.

### 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.

## Terminology

- On the RC-50, a “phrase” is a container for audio data. An RC-50 patch contains three phrases, and each can loop indefinitely or be triggered sampler-style using the “One Shot” function.
- When a phrase is empty, capturing audio into it is called “recording.”
- While recording a phrase, pressing the REC/PLAY/OVERDUB pedal stops recording and starts the phrase playing from the beginning. This action determines the phrase's length, and we call it “closing the phrase.”
- Alternately, a phrase can be closed by pressing the STOP pedal during phrase recording.
- When a phrase already contains audio and you wish to layer more—or replace some—you “overdub” audio into the phrase.

## A Note About Patch Settings

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An RC-50 patch contains many settings that determine how its phrases play, and among them is the Play mode selection. Multi mode—one of the two Play modes—is the subject of this booklet.

While discussing Multi mode, we'll describe some other patch settings that are important to using the mode effectively. Focusing on them in particular doesn't mean that other patch settings are irrelevant while working with Multi mode—we're only highlighting them here because they so fundamentally affect the use of the mode. Additionally, the suggestions made here are just basic recommendations, and we encourage you to experiment and find the settings that best suit the way you like to work.

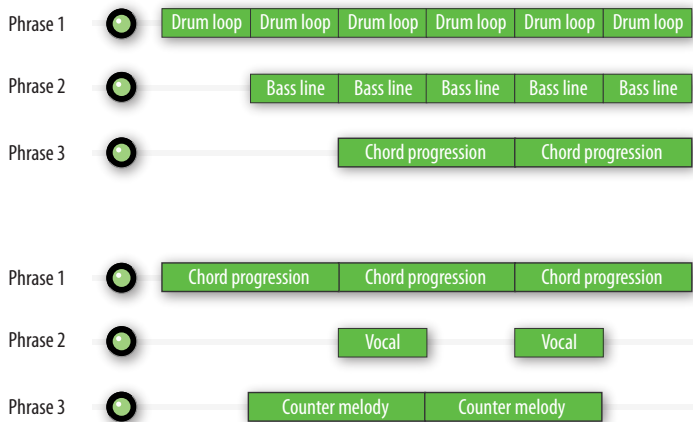
To learn more about patches, see the RC-50 Workshop booklet *Patches* and Chapter 4 in the *RC-50 Owner's Manual*.

## About Multi Mode

When the RC-50's in Multi mode, all three phrases in a patch can play simultaneously. Essentially, this turns the RC-50 into a multitrack recording and playback device.

Multi mode's great for creating complex, layered compositions live in real time. If you wish, you can import audio—such as drum loops, bass lines, etc.—into the RC-50's phrases, and use them as starting points for your live phrase recordings. With a three-phrase looping multitracker at your feet, the creative possibilities are nearly endless.

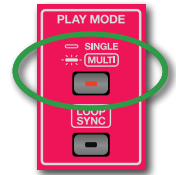
The following illustrations show just two examples of the many ways you can use Multi mode phrases:



The *Sound Library for RC-50* CD that comes with the RC-50 has tons of great audio bits that you can import into phrases from your computer via USB. To learn how, see Chapter 9 in the *RC-50 Owner's Manual*.

## Selecting Multi Mode

To choose Multi as the Play mode, press the PLAY MODE button so its indicator lights.



The Play mode can't be changed during recording, overdubbing, or playback.

## Multi Mode's Synchronization Tools

When multiple phrases are playing simultaneously, you'll usually want to keep them in synchronization with each other. Following are some of the tools the RC-50 provides to help you accomplish this.

### Loop Quantize

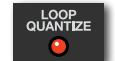
Loop Quantize is a feature that helps you close a phrase in time with the guide or another phrase, even if you don't press the REC/PLAY/OVERDUB pedal at exactly the right moment. This allows you to focus on your performance rather than precision pedal-pressing.

The ins and outs of Loop Quantize are covered in detail in the RC-50 Workshop booklet *The Guide and Loop Quantize*.

There's no on/off switch for Loop Quantize—when it's needed, it's automatically enabled during phrase recording while you're using the other RC-50 features described in this section.



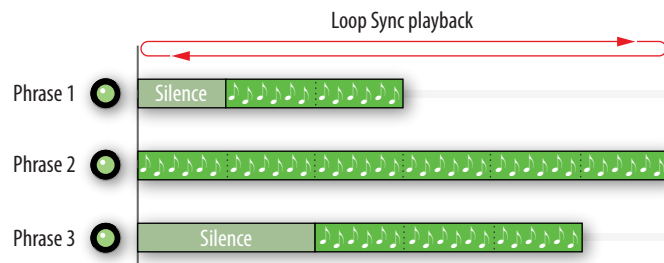
The LOOP QUANTIZE indicator lights whenever Loop Quantize is active.



## Loop Sync

Multi mode's Loop Sync feature offers an easy way to keep multiple phrases in sync with each other.

The following example illustrates how Loop Sync works after audio's been recorded in a patch's phrases. When it's on, the RC-50 loops over the length of the longest phrase—Phrase 2 in this case. The playback starting points of Phrases 1 and 3 are determined by when they were recorded in relation to Phrase 2's length. (When necessary, the RC-50 locks a newly recorded phrase's start time to the start of the longest phrase by automatically adding silence—that is, blank audio—to the beginning of the new phrase when it's closed.)



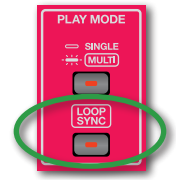
If you're using Loop Sync to create a multi-phrase loop performance from a blank slate—that is, you start with three empty phrases—the first phrase you record will determine the loop playback length for all phrases. However, if you've recorded or imported audio into a patch's phrases before turning on Loop Sync, the loop playback length is determined by the overall length of the longest recorded/imported phrase.

Either way, once the longest phrase has been defined, Loop Quantize is enabled, ensuring that additional phrase recordings don't exceed the length of this phrase.



Loop Sync only works with phrases that are set for looped playback. If a phrase is set for One Shot playback, its length is not constrained by Loop Sync. We'll cover loop/One Shot phrase settings in the next section.

To enable Loop Sync, make sure that the RC-50's in Multi mode, and then press LOOP SYNC so its indicator lights. (The LOOP SYNC button is disabled when the RC-50's in Single mode.)



## To Loop Sync or Not to Loop Sync?

Loop Sync makes syncing multiple phrases hassle-free, but there may be times when turning it off will suit a composition better. Use the following as general guidelines:

- *Turn Loop Sync on*—when you want to create a multi-phrase performance where all phrases share a common looping length.
- *Turn Loop Sync off*—when you want to create a multi-phrase performance where each phrase loops independently based on its length, and/or where you wish to have independent control of the playback starting points of all three phrases.

## The Guide

The RC-50's built-in guide provides a rhythmic backing you can play along with while recording phrases. It offers numerous patterns in a variety of time signatures, so it's easy to find a backing that works with most any musical style.

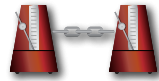


The guide can be used in either Single or Multi mode. When it's on, Loop Quantize is always enabled during phrase recording. When a phrase is closed, Loop Quantize automatically adjusts its ending so it matches the tempo—and therefore the measure length—of the guide sound. This ensures that all phrases play in sync relative to each other and the guide.

To learn more, see the RC-50 Workshop booklet *The Guide and Loop Quantize*.

## Tempo Sync

The RC-50 has a feature called Tempo Sync that has a great impact on how phrases are recorded and played back.



Tempo Sync's primary function is to make a previously recorded phrase play at the current patch tempo. This is accomplished using a time-shifting algorithm that changes the phrase's speed without changing its pitch.

A secondary use for Tempo Sync is to allow the recording of a specific phrase to set the patch tempo. This, in turn, enables that phrase to be used as a Loop Quantize reference during the recording of another phrase. Covered in detail in the RC-50 Workshop booklet *The Guide and Loop Quantize*, this functionality helps you keep Multi phrases in sync with each other when the guide and Loop Sync are off.

Each phrase has its own Tempo Sync switch, so you can decide whether you want to use it—or not—on a per-phrase basis.

- 1 With all phrases stopped, press the PHRASE EDIT button for the desired phrase: PHRASE 1, 2, or 3.



- 2 Use the PARAMETER buttons to display the selected phrase's Tempo Sync screen.



In this example we've selected Phrase 3's Tempo Sync screen.

- 3 Turn the PATCH/VALUE dial to choose the desired setting: ON or OFF.
- 4 To adjust the Tempo Sync setting for another phrase, select the phrase by pressing its PHRASE EDIT button, and then use the procedure described in Step 3.
- 5 Press EXIT when you're done.

Here are some general guidelines for setting phrases' Tempo Sync switches while working in Multi mode:

- When using a phrase as a Loop Quantize reference for the recording of other phrases—turn the phrase's Tempo Sync switch on, and turn all other phrases' Tempo Sync switches off.
- When recording and playing phrases with the guide on—make sure all phrases' Tempo Sync switches are set the same (on or off).



To learn more about Tempo Sync, see the RC-50 Workshop booklet *Tempos and Tempo Sync*.

## No Sync

There may be times when you want Multi mode's phrases to have no synchronization reference to each other at all. This is an effective technique when working with non-rhythmic and/or ambient sounds to create avant-garde "soundscapes."

In this musical style, it's often desirable to have the phrases' playback relationships constantly evolve over time as each loops independently of the other.



When you wish to create phrases in this fashion, turn Loop Sync, the guide, and all phrases' Tempo Sync switches off. Then, turn on your imagination...



You'll probably find the RC-50's reverse playback and fade in/fade out features useful for this musical style as well. To learn how to use them, see the RC-50 Workshop booklet *Patches* and Chapter 4 in the *RC-50 Owner's Manual*.

## Other Important Multi Mode Patch Settings

Here are a few other patch settings you'll want to think about before using Multi mode.

### Loop/One Shot Playback

A phrase's One Shot setting determines how it plays. When it's set to:

- *LOOP*—the phrase loops continuously.
- *ONE SHOT*—the phrase plays once and then stops. While a One Shot phrase is selected and playing, you can:
  - *restart it from its beginning*—by pressing REC/PLAY/OVERDUB.
  - *make it loop continuously*—by pressing and holding REC/PLAY/OVERDUB.

When a phrase is set for One Shot playback, its front-panel ONE SHOT indicator lights.



Audio can't be overdubbed in a phrase when it's set to ONE SHOT.

Most of the time, you'll probably want to set your phrases to loop continuously. However, the One Shot setting is excellent when you want to play one-off sounds such as a single vocal line, a sound effect, etc.

To set a phrase for loop or One Shot playback:

- 1 Press the PHRASE EDIT button for the desired phrase: PHRASE 1, 2, or 3.
- 2 Use the PARAMETER buttons to display the selected phrase's One Shot screen.



In this example we've selected Phrase 2's One Shot screen.

- 3 Turn the PATCH/VALUE dial to choose the desired setting: ONE SHOT or LOOP.
- 4 To adjust the One Shot setting for another phrase, select the phrase by pressing its PHRASE EDIT button, and then use the procedure described in Step 3.
- 5 Press EXIT when you're done.

### Time Signature

When you record a phrase, the RC-50 assigns it a tempo value called the "original tempo." If you plan on using the guide and/or Tempo Sync in Multi mode, you should set the desired time signature before beginning any phrase recording. This helps the RC-50 calculate an accurate original tempo, which is important for Tempo Sync and Loop Quantize to work properly.

To set the time signature:

- 1 Press the GUIDE SELECT button.
- 2 Use the PARAMETER buttons to display the Guide:Beat screen.



- 3 Turn the PATCH/VALUE dial to choose the desired time signature.
- 4 Press EXIT when you're done.



The time signature can't be changed once audio's been recorded into any of a patch's phrases. To change the time signature, clear all of the patch's phrases or initialize the patch.

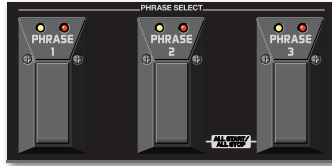


To learn more about phrases' original tempos, including tips on helping the RC-50 calculate them accurately, see the RC-50 Workshop booklet *Tempos and Tempo Sync*.

## Pedal Operations in Multi Mode

### Selecting a Phrase

To select a phrase for recording, playback, or overdubbing, press its PHRASE SELECT pedal: PHRASE 1, 2, or 3. A pedal's left indicator lights solid when it's the currently selected phrase. (For the sake of brevity, we'll refer to a selected phrase as the "current phrase.")



Multi mode allows you to play up to three phrases simultaneously; however, audio can only be recorded/overdubbed into one phrase at a time.

A PHRASE SELECT pedal's right indicator lights solid or flashes in different colors to inform you about the phrase's current condition.

When a phrase is selected while its playback is stopped, the right indicator:

- *flashes red*—if the phrase is empty.
- *flashes green*—if the phrase contains audio.



The RC-50's Play screen shows the audio content status of all three phrases at once. To learn more about the Play screen, see the RC-50 Workshop booklet *Patches* and Page 18 in the *RC-50 Owner's Manual*.

A phrase can be selected at any time, even while recording, playback, or overdubbing is taking place in other phrases.

## Using the REC/PLAY/OVERDUB Pedal

Press the REC/PLAY/OVERDUB pedal to record, play, or overdub audio in the current phrase. All of these actions can be initiated in real time without stopping the phrase.



The sequence of actions that occur each time the pedal is pressed is determined by the current phrase's One Shot setting and its audio content.

The REC/PLAY/OVERDUB pedal's indicator—as well as the right indicator on the PHRASE SELECT pedals—light solid in different colors to show the current phrase operation(s):



Red=Recording



Green=Playback

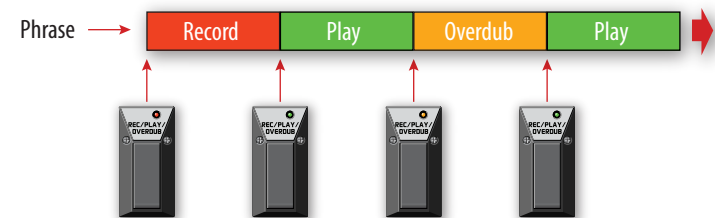


Orange=Overdubbing

### When a Phrase is Set for Loop Playback

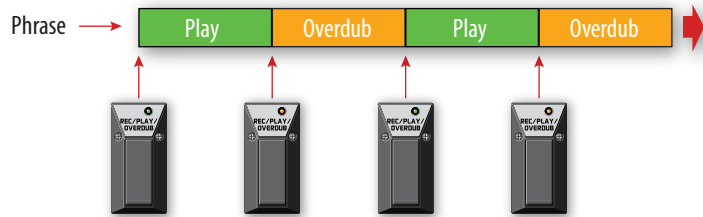
When a phrase's One Shot setting is LOOP, the phrase loops continuously once audio's been recorded in it and playback is started. While the current phrase is looping, overdubbing can be started and stopped at any time by pressing REC/PLAY/OVERDUB.

If the current phrase is empty and stopped, the following actions occur each time REC/PLAY/OVERDUB is pressed:



If desired, the RC-50 can be set so that overdubbing begins—instead of playback—when the phrase is closed. We'll show you how in the next section.

If the current phrase contains audio and is stopped, the following actions occur each time REC/PLAY/OVERDUB is pressed:



### Overdubbing Immediately After Recording

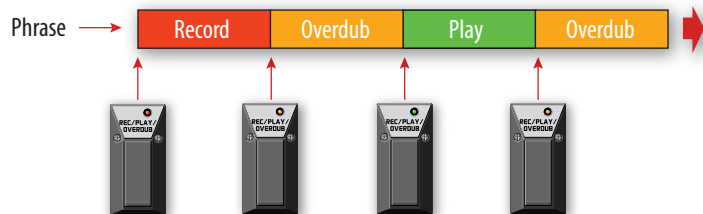
Normally, a phrase begins playing back when it's closed with the REC/PLAY/OVERDUB pedal. In some circumstances, you may prefer to have overdubbing begin instead of playback. Here's how:

- 1 Press SYSTEM/USB.
- 2 Use the PARAMETER buttons to display the Sys:REC Pdl Act screen.



- 3 Turn the PATCH/VALUE dial to change the setting from REC->PLAY to REC->OVERDUB.
- 4 Press EXIT when you're done.

Now, if the current phrase is empty and stopped, the following actions occur with each press of the REC/PLAY/OVERDUB pedal:



This setting is system-wide, affecting all patches. If you want to return to the normal REC/PLAY/OVERDUB pedal behavior, use the above procedure to set the Sys:REC Pdl Act setting back to REC->PLAY.

The current OVERDUB MODE setting determines how audio is overdubbed in a phrase. To learn more about the Overdub modes, see the RC-50 Workshop booklet *Patches* and Page 47 in the *RC-50 Owner's Manual*.

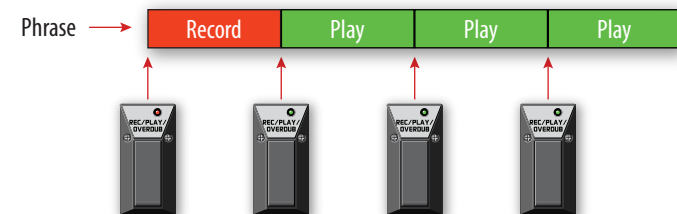
### When a Phrase is Set for One Shot Playback

When a phrase is set to One Shot, its playback behavior is like that of a traditional phrase sampler.

Once audio's been recorded in a One Shot phrase and playback is started, it plays to its ending and then stops. While the phrase is playing, it can be re-started from its beginning at any time. This allows you to perform the popular "stuttering audio" effects that DJs accomplish with phrase samplers. The only downside is that you give up the ability to overdub audio in the phrase while it's set to One Shot.

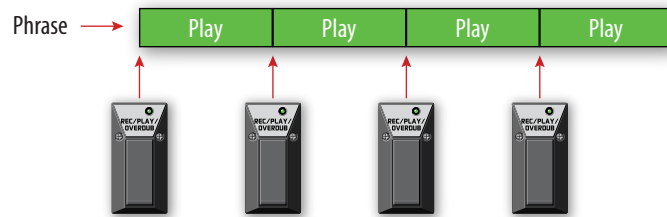
If you have a One Shot phrase that you'd like to overdub audio into, you can temporarily set it for looped playback, overdub the desired audio, and then set it back to One Shot. The caveat is that you can't do this in real time—you must stop the phrase each time the One Shot setting is changed.

If the current phrase is empty and stopped, the first REC/PLAY/OVERDUB press starts recording, while each subsequent press starts the phrase playing from its beginning:





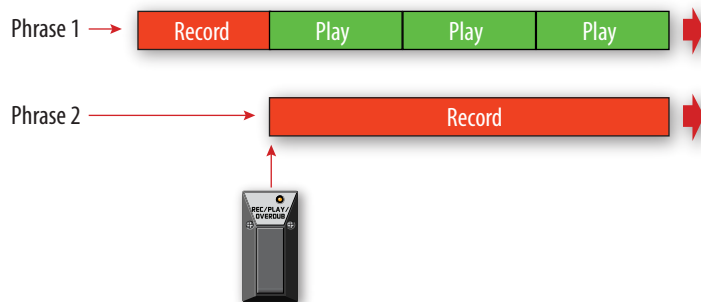
If the current phrase contains audio and it's stopped, each press of REC/PLAY/OVERDUB starts the phrase playing from its beginning:



If desired, you can make a One Shot phrase loop continuously by pressing and holding the REC/PLAY/OVERDUB pedal.

## Creating Phrases in Sequence

You can initiate recording/overdubbing in the current phrase while one of the same actions is taking place in another phrase. When you do this, the current phrase starts recording/overdubbing, and the other phrase switches to playback. This allows you to create phrases one-after-another without stopping playback.



If Loop Quantize is enabled during recording, you might experience a brief “lag” before the current phrase begins recording/overdubbing. This happens because Loop Quantize is closing the previous phrase to match the measure length of a reference (either the guide or another phrase). To learn more about Loop Quantize, see the RC-50 Workshop booklet *The Guide and Loop Quantize*.

## Stopping the Current Phrase

In Multi mode, each phrase can be stopped independently using the STOP pedal. To stop a phrase:

- 1 Select the phrase you want to stop by pressing its PHRASE SELECT pedal.
- 2 Press STOP.



Depending on the phrase's Stop mode setting, it may not stop immediately—it could play to its ending and then stop, or slowly fade out instead. If this is the case, you can immediately stop playback by pressing STOP a second time.



To learn how to set the phrases' Stop modes, see the RC-50 Workshop booklet *Patches* and Chapter 4 in the *RC-50 Owner's Manual*.

## Starting and Stopping All Phrases at Once

You can start and/or stop all Multi mode phrases at once by simultaneously pressing the PHRASE 2 and PHRASE 3 pedals. As a reminder, this dual-pedal function is provided on a label next to the pedals.



When phrases are started in this fashion, each phrase plays according to its Start mode setting—either starting at full volume immediately or fading in gradually.

Similarly, when all phrases are stopped at once, each follows its individual Stop mode setting. If one or more phrases continue to play or fade out, you can simultaneously press PHRASE 2 and 3 again to stop all phrase playback immediately.



To learn how to set the phrases' Start and Stop modes, see the RC-50 Workshop booklet *Patches* and Chapter 4 in the *RC-50 Owner's Manual*.

## Simul-Start

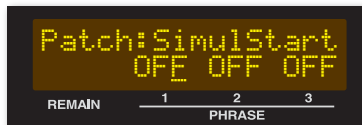
There may be situations where you'd like two or more phrases to start playing simultaneously when you press the REC/PLAY/OVERDUB pedal. This can be achieved using the Simul-Start function.

When a phrase's Simul-Start switch is on and its playback is stopped, one of the following actions will occur when REC/PLAY/OVERDUB is pressed:

- *If the phrase contains audio*—playback begins, even if it's not the current phrase.
- *If the phrase is empty and it's the current phrase*—recording begins.
- *If the phrase is empty and it's not the current phrase*—it remains stopped.

To adjust Simul-Start settings:

- 1 Press the NAME/PATCH button twice.
- 2 Use the PARAMETER buttons to display the Patch:SimulStart screen.



- 3 Use the PARAMETER buttons to select a phrase, and then turn the PATCH/VALUE dial to ON or OFF as desired.
- 4 Press EXIT when you're done.

Alternately, you can enable or disable Simul-Start for each phrase using the PHRASE SELECT pedals. This is handy for making hands-free settings in the middle of a performance.

To change a phrase's Simul-Start status from its current state:

- 1 Press and hold the phrase's PHRASE SELECT pedal until the Patch:SimulStart screen appears (this takes approximately two seconds). The screen shows you the new setting—ON or OFF.
- 2 Release the PHRASE SELECT pedal.
- 3 Repeat Steps 1 and 2 to change settings for other phrases.



Simul-Start settings have no effect when the RC-50's in Single mode.

## Undo and Redo

If desired, you can undo the last recording or overdub by pressing the UNDO/REDO pedal.

After performing an undo, the pedal's indicator lights. When it's lit, you can press the pedal again to cancel—or "redo"—the undo.



If you continue to have commitment issues, you can toggle between the previous undo/redo action with each press of the UNDO/REDO pedal.



Undo/redo isn't just for phrase recording perfection—you can use it to bring audio content in and out in real time, giving you an additional "virtual phrase" to use during your looping performances.



The UNDO/REDO pedal—and the TEMPO pedal as well—can be reassigned to control alternate patch functions (see Pages 70-71 in the *RC-50 Owner's Manual*). If the UNDO/REDO pedal has been reassigned, it can't be used to undo and redo phrase recordings.

## Clearing a Phrase

If you wish, you can easily clear the contents of a phrase while it's playing or stopped.

- 1 Select the phrase you want to clear by pressing its PHRASE SELECT pedal.
- 2 Press and hold the STOP pedal for at least two seconds. When the contents of the phrase are cleared, the right indicator on its PHRASE SELECT pedal flashes red.

As a reminder, this pedal function is provided on a label next to the STOP pedal.



You can't clear a phrase while you're recording or overdubbing into it.

## About Pedal Assignments and External Control

As mentioned earlier, the RC-50's TEMPO and UNDO pedals can be reassigned to control alternate patch functions if desired. Additionally, you can connect optional pedals to the CTL 1, 2 PEDAL and EXP/CTL 3, 4 PEDAL jacks—four footswitches or two footswitches and an expression pedal—and use them to control numerous RC-50 functions. And, to top it all off, MIDI CC messages (#1, #7, and #80) received at the MIDI IN jack can control up to three different RC-50 functions as well.



Among the many functions available for assignment are start, stop, and clear for individual phrases. This type of direct phrase control is particularly helpful in Multi mode, since it spares you from having to first select a phrase with a PHRASE SELECT pedal before performing an available operation.

To learn how to connect external pedals and MIDI devices and check out the RC-50 functions that can be assigned for control, see Chapters 7 and 8 in the *RC-50 Owner's Manual*.

## The End

We hope you've found this workshop helpful. Keep an eye out for other RC-50 Workshop booklets, available for downloading at [www.BOSSUS.com](http://www.BOSSUS.com) and [www.RolandUS.com](http://www.RolandUS.com).



For the latest RC-50 updates and support tools, visit the BOSS U.S. Web site at [www.BOSSUS.com](http://www.BOSSUS.com). If you need personal assistance, call our amazing Product Support team at 323-890-3743.