Saving data

Types of data that can be saved

On the TRITON, there are three ways to save data: **writing to internal memory**, **saving on external media (floppy disk etc.)**, and **MIDI data dump**.

Writing to internal memory

The following data that you edit can be written into internal memory.

- Program settings
  Programs 0–127 in banks A–F
  (However, bank F is available only if the separately sold EXB-MOSS option is installed.)
- Combination settings
  Combinations 0–127 in banks A–D
- Global settings (Page 0–4)
- User drum kits 00 (A / B)–63 (User)
- User arpeggio patterns U000 (A / B)–U231 (D)
- User template songs
  Song settings such as the song name and tempo, track settings (☞p.60), arpeggiator settings, and effect settings can be saved (Write) to internal memory. However, the musical data for song tracks and patterns are not saved to internal memory. Furthermore, settings that govern how the musical data is played back such as "Meter," "Metronome," "Play / Mute," "Track Play Loop (including Start / End Measure)," and RPPR settings will not be saved either. Use the Sequencer mode or Song Play mode page menu command "Save as User Template Song" to write this data (☞p.48 in the *Parameter Guide*).

If multisamples or samples from the RAM bank are used in the **Multisample** or **Drum Kit** of a program, you should be aware that these multisamples or samples cannot be written into memory. This means that if you turn the power of and then on once again, programs or combinations that use such multisamples or samples will not sound as intended. To reproduce such programs or combinations, the necessary multisamples or samples must be saved on external media (such as floppy disk), and then reloaded.

Data that you edit in Sequencer, Song Play, or Sampling cannot be saved in internal memory by the Write operation.

Saving to external media (floppy disk etc.)

The following data can be saved on external media (floppy disk etc.). If the separately sold EXB-SCSI option is installed, this data can also be saved on high-capacity media such as a hard disk etc.

For details on the file format when saving (☞p.139 in the *Parameter Guide*).

- Programs, combinations, global settings, drum kits, and user arpeggio patterns from internal memory
- Songs, cue lists, and patterns
- Multisamples and sample data created in Sampling mode
- Standard MIDI Files (SMF)
  Sequencer mode songs can be saved as SMF data.
- System exclusive data
  System exclusive data received by the TRITON from an external MIDI device (The TRITON can function as a data filer.)
- Jukebox lists
  Jukebox lists are saved in Song Play mode (☞p.88).
  Other data is saved in Disk mode.

MIDI data dump

The following types of data can be transmitted as a MIDI data dump and saved on an external data filer or other device.

- Internal memory programs, combinations, drum kits, arpeggio patterns, and global settings
- Songs, cue lists, patterns

Writing to internal memory

Memory protect

To prevent programs, combinations, songs, drum kits, and user arpeggio patterns from being overwritten accidentally, the TRITON provides a Memory Protect setting that prohibits writing to memory.
Before you save edited data or load data from floppy disk or other external media, use the following procedure to turn off memory protect (uncheck the appropriate check box).

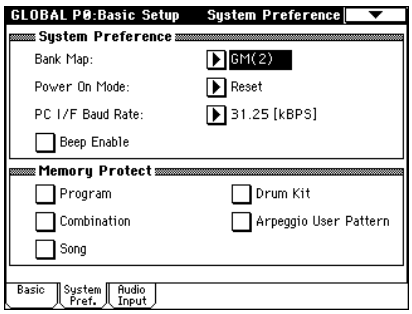
Memory protect must also be turned off before the above-listed data or a song in Sequencer mode can be loaded from external media or via MIDI data dump, and before recording.

① **Press the [GLOBAL] key to enter Global mode.**

② **After pressing the [MENU] key, press either P0: Basic Setup or the [0] key.**

③ **Press the System Pref. tab.**

The System Preference page will appear.



④ **Press the "Memory Protect" check box for the type of internal memory into which you wish to write data, so that the box is unchecked.**

Assigning a name (Rename)

You can modify the name of an edited program, combination, song, drum kit, user arpeggio pattern, multisample or sample etc.

You can also modify the category names for programs and combinations.

These renaming operations can be performed in the following pages.

Programs	Program P0...9 Page Menu Command: Write Program
Combinations	Combination P0...9 Page Menu Command: Write Combination
Songs	SequencerP0, 2...4, 7 Page Menu Command: Rename Song
Cue lists	Sequencer P1 Page Menu Command: Rename Cue List
Tracks	Sequencer P5: Track Name
Patterns	Sequencer P6: Pattern Name
Multisamples	Sampling P0...4 Page Menu Command: Rename MS
Samples	Sampling P0...4 Page Menu Command: Rename Sample
Drum kits	Global Page Menu Command P5: Rename Drum Kit
User arpeggio patterns	Global Page Menu Command P6: Rename Arpeggio Pattern
Program categories	Global P4: Program Cat.
Combination categories	Global P4: Combination Cat.

For details on the renaming procedure, refer to "Writing a program or combination."

Writing a program or combination

A program or combination that you create by editing its settings in the Performance Editor or in the various Edit pages can be saved in internal memory. This procedure is called Program Write or Combination Write. If you wish to use the edited settings again after turning the power off, be sure to write the settings into memory.

There are two ways to write a program or combination.

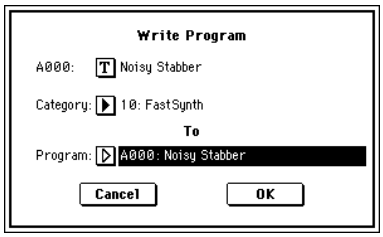
Before you write data into memory, you must turn off the memory protect setting in Global mode (☞ "Memory protect").

Using a page menu command to write

① **Press the "Write Program" or "Write Combination" page menu command.**

The Write Program / Write Combination dialog box will appear.
You can also access the same dialog box by holding down the [ENTER] key and pressing the [0] key.

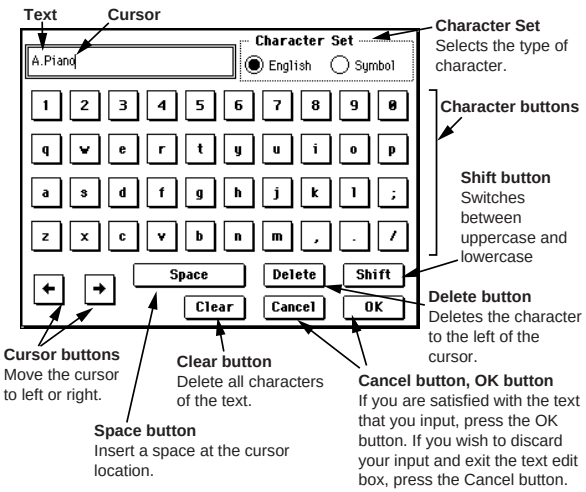
The screen shown is for Program mode



note If you wish to overwrite the edited settings onto the currently selected program / combination with the same program / combination name and program / combination category, simply press the **OK button** in the dialog box.

② **If you wish to modify the program/combination name, press the text edit button.**

The text edit dialog box will appear.
Input the program / combination name.



When you have input the desired name, press the OK button to return to the Write Program/Write Combination dialog box.

③ **In "Category," specify the category of the program/combination.**

The category you specify here can be selected in the Category / Program Select menu, the Category / Track Program Select menu, or the Category / Timbre Program Select menu (when choosing a program), or in the Category / Combination Select menu (when choosing a combination).

④ **Use "To Program" and "To Combination" to specify the writing destination program/combination number.**

Use the [△][▽] keys, [VALUE] slider, [VALUE] dial, numeric keys [0]–[9], or [ENTER] key to make your selection. Alternatively, you can press the popup button and use the popup menu to specify the writing destination bank and program / combination number.

⑤ **To write the data, press the OK button. To cancel without writing, press the Cancel button.**

When you press the **OK button**, the display will ask "Are you sure?" When you press the **OK button** once again, the data will be written.

Using the [REC / WRITE] key to write

This method can only be used to write to the selected program / combination number.

① **Press the front panel [REC/WRITE] key.**

The following display will appear.

The screen shown is for Program mode

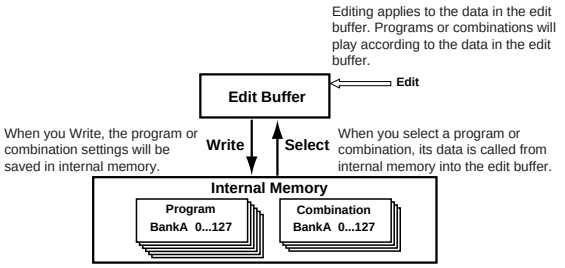


② **To write the data, press the OK button. To cancel without writing, press the Cancel button.**

About the Edit Buffer

When you select a program or combination in Program P0: Play and Combination P0: Play, the program or combination data is called into the "edit buffer."
When you modify the parameters in P0: Play or in the edit pages P1–P9, the changes you make will affect the data in the edit buffer.
If you wish to save this modified data into internal memory, you must perform the Write operation.
When you perform the Write operation, the data in the edit buffer is written to the specified program number or combination number of the specified bank.
If you select another program or combination without writing, the data of the newly selected program or combination will be called into the edit buffer, and your changes will be lost.

When you press the front panel [COMPARE] key in the edit pages P1–P9 of Program mode or Combination mode, the data from memory (i.e., the contents that were written into memory) will be temporarily called into the edit buffer. This allows you to compare the settings you are editing with the original un-edited settings.



Writing global settings, user drum kits, and user arpeggio patterns

The settings you edit in Global mode can be written into internal memory. This is done using the operations **Write Global Setting**, **Write Drum Kits**, and **Write Arpeggio Patterns**. If you wish to use these settings after turning the power off, be sure to write the data.

There are two ways to write global settings, user drum kits, and user arpeggio patterns.

Before you write a user drum kit or user arpeggio pattern, the Global mode memory protect setting must be turned off (☞"Memory protect").

The **user arpeggio pattern** settings "Tempo," "Pattern," "Octave," "Resolution," "Sort," "Latch," "Key Sync," and "Keyboard" are parameters that are set independently in Program, Combination, Song, and Song Play mode. These settings are not saved when you perform the Write operation described here.
If you moved from Program or Combination mode and set these parameters, you must return to the original mode and write them.

Using a page menu command to write

① **To write global settings (Global P0–P4), press the page menu command "Write Global Setting" in Global P0–P4.**
The Write Global Setting dialog box will appear.

To write user drum kits, press the page menu command "Write Drum Kits" in Global P5.
The Write Drum Kits dialog box will appear.

To write user arpeggio patterns, press the page menu command "Write Arpeggio Patterns" in Global P6.
The Write Arpeggio Patterns dialog box will appear.

The same dialog box will also appear if, in each of the above pages, you hold down the [ENTER] key and press the [0] key.

The example shown is for Write Arpeggio Patterns



② **To execute the Write operation, press the OK button. To cancel, press the Cancel button.**

When you press the **OK button**, the display will ask "Are you sure?" Press the **OK button** once again to write the data.

Using the [REC/WRITE] key to write

① **In the following pages, press the front panel [REC/WRITE] key. A dialog box will appear.**

Global settings:	**Global P0–P4**
User drum kits:	**Global P5**
User arpeggio patterns:	**Global P6**

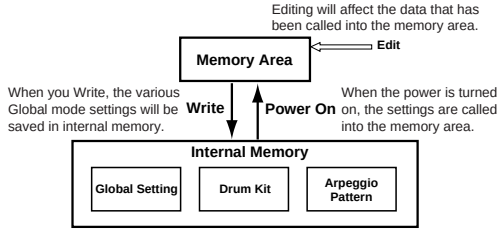
The example shown is for Update Arpeggio Patterns



② **To execute the Write operation, press the OK button. To cancel, press the Cancel button.**

Memory in Global mode

When the power is turned on, the Global mode data is called from internal memory into the Global mode memory area. Then when you modify the parameters in Global mode, the data in the memory area will be modified. If you wish to save this modified data in internal memory, you must Write it.
When you write, the data in the memory area will be written into the global settings, drum kits, and arpeggio patterns of internal memory.
If you turn off the power without writing, the modified data in the memory area will be lost.



Saving on external media

For details on the data that can be saved on external media (floppy disk etc.) (☞p.37 "Types of data that can be saved").

Song data, patterns and cue lists in the TRITON's Sequencer mode, and multisamples and samples in Sampling mode cannot be written into internal memory. This data will disappear when the power is turned off. If you wish to keep this data, you must save it on a floppy disk or on other external SCSI storage media (if the separately sold EXB-SCSI option is installed).

Other types of data can also be saved on a floppy disk, or (if the separately sold EXB-SCSI option is installed) on external SCSI storage media (maximum 4 GB), and loaded to restore the original settings even if they have been modified. It is a good idea to save favorite settings that you create.

As an example, we will explain how to save the following data.

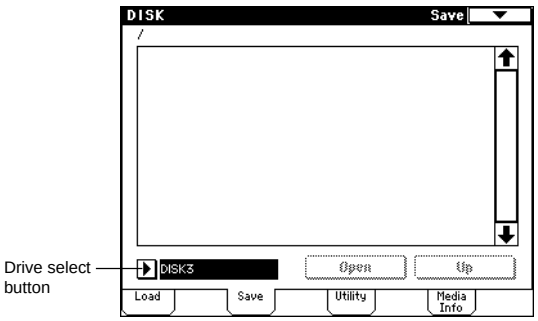
- Internal memory programs, combinations, global settings, drum kits, user arpeggio patterns
- Songs, cue lists, patterns
- Multisamples and samples created in Sampling mode

① **If you wish to save the data on a floppy disk, insert a floppy disk into the TRITON's floppy disk drive.**

For details on floppy disk handling, be sure to refer to "Cautions for floppy disk handling (☞p.95).
If the separately sold EXB-SCSI option is installed and you wish to save the data on a hard disk or other external SCSI media, refer to the EXB-SCSI owner's manual, and make sure that the external SCSI drive etc. is connected correctly.

Format the disk if necessary (☞p.142 in the *Parameter Guide*)

② **Press the [DISK] key. You will enter Disk mode.**



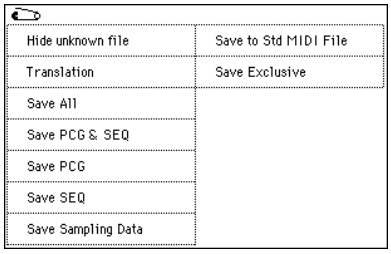
③ **Press the Save tab, and the Save window will appear.**

④ **If you are saving to external SCSI media, press the drive select button to select the save destination drive.**

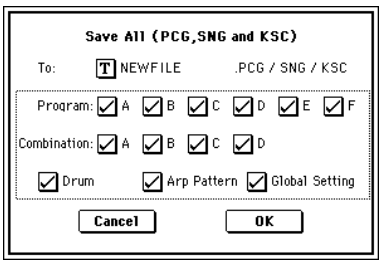
⑤ **If the media contains directories, select the director in which you wish to save the data.**

To move to a lower directory level, press the **Open button**. To move to a higher level, press the **Up button**.

⑥ **Press the page menu button, and then press the "Save All" page menu command.**



A dialog box will appear. The contents of the dialog box and the settings etc. will differ depending on the type of data that you are saving. For details on each type of file (☞p.139 in the *Parameter Guide*).



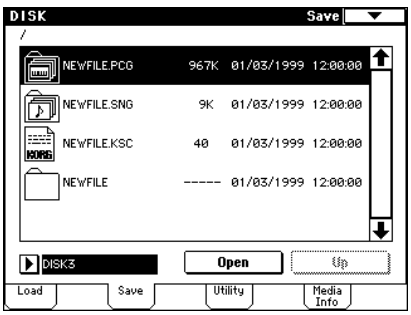
⑦ **Use the text edit button to input a name (☞p.38).**

⑧ **Use the check boxes to uncheck items that you do not wish to save.**

In order to accurately reproduce the data you created, we recommend that you leave all check boxes checked.

⑨ **Press the OK button.**

The data will be saved on the specified media, and you will return to the Save page. The amount of time required will depend on the amount of data. If a file with the same name already exists on the floppy disk, you will be asked whether you want to Overwrite. If you wish to overwriting, press the **OK button**. If you wish to save without overwriting, press the **Cancel button**, re-do the operation from step ⑥, and rename the data in step ⑦ before saving it.
The LCD screen will show the files that were saved. **The data will be saved as the following files**.



.PCG file
Programs, combinations, drum kits, user arpeggio patterns, and global settings that were saved in internal memory

.SNG file
Sequencer songs, cue lists, and user patterns

.KSC file
A file which lists the multisamples and samples used

Directory
A directory containing the multisamples (.KMP files) and samples (.KSF files) that are listed in the .KSC file

Other ways to save

In addition to "Save All," the page menu commands include "Save PCG which saves programs, combinations, drum kits, user arpeggio patterns, and global settings; "Save SEQ" which saves only sequencer songs, cue lists, and user patterns; and "Save Sampling Data" which saves only multisamples and samples. Select the appropriate page menu command for the data that you wish to save on external media.

note When using "Save All," "Save PCG & SNG," and "Save PCG" to save combinations, you should also remember to save the programs used by each timbre (and the drum kits used by the programs) and user arpeggio patterns at the same time.
Similarly when saving programs, you should also remember to save the drum kits and user arpeggio patterns used by the programs.

note If your programs or drum kits use multisamples and samples that were created in Sampling mode, we recommend that you use "Save All" to save the data.
When you use "Save PCG" or "Save Sampling Data" to individually save a program or drum kit, or a multisample or sample that you created in Sampling mode, we recommend that you save them under the same filename in the same directory. When you use "Load PCG" to load a .PCG file, the identically-named .KSC file will also be loaded so that the correct multisamples / samples will correspond automatically.

note When saving .KSC, .KMP, and .KSF files and the data does not fit on a single floppy disk (or other volume of media), another dialog box will appear, and you will be asked to specify the next volume of media (☞p.141 in the *Parameter Guide* "Select other medium")

MIDI data dump

The programs, combinations, drum kits, arpeggio patterns and global settings of internal memory, and songs, cue lists, and patterns can be transmitted as MIDI exclusive data and saved on a connected MIDI data filer, computer, or another TRITON.

☞ p.119 in the *Parameter Guide*.

Restoring the factory settings

The factory setting data is referred to as the “preload data”, and you can restore the factory settings for the TRITON’s programs, combinations, and global settings by loading this preload data.

This will rewrite any data that had been written before loading. If you do not wish to lose this data, you must first save it on a floppy disk or (if the separately sold EXB-SCSI option is installed) on external SCSI media (☞p.40).

Loading the preload data

① **Insert the included TNFD-00P floppy disk into the floppy disk drive.**

For details on floppy disk handling, refer to “Disk mode” (☞p.95).

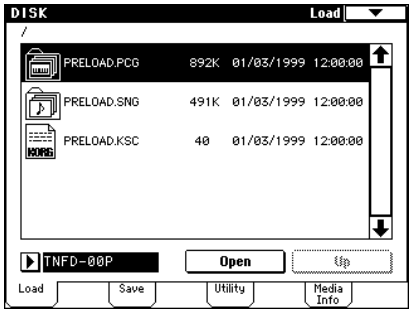
② **Press [DISK].**

You will enter Disk mode.

③ **Press the Load tab.**

You will move to the Load page, and file information will be displayed.

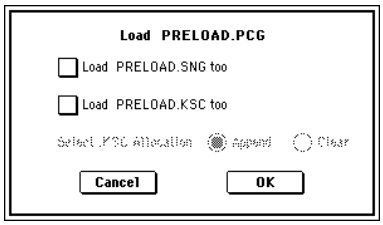
④ **Press “PRELOAD.PCG.” The display will be highlighted.**



A .PCG file contains programs, combinations, drum kits, arpeggio patterns, and global setting data.

⑤ **Press the page menu button to display menu commands, and select “Load Selected.”**

A dialog box will appear.



⑥ **If “Load PRELOAD.SNG too” is checked when you load, the .SNG file will also be loaded when the .PCG file is loaded.**

If you check “Load PRELOAD.KSC too” is checked when you load, the .KSC file will also be loaded when the .PCG file is loaded.

For details on the files that are loaded by the .KSC file, refer to “Listening to a demo song” (☞p.18).

⑦ **Press the OK button.**

Program mode

About the pages in Program mode

In Program mode you can select and edit programs. Program mode consists of pages P0–P9.
In P0: Play you can play programs. You can also perform simple editing (☞p.34).
In P1–P9, you can edit the parameters of the program that was selected in P0.

○ **For details on how to access these pages or modes, refer to "Basic operation of the TRITON" (☞p.12).**

P0: Play	Select a program, use the Performance Editor to perform simple editing, and select and set arpeggio patterns.
P1: Edit-Basic	Set basic program parameters such as oscillator and multisample. Set scale and controllers.
P2: Edit-Pitch	Settings related to the pitch, including the pitch EG.
P3: Edit-Filter	Settings related to the filter (tone), including the filter EG.
P4: Edit-Amp	Settings related to the amplifier (volume), including amp EG and pan.
P5: Edit-Common LFO	For each of the two LFO's provided for each oscillator, select the LFO type and speed, etc. (Settings in the pitch, filter, and amp pages will determine how deeply the LFO that you specify here is applied.)
P6:	---
P7: Edit-Arpeggiator	Settings for the arpeggiator. (Some of these are shared with the arpeggiator settings of P0, and you may edit them in either location.)
P8: Edit-Insert Effect	Select insert effects and make settings for them. Specify the oscillator routing (send levels to the insert effects, master effects, and independent outputs).
P9: Edit Master Effect	Select master effects and make settings for them. Make settings for the master EQ.

If the separately sold EXB-MOSS has been installed, you will be able to use bank F. The page structure and parameter structure of bank F programs is different than for the programs of other banks. Refer to the owner's manual for the EXB-MOSS.

When it is shipped from the factory, the TRITON is loaded with a variety of preset programs. You can create your own programs by modifying these factory-preset programs or by creating original programs from scratch. You can also create original programs using sample waveforms and multisamples that you recorded in Sampling mode or loaded into memory in Disk mode.

Programs that you edit or create can be written into the 640 program memory areas in banks A–E. In Disk mode, programs can also be saved on external media such as floppy disk (☞p.40).

note The TRITON provides AUDIO INPUT jacks that allow an external audio source to be input. In addition to sampling the external audio input in Sampling mode, you can apply the TRITON's effect section to the external audio input in other modes such as Program mode, or even use vocoder effects that combine the sound of an oscillator with an external audio source (☞p.109). (☞p.201 in the *Parameter Guide*)

MIDI All transmission and reception of MIDI data in Program mode is performed on the Global MIDI channel. The global MIDI channel is set in Global mode P1: MIDI "MIDI Channel."

Playing a program

P0: Play

Here you can select and play programs. You can also use the Performance Editor to do some simple editing, and make arpeggiator settings.

Selecting a program

There are three ways to select a program. For the procedure, refer to the appropriate page.

- Using the controls of the TRITON ("Selecting and playing a program" ☞p.21)
  Selecting by bank / program number
  Selecting by program category
  Selecting with 10's Hold
- Using a connected switch ("Other functions" ☞p.125)
- Receiving MIDI program change messages ("MIDI" ☞p.114)

For the names of the factory-set programs, refer to the separate *Voice Name List*.

The Performance Edit tab

- Here you can view the insert / master effect settings, the functions of [SW1], [SW2] keys, and the B-mode functions of REALTIME CONTROLS knobs [1]–[4].
- You can use the performance editor to adjust the major parameters of Program P1–P9 (☞p.34, or "Performance Edit" on p.2 in the *Parameter Guide*). If you wish to save the program settings that you modify using the performance editor, you must

turn off memory protect in Global mode (☞p.37), and write the program (☞p.38).

The Arpeggio tab

- Use the ARPEGGIATOR [ON / OFF] key to turn the arpeggiator on / off.
- You can select arpeggio patterns and edit arpeggiator parameters in realtime while you play.
- You can use the ARPEGGIATOR [TEMPO], [GATE], and [VELOCITY] knobs to control the tempo of the arpeggio, the note length, and the strength of the notes.

For details refer to “Using the arpeggiator while you play” (☞p.29).

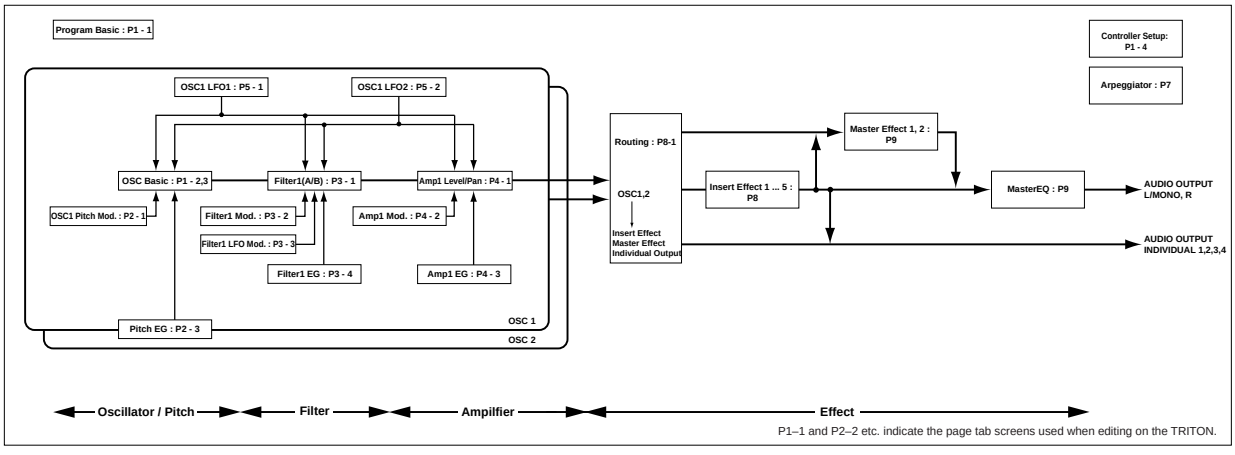
How a program is organized

A program consists of the many parameters of P1–P9. The diagram below shows the structure of a program.

Sound has three aspects: **pitch**, **tone**, and **volume**. On the TRITON, the **Pitch**, **Filter**, and **Amplifier** blocks which make up a program correspond to these three aspects of sound. In other words, adjust the Pitch section to modify the pitch, adjust the Filter section to modify the tone, and adjust the Amplifier section to modify the volume.

First, make **Oscillator** settings (P1: Edit-Basic) to select a **multisample** waveform that will be the basis of the sound. Then make **pitch** settings (P2: Edit-Pitch), **filter** settings (P3: Edit-Filter) and **amplifier** settings (P4: Edit-Amp) to create the basic program. (This is the program as it is used in Combination, Sequencer, or Song Play mode.) To this, you can add **insert effect** settings (P8: Edit-Insert Effect), **master effects** and **master EQ** settings (P9: Edit-Master Effect) to add finishing touches to the sound. You can also make arpeggiator settings (P7: Edit-arpeggiator) and controller settings (P1: Edit-Basic, Controller tab) to create the final **program**.

note For programs that are used in Combination, Sequencer, and Song Play mode, settings for insert effects, master effects, master EQ, arpeggiator, and controllers must be made separately from the settings made in Program mode.



Basic program editing

Program editing refers to the process of modifying the parameters that make up a program to vary the sound or to set controllers etc.
General program editing can be performed using the performance editor of Program P0: Play, or using the REALTIME CONTROLS knobs [1]–[4], but detailed editing is performed in Program P1–P9.

Use the parameters of P1–P9 to edit the program that you selected in Program P0: Play. In this section we will give examples of how to modify representative parameters in each page, so that you can understand the operation of each parameter. For details on all parameters, refer to in the *Parameter Guide*.

note For parameters in P1–P5 that are set independently for each oscillator 1 and 2, you can use the page menu command “Copy Oscillator” to copy settings from one oscillator to the other. This is a convenient way to make the same settings for two oscillators, or to copy settings from one oscillator to the other.

If you wish to save an edited program into internal memory, be sure to Write the program. (☞p.38)

If the separately sold EXB-MOSS option is installed, you will be able to use the special bank F. The parameter structure of bank F programs is different than that of the other banks. Refer to the EXB-MOSS owner’s manual.

The Compare function

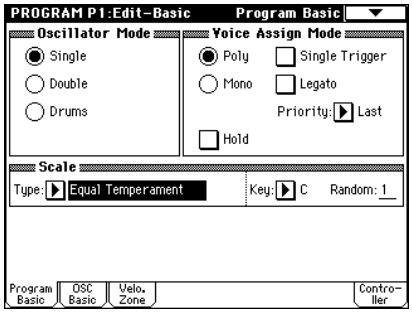
When P1–P9 are displayed, you can press the [COMPARE] to make the LED light. This will recall the sound that had been written before you started editing. Press the [COMPARE] key once again and the LED will go dark, and you will return to the sound that you had been editing. Use this function when you wish to compare the unedited sound with the results of your editing.

When the [COMPARE] key LED is lit, editing a parameter will make the LED go dark, and that sound will now be the sound that is recalled when the [COMPARE] key LED is dark.

P1: Edit-Basic Oscillator settings

In P1: Edit-Basic you can make oscillator-related settings. The TRITON provides two oscillators, and for each oscillator you can select a basic waveform (“**multisample**”) and set the pitch. The multisamples provided by the TRITON include waveforms for musical instruments such as pianos, as well as special waveforms unique to synthesizers. Multisamples reproduce the complex overtone structure and frequency characteristics that allow us to identify a sound as being “piano-like” or “guitar-like.”

Program Basic tab



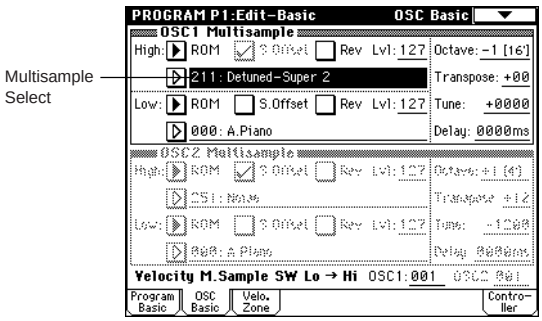
Oscillator Mode

This sets the mode of the oscillator. **Single** uses one oscillator and **Double** uses two oscillators. In the case of **Single** the maximum polyphony is 62 notes, and in the case of **Double** the maximum polyphony is 31 notes. If you wish to use a Drum Kit to create a drums program, select **Drums**.

Voice Assign Mode

Select whether the program will sound in **Poly** (polyphonically) or **Mono** (monophonically). If this is set to **Poly**, you will be able to play chords using the program. If this is set to **Mono**, only one note will sound even if you play a chord. Normally you will set this to **Poly**, but it is effective to use **Mono** when you are playing sounds such as analog-synth bass or synth lead. Try switching between **Poly** and **Mono**, and listen to the result.

OSC Basic tab



In this page you can select the multisample for the oscillator. The TRITON provides 425 multisamples in its internal ROM memory. For the multisample names, refer to the separate *Voice Name List*.
Additional multisamples can be added by installing a separately sold EXB-PCM series option board. You can also use multisamples from the RAM memory that you created in Sampling mode.

Selecting a multisample

The multisample will determine the basic character of the program.

○ **Press “Multisample Select” (it will be highlighted), and use the [△][▽] keys, [VALUE] slider, [VALUE] dial, numeric keys, and [ENTER] key, [0]–[9] to select the desired multisample.**

note If you press the popup button, all multisamples of internal ROM will be displayed, grouped into fifteen categories.
Use the tabs at left and right to select a category, and select the desired multisample.

About High/Low

You can specify two multisamples for an oscillator, and use velocity (keyboard playing dynamics) to switch between the two multisamples. This capability is called "**velocity multisample switching**."

① **Select different multisamples for "High" and "Low."**

② **Set the "Velocity M.Sample SW Lo fi Hi" parameter to set a value of (for example) 100 for OSC1.**

The **Low** and **High** multisamples will be switched at this velocity value.

③ **Play the keyboard softly, and the multisample specified for "Low" will sound.**

④ **Play the keyboard strongly, and the multisample specified for "High" will sound.**

⑤ **Adjust the "Lvl" (level) for "High" and "Low" multisamples to set their volume balance.**

If you do not wish to use this function, set the "Velocity M.Sample SW Lo fi Hi" value to **001**. Only the High multisample will sound.

Rev (Reverse) check box

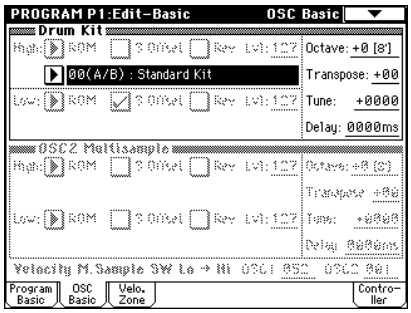
If this is **checked**, the multisample will be played backward. This can produce interesting results when used on sound-effects, etc. Normally you will not **check** this.

When "Oscillator Mode" = Double

To use OSC2, set "Oscillator Mode" to **Double** in the Program Basic tab.
In the same way as for OSC1, you can set High and Low multisamples for OSC2.
The playback pitch can be set independently. By using the same multisample with slightly different "Tune" settings, you can "detune" the oscillators to produce a richer sound.

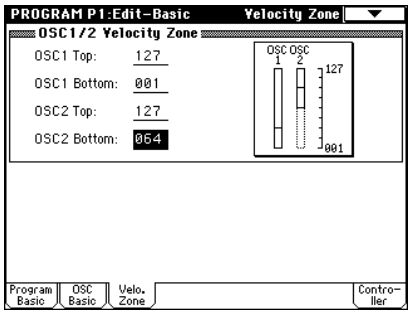
note It will be convenient to use the page menu command "Copy Oscillator" to make the oscillator settings match each other.

When "Oscillator Mode" = Drums



In the Program Basic tab, set "Oscillator Mode" to **Drums**. When this is set to **Drums**, you will be able to create a drum program.
This will select a drum kit instead of a multisample. The TRITON provides sixteen factory preset drum kits that are suitable for a wide variety of music. For the drum kit names, refer to the separate *Voice Name List*. Here you can only select a drum kit. To edit or create a drum kit, use Global P5: Drum Kit (☞p.90).

Velocity Zone tab



Here you can specify the range of velocities that will sound oscillators 1 and 2. In the example shown above, the velocity ranges are as follows.

- OSC1 will sound for all velocity values.
- OSC2 will sound only for strongly played notes (64 and above).
- You can use Velocity Multisample Switching in addition to this (☞"About High/Low"). For this example, set "OSC1" in "Velocity M.Sample SW Lofi Hi" to **032** and "OSC2" to **096**. The settings are shown as horizontal lines in the velocity zone display.
  In this example, the multisamples will sound over four levels.

Velocity values 001–031: sound only the OSC1 Low multisample.
Velocity values 032–063: sound only the OSC1 High multisample.
Velocity values 064–095: sound the OSC1 High multisample and the OSC2 Low multisample.
Velocity values 096–127: sound the OSC1 High multisample and the OSC2 High multisample.

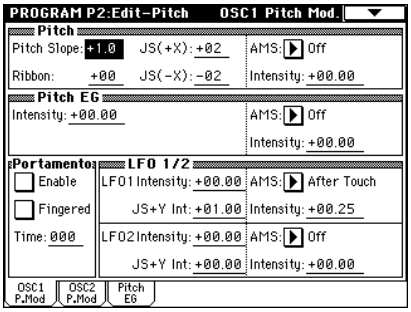
Controller Setup tab

For each program, this tab lets you make settings for the [SW1] and [SW2] keys, and for the B-mode of REALTIME CONTROLS knobs [1]–[4] (☞p.127). (☞p.8, 217, 218 in the *Parameter Guide*)

P2: Edit-Pitch Pitch settings

Here you can specify how the pitch of the multisample selected for the oscillator will change. Pitch EG and LFO settings allow the pitch to varied over time. When the "OSC Mode" is **Single** or **Drums**, only the OSC1 P.Mod. tab is available.

OSC1 Pitch Mod. tab



Pitch

JS(+X) and JS(-X) specify the amount of pitch change that will occur when the joystick is moved to right or left, in semitone units. With a setting of **+12** the pitch can be raised a maximum of one octave, and with a setting of **–12** the pitch can be lowered a maximum of one octave.

"Pitch Ribbon" specifies the amount of pitch change that will occur when you operate the ribbon controller toward the left or right. With a setting of **+12**, moving your finger to the right edge will raise the pitch one octave, and moving your finger to the left edge will lower the pitch one octave.

Pitch EG

When the "Intensity" value is set to **+12.00**, the pitch EG specified in the Pitch EG tab will produce a maximum of ±1 octave of pitch change.

Portamento

If "Enable" is checked, portamento will be applied. Portamento makes the pitch change smoothly when you play the next note before releasing the previous note.
The "Time" parameter specifies the portamento time. As this value is increased, the pitch will change over a longer time. With a value of **000**, there will be no portamento.

If **Porta.SW CC#65** is assigned as the function of [SW1] or [SW2] key, the portamento effect can be switched on / off by [SW1] or [SW2] key.

LFO 1/2

An LFO can be used to cyclically modulate the pitch (the "vibrato" effect).
"LFO Intensity" specifies the amount of pitch change that the LFO will produce. With a setting of **+12.00**, vibrato will produce a maximum of ±1 octave of pitch change.
"JS+Y Int" specifies the amount of vibrato that the LFO will produce when the joystick is pushed away from yourself.
"AMS Intensity" specifies the amount of vibrato that the LFO will produce when an AMS (alternate modulation source) is operated. For example if "AMS" is set to **After Touch**, vibrato will be applied when you apply pressure to the keyboard.

Pitch EG tab

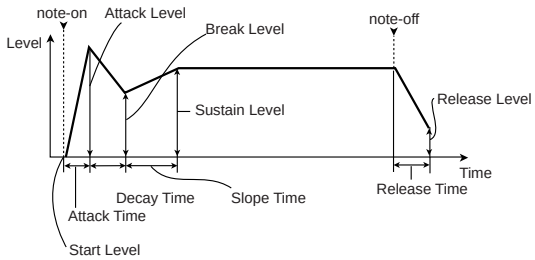
Here you can make settings for the pitch EG.
When you wish to create sound effects etc., set the pitch EG to make major changes in pitch over time. To realistically simulate the slight change in pitch that occurs when a string is plucked or at the attack of a brass or vocal sound, you can use the pitch EG to create a subtle change in pitch at the attack (☞p.10 in the *Parameter Guide*).

EG and LFO

When controlling the pitch, filter, and amplifier, the EG (envelope generator) and LFO (low frequency oscillator) are used to create time-varying and cyclical changes.

EG (Envelope Generator)

The TRITON provides a Pitch EG, Filter EG, and Amplifier EG, which produce time-varying changes in pitch, tone, and volume respectively.

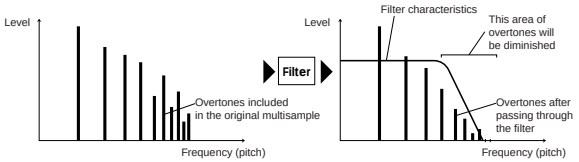


LFO (Low Frequency Oscillator)

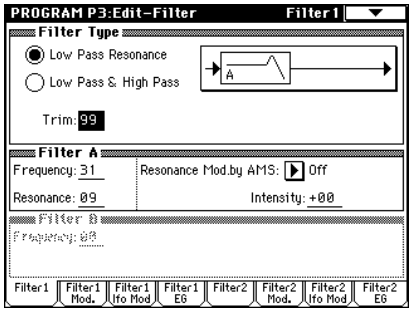
For each oscillator, the TRITON provides two LFO's that can be used to apply cyclical change in pitch, tone, and volume.
Examples of this are "vibrato" (cyclical change in pitch), "wah" (cyclical change in tone), and "tremolo" or "auto-pan" (cyclical change in volume).

P3: Edit-Filter Filter settings

The filter allows you to diminish or emphasize specified frequency areas of the multisample selected for the oscillator. The tone of the sound will depend significantly on the filter settings.
The TRITON lets you choose between two types of filter for each oscillator. Filter 1 is used for OSC1, and Filter 2 is used for OSC2. If "OSC Mode" is **Single** or **Drums**, only Filter 1 will be available.
Filter EG and LFO can be used to produce time-varying changes in the filter.



Filter 1 tab



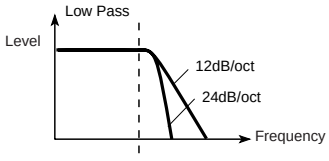
Filter Type, Filter A, Filter B

Select the type of filter, and specify the "Frequency" (cutoff frequency) and "Resonance" (resonance level).

- **Low Pass Resonance** (24 dB / oct low pass filter with resonance): Make settings for filter A.
- **Low Pass & High Pass** (12 dB / oct low pass filter and 12 dB / oct high pass filter in series connection): Make low pass filter settings in filter A, and high pass filter settings in filter B.

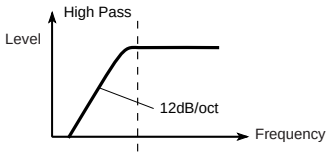
Low pass filter

This is the most common type of filter, which passes the low frequency range and cuts the high frequency range. When the overtones of the high range are cut, a bright sound will become darker (more mellow).
24 dB / oct and 12 dB / oct refer to the steepness of the cut. 24 dB / oct means that the gain will decrease 24 dB in one octave (i.e., as the frequency doubles). A 12 dB / oct filter would decrease the gain 12 dB in one octave. The 24 dB / oct filter produces a steeper cut.



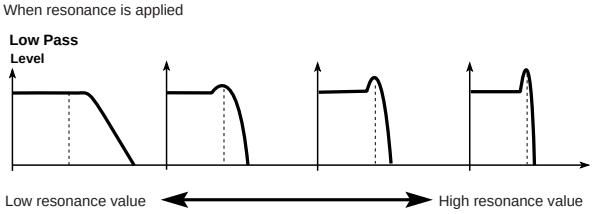
High pass filter

This type of filter passes the high frequency range and cuts the low frequency range. Use this when you wish to make the sound thinner. However if the cutoff frequency (Frequency) is raised excessively high, the volume will become very low.

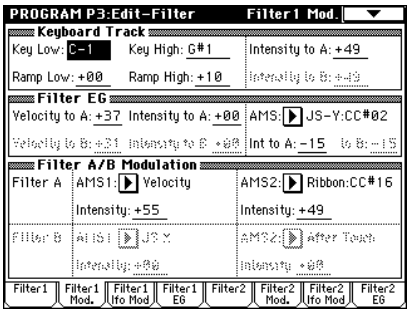


Resonance

When "Resonance" is set to a higher value, the overtones in the region of the cutoff frequency will be boosted as shown in the diagram below, giving a distinctive character to the sound.



Filter 1 Mod. tab



Controllers and the filter EG can be used to modulate the filter cutoff frequency that was specified in the Filter 1 tab. By using a controller to vary the tone or by using an EG to create time-varying changes, you can add a rich variety of tonal change to the sound.

Keyboard Track

This varies the cutoff frequency according to the keyboard location that you play.

- When "Ramp Low" is set to a positive **(+) value**, the cutoff frequency will rise as you play lower on the keyboard, making the sound brighter. When set to a negative **(–) value**, the cutoff frequency will fall as you play lower on the keyboard, making the sound darker.
- When "Ramp High" is set to a positive **(+) value**, the cutoff frequency will rise as you play higher on the keyboard, making the sound brighter. When set to a negative **(–) value**, the cutoff frequency will fall as you play higher on the keyboard, making the sound darker.

- "Intensity to A" and "Intensity to B" adjust the effect that keyboard tracking will have on filters A and B (☞p.13 in the *Parameter Guide*).

Filter EG

Adjust the effect produced by the filter EG, whose settings are made in the Filter 1 EG tab.

- "Velocity to A" and "Velocity to B" adjust the effect that velocity will have on the filter EG depth.
- "Intensity to A" and "Intensity to B" adjust the depth of the filter EG.
- "AMS Int to A" and "AMS Int to B" adjust the effect that AMS will have on the filter EG depth.

These three settings will determine the depth of the tonal change produced by the filter EG.

Filter A/B Modulation

Set this when you wish to produce tonal change by using controllers etc. to vary the cutoff frequency.

Filter 1 LFO Mod. tab

Make settings that allow the LFO to produce cyclic changes in tone (a "wah" effect).

"LFO Intensity to A" and "LFO Intensity to B" will cause the tone to be modulated.
"JS–Y Intensity to A" and "JS–Y Intensity to B" specifies the depth of the wah effect that is produced when you move the joystick toward yourself.
"AMS Intensity to A" and "AMS Intensity to B" specifies the depth of the wah effect that is produced when you operate an "AMS" (alternate modulation source). For example if you set "AMS" to **After Touch**, a wah effect will be produced when you apply pressure to the keyboard.

Filter 1 EG tab

Make settings for the filter EG, which controls time-variant changes in tone. Make settings for the EG here, and set the depth of its effect in the Filter 1 Mod. tab "Filter EG" parameter (☞p.15 in the *Parameter Guide*).

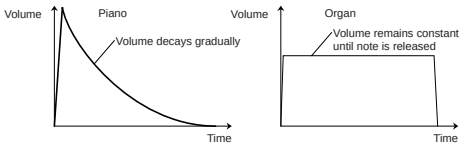
Filter EG and Amplifier EG

When the Filter EG changes the cutoff frequency, the tone will change. However depending on the volume changes produced by the Amplifier EG, this can be heard in different ways. For example by changing the speed at which the tone and volume begin (attack) or decay, you can significantly vary the character of the tonal change. It is a good idea to adjust the changes of both the Filter EG (tone) and the Amplifier EG (volume) as you proceed with editing. (☞"Amp 1 EG" tab.)

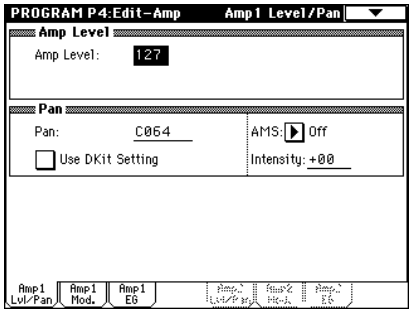
P4: Edit-Amp Amplifier settings

These settings affect the volume. Here you can adjust the way in which the Amp EG and LFO produce time-varying and cyclic changes in volume, and how the controllers etc. will affect the volume.
Amp1 applies to OSC1, and Amp2 applies to OSC2. If the "OSC Mode" is **Single** or **Drums**, only Amp1 will be available.

For example, the volume of a piano note begins at a high volume the instant you play the note, and then decreases gradually. The volume of an organ note remains constant as long as you continue pressing the key. The volume of a note on a violin or wind instrument can be varied during the note by the musician (i.e., by regulating the amount of pressure on the bow or the force of the breath).



Amp1 Lvl/Pan tab



Amp Level

Adjust the volume of the sound that has passed through the oscillator, filter, and amp.

Pan

Adjust the pan (stereo position) of the sound that has passed through the oscillator, filter, and amp. Normally this will be set to **C064**. If "OSC Mode" is **Double** and you wish to produce a sense of stereo, you can use this setting to place oscillators 1 and 2 at the left and right. With a setting of **Random**, the sound will be placed at a random location each time you play a note, producing an interesting effect.

AMS Intensity

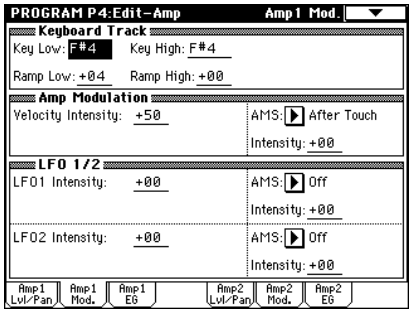
"AMS Intensity" specifies the depth of the panning effect that will occur when "AMS" is operated.

When "AMS" is set to **Note Number**, the pan will change according to the location you play on the keyboard. With a setting of **LFO1** or **2**, the pan will sweep from side to side (auto pan). Other settings allow you to move the oscillator pan by operating a controller.

Use DKit Setting

This is valid when "OSC Mode" is set to **Drums**. If this is **checked**, the pan location specified by the Drum Kit for each drum sound will be used. If this is **unchecked**, all drum sounds will sound at the same location. Preset drum kits are set to stereo settings. Normally you will leave this **checked**.

Amp1 Mod. tab



Keyboard Track

This lets you vary the volume by the keyboard location you play.

- When "Ramp Low" has a positive **(+) value**, the volume will increase as you play lower on the keyboard. With a negative **(–) value**, the volume will decrease as you play lower on the keyboard.
- When "Ramp High" has a positive **(+) value**, the volume will increase as you play higher on the keyboard. With a negative **(–) value**, the volume will decrease as you play higher on the keyboard.

Amp Modulation

"Velocity Intensity" is used by most programs to decrease the volume of softly played notes and increase the volume of strongly played notes, and this Amp Modulation parameter adjusts the depth of this control. Normally you will set Amp Modulation to positive **(+) values**. As this setting is increased, there will be greater volume difference between softly played and strongly played notes.

LFO 1/2

Specify how the LFO's will produce cyclic changes in volume (the tremolo effect).
The volume will be affected by the LFO(s) for which you set an "LFO Intensity" value.
"AMS Intensity" adjusts the depth by which the tremolo effect produced by the LFO will be affected when you operate an "AMS" (alternate modulation source). For example if "AMS" is set to **JS–Y**, moving the joystick toward yourself will apply tremolo.

Amp1 EG tab

Here you can make settings for the amplifier EG that produces changes in volume over time.

Every instrument has its own characteristic curve of volume change. This is part of what gives each instrument its identifiable character. Conversely, by applying a strings-type Amp EG curve to an organ-type multi-sample, you can produce a sound with a character unlike a typical organ.

Piano



Organ

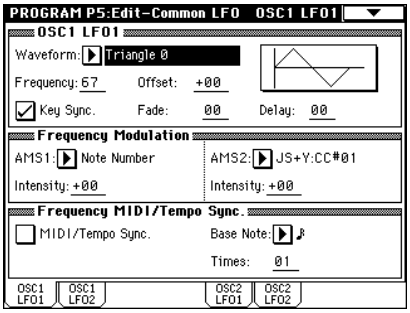


Strings



P5: Edit-Common LFO LFO settings

For each oscillator, you can use two LFO (Low Frequency Oscillator) units: LFO1 and LFO2. You are free to select the type of each LFO and set its speed. The depth of the LFO1 and LFO2 whose settings you make here can be adjusted in pages P2: Edit-Pitch, P3: Edit-Filter, and P4: Edit-Amp.



OSC (1/2) LFO (1/2)

"Waveform" selects the type of LFO. You can choose from a variety of waveforms, including standard waveforms such as **Triangle**, **Saw**, **Square**, and **Sine**, as well as **Step** or **Random** waveforms that produce a sample-and-hold effect (☞p.20 in the *Parameter Guide*). A wide range of variations can also be produced using the "Offset," "Fade," and "Delay" parameters, and by changing the sign of the "Intensity" parameters in P2: Edit-Pitch, P3: Edit-Filter, and P4: Edit-Amp. "Frequency" sets the speed of the LFO.

Frequency Modulation

"AMS" can be used to vary the LFO speed. This lets you change the LFO speed by operating a controller, or by the EG or Keyboard Track settings.

Frequency MIDI/Tempo Sync.

If "MIDI/Tempo Sync" is **checked**, the "Frequency" setting will be ignored, and the LFO will synchronize to the tempo of the arpeggiator or sequencer. This lets you produce vibrato, wah, auto-pan, or tremolo that is synchronized to the playback speed of the arpeggiator.

P7: Edit-arpeggiator
Arpeggiator settings

Here you can make arpeggiator settings (☞p.96).

P8: Edit-Insert Effect
Insert Effect settings

Here you can select insert effects and make settings for them. You can also specify the oscillator routing (the signal sent to the insert effects, master effects, and independent outputs) (☞p.107).

P9: Edit Master Effect
Master Effect settings

Here you can select master effects and make settings for them. The master EQ is also set here (☞p.108).

More about Alternate Modulation

Alternate Modulation is a type of modulation that can be used to control various aspects of the sound.

AMS (Alternate Modulation Source) refers to any of the numerous sources that can control alternate modulation, and includes controllers such as the joystick or ribbon controller that you physically operate, incoming MIDI data, as well as modulators such as the EG or LFO.
Since the TRITON allows you apply modulation to a modulator, this type of control is referred to as "alternate modulation."

Intensity is a parameter that sets the degree (speed or depth) to which AMS will control alternate modulation.

Combinations that are frequently used in sequencer performance (such as using the joystick or ribbon controller to vary the pitch) are also provided as special parameters separately from alternate modulation.

The TRITON provides 29 types of alternate modulation.
In single mode you can use 29 alternate modulation destinations of 29 types, and in double mode you can use 55 alternate modulation destinations of 29 types.
There are 42 AMS sources. (However depending on the type of modulation, some sources cannot be selected.)
For details on alternate modulation and AMS, refer to p.209 in the *Parameter Guide*.

Suggestions on using alternate modulation

When making settings for alternate modulation, think of the effect that you wish to produce, what type of modulation will be necessary to produce that effect, and what parameter of the oscillator, filter, or amplifier needs to be controlled. Then select a source ("AMS") and set the "Intensity."
If you proceed logically in this way, you will achieve the desired effect.
For example if you want to "control a guitar-like sound so that it appears to be approaching feedback when the joystick is moved away," you will make settings so that the joystick controls filter modulation or the resonance level.

Pages in Combination mode

In Combination mode you select combinations and edit them. Combination mode consists of pages P0–P9. To play a combination, select P0: Play. In P1–P9 you can edit the parameters of the combination that was selected in P0.

○ **For details on accessing each page or modes (☞p.12 “Basic operation of the TRITON”).**

P0: Play	Select a combination; select a program for each timbre; set the status, pan, and level; select and set the arpeggio pattern.
P1: Edit-program/ Mixer	Select a program for each timbre, and set pan and level. (These are common to the parameters in P0, and can be edited from either page.)
P2: Edit-Trk Param	Set various parameters for each timbre, such as MIDI, OSC, Pitch etc.
P3: Edit-MIDI Filter	MIDI transmission/reception filter settings for each timbre.
P4: Edit-Zone/Ctrl	Key zone and velocity zone settings for each timbre. Make controller settings. If the separately sold EXB-MOSS option is installed, set related parameters.
P5:	---
P6:	---
P7: Edit-Arpeggiator	Arpeggiator settings. (These are common to the parameters in P0, and can be edited from either page.)
P8: Edit-Insert Effect	Select insertion effects and make settings. Specify the timbre routing (send levels to the insertion effects, master effects, and independent outputs).
P9: Edit Master Effect	Select master effects and make settings. Also make master EQ settings.

If the separately sold EXB-MOSS option is installed, bank F programs can be used by the timbres of a combination. For details on the parameters of bank F programs, refer to the EXB-MOSS owner’s manual.

When the TRITON is shipped from the factory, it contains a wide variety of factory preset combinations that use the preset programs, preset arpeggio patterns, and effects. You can create your own combinations by modifying these preset combinations, or by creating a combination from scratch by starting with an initialized combination.
Your own programs that use original sample waveforms or multisamples that were sampled in Sampling mode or loaded into the TRITON in Disk mode can also be used by a combination.
Combinations that you edit or create can be written into the 512 combination memory areas of banks A–D. In Disk mode, you can save combinations on a floppy disk or on other external media (☞p.40).

Playing a combination

P0: Play

Here you can select and play combinations. For each timbre 1–8, you can also select the program and set its status, pan, and level. You can also make arpeggiator settings.

Selecting a combination

There are three ways to select a combination. For the procedure, refer to the appropriate page.

- From the TRITON’s front panel (“Selecting and playing a combination” ☞p.23)
  Selecting by bank / combination number
  Selecting by combination category
  Selecting with [. / 10’s HOLD]
- With a connected foot switch (“Other functions” ☞p.125)
- By receiving MIDI program change messages (“MIDI” ☞p.115)

For the factory-set combination names, refer to the separate *Voice Name List*.

Program Select tab

Selecting a program for each timbre 1–8

There are three ways to select a program for each timbre 1–8. For the procedure, refer to the appropriate page.

- From the TRITON’s front panel (“Simple combination editing” ☞p.35)
  Selecting by bank / program number
  Selecting by program category
- By receiving MIDI program change messages (“MIDI” ☞p.115)

It is not possible to use MIDI program changes to select a program on a Timbre whose “Status” is other than **INT**.

If a program currently being edited in Program mode is used in a combination, the combination will use the sound that is being edited.

For the factory-set program names, refer to the separate *Voice Name List*.

Status

For each timbre 1–8, this indicates the status of MIDI and the internal tone generator. Normally, you will set this to **INT** if you want the TRITON's internal tone generator to sound. Turn this **Off** for unused timbres. With settings of **Off**, **EXT** or **EX2**, that timbre will not sound. Settings of **EXT** and **EX2** allow the timbre to control an external tone generator connected via MIDI (☞p.35). (☞p.30 in the *Parameter Guide*)

Mixer tab

Here you can adjust the pan and level of each timbre 1–8 (☞p.35). (☞p.31 in the *Parameter Guide*)

Arpeggio Play A / Arpeggio Play B tab

- Arpeggiators A and B can be switched on / off independently. To turn both arpeggiators on / off, use the ARPEGGIATOR [ON / OFF] key.

The arpeggiators will function only for timbres 1–8 to which arpeggiator A or B is assigned.

- Arpeggiator parameters including the arpeggio pattern selection can be edited in realtime while you play.
- ARPEGGIATOR [TEMPO], [GATE], and [VELOCITY] knobs will control the tempo, note length, and strength of the arpeggio notes.

For details refer to "Using the arpeggiator while you play" (☞p.31).

How a combination is structured

A combination consists of a variety of parameters that can be accessed in P1–P9. The diagram below shows how a combination is structured.

Parameters for each timbre are found in P1–P4. Here you can bring programs together to create the basic combination. Finishing touches can be added to the combination by using **insert effects**, **master effects**, and the **master EQ**. Effect settings are made for the combination independently of the settings in Program mode. To these settings you can add arpeggiator and controller settings to create the final **combination**.

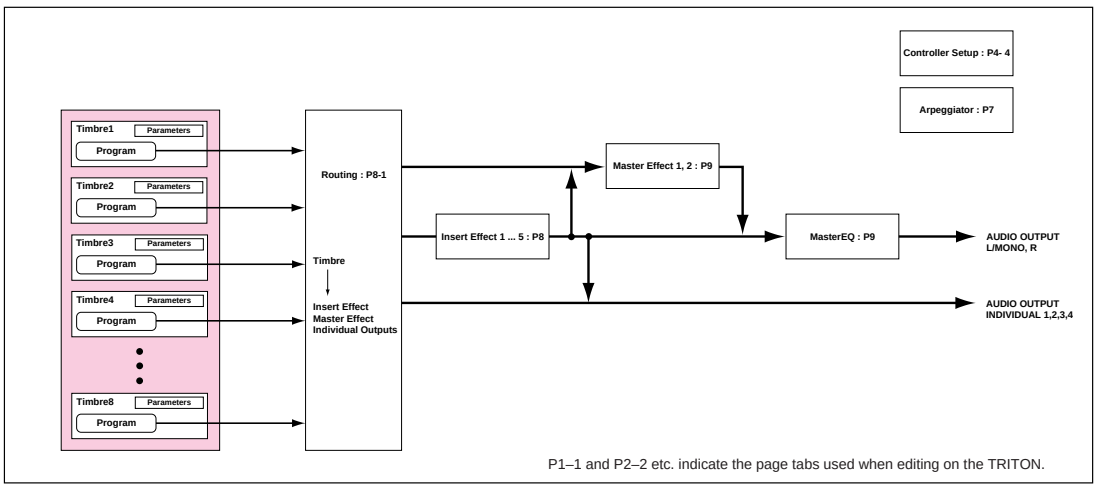
Basic combination editing

Combination editing refers to actions such as re-selecting the program for a timbre to change the sound, changing the keyboard area or velocity range that will sound the program for each timbre, or making controller settings.
Quick editing of a combination can be performed in the Program Select tab and Mixer tab of Combination P0: Play, but for detailed editing you will need to use Combination P1–P9.

The parameters in P1–P9 will affect the combination that you selected in Combination P0. In the pages that follow, we will be modifying some of the representative parameters as we explain their function. For details on all parameters, refer to the *Parameter Guide.*

note The most effective procedure is to first use P1: Edit-program / Mixer to select the program for each timbre. Then use P4: Edit-Zone to specify the keyboard range for each program (layer, split, velocity switch etc.). Finally, adjust the volume of each timbre, and make other parameter settings.

note If you execute the page menu command "Solo Selected Timbre," only the sound of the selected timbre will be heard when you play the keyboard. This provides a convenient way to hear individual timbres that have been layered. (☞p.31 in the *Parameter Guide*)



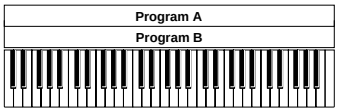
If you wish to keep a combination that you edited, you must Write it (☞p.38).

Layer, split, and velocity switch

Within a combination, you can use keyboard location and velocity to change the program that sounds. The programs assigned to each timbre can sound in three ways: as a **layer**, a **split**, or a **velocity switch**. A combination can be set to use any one of these methods, or to use two or more of these methods.

Layer

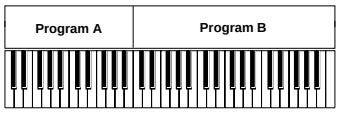
Layer refers to settings which cause two or more programs to sound simultaneously when a note is played.



Layer:
Two or more programs sound simultaneously.

Split

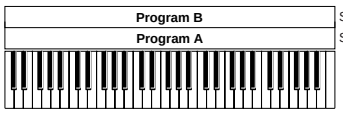
Split refers to settings which cause different programs to sound depending on the keyboard location that is played.



Split:
Different programs will sound in different areas of the keyboard.

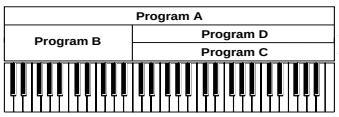
Velocity switch

Velocity Switch refers to settings which cause different programs to sound depending on the velocity (keyboard playing dynamics).



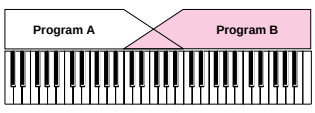
Velocity Switch:
Keyboard playing dynamics (velocity) switches between different programs.

On the TRITON, you can use a different program for each of up to eight timbres, and combine two or more of the above methods to create even more complex setups.

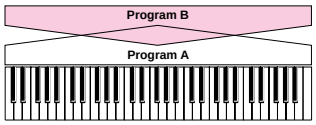


Example:
B and C/D are split. In the lower keyboard range, A and B are layered. In the higher keyboard range, C and D are switched by velocity and layered with A.

As an additional possibility, you can set the slope for a key zone or velocity zone so that the volume diminishes gradually. This lets you change a split into a **keyboard crossfade**, or a velocity switch into a **velocity crossfade**.



Keyboard X-Fade (keyboard crossfade):
As you play from low notes to high notes, the volume of A will fade out, and the volume of B will fade in.



Velocity X-Fade (velocity crossfade):
As you play with increasingly stronger velocity, the volume of A will fade out, and the volume of B will fade in.

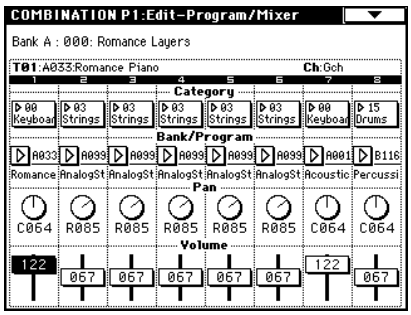
The Compare function

When P1–P9 are displayed, you can press the [COMPARE] key to make the LED light. This will recall the combination that had been written before you began editing. When you press the [COMPARE] key once again the LED will go dark, and you will return to the sound that you had been editing. Use this when you wish to compare the edited sound with the un-edited sound.

If you continue editing when the [COMPARE] key LED is lit, the LED will go dark, and the current sound will now be the sound that is recalled when the [COMPARE] key LED is dark.

P1: Edit-Program / Mixer
Timbre 1–8 program, pan and volume

Here you select a program for each timbre 1–8, and set its pan and volume. These are the same parameters as in P0: Play, and can be edited from either page.



Category, Bank / Program

Select the program for each timbre.

Selection of programs via MIDI program change is disabled in this page.

If a program currently being edited in Program mode is used in a combination, the combination will use the sound that is being edited.

Pan

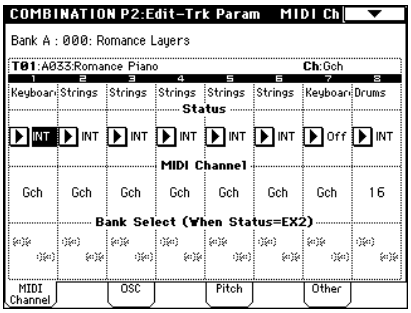
Specify the panning (stereo location) for each timbre. A setting of **C064** will reproduce the oscillator pan setting of the program. Moving this to left or right will move the sound to left or right while preserving the pan relationship between the oscillators. A setting of **L000** is far left, and **R127** is far right. (☞p.31 in the *Parameter Guide*.)

Volume

Adjust the volume of each timbre 1–8.
Create the overall sound by adjusting the volume balance between timbres. The “Volume” setting is an important aspect of creating the sound, and this setting will have a significant effect on the overall impression produced by the combination.

P2: Edit-Trk Param
Settings for status, MIDI channel, and playing mode

MIDI Channel tab



Status

Select a “Status” of **INT** for all timbres that you wish to use. Select **Off** for unused timbres.
Timbres that are set to **INT** will sound the TRITON’s internal tone generator. Timbres set to **Off**, **EXT**, or **EX2** will not sound. Timbres set to **EXT** or **EX2** can control an external tone generator connected via MIDI.

MIDI Channel

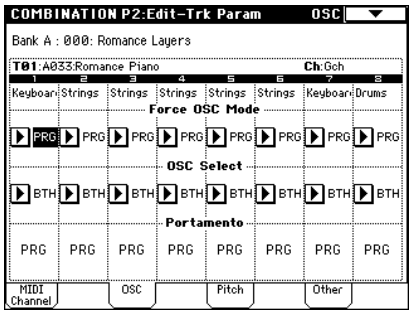
Timbres that you wish to play from the TRITON’s keyboard must be set to the global MIDI channel. Your playing on the keyboard is transmitted on the global MIDI channel, and will sound any timbre that matches this channel. Normally you will set this to **Gch**. When this is set to **Gch**, the MIDI channel of the timbre will always match the global MIDI channel, even if you change the global MIDI channel.

On some preset combinations that use the arpeggiator, timbres assigned to the arpeggiator may not have a “Status” of **INT** and “MIDI Channel” of **Gch**.
The reason for this is that these settings are for timbres that sound only when the arpeggiator is on. This is a very useful technique for creating combinations that use the arpeggiator. Refer to “Dual arpeggiator editing” (☞p.104) and to “7–1b” (☞p.39) in the *Parameter Guide*, and study the relationship between arpeggiator assignments, “Status,” and “MIDI Channel.”

Bank Select (when Status = EX2)

This setting is valid when “Status” is set to EX2. It specifies the Bank Select message that will be transmitted from the TRITON.

OSC tab



Force OSC Mode

Normally you will set this to **PRG**.
If you wish to force a polyphonic program to sound monophonically, set this either to **MN (Mono)** or **LGT (Legato)**. Conversely, set this to **Poly** if you wish to force a monophonic program to play polyphonically (☞p.33 in the *Parameter Guide*).

OSC Select

Normally you will set this to **BTH (Both)**.
If the timbre is using a program whose “OSC Mode” is **Double**, and you want only OSC1 or OSC2 (not both) to sound, set this to **OS1** (only OSC1 will sound) or **OS2** (only OSC2 will sound).

Portamento

Normally you will set this to **PRG**.
If you want the portamento setting specified for the program of the timbre to be forced off, set this parameter to **Off**. Conversely, if you want to forcibly turn the portamento on, or to change the portamento time, set this to a value of **001–127** to specify the portamento time.

Pitch tab

Transpose, Detune

These parameters adjust the pitch of the timbre.

- In a layer-type combination, you can set two or more timbres to the same program, and create a richer sound by using “Transpose” to shift their pitch apart by an octave or by using “Detune” to create a slight difference in pitch between the two.
- In a split-type combination, you can use “Transpose” to change the pitch of the program in each key zone in steps of an octave.
- If you wish to change the playback pitch of a drum program, use “Detune.” If you change the “Transpose” setting, the correspondence between notes and drum sounds will change.

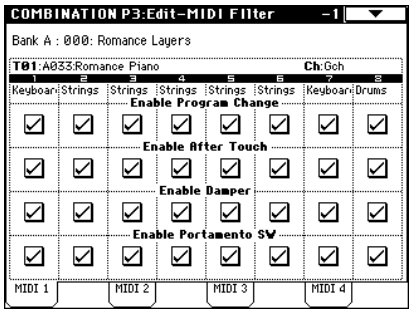
Other tab

Delay [ms]

Specify the timing of the delay before each timbre sounds.
Select the preset combination **A127: One FingerTVShow**, and play a single note. Timbres will sound consecutively, according to their Delay setting.
If you select **KeyOff** for this parameter, the timbre will sound when the note is released.

P3: Edit-MIDI Filter
MIDI filter settings

For each MIDI Filter item, you can specify whether or not the corresponding MIDI message will be transmitted and received. The **checked** items will be transmitted and received.



For example, suppose that you have a split combination in which timbre 1 uses a bass program and timbre 2 uses a piano program.
You could **uncheck** "Enable Damper" for timbre 1, and **check** "Enable Damper" for timbre 2.
With these settings, pressing a damper pedal connected to the [DAMPER] jack would apply the damper effect only to the piano program of timbre 2.

For details on each MIDI filter item, refer to p.35 in the *Parameter Guide*.

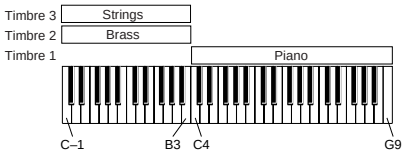
The MIDI Filter settings do not switch the corresponding function on / off, but merely specify whether or not that MIDI message is transmitted and received. For example if portamento is on, portamento will be applied to the sound of the TRITON even if the "Enable Portamento SW" is unchecked.

P4: Edit-Zone / Ctrl
Layer, split, and velocity switch settings

You can make most of the settings necessary for creating layers, splits, velocity switches, keyboard crossfades, and velocity crossfades.

Key Zone tab (key zone settings)

For each timbre, you can specify the range of notes for which it will sound. Each area that sounds a timbre is referred to as a **Key Zone**. By setting key zones, you can create a combination in which different programs sound in different areas of the keyboard.
By combining key zones specified for each timbre, you can create **layered** or **split** combinations.
The upper and lower limits for the key zone of each timbre are set by the "Top Key" and "Bottom Key" respectively. For example in the following diagram, timbres 1–3 are set to create a layered and split combination. This is specified by the key zone settings. Timbres 2 and 3 create a layer. Timbre 1 and timbres 2 / 3 are split between the B3 and C4 note numbers.



① **To create a combination like the one shown above, first use the P0: Play or P1: Edit-program/Mixer page to select a program for each timbre 1–3.**

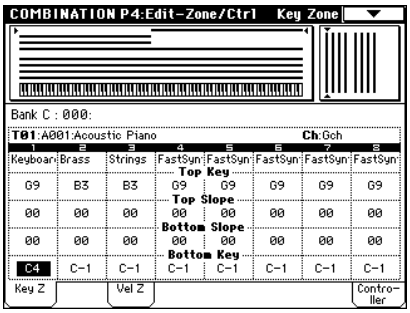
Select a piano program for timbre 1.
Select a brass program for timbre 2.
Select a strings program for timbre 3.

② **In P2: Edit-Trk Param, select the MIDI Channel tab. Set each timbre you wish to use to a "Status" of INT, and a "MIDI Channel" of Gch or the global MIDI channel. ("G" will be displayed following the channel number.)**

③ **In P4: Edit-Zone/Ctrl Key Zone tab, set the "Top Key" and "Bottom Key."**

Set timbre 1 to a "Top Key" of **G9** and a "Bottom Key" of **C4**. Set timbres 2 and 3 to a "Top Key" of **B3** and a "Bottom Key" of **C–1**.

You can also input the value by holding down the [ENTER] key and playing a note.

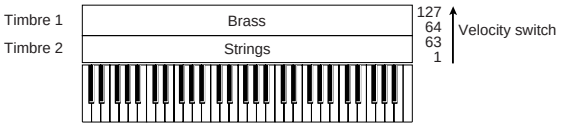


As an option, you could specify the range velocities, so that a portion of timbre 1 overlapped with timbres 2 and 3 (creating a layer), and setting "Top Slope" and "Bottom Slope" so that the volume would change gradually between **B3** and **B4**. This would avoid an abrupt change in sound between the two keyboard areas.

Vel (Velocity) Zone tab (Velocity zone settings)

For each timbre, you can specify a range of velocities for which it will sound. The range of velocities for which a timbre will sound is called the **Velocity Zone**. By setting a velocity zone, you can set up a timbre which will be sounded only by notes played at a certain strength, and not by stronger or weaker notes. By combining timbres that have differing velocity zone settings, you can create **velocity switched** combinations.

The upper and lower limits of the velocity zone of each timbre are determined by the "Top Velocity" and "Bottom Velocity" respectively. The following diagram shows an example of a velocity switched combination in velocity will switch between timbres 1 and 2 to play different programs. Such combinations are created by setting the velocity zone.



① **To create a combination such as shown above, first use P0: Play or P1: Edit-program/Mixer to select the program that each timbre 1 and 2 will use.**

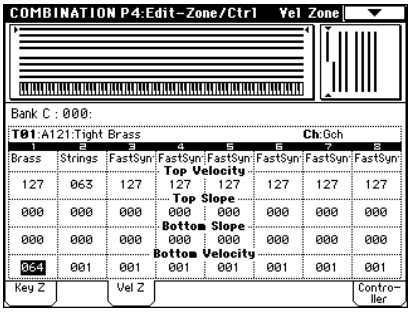
Select a brass program for timbre 1.
Select a strings program for timbre 2.

② **In P2: Edit-Trk Param, select the MIDI Channel tab. Set each timbre you are using to a "Status" of INT, and a "MIDI Channel" of Gch or the global MIDI channel. ("G" will be displayed after the channel number.)**

③ **In P4: Edit-Zone/Ctrl Vel Zone tab, set the "Top Velocity" and "Bottom Velocity."**

Set timbre 1 to a "Top Velocity" of **127** and a "Bottom Velocity" of **64**.
Set timbre 2 to a "Top Velocity" of **63** and a "Bottom Velocity" of **1**.

You can also input the value by holding down the [ENTER] key and playing a note on the keyboard.



As an option, you could specify the range velocities, so that a portion of the two timbres overlapped, and set "Top Slope" and "Bottom Slope" so that the volume would change gradually within that area. This would avoid an abrupt change in sound between velocities **63** and **64**.

Controller Setup tab

For each combination, you can specify the functions of the [SW1] and [SW2] keys, and the B-mode functions of REALTIME CONTROLS knobs [1]–[4] (☞p.127). (☞p.38, 217, 218 in the *Parameter Guide)*

P7: Edit-Arpeggiator Arpeggiator settings

Make settings for the arpeggiator (☞p.98).

P8: Edit-Insert Effect Insert Effect settings

Select insert effects, and make settings for them. Here you can also set the oscillator routing (send levels to the insert effects, master effects, and individual outputs) (☞p.108).

P9: Edit Master Effect Master Effect settings

Select master effects, and make settings for them. Here you can also make master EQ settings (☞p.108).

Sequencer mode

The TRITON contains a 16-track MIDI sequencer. This sequencer is the center to which the TRITON's numerous functions are integrated, allowing it to be used in a variety of situations including music production and live performance.

When you turn off the power, the settings made in Sequencer mode and the song data, cue list data, and user pattern data that you recorded are not backed up. If you wish to keep this data, you must save it on a floppy disk or external SCSI device (if the separately sold EXB-SCSI option is installed) before turning off the power, or perform a MIDI data dump to save the data on an external data filer etc.
If you wish to save the programs, track parameters and effects etc. selected for a song as a template song, use the page menu command "Save as User Template Song."
Immediately after the power is turned on, the TRITON will not contain any cue list data or song data, so if you wish to playback a song on the sequencer, you must first load data from floppy disk or receive a MIDI data dump from an external MIDI sequencer (☞p.40, 92). (☞p.119 in the *Parameter Guide*)

Features of the sequencer

- The sequencer lets you record a **maximum of 200,000 events** (note data etc.), up to **200** songs, and as many as **999** measures per song.
- Up to **20 cue lists** can be created.
  A cue list is an arrangement of up to 99 songs that will be played as a chain. You can specify the number of times that each song will repeat. Songs in a cue list can also be converted into a single song.
- The **RPPR (Realtime Pattern Play/Recording) function** can be used for playback or recording.
- The **dual polyphonic arpeggiator** can be used for playback or recording.
- **Sixteen different template songs** are built-in, and contain program and effect settings suitable for various musical styles. Up to sixteen original templates that you create can be registered as user template songs.
- **Five stereo insertion effects**, **two master effects**, and a **stereo master EQ** can be used for each song.
- Sample waveforms that you sampled in Sampling mode or loaded in Disk mode can be converted into programs and used in a song.
- If the separately sold EXB-MOSS option is installed, **MOSS tone generator programs can be played multi-timbrally**. (For example, you could use two bass voices and four electric piano voices. However, effect settings cannot be made separately.)
- Timing **resolution is a maximum** of ♩ / 192.
- **Sixteen tracks** are provided for musical data, and a **master track** contains time signature and tempo data that controls the playback.
- A **track play loop function** lets you loop specified measures independently for each track.
- **150 preset patterns** ideal for drum tracks are built in. In addition, you can create up to 100 user patterns for each song. These patterns can be used as musical data within a song, or can be played by the RPPR function.
- Various methods of recording are supported, including **realtime recording** in which your performance on the keyboard and controllers (including MIDI control events) is recorded just as you play, and **step recording** in which the timing, length, and velocity of each note can be specify in the LCD as you input the pitches from the keyboard.
- The musical data and control events that you recorded can be edited in various ways (including event editing and many other edit commands).
- When the "Status" of a track is set to INT or BTH, an external sequencer can be used to play the TRITON as a **multi-timbral tone** generator.
  When the "Status" of a track is set to BTH, EXT, or EXT2, the sequencer of the TRITON can **play external tone** generators.
- Playback can be **synchronized with an external** MIDI device.
- The TRITON's **AMS (Alternate Modulation)** capability lets you use control changes for realtime control of the parameters of the programs used in a program. Its **MIDI Sync. functionality** lets you synchronize the LFO speed to changes in the tempo.
- **Dmod (Dynamic Modulation) functionality** lets you control effect parameters in realtime. You can also use **MIDI Sync.** to synchronize the LFO speed or delay time to changes in the tempo.
- You can assign names not only to the song, but also to each pattern and track.
- Combination settings can be copied to a song.
- Sequencer data such as a song or cue list that you create can be saved in the TRITON's native format, or transmitted as a MIDI data dump.
- Programs or sample files can be linked and saved on external media. This data can be loaded when desired.
- A song you created can be converted into SMF (Standard MIDI File) data and saved on external media. SMF songs can also be loaded.
- The PLAY / MUTE / REC buttons and SOLO buttons let you instantly play / mute any desired track.
- You can rewind or fast-forward while listening to the sound.
- The [LOCATE] key lets you move quickly to a desired location.
- The Track **BPM Adjust function** (playback pitch adjust) can automatically change the pitch of a

sample / multisample that was sampled in Sampling mode or loaded in Disk mode so that it matches the tempo.

About song data

The following two types of song data can be loaded from floppy disk or other external media into the TRITON's sequencer.

- **Song data saved in the TRITON's own format**
  This data cannot be loaded by another device, but the playback will faithfully reproduce the detailed settings unique to the TRITON. We recommend that song data intended for playback on the TRITON be saved in this format.
- **Standard MIDI Files**
  This format is not able to provide a totally faithful reproduction of the performance on the TRITON in the way that the TRITON's own format does (although there will be no problem for normal playback), but does provide compatibility with other SMF-compatible devices.

To load song data from floppy disk or save song data to floppy disk, use Disk mode. (☞p.40, p.92)

Memory Protect

Before you record a track or pattern, or edit the musical data, you will need to turn off the memory protect setting in Global mode. (☞p.37)

The Compare function

When you perform realtime recording, step recording, or track editing, this function allows you make before-and-after comparisons. (☞p.14)

If you continue editing when the [COMPARE] key LED is lit, the LED will go dark. That musical data will now be the data that is selected when the [COMPARE] key LED is dark.

Operations for which Compare is available

- **Recording to a track**
- **Track Edit**
  All commands other than P5: Page menu commands "Memory Status," "FF / REW Speed," and "Set Location"
- **Recording to a pattern**
- **Pattern Edit**
  All commands other than P6: Page menu commands "Memory Status" and "FF / REW Speed"
- **Song Edit**
  P: 0, 2, 3, 4, 7: Page menu commands "Delete Song" and "Copy From Song"
  P1: Page menu commands "Convert to Song" and "Copy Song"

In general, track and pattern event data can not be returned to its original state.
Comparing song parameters is possible only during song editing (when executing a page menu command).

Operations for which Compare is not available

- **Editing song parameters**
  (Including "Track Name" and "Pattern Name")
- **Page menu commands other than those listed above (in Operations for which Compare is available)**

About MIDI

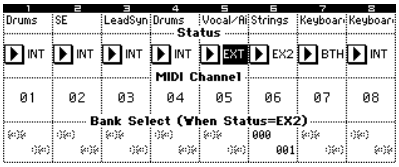
Synchronizing the sequencer with an external MIDI device

The record / playback tempo of the TRITON's sequencer can be synchronized to an external MIDI device such as a sequencer or rhythm machine (☞p.122).

Track status settings in Sequencer mode

You can make settings for the TRITON's sequencer to specify whether it will sound the internal tone generator or an external tone generator.

When Track Status is set to **INT**, operating the TRITON's keyboard and controllers will sound and control the TRITON's own tone generator.
When Track Status is set to **EXT**, **EX2** or **BTH**, operating the TRITON's keyboard and controllers will sound and control the external tone generator. (The MIDI channel of the external tone generator must match the "MIDI Channel" of the track that is set to **EXT**, **EX2** or **BTH**.) With a setting of **BTH**, both the external tone generator and the TRITON's tone generator will sound and be controlled.



If you wish to use the TRITON's Sequencer mode as a 16-timbre (16-track) tone generator, set each track to either **INT** or **BTH** (☞p.55 in the *Parameter Guide).*

About each page in Sequencer mode

○ **For details on how to access each page or modes, refer to “Basic operation of the TRITON” (☞p.12).**

P0: Play/REC	Play and record songs, and make related settings. Select the program for each track, and set pan and level.
P1: Cue List	Play, create, and make settings for cue lists.
P2: Trk Param	Parameter settings for each track of a song. MIDI, OSC, Pitch, etc.
P3: MIDI Filter	MIDI message transmission/reception filter settings for each track of a song.
P4: Zone/Ctrl	Key Zone and Velocity Zone settings for each track of a song. Controller settings. If the separately sold EXB-MOSS expansion is installed, settings for related parameters.
P5: Track Edit	Edit musical data for song tracks. Specify track names.
P6: Pattern/RPPR	Record and edit patterns for a song. Specify pattern names. RPPR function settings for a song.
P7: Arpeggiator	Arpeggiator settings.
P8: Insert Effect	Select and make settings for insert effects. Set the routing, insert effects, master effects, and individual output send amounts for each track of the song.
P9: Master Effect	Select and make settings for the master effects. Master EQ settings.

If the separately sold EXB-MOSS option is installed, bank F programs can also be used in Sequencer mode. For details on the parameters of bank F programs, refer to the EXB-MOSS owner’s manual.

The structure of Sequencer mode

Sequencer mode consists of the following pages.

Songs

A song consists of tracks 1–16, a master track, song parameters such as the song name, effect, arpeggiator and RPPR parameters, and 100 user patterns.
A maximum of 200 such songs can be created on the TRITON.

Tracks 1–16 and the master track each consist of **setup parameters** located at the start location, and **musical data** within the track.

Setup parameters	**Musical data**
Tracks 1–16	Tracks 1–16
Bank/Program No. *	Note On/Off
PLAY/MUTE/REC	Program Change (including Bank Select)
Pan *	Pitch Bend
Volume *	After Touch (Poly After)
Track Play Loop	Control Change
Loop Start Measure	Pattern No.
Loop End Measure	
Status	
MIDI Channel	
Bank Select (When Status=EX2)	
Force OSC Mode	
OSC Select	
Portamento *	
Transpose **	
Detune **	
Bend Range **	
Delay	
Use Program's Scale	
MIDI Filter	
Key Zone	
Velocity Zone	
Track Name	
Arpeggiator Assign	
IFX/Indiv.Out BUS Select	
Send1(MFX1) *	
Send2(MFX2) *	

Master track	
Time signature *	
Tempo *	

* When you change the setting during realtime-recording, this will be recorded as musical data. This allows the starting settings to be modified during the playback.

** Musical data (MIDI RPN data) can be used to change the starting settings during playback.

For details on control changes, refer to p.223 in the *Parameter Guide.*

Patterns

There are two types of patterns: preset patterns and user patterns.

- **Preset patterns:** Patterns suitable for drum tracks are preset in internal memory, and can be selected for any song.
- **User patterns:** Each song can have up to 100 patterns. When using a pattern in a different song, use the page menu commands “Copy Pattern” or “Copy From Song” etc. to copy the pattern. The pattern length can be specified in units of a measure.

Each pattern consists of musical data for one track. It is not possible to create patterns that contain multiple tracks.

These patterns can be used as track musical data by being **placed in a track** (page menu command “Put to Track”) or **copied to a track** (page menu command “Copy to Track”). Alternatively, you can use a pattern with the **RPPR function of a song**.

As track musical data of a song

Phrases that are used repeatedly in a song can be recorded as patterns.
When you **place** (“Put to Track”) such a pattern in a song, the musical data of that pattern will be recalled and played when playback reaches the measure in which the pattern was played. When using a phrase or rhythm that occurs repeatedly, you can make more efficient use of memory by creating a pattern and placing it in multiple locations of the song, rather than actually recording the same data directly to each location of the song. However, be aware that if you modify the pattern itself, the playback will be affected for all measures at which the pattern had been placed.

If you **copy** (“Copy to Track”) a pattern to a track of the song, the playback data will be recorded on the track just as if you had recorded it onto the track in the first place. This will occupy more memory than if you use “Put to Track,” but you will be able to edit each location of data independently without affecting other locations, just as when editing normal track data.

The RPPR (Realtime Pattern Play/Recording) function:

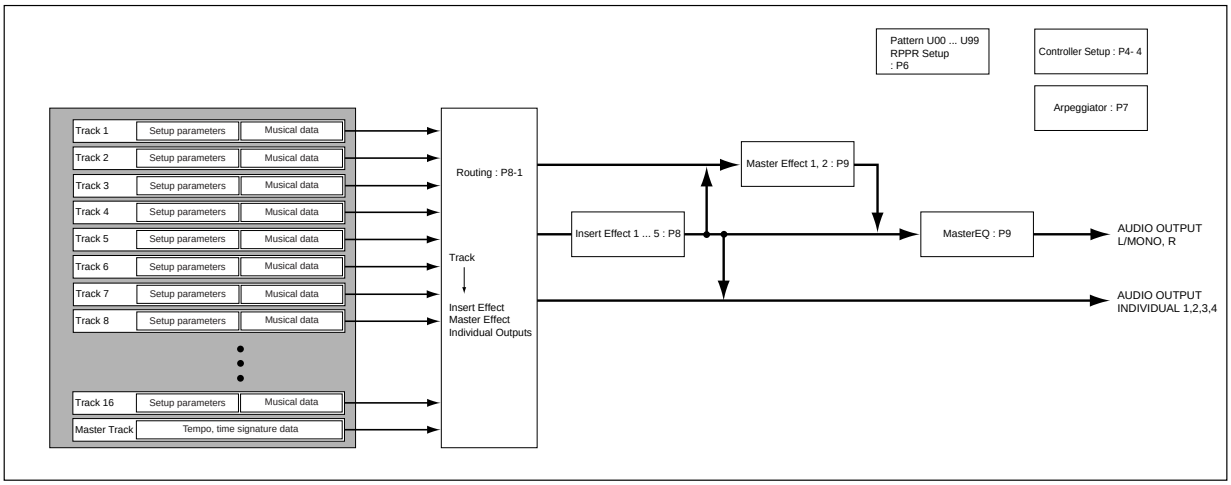
For each song, you can assign patterns to each note of the keyboard, and play notes on the keyboard to playback or record patterns in realtime.

Cue List

A cue list allows you to playback multiple songs in succession. The TRITON allows you to create 20 cue lists. Each cue list allows you to connect a maximum of 99 songs in any order, and to specify the number of times that each song will repeat.
Each unit in a cue list is called a “step,” and each step contains a song number and the number of repeats.

For example, a song consisting of an introduction, melody A, melody B, bridge, solo backing, and ending could be created using a separate song for each unit. Then you could use a cue list to play the introduction twice, melody A four times, melody B four times, the break twice, melody A four times, ... etc. to create the completed song. When you will need to change the structure of the song, the cue list function provides an efficient way to do so.

The page menu command “Convert to Song” lets you convert the two or more songs in a cue list into a single song. This allows you to use a cue list to create the backing, then convert the cue list into a song and add solo phrases on unused tracks.



Playing a song (Play)

When you wish to playback song data on the sequencer, you must first record song data, or load or dump song data into the TRITON.
To load song data from a floppy disk etc., use Disk mode.

① **In Sequencer mode, press P0: Play/REC.**

② **Use "Song No. and name" to select the desired song (☞p.64).**

③ **Press the [START/STOP] key.**

The song you selected in step ② will begin playing.

Pressing the [START/STOP] key in pages other than Sequencer mode P1: Cue List or P5: Pattern/RPPR will start song playback. When the [START/STOP] key is pressed in P1: Cue List, the currently selected cue list will begin playing. When the [START/STOP] key is pressed in P5: Pattern/RPPR, the currently selected pattern will begin playing.

④ **If you press the [START/STOP] key during playback, the playback will stop.**

Press the [START/STOP] key once again, and playback will resume from where it had been stopped.

- **Pressing the [LOCATE] key will move to the specified location.**
- **Pressing the [PAUSE] key will resume playback.**
- **Pressing the [<<REW], [FF>>] keys will rewind or fast-forward. These can be used during playback or when paused.**
  The speed of rewind and fast-forward is set by the "FF/REW Speed" page menu command.

Mute/Solo function

You can use the **PLAY/MUTE/REC buttons** and **SOLO ON/OFF buttons** in the Program Select tab of P0: Play/REC to hear or mute a desired individual track 1–16. For example, this can be used when you wish to record new tracks while listening only to the rhythm section of the previously recorded tracks.

You can use the page menu command "Solo Selected Track" to hear only the currently selected tracks. It is convenient to use this while setting track parameters or effect settings (☞p.47 in the *Parameter Guide*).

Make sure that page P0: Play/Rec is opened.

① **Press the [START/STOP] key to playback the song.**

② **Press the Prog. 1–8 tab.**

③ **Press the track 1 PLAY/MUTE/REC button once.**

The display will change to "MUTE," and the playback of track 1 will no longer be heard. In this way, the "**mute**" function allows you to silence a specified track.



Press the track 2 PLAY/MUTE/REC button once.

The display will change, and the playback of track 2 will also be muted.



To cancel muting, press the **PLAY/MUTE/REC button** once again so that the display changes to **PLAY**. Each time you press the button, the display will alternate between **MUTE** and **PLAY**.

④ **Next press the track 1 SOLO button once.**

The display will change, and now only the track 1 playback will be heard. In this way, the **Solo** function lets you hear only a specified track. (If both Mute and Solo are used, the Solo function will be given priority.)



Press the track 2 SOLO button once.

The display will change, and only the playback of tracks 1 and 2 will be heard.



To turn off the Solo function, press the SOLO button once again. Press the track 1 and 2 SOLO buttons once each.

The display will change, and the playback of tracks 1 and 2 will be muted. If the Solo function is turned off for all tracks, playback will be according to the **PLAY/MUTE/REC button** settings.

[LOCATE] settings

These settings are made by the page menu command "Set Location." You can also set the location during playback by holding down the [ENTER] key and pressing the [LOCATE] key (☞p.48 in the *Parameter Guide*). Normally you will set this to **001:01.000**. You will return to the beginning of the song.
When you select a song, the [LOCATE] setting will automatically be set to 001:01.000.

Other playback

In Sequencer mode, you can also use playback functions such as Loop All Tracks, play Patterns (using the RPPR function), Track Play Loop, and Cue List.

Recording

The process by which your playing on the TRITON's keyboard and controllers is captured on the tracks or patterns of a song as data is called "**recording**."

Recording on a track, and recording on a pattern

Recording on a track

There are two ways to record on a track: **realtime recording** and **step recording**. You can choose from a further six types of realtime recording.

In addition, you can use **event editing** to modify data that has been recorded or to insert data, and use **track editing** operations such as **Create Control Data** to insert data such as bend, after touch, and control changes.

Recording on a pattern

There are two ways to record on a pattern: **realtime recording** and **step recording**. For realtime recording, only one recording type (loop) is available.

In addition, you can use **event edit** operations to modify data that has been recorded or to insert data.

The page menu command "Get From Track" can be used to take musical data from a desired area of a track, and use it as the musical data for a pattern. Conversely, the page menu commands "Put to Track" and "Copy to Track" can be used to place or to copy the musical data of a pattern in a track.

Realtime recording

This is a method of recording in which your playing on the keyboard and your operations of controllers such as the joystick are recorded in realtime.
This method of recording is normally used one track at a time, and is called **single track recording**.
As an alternative, **multitrack recording** allows you to simultaneously record multiple channels of data onto multiple tracks. This is the method you will use when using the RPPR function to record multiple tracks of musical data at once, or when you playback existing sequence data on an external sequencer and record it onto the TRITON's sequencer in realtime (☞p.64, p.66, p.73).

- **Overwrite**
  With this method, the musical data previously on the track is overwritten by the newly recorded data.
  When you perform overwrite recording on a previously-recorded track, its musical data will be replaced by the newly recorded data.
  Normally you will use this method to record, and then modify the results by using other types of realtime recording or event editing.
- **Overdub**
  With this method, the newly recorded musical data is added to the existing data.
  When you perform overdub recording on a previously-recorded track, the newly recorded data will be added to the previously-recorded data.
  It is best to select this method when you wish to add control data, or to record tempo data onto the master track. This lets you record data without erasing the existing data.
- **Manual punch-in**
  With this method, the musical data previously on the track is overwritten by the newly recorded data. While the song is playing, you can press the [REC] key or a connected pedal switch at the desired location to start or stop recording.
- **Auto punch-in**
  With this method, the musical data previously on the track is overwritten by the newly recorded data. First you must specify the area that will be re-recorded. Then playback the song, and recording will occur automatically at the specified area.
- **Loop All Tracks**
  This method lets you continue recording as you add musical data.
  Recording will occur repeatedly over the specified area.
- **Multi**
  Multitrack recording allows you to simultaneously record onto multiple tracks, each with a different channel. This method can be used with overwrite, overdub, manual punch-in, and auto punch-in recording.

Step recording

This is a method of recording where you specify the note timing, note length, and velocity etc. in the LCD screen, and use the keyboard to input the pitches. Only note-on / off data can be recorded with this method.

Event Edit and Create Control Data

Note data is the only type of data that can be recorded in step recording. However as ways to record other types of data outside of realtime, you can use the Event Edit and Create Control Data functions.

Event Edit is intended as a way to edit previously-recorded data, but you can also use it to modify program numbers or insert control changes.

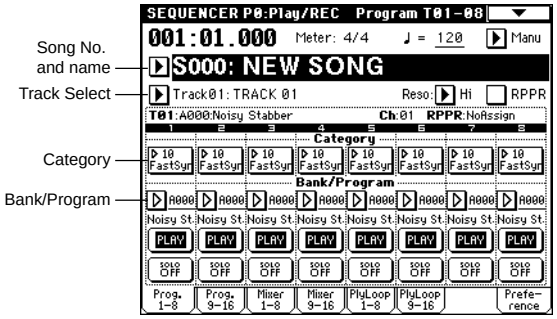
Create Control Data is a function that lets you create and insert controller data that changes smoothly between two specified values over the specified length of time. This is used to input bend, after touch, and control change data etc.

Realtime recording on a track

Preparations for recording

Before you begin recording, you need to make track settings.

Be sure to turn off the Global mode protect setting (☞p.37).



① **In Sequencer mode, select P0: Play/REC, and select the Program T01–08 tab (or Program T09–16 tab).**

② **Press "Song No. and name," and select the song that you wish to record.**

Use numeric keys [0]–[9] to enter the song number, and press the [ENTER] key. If you press the popup button, you can select from the popup menu.
If you select a song number that has not yet been recorded, the Create New Song dialog box will appear. Press the **OK button**.

To set the song name, use the page menu command "Rename Song." (☞p.38 "Assigning a name (Rename)").

③ **Use "Track Select" to select the track that you wish to record.**

④ **Use "Bank/Program" or "Category" to select the program for the track you wish to record.**

Use the Prog.1–8 tab to select a program for tracks 1–8, and the Prog.9–16 tab to select a program for tracks 9–16.

note You may find it convenient to use the page menu command "Load Template Song" and use the settings from a template song (☞p.67).

If necessary, select the Mixer tab and set the pan and volume. The status and MIDI channel of each track are set by P2: Trk Param MIDI Ch tab "Status" and "MIDI Channel."

note It is a good idea to set tracks 1–16 to "MIDI Channel" 1–16 respectively. (This is the default.) Tracks that are set to the same MIDI channel will sound simultaneously when either track is recorded or played.
Make sure that "Status" is **INT** or **BTH**.

⑤ **Press the [REC/WRITE] key.**

The TRITON will enter record-standby mode.
The **PLAY/MUTE/REC button** of the track(s) you specified in step ③ will change from **PLAY** to **REC**.

The metronome will begin sounding. If it does not, use the Preference tab "Metronome Setup" to make metronome settings. The default values are "Sound" **Only REC**, "BUS Select" **L/R**, "Level" **127**, and "Precount" **2**. With these settings, there will be a two-measure pre-count, the metronome sound will be output at the maximum level from the L/MONO and R jacks (and from the headphones), and will be heard only during recording.

⑥ **Set "Tempo Mode" to Manu (manual), and as you listen to the metronome, use "♩=" to set the tempo.**

⑦ **Set "Meter" to the desired time signature.**

⑧ **If necessary, set "Reso" (resolution) to the desired realtime quantize setting (☞p.68).**

This completes preparations for recording. The recording procedure will depend on the "Overwrite" – "Multi (multitrack recording)" setting explained below. Press the [REC/WRITE] key to temporarily cancel record-standby mode, and try out the various recording methods described below.

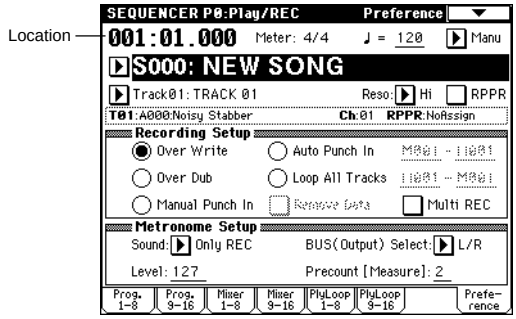
The time signature will be recorded when you actually begin recording. If you cancel recording during recording-standby or during the precount, the time signature specified in ⑦ will not be recorded.

Overwrite

Use this method when recording for the first time.

① **Make the necessary settings in "Preparations for recording."**

② **In the Preferences tab "Recording Setup," select Over Write.**



③ **In "Location," specify the location at which you wish to begin recording.**

If no musical data has been recorded it will not be possible to change the location, so proceed to step ④.

④ **Press the [REC/WRITE] key, and then press the [START/STOP] key.**

If “Metronome Setup” has the default settings (refer to “Preparations for recording” step ⑤), the metronome will sound for a two-measure pre-count, and then recording will begin. Play the keyboard and move controllers such as the joystick to record your performance.

⑤ **When you finish playing, press the [START/STOP] key.**

Recording will end, and the location will return to the point at which you begin recording.

At this time if you press the [PAUSE] key instead of the [START / STOP] key, recording will pause. When you press the [PAUSE] once again, recording will resume. When you are finished, press the [START / STOP] key to stop recording.

Overdub

① **Make the necessary settings in “Preparations for recording.”**

② **In the Preferences tab “Recording Setup,” select Over Dub.**



③ **For the rest of the procedure, refer to steps ③–⑤ of “Overwrite” (☞p.64).**

Manual punch-in

① **Make the necessary settings in “Preparations for recording.”**

② **In the Preferences tab “Recording Setup,” select Manual Punch In.**



③ **In “Location,” specify a location several measures earlier than the point at which you wish to begin recording.**

④ **Press the [START/STOP] key.**

Playback will begin.

⑤ **At the point at which you wish to begin recording, press the [REC/WRITE] key.**

Recording will begin. Play the keyboard and operate controllers such as the joystick to record your performance.

⑥ **When you finish recording, press the [REC/WRITE] key.**

Recording will end (playback will continue).

Instead of pressing the [REC / WRITE] switch in steps ⑤ and ⑥, you can use a foot switch connected to the [ASSIGNABLE SWITCH] jack. Set the Global P2: Controller “Foot Switch Assign” to **Song Punch In/Out (**☞p.125**)**.

⑦ **Press the [START/STOP] key.**

Playback will stop, and you will return to the location that you specified in step ③.

Auto punch-in

① **Make the necessary settings in “Preparations for recording.”**

② **In the Preferences tab “Recording Setup,” select Auto Punch In.**



③ **In “M__–M__” specify the area that you wish to record.**

For example if you specify **M005–M008**, recording will occur only from measure 5 to measure 8.

④ **In “Location,” specify a location several measures earlier than the point at which you wish to begin recording.**

⑤ **Press the [REC/WRITE] key, and then press the [START/STOP] key.**

Playback will begin.

When you reach the starting location you specified in step ④, recording will begin. Play the keyboard and operate controllers such as the joystick to record your performance. When you reach the ending location you specified in step ④, recording will end. (Playback will continue.)

⑥ **Press the [START/STOP] key.**

Playback will stop, and you will return to the location you specified in step ④.

Loop All Tracks

① **Make the necessary settings in “Preparations for recording.”**

② **In the Preferences tab “Recording Setup,” select Loop All Tracks.**

However since multitrack recording is not possible, the “MultiRec” check box must be **unchecked**.



③ **In “M__–M__” specify the area that you wish to record.**

For example if you specify **M004–M008**, recording will occur repeatedly (as a loop) from measure 4 to measure 8.

④ **In “Location,” specify a location several measures earlier than the point at which you wish to begin recording.**

⑤ **Press the [REC/WRITE] key, and then press the [START/STOP] key.**

Playback will begin. When you reach the starting location you specified in step ③, recording will begin. Play the keyboard and operate controllers such as the joystick to record your performance. When you reach the ending location you specified in step ③, you will return to the starting location, and continue recording.

The musical data that is loop-recorded will be added to the previously-recorded data.

⑥ **During loop recording, you can press the [REC/WRITE] key or check the "Remove Data" check box to erase the specified musical data.**

If you press the [REC / WRITE] key during loop recording, all musical will be removed from the currently selected track as long as you continue pressing the key.

By **checking** the "Remove Data" check box you can erase only the specified data. During loop recording, press the note that you wish to delete, and only the data of that note number will be deleted from the keyboard as long as you continue pressing that note.

Similarly, bender data will be deleted as long as you tilt the joystick in the X (horizontal) direction, and after touch data will be deleted as long as you apply pressure to the keyboard.

When you are once again ready to record musical data, **uncheck** the "Remove Data" check box.

⑦ **Press the [START/STOP] key.**

Playback will end, and you will return to the recording start location that you specified in step ④.

If Loop All Tracks is selected, normal playback will be looped as well.

Multi (multitrack recording)

Multitrack recording can be used with **overwrite**, **overdub**, **manual punch-in**, or **auto punch-in** recording methods. Here we will explain the procedure for overwrite recording, which is the most commonly used method. Multitrack recording will record multiple tracks at once.

When simultaneously recording multiple tracks of MIDI data from an external sequencer, etc.

① **Set the MIDI Clock (Global P1: MIDI "MIDI Clock") to External MIDI or External PCI/F, so that the TRITON will synchronize to the MIDI clock of the external sequencer (☞p.122).**

② **Make settings as described in "Preparations for recording" (☞p.64).**

MIDI data of the corresponding MIDI channel will be recorded on each track whose "PLAY / MUTE / REC" button is set to **REC**. (This has no relation to the settings in "Preparations for recording" step ③.)

When using multitrack recording, refer also to "Multi Rec" (☞p.50) of the *Parameter Guide*.

③ **In the Preference tab "Recording Setup," select Over Write.**

④ **Check the "Multi REC" check box.**



⑤ **Press the Program T01–08 tab and Program T09–16 tab.**

The "PLAY / MUTE / REC" button display of all tracks will read **REC**. Press the "PLAY / MUTE / REC" button to change **PLAY** to **MUTE** for any tracks that you do not wish to record.

⑥ **In P2: Trk Param MIDI Ch tab "MIDI Channel," specify the MIDI channel for each track.**

The specified channel of musical data will be recorded on that track. It is a good idea to set tracks 1–16 to MIDI channels 1–16. (This is the default setting.) Also make sure that "Status" is set either to **INT** or **BTH**.

⑦ **In "Location," specify the location at which recording will begin.**

It will not be possible to change the location if the song is being recorded for the first time, so proceed to step ⑧.

⑧ **Press the [REC/WRITE] key.**

You will be in recording-standby condition.

⑨ **Start the external sequencer.**

The TRITON's sequencer will receive the MIDI Start message transmitted by the external sequencer, and will automatically begin recording.

⑩ **When the song ends, stop the external sequencer.**

The TRITON's sequencer will receive the MIDI Stop message transmitted by the external sequencer, and will automatically stop recording. You can also press the [START / STOP] key on the TRITON itself to stop recording.

When simultaneously recording multiple tracks using the RPPR function

You can use multitrack recording to simultaneously record the playback of multiple tracks that are being triggered by the RPPR function. For the procedure, refer to "Realtime recording an RPPR performance" (☞p.73).

Using the Track Play Loop function to record

The **Track Play Loop function** lets you specify a range of measures over which each track 1–16 will loop repeatedly during playback.

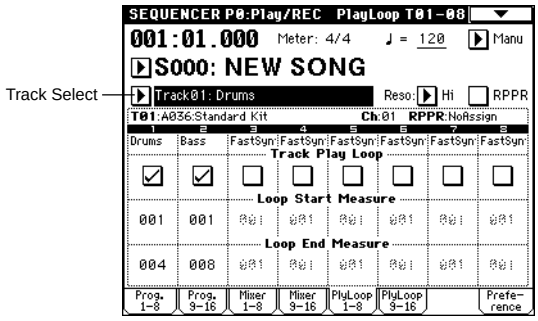
As an example, we will describe how you can use the Track Play Loop function to efficiently record tracks. This is a convenient way to create a basic rhythm section.

Here we will explain the procedure of using the Track Play Loop function to playback a drum track and a bass track, while you record synth phrases.

① **Record a drum phrase on track 1.**

Select a drum program for track 1. Set "Track Select" to **Track 01**, and record a rhythm pattern of four measures or more in realtime. Alternatively, you can place or copy one of the preset patterns.

② **When you are finished recording, press the Ply Loop tab. For track 1, check "Track Play Loop." Set "Loop Start Measure" to 001, and "Loop End Measure" to 004.**



Press the [START / STOP] key to playback, and track 1 will continue repeating measures 1–4.

note In this case, playback will end with the measures recorded in step 1. This is because the current length of the song is the number of measures that were recorded in step 1. The measure at which recording ended will be the current length of the song.

In some cases you will probably want to continue looping during playback, so that you can rehearse the phrase that you will record next. In this case, you will need to specify the length of the song. You can do this by executing the P5: Track Edit page menu command "Insert Measure" before you perform step ①. For example if you execute this command with the settings shown below, the song length will be 64 measures. (If you continue recording for longer than 64 measures, the song length will be updated to the measure at which you stopped recording.)



③ **Record a bass phrase on track 2.**

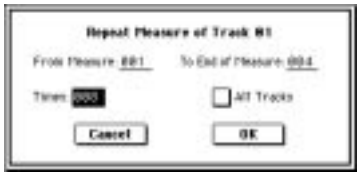
Select a bass program for track 2. In "Track Select," chose **Track 02**, and use realtime recording. During recording, track 1 will continue repeating measures 1–4. While listening to the drum phrase, record (for example) an eight-measure bass phrase.

④ **When you are finished recording, check "Track Play Loop" for track 2 also, as you did in step ②. Set "Loop Start Measure" to 001, and "Loop End Measure" to 008.**

⑤ **Next we will record synth brass riffs on track 3.**

Select a synth brass program for track 3. Use "Track Select" to select **Track 03**, and use realtime recording. During recording, track 1 will continue repeating measures 1–4, and track 2 will continue repeating measures 1–8.

note Track Play Loop will continue repeating for the length of the song. If you wish to specify the number of times that playback will repeat, or to place different musical data (drum fill-in, etc.) in the track, the song will have to be expanded as musical data. To specify the number of times that playback will repeat, execute the P5: Track Edit page menu command "Repeat Measure."



In the above example, musical events (32 measures of data) will be created out of measures 1–4 which were being repeatedly played as a loop by track 1.

Recording the arpeggiator

If arpeggiator A or B is assigned to a track selected by "Track Select," and the arpeggiator is running, the performance of the arpeggiator will be recorded on the track. For details on arpeggiator settings (☞p.98, ☞p.105). (☞p.73 in the *Parameter Guide*)

Template Song

The TRITON contains sixteen template songs. These provide program and effect settings etc. that are suitable for various styles of music. When preparing to record, you can load a template into your song to quickly and easily make appropriate settings.
For details on loading, refer to "Load Template Song" (☞p.48) in the *Parameter Guide*.

You can also make changes to a template song that you loaded, and save frequently used settings as a User Template Song.
For the saving procedure, refer to "Save Template Song" (☞p.48) in the *Parameter Guide*.

Musical data will not be saved in the user template song.

Copying combination sounds to multiple tracks

You can copy a combination sound to multiple tracks to record it.

For the copy procedure, refer to “Copy From Combination” (☞p.48) in the *Parameter Guide*.

If you wish to use the arpeggiator settings of a copied combination and record the arpeggiator performance in realtime, use “Track Select” to choose a track that uses the global MIDI channel. When you play the keyboard, it will sound in the same way as for the combination. When you perform multitrack recording, the multiple channels that are sounded by the arpeggiator will be recorded in the same way.
However, in the case of multi-track recording when multiple tracks are set to the same MIDI channel, this musical data will be combined.

Quantize

The TRITON provides a **realtime quantize “Reso”** (resolution) setting (see step ⑧, ☞p.64) that lets you correct the timing of musical data as it is being recorded, and a **“Quantize”** function (a P5: Track Edit page menu command) that lets you correct the timing of musical data that has already been input.

For example, suppose that during realtime recording you intended to play eighth notes, but that the rhythm was slightly inaccurate, as shown in figure 1 below. In such cases, you could set “Reso” (resolution) to ♪, so that when you realtime-record, the notes will automatically be adjusted to the correct timing as shown in figure 2.

Alternatively, if data that was recorded without using realtime quantize plays back as shown in figure 1, you could select the P5: Track Edit page menu command “Quantize,” set its “Resolution” parameter to ♪, and press the **OK button** to correct the timing as shown in figure 2.

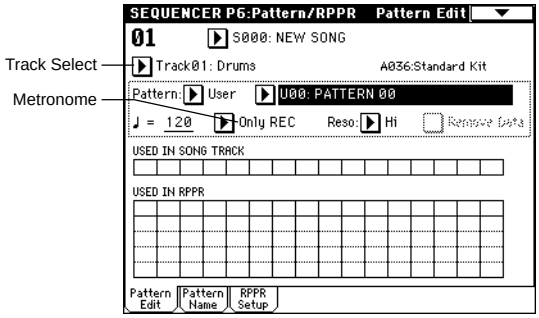


Realtime recording to a pattern

Before you begin recording a pattern, turn off the protect setting in Global mode (☞p.37).

When realtime-recording a pattern, a pattern of the specified number of measures will playback repeatedly, allowing you to continue adding musical data to it.

① **In Sequencer mode P6: Pattern/RPPR, select the Pattern Edit tab.**



② **Use “Track Select” to select the track.**

The pattern will sound with the program and settings of that track.

③ **In “Pattern,” select the user pattern number U00–U99 that you wish to record.**

④ **If necessary, set “Metronome” and “Reso” (resolution).**

⑤ **Select the “Pattern Parameter” page menu command.**

A dialog box will appear.



⑥ **In “Length,” specify the length of the pattern. In “Meter,” specify the time signature.**

⑦ **Press the OK button.**

This completes preparations for recording.

⑧ **Press the [REC/WRITE] key, and then press the [START/STOP] key.**

Pattern recording will begin. Play the keyboard and operate the joystick or other controllers to record your performance.

If arpeggiator A or B is assigned to the track selected in “Track Select” and the arpeggiator is running, the performance of the arpeggiator will be recorded in the pattern. For details on arpeggiator settings (☞p.98, ☞p.105*)*. (☞p.73 in the *Parameter Guide*)

note If you want the arpeggio to start at the moment that recording begins, turn off ARPEGGIATOR [ON / OFF], hold down a chord on the keyboard, and then start recording. The arpeggiator will start at the moment that recording begins, and the arpeggio will be recorded.

When you record to the end of the pattern, you will return to the beginning of the pattern and continue recording.

The musical data that is recorded will be added to the previously-recorded data.

⑨ **During pattern recording, you can erase unwanted musical data by pressing the [REC/WRITE] key, or by checking the "Remove Data" check box.**

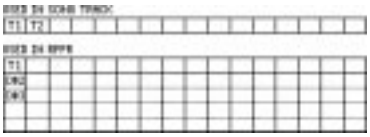
For details refer to "Loop All Tracks," step ⑥ (☞p.66).

⑩ **Press the [START/STOP] key.**

Pattern recording will end.

To use a user pattern that was recorded in this way (or a preset pattern), you can execute "Put to Track" to assign the pattern to a track (☞p.70 in the *Parameter Guide*).

A pattern can also be used in the RPPR Setup tab (☞p.73). (☞p.71 in the *Parameter Guide*)



In the LCD screen, "USED IN SONG TRACK" indicates how that pattern is assigned to the tracks. "USED IN RPPR" indicates how that pattern is used in RPPR Setup (i.e., the keys and tracks to which the pattern is assigned).

Although you may operate controllers etc. to record control data in a pattern, you should restore the control data to its normal value within the pattern. If you fail to restore the normal value, unnecessary control data may remain in a "stuck" position when you place the pattern in a song or use the RPPR function to play the pattern. However, the following control data will be automatically reset to the following values when the song or RPPR function finishes playing the pattern, or when playback is halted.

Controller	Reset value
Modulation 1 (CC#01)	00 (zero)
Modulation 2 (CC#02)	00 (zero)
Expression (CC#11)	127 (max)
Ribbon controller (CC#16)	64 (center)
Damper switch (CC#64)	00 (zero)
Sostenuto switch (CC#66)	00 (zero)
Soft switch (CC#67)	00 (zero)
EG sustain level (CC#70)	64 (center)
Resonance level (CC#71)	64 (center)
EG release time (CC#72)	64 (center)
EG attack time (CC#73)	64 (center)
Low pass filter cutoff (CC#74)	64 (center)
EG decay level (CC#75)	64 (center)
LFO1 speed (CC#76)	64 (center)
LFO1 depth (pitch) (CC#77)	64 (center)
LFO1 delay (CC#78)	64 (center)
Filter EG intensity (CC#79)	64 (center)
SW1 modulation (CC#80)	00 (zero)
SW1 modulation (CC#81)	00 (zero)
Channel after touch	00 (zero)
Pitch bender	00 (zero)

Step recording on a track or pattern

To step record on a track, use the P5: Track Edit "Track Edit" tab page menu command "Step Recording." To step record on a pattern, use the P6: Pattern / RPPR "Pattern Edit" tab page menu command "Step Recording."

For details on step recording on a track or pattern, refer to p.61, 69 in the *Parameter Guide.*

Editing

Track editing

Track editing is performed using the page menu commands of P5: Track Edit.

Event Edit allows you to modify previously-recorded data or to insert new data. **Track Edit** commands such as **Create Control Data** allow you to insert bend, after touch, and control change data, and to **delete**, **copy**, **insert** and **move** tracks (☞p.62 in the *Parameter Guide*).

Pattern editing

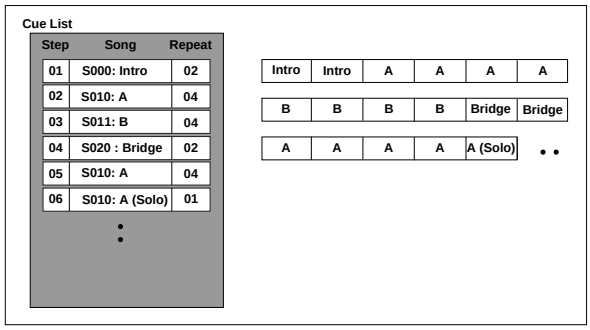
Using the page menu commands of the P6 Pattern Edit tab and the Pattern Name tab, you can use **event editing** to modify the recorded data or insert new data, and execute commands to **delete**, **copy**, or **bounce** patterns (☞p.69 in the *Parameter Guide*).

Song editing

The page menu commands of P0, 2, 3, 4, and 7 allow you to **rename**, **delete**, and **copy** songs (☞p.47 in the *Parameter Guide*).

Creating and playing a Cue List

A cue list allows you to play multiple songs in succession. For example you can create a separate song for each portion (introduction, melody A, melody B, bridge, and ending) of a composition, and use the cue list to specify the order of each portion and the number of times that it will be repeated to complete the song. You can also use this as a jukebox function that will playback completed songs in the order you specify.



As an example, we will explain the procedure for creating individual songs for the introduction, melody A, bridge, and ending, and then using a cue list to bring these songs together to form a complete song.

① **Create separate songs for the introduction, melody A, bridge, and ending.**

S000: Intro (4 measures)
S001: A (8 measures)
S002: Bridge (8 measures)
S003: Ending (4 measures)

Record the songs.

When doing so, first create the program settings, track settings, and effect settings for one song (e.g., S000), and then use the P0 page menu command "Copy From Song" to copy these settings to the other songs (S001–S003).



Keep the track settings unified as far as possible. After the cue list is completed, you can convert it into a song. When this is done, the track settings of each song (program, pan, volume etc.) will be converted into musical data and reproduced, but unless the MIDI channel settings are the same, the resulting song may not be the same as the cue list playback.

② **Select Sequencer mode P1: Cue List.**

With the default settings, song **S000** will be selected for "Step" **01**, and **End** will be selected for "Step" **02**.



③ **Press the Insert button three times. Steps 01–04 will become active.**

④ **Select a song for each "Step" 01–04.**

Select **S000: Intro** for "Step" **01**, **S001: A** for "Step" **02**, **S002: Bridge** for "Step" **03**, and **S003: Ending** for "Step" **04**.

⑤ **In "Repeat," specify the number of times that the song at each step will repeat.**

Set "Step" **01** to **02**, "Step" **02** to **04**, "Step" **03** to **02**, and "Step" **04** to **01**.

⑥ **If necessary, check the "Load FX?" check box.**

This specifies whether or not the effect settings will also be changed when the song at that step is played. If you want the effect settings to change, check this box. For this example, **check "Step" 01**.

Depending on the effect settings, a certain amount of time may be required for the effects to be switched. If this occurs, the playback will not be smoothly connected from song to song.
To ensure a smooth transition from song to song, check "FX Load?" for "Step" 01. Do not check "FX Load?" for the remaining steps. This way, the effect settings will be made before playback begins, and there will be no time lag when cue list playback is started or when switching from song to song. Although it will not be possible to change effect types within the cue list, you can use dynamic modulation or MIDI control changes such as Effect Control to control the effects within the cue list, for example applying reverb more deeply on certain songs, or raising the LFO speed for a specific song. We recommend this method if you will be using a cue list to construct the song. When you execute the "Convert to Song" page menu command, the effect settings of the "Step" 01 song will be specified for the song that results from the conversion.

Even if "Load FX?" is not checked, there may be cases in which a time lag in the transition between songs, depending on the musical data of the song. Also, there may be cases in which the musical data is not played at the correct timing at the transition between songs. If this occurs, you can edit the musical data of the song, or convert the cue list to a song for playback. If you use "Convert to Song" to convert the cue list to a song, there will be no time lag during playback at the transition between songs, and the musical data will be played at the correct timing.

- "Step": The arrow will indicate the currently playing step. ▶ indicates the currently selected "Step." If you set "Current Step" while stopped, the display will change.
- "Measure": Indicates the starting measure of that step.
- "Meter": Indicates the currently-playing time signature. This cannot be changed.

⑦ **This completes the settings. Press the [START/STOP] key to begin playback from the step specified in "Current Step."**

Intro (measures 1–4) fi Intro (measures 5–8), A (measures 9–16) fi A (measures 17–24) fi A (measures 25–32) fi A (measures 33–40) fi Bridge (measures 41–48) fi Bridge (measures 49–56) fi Ending (measures 57–60)

- The name of a cue list can be specified by the "Rename Cue List" page menu command.
- If you wish to use the tempo that is specified by the song of each step, set "Tempo Mode" to **Auto**. If this is set to **Manu** (manual), playback will use the tempo that you specify in "♩=".
- If you specify **Continue to Step01** for the last step, the cue list will continue playing back repeatedly.
- If you set "Repeat" to **FS**, a foot switch connected to the [ASSIGNABLE SWITCH] jack will control the timing at which the song stops repeating. Set "Foot Switch Assign" (Global P2: Controller) to **Cue Repeat Control**.
- When you play the keyboard, the program of the track selected by "Track Select" will sound. If a different program is selected for each song, the program specified for the currently playing song will sound.

Converting a cue list to a song

Although it is not possible to record additional material onto tracks in a cue list, you can convert a cue list to a song, and then record solos etc. to vacant tracks. You will also need to convert a cue list to a song if you wish to save it on a floppy disk as SMF data.

○ **Select the "Convert to Song" page menu command.**



In "To Song," specify the destination song number for the converted data. The cue list name will automatically be assigned as the song name of the converted data. (For details and cautions regarding "Convert to Song," refer to p.53 in the *Parameter Guide*.)

RPPR (Realtime Pattern Play/ Recording) function

For details on the RPPR function, refer to “Playing with the RPPR function” (☞p.33). Here we will give an example of how to make RPPR settings, and how to playback and record.

RPPR settings

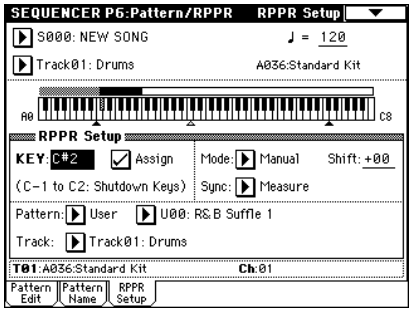
RPPR settings are made individually for each song. To use RPPR playback, check the “RPPR” check box. If this is **checked**, the RPPR function will be turned on, and playing the keyboard will cause patterns to playback according to the RPPR settings. If the “RPPR” check box is **not checked**, the song will play normally even if RPPR settings have been made.

① **Make track settings just as when preparing to record tracks.**

Use steps ①–④ of “Preparations for recording” (☞p.64) to specify the program for the track.

② **In Sequencer mode P6: Pattern/RPPR, select the RPPR Setup tab.**

In this page, the RPPR function will automatically be on.



③ **Use “KEY” to select the key to which you wish to assign a pattern.**

You can also select a key by holding down the [ENTER] key and playing a note. **Check** the “Assign” check box. (You can make assignments for keys C#2–C8. Keys C2 and below are used for stopping the pattern playback, and cannot be assigned.)

④ **Select the pattern that will playback when you press the key selected in step ③.**

Use “Pattern” to select the pattern type (either **Preset** or **User**), and use “Pattern Select” to select the pattern. A user pattern selected here must have already been recorded or copied in the Pattern Edit tab.

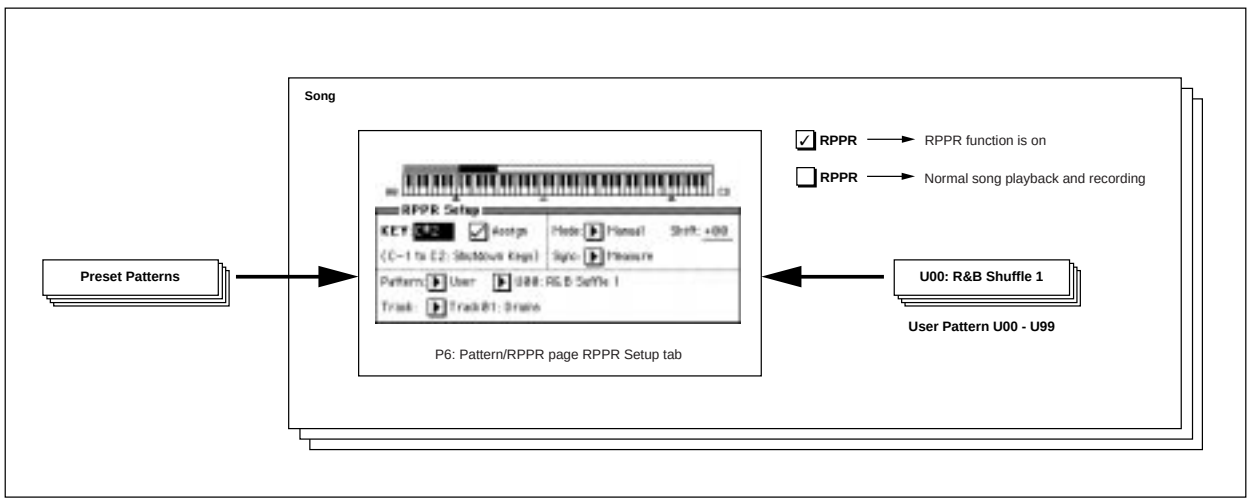
⑤ **Select the track that will play this pattern.**

The pattern will play according to the program and other settings of the track you select here.
If you wish to play a drum pattern, choose a track for which a drum program is selected. If you wish to play a bass pattern, select a track for which a bass program is selected.

⑥ **Set “Mode,” “Shift” and “Sync” to specify how the pattern will play, and how it will synchronize.**

When you press the key to which the pattern is assigned, the pattern will begin playing. The method of stopping playback will depend on the “Mode” setting, but pressing the **C2** or lower key will stop all patterns.
For details on these parameters and on how to stop the playback, refer to p.71 in the *Parameter Guide*.
The assigned keys will be shown as a keyboard graphic in the LCD screen.

note Unassigned keys can be used for normal keyboard performance. Use “Track Select” to select the track that will be played from the keyboard. For example you might assign backing patterns such as drums and bass to the **C#2–B2** keys and use these keys to control pattern playback, and use keys **C3** and above to play solos in realtime. It is a good idea to keep the assigned keys together in this way.



RPPR playback

Here's how you can use the RPPR function to perform in the P0: Play / REC page. You can also playback a song while you perform with the RPPR function.

① **In Sequencer mode, select P0: Play/REC.**

② **Check the "RPPR" check box. The RPPR function will be turned on. The on/off setting is memorized for each song.**

③ **Play the keyboard, and patterns will begin playing according to the RPPR settings.**

note Keys to which no pattern is assigned can be used for normal keyboard performance. (When you change "Track Select," the track played by the keyboard will change.)

note If you wish to trigger the RPPR function from an external MIDI device, use the MIDI channel that is selected for "Track Select."

④ **To turn off the RPPR function, uncheck the RPPR check box.**

RPPR performance techniques

- Pattern playback for a key with a "Sync" setting of **Beat** or **Measure** will synchronize to the pattern playback of the first key. (For details refer to "Sync" on p.71 in the *Parameter Guide*.)
- Pattern playback for a key with a "Sync" setting of **SEQ** will synchronize to the playback of the song. Start song playback, and then press the key. The pattern playback will start in synchronization with the measures of the song.

note If you want RPPR pattern playback to begin at the moment that song playback begins, it is a good idea to insert an empty measure containing no musical data before the song playback begins.

note If the song is stopped, the pattern will synchronize to the timing of the arpeggiator.

- If you are playing the pattern in synchronization (when "Sync" is **Beat**, **Measure**, or **SEQ**), the pattern will start accurately if you play the note slightly earlier than the timing of the beat or measure. Even if you play the note slightly later than the beat or measure (but no later than a 32nd note), it will be considered to have started at the beat or measure, and the beginning of the pattern will be compressed so that the remainder of the playback will be correct.

Realtime recording an RPPR performance

Multitrack recording

You can use multitrack recording to simultaneously record the performance of multiple tracks played by the RPPR function.

The pattern will be recorded as musical data on the track used by RPPR.
RPPR settings for recording are made in the P6: Pattern / RPPR tab RPPR Setup. Here if you set "Sync" to **SEQ**, the pattern playback will be recorded in synchronization with the sequencer. For details on how the "Sync" setting will affect the start timing of the pattern playback (☞p.71 in the *Parameter Guide*).
With a setting of **SEQ**, patterns played by the RPPR function while the sequencer is playing or recording will start in synchronization with the measures of the sequencer. The pattern of a key pressed during the precount before recording begins will start simultaneously with the beginning of recording, and will be recorded.

When recording the playback of patterns triggered by RPPR, the timing of the recorded events may be slightly skewed. If this occurs, try setting "Reso" (Realtime Quantize Resolution) to a setting other than **Hi**.

① **Using the procedure described in "Preparations for recording" (☞p.64), make the necessary settings.**

Your keyboard performance on keys that are not assigned to the RPPR function will be recorded on the track specified by "Track Select."

② **In the P0: Play/REC tab Preference, set "Recording Setup" to Over Write.**

Multitrack recording can be used in **Over Write**, **Over Dub**, **Manual Punch In**, and **Auto Punch In recording modes**. Here we will describe the procedure for the most commonly used overwrite recording.

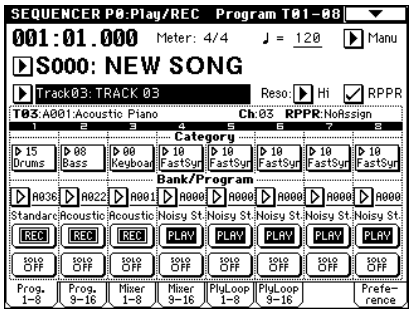
③ **Check the "Multi REC" check box.**



④ **Press the Program T01–08 or Program T09–16 tab. The "PLAY/MUTE/REC" button of each track will indicate REC. For the tracks that you do not wish to record, press the "PLAY/MUTE/REC" button to select either PLAY or MUTE.**

You will record all tracks played by RPPR and the keyboard performance track selected by "Track Select."

For example if you are using tracks 1 and 2 for RPPR playback and using track 3 for keyboard performance, you would set **REC** only for tracks 1, 2, and 3 as shown below.



⑤ **Check the "RPPR" check box.**

The RPPR function will be on.

⑥ **In "Location," specify the point at which recording will begin.**

It will not be possible to change the location if you are recording the song for the first time, so proceed to step ⑦.

⑦ **Press the [REC/WRITE] key, and then press the [START/STOP] key.**

Recording will begin.
When you press a key to which a pattern is assigned, that pattern will begin playing. Keys to which no pattern has been assigned will sound as usual for the track specified by "Track Select," and will be recorded.

If you want a pattern to begin playing at the moment that recording begins, press the key during the pre-count. (Make sure that the RPPR "Sync" is set to **SEQ**.)

⑧ **Press the [START/STOP] key.**

Recording will end, and the location will return to the point at which you began recording.

⑨ **To cancel multitrack recording, uncheck the "Multi REC" check box in step ③.**

Single track recording

You can also use single track recording to record an RPPR performance.

① **Make track settings in the same way as for multitrack recording.**

② **In P0: Play/REC, check the RPPR check box.**

The RPPR function will be turned on.

③ **In the same way as for single track recording of a normal song, use "Track Select" to select the track that you wish to record.**

④ **In "Location," specify the point at which recording will begin.**

It will not be possible to change the location if you are recording the song for the first time, so proceed to step ⑤.

⑤ **Press the [REC/WRITE] key, and then press the [START/STOP] key.**

Recording will begin.

In the case of single track recording, only the track specified by "Track Select" will actually be recorded even if the RPPR performance consists of multiple tracks. Of the patterns that are assigned by the RPPR settings, only the performance of the patterns whose track matches will be recorded.

⑥ **Press the [START/STOP] key.**

Recording will end, and the location will return to the point at which recording began.

Sampling mode

The TRITON provides high-performance mono / stereo sampling.

None of the multisample or sample data in Sampling mode is backed up when the power is turned off. If you wish to keep this data, you must save it on a floppy disk or external SCSI device (if the separately sold EXB-SCSI option is installed) before turning off the power.
Immediately after the power is turned on, the TRITON will contain no multisample or sample data. If you wish to playback or edit data, you must first load previously-saved data from floppy disk or an external SCSI device.

Features of sampling mode

- **48 kHz 16 bit linear mono/stereo sampling**.
- **16 Mbytes** of sample (waveform) data memory is standard, allowing you to sample for approximately 2 minutes 54 seconds in monaural, or approximately 1 minute 27 seconds in stereo. By installing 72 pin SIMM modules, you can expand the memory to a **maximum of 64 Mbytes**, which will allow you to record up to four 2 minute 54 second samples in mono (or four 1 minute 27 second samples in stereo), for a maximum total of approximately 11 minutes 39 seconds of sampling time. (For details on expansion, refer to p.237 in the *Parameter Guide*.)
- A **maximum of 1,000 multisamples and 4,000 samples** can be created.
- In Disk mode you can load multisample / sample data from a floppy disk or SCSI media (when the separately sold EXB-SCSI option is installed).
- Korg format or AKAI (S1000 / S3000) format sample data, or AIFF or WAVE files can be loaded. (When this data is loaded into the TRITON, it will all be handled as Korg format sample data.)
- The external audio source that you are sampling can be processed by the **five insertion effects** to apply effects such as compressor, EQ, or lo-fi. The LFO frequency or delay time of the effect can be specified as a BPM value, which is highly effective when sampling phrase loops etc.
- Both **auto sampling** and **manual sampling** can be performed. With auto sampling, recording will begin automatically when the input level exceeds a specified threshold. In either method of sampling, you can make pre-trigger settings.
- The audio input supports both mic and line level signals.
- Data that is sampled can be immediately played from the keyboard. It can also be **converted into a program by a simple operation**, and used as an element of the TRITON's HI synthesis system. Multisamples / samples that have been converted into a program can be used in a combination or song.
- The waveform can be viewed in the LCD screen, and edited by a variety of waveform editing commands that include **rate convert** (down-sampling) and reverse playback.
- Start, loop start, and end addresses can be specified in units of a single sample. Loop tune, **reverse playback**, and **loop lock functions** are also supported.
- The **Use Zero function** automatically detects zero cross points, making it easy to find the beginning or end of the sample, or click-free locations.
- The **grid function** displays a BPM-based grid on the waveform display, helping you to create loops or make waveform edits that match the desired BPM.
- Each multisample allows you to create up to **128 indices**. Each index consists of a sample assignment, a key zone, an original key, a playback pitch, and settings such as level.
- The "Keyboard & Index" display lets you edit a multisample while viewing the assignments and zones of each sample.
- The playback pitch of each index can be matched to a desired BPM value by using the **BPM Adjust function** (playback pitch adjust) to set the loop frequency.
- Sample names and multisample names of up to 16 characters can be assigned. Sample names and multisample names can also be viewed in Disk mode (☞p.132 "Translation" in the *Parameter Guide*).

Pages in Sampling mode

○ **For the procedure of entering each page or modes, refer to "Basic operation of the TRITON" (☞p.12).**

P0: Recording	Record samples. Select the sample or multisample to record, make various recording settings and AUDIO INPUT settings. View the memory status.
P1: Sample Edit	Perform waveform editing etc. on samples that were sampled or loaded in Disk mode.
P2: Loop Edit	Set sample playback parameters: Start, Loop Start, End Address, Loop on/off, and Reverse on/off.
P3: Multisample	Edit multisamples. Set and edit the sample assignments, zone, and original key etc.
P4: Controller Setup	Controller settings.
P5:	---
P6:	---
P7:	---
P8: Insert Effect	Select and make settings for the insert effects used in sampling.
P9:	---

note Sampling can be performed in any page P0–P8 of Sampling mode by using the [REC / WRITE] key and the [START / STOP] key. Recording-related settings such as input level are made by the parameters of P0: Recording, and these settings are valid for the other pages as well.

note The selected multisample or sample can be played from the keyboard in any page, allowing you to hear the results of your editing in each page.

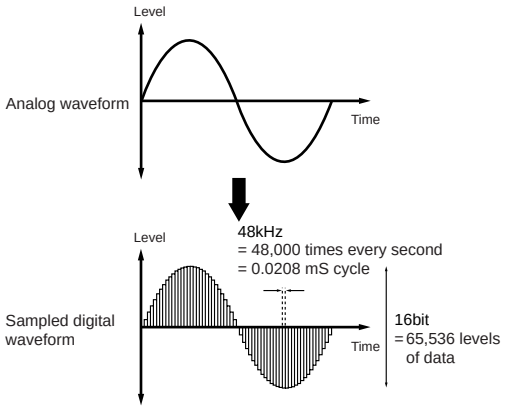
How Sampling mode is organized

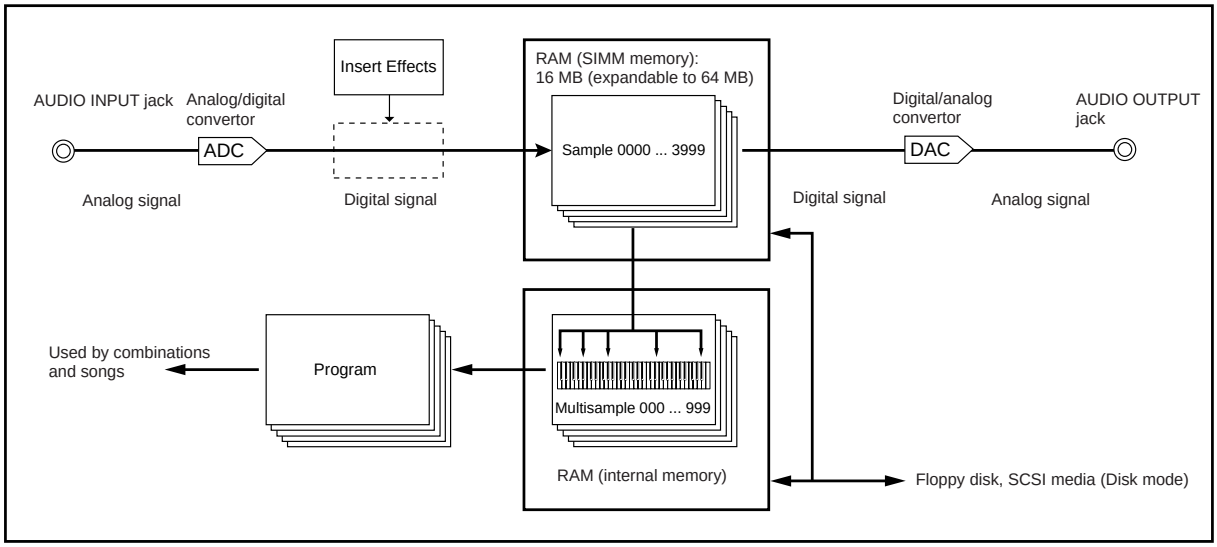
In Sampling mode

- An external audio signal from an external audio device or microphone connected to the AUDIO INPUT 1 and 2 jacks is passed through an analog / digital convertor, and recorded (sampled).
- You can edit the waveform and loop settings etc. of sample data that you sampled or that you loaded from a floppy disk, CD-ROM etc., in Disk mode.
- You can assign samples to the keyboard to create a multisample. These samples and multisamples can be easily converted to a program using the "Convert MS to Program" page menu command, and these programs can be used immediately in a combination or song.

Sampling frequency and bit resolution

As shown in the diagram, sampling reads the level of the analog signal at fixed intervals along the time axis, and stores the levels in memory as digital data.





The “fixed intervals” mentioned above are generally expressed as the “sampling frequency.” 48 kHz (kilohertz) means that sampling is performed 48,000 times each second, and that the interval is 1 (second) / 48,000 (times) = approximately 0.00002083 (seconds) = approximately 0.02083 mS (millisecond).
The higher the sampling frequency is, the closer to the original analog signal the waveform in memory will be.

Each level is read, and converted into digital data. The accuracy at this time is determined by the bit resolution. The infinite number of levels in the analog signal are converted into digital data with a finite number of levels. With 16 bit resolution, each level is indicated in 65,536 steps (the sixteenth power of two).
The greater the bit resolution is, the closer to the original analog signal the waveform in memory will be.

48 kHz 16 bit sampling is the same quality as in audio devices such as DAT. A CD uses 44.1 kHz 16 bit sampling, which is a slightly lower sampling frequency.

Samples and Multisamples

Samples

The data that is recorded (sampled) into internal memory or loaded from a file is referred to as a sample or sample file. Samples consist of the actual waveform data, and parameters that specify how the data will be played back, such as Start, Loop Start, and End Address.
Samples can be used by multisamples and drum kits. The TRITON can hold a maximum of 4,000 samples in its internal memory.

note The TRITON can share a single waveform among multiple samples. This allows you to create multiple samples with different playback addresses from the same waveform without wasting internal memory. For example, suppose that you have waveform data that records a voice saying “One-Two-Three.” This single piece of waveform data could be shared by three samples, with the playback of sample A producing “One-Two-Three,” sample B producing “One-Two,” and sample C producing “Two-Three.” Refer to “Copy Sample” (p.83) in the *Parameter Guide*.

Multisamples

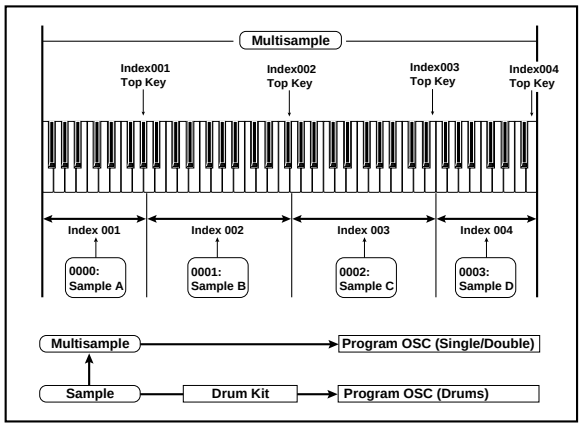
A multisample consists of settings that make one or more samples sound in different areas of the keyboard. A multisample consist of between one and 128 “indexes.” Each index contains parameters that specify the sample that will playback, the zone for which it will playback, the original pitch key, the playback pitch, and level etc.

Using multisamples

When sampling an instrument that is able to produce a wide range of pitches, such as a piano, recording just one sample and using it (playing it back) over the entire pitch range will not produce a natural-sounding result. By using a multisample and assigning a separately recorded sample to each portion of the pitch range, you can produce a more natural sound. For example, you might record one sample per octave, and assign each of these samples to an index (keyboard area). All of the instrumental sounds in the TRITON’s internal preset ROM multisamples are constructed in this way.

You can use a multisample to arrange multiple phrase samples or rhythm loops across the keyboard, and play two or more samples simultaneously. Since a different phrase could be assigned to each key, you can perform just as though you were using a pad-type sampler. Alternatively, these samples could be assigned at one-octave intervals, and played as phrase variations with different playback pitches.

The TRITON can hold a maximum of 1,000 multisamples in its internal memory.
A multisample can be selected as the oscillator for a program, and played as a program. In a combination, they can be combined with preset programs, and used in a song. They can be used with the arpeggiator to produce interesting results (for example, by using the arpeggiator to automatically play sound effects or spoken samples).

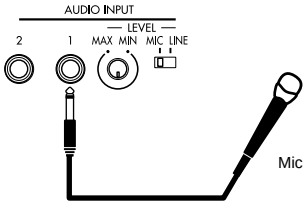


Preparations for sampling

Connections and settings for a monaural source

When sampling in monaural from a mic, the output of an external audio device or mixer, or an instrumental sound such as guitar or synthesizer, connect the source to the AUDIO INPUT 1 or 2.

note Guitars etc. with active pickups can be input directly, but instruments with passive pickups (i.e., without internal preamps) cannot be sampled at an appropriate level, due to impedance mismatching. When connecting such instruments, use a preamp or effect device.



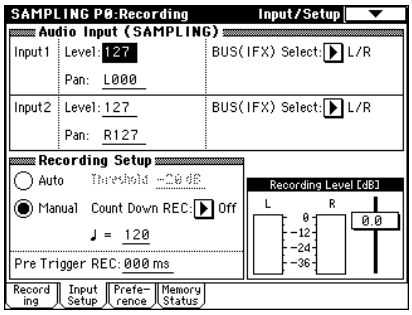
① **Connect the mic or external audio device to the AUDIO INPUT 1 jack.**

② **Set the AUDIO INPUT [MIC-LINE] switch to match the input source. For input sources with a low input level, such as a microphone, select the MIC position. For other sources, select the LINE position.**

The AUDIO INPUT [MIC-LINE] switch affects both the AUDIO INPUT 1 and 2 jacks.

③ **The AUDIO INPUT [LEVEL] knob will be adjusted later. For now, set it near the center.**

④ **In Sampling mode P0: Recording, select the Input/Setup tab.**



⑤ **In "Audio Input (SAMPLING)," set various parameters that specify how the signal from the AUDIO INPUT jack will be received.**

- "Level" adjusts the volume. Normally you will set this to **127**.
- "Pan" adjust the panning. For this example set it to **L000**.
- Set "BUS (IFX) Select." If you wish to use the TRITON's insert effects to process the incoming sound, select **IFX1–5** here. For this example, select **L/R**. The input sound will be sampled just as it is.

Be aware that when you change the setting from **Off** to **L/R** or **IFX1–5**, the volume level in the AUDIO OUT L/MONO and R jacks and in the headphones may rise excessively.

"Input 1" controls the AUDIO INPUT 1 jack, and "Input 2" controls the AUDIO INPUT 2 jack.

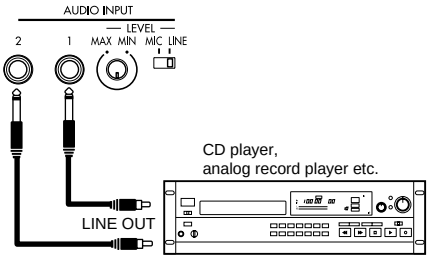
The settings up to this point will cause the sound from the AUDIO INPUT 1 jack to be output from the AUDIO OUT L/MONO jack and from the L channel of the headphones.

⑥ **Use the AUDIO INPUT [LEVEL] knob to set an appropriate level.**

If the level is excessive at the TRITON's input stage, the display will indicate "ADC OVERLOAD !!" (analog/digital converter is overloaded). Adjust the AUDIO INPUT [LEVEL] knob or the output level of the external audio device just low enough so that the "ADC OVERLOAD !!" does not appear (i.e., the maximum level that does not cause an overload).

Connections and settings for a stereo source

When sampling in stereo from a stereo mic, the output of an external audio device or mixer, or synthesizer, connect the source to the AUDIO INPUT 1 and 2 jacks.



① **Connect the L source to AUDIO INPUT jack 1, and the R source to jack 2.**

② **Make the settings described in steps ②–④ of "Connections and settings for a monaural source."**

③ **In "Audio Input (SAMPLING)," set various parameters that specify how the signal from the AUDIO INPUT jacks will be received.**

- "Level" adjusts the volume. Set both Input 1 and Input 2 to **127**.
- "Pan" adjust the panning. Set Input 1 to **L000**, and Input 2 to **R127**.
- Set "BUS (IFX) Select." For this example, select **L/R** for both Input 1 and Input 2.

The settings up to this point will cause the sound from the AUDIO INPUT 1 and 2 jacks to be output in stereo from the AUDIO OUT L/MONO and R jacks and from the headphones. The sound of AUDIO INPUT 1 will be output from the left, and AUDIO OUTPUT 2 from the right.

④ **Use the AUDIO INPUT [LEVEL] knob to adjust a suitable input level. (Refer to step ⑥ of "Connections and settings for a monaural source")**

The AUDIO INPUT [LEVEL] knob adjusts both AUDIO INPUT 1 and 2.

Using an insert effect

The TRITON's insert effects can be applied to the sound that is being input from the AUDIO INPUT 1 and 2 jacks, allowing you to record a sample with effects applied. As an example, we will explain the procedure for applying an insert effect to a stereo source and sampling the result.

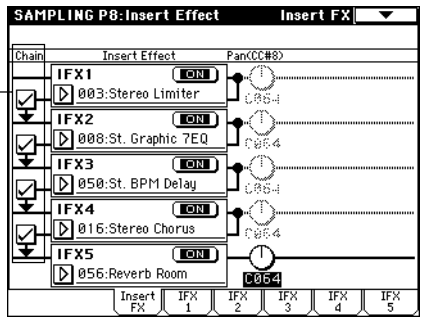
① **Make the settings of step ① and ② in "Connections and settings for a stereo source."**

② **Set the "Audio Input (SAMPLING)" parameters.**

- Set "BUS (IFX) Select" to **IFX1** for both Input 1 and 2.
- Set "Level" and "Pan" to the same settings as in step ③ of "Connections and settings for a stereo source." With these settings, the stereo source will be sent to insert effect 1 (IFX 1).

③ **Use the AUDIO INPUT [LEVEL] knob to adjust a suitable input level. (Refer to step ⑥ of "Connections and settings for a monaural source.")**

④ **In P8: Insert Effect, select the Insert Fx tab.**



Up to five insert effects can be connected in series. Make settings for "Chain," "Insert Effect," and the "Pan" of the sound after it has passed through the insert effect. For details on the settings, refer to p.109, 107, and to p.26, 99 in the *Parameter Guide*.

Examples of settings using the insert effects are given in "Sample Mode" (p.82) in the *Parameter Guide*.

Manual sampling

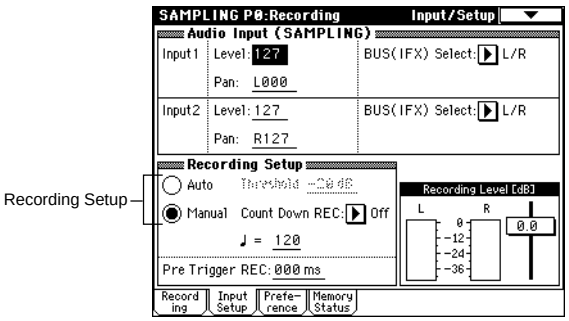
There are two methods of sampling: **manual** and **auto**.

In **manual** mode, sampling is started by pressing the [START / STOP] key from the recording standby condition (entered by pressing the [REC / WRITE] key once). For the sampling procedure in **auto** mode, refer to "Auto sampling" (☞p.80).

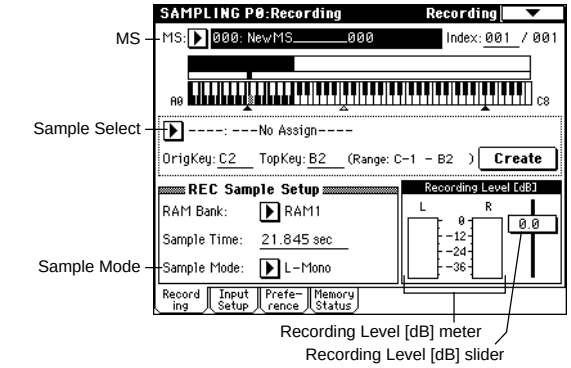
① **In P0: Recording, select the Input/Setup tab.**

② **Use the "Recording Setup" radio buttons to select Manual.**

This will select manual recording mode.



③ **In P0: Recording, select the Recording tab.**



④ **Select "MS" the multisample (MS). For this example, select 000: NewMS_____000.**

Immediately after the power is turned on, **000: NewMS_____000** will be created automatically. Use the numeric keys [0]–[9] to input the multisample number that you wish to record, and press the [ENTER] key. Alternatively, you can press the popup button and select a multisample from the popup menu. If you select a new number, the Create New Multisample dialog box will appear. Press the **OK button**.



To specify the name, use the "Rename MS" page menu command.

⑤ **In "Sample Select," select the sample that you wish to record. For this example, select ----: ---No Assign----.**

Immediately after the power is turned on, this will be set to **----: ---No Assign----**. You may sample even in this condition. The sample will be automatically recorded to a vacant sample number.
If you wish to first specify a sample number to which the sample will be recorded, use the numeric keys [0]–[9] and [ENTER] key or the popup menu to select the number.

A sample will be created automatically when you record.
A sample name such as **0000: NewSample_0000** will be assigned automatically. This name can be edited using the "Rename Sample" page menu command.

If you execute sampling when an existing sample such as **0000: NewSample_0000** is selected, the new sample will be sampled to a vacant sample number. You do not need to be concerned with this setting even when you continue recording successive samples.

⑥ **Select the "Sample Mode."**

Monaural source: If the "Audio Input (SAMPLING)" setting "Pan" is **L000**, set "Sample Mode" to **L-Mono**. If "Pan" is **R127**, set "Sample Mode" to **R-Mono**.
Stereo source: Set the "Sample Mode" to **Stereo**.

⑦ **Press the [REC/WRITE] key.**

If an input signal is present, the Recording Level [dB] meter will move according to the Pan setting in "Audio Input (SAMPLING)." This is the recording-standby condition.

In the case of "Connections and settings for a monaural source," the L meter will move. In the case of "Connections and settings for a stereo source," the L and R meters will move.

Use the "Recording Level [dB]" slider to adjust the level. For this example, set the slider to the **0.0** setting (☞p.82 in the *Parameter Guide*).

⑧ **At the moment that you wish to begin sampling, press the [START/STOP] key.**

Sampling will begin.

⑨ **Sampling will stop when you press the [START/STOP] key once again.**

Sampling will stop automatically when the remaining amount of memory reaches zero.

⑩ **Play the C2 note on the keyboard.**

The sample you recorded will play back.

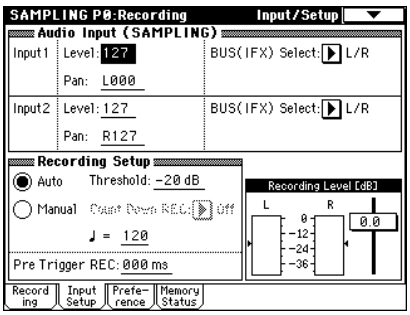
If you wish to continue recording samples, repeat steps ⑥–⑨.

Auto sampling

There are two ways to record a sample: **manual** and **auto**.

With **auto**, sampling will begin when the input signal exceeds the specified threshold level. For details on **manual** sampling, refer to "Manual sampling" (☞p.79).

① **In the P0: Recording, select the Input/Setup tab.**



② **Use the "Recording Setup" radio buttons to select Auto.**

This will select auto recording mode.

③ **Set the "Threshold."**

When the input signal exceeds the "Threshold" level, sampling will begin automatically. The black triangles at both sides of the Recording Level [dB] meter display will indicate the specified level.

note When you use auto sampling, the attack portion of the sampled input sound may be lost, depending on the "Threshold" setting. If this occurs, you can use "Pre Trigger REC" to sample the sound that occurs before sampling actually begins. Normally you will set this to **0**, and use it only when necessary.

④ **In P0: Recording, select the Recording tab.**

⑤ **Select the "MS" (multisample) (refer to "Manual sampling" step ④).**

⑥ **Select the sample in "Sample Sellect" that you wish to record (refer to "Manual sampling" step ⑤).**

⑦ **Specify the "Sample Mode" (refer to "Manual sampling" step ⑥).**

⑧ **Press the [REC/WRITE] key.**

⑨ **Press the [START/STOP] key.**

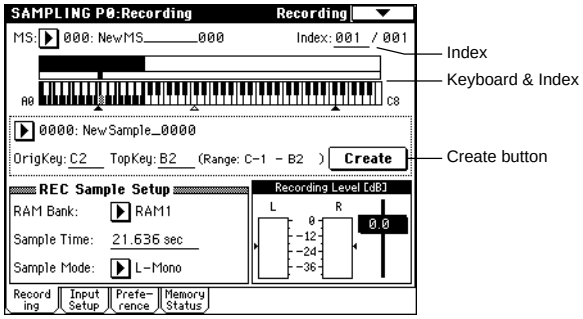
When the input signal exceeds the "Threshold" level, sampling will begin automatically.

⑩ **Sampling will stop when you press the [START/STOP] key once again.**

Sampling will end automatically if the remaining amount of memory reaches zero.

⑪ **Play the C2 note on the keyboard, and you will hear the sound that you sampled.**

Creating multisample indexes and sampling



Here's how to create indexes for a multisample, and assign a sample to each index.

If desired, you can first create several indexes for a multisample, and then record a sample for each index.

① **In P0: Recording, select the Recording tab.**

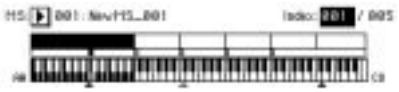
② **Select the "MS" (multisample) (refer to "Manual sampling" step ④).**

③ **Press the Create button to create an index.**

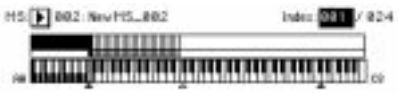
Immediately after the power is turned on, the "Index" will be indicated as **001/001**. This means that there is only one index. The range that is highlighted in the keyboard & Index is the range of the selected index.

Press the **Create button** several times. Each time you press it, an index will be created. The keyboard display will indicate the zone and original key location of each index. The highlighted area is the currently selected index.

note The index that is created when you press the **Create button** is created according to the "Create Zone Preference" settings of the Preference tab. For details refer to p.87 and "Create" (p.81), both in the *Parameter Guide*.
Immediately after the power is turned on, "Position" will be **Right**, "Zone Range" will be **12Keys**, and "Original Key Position" will be **Bottom**, so that indexes will be created as shown below.



note If you set "Zone Range" to **1Key**, an index will be created for each note of the keyboard and a sample assigned to in index. You can then continue sampling. It is convenient to use 1Key when you wish to sample numerous takes in succession, such as when recording phrases or rhythm loops.



④ **Select "Index."**

"Index" can also be selected by holding down the [ENTER] key and playing a note on the keyboard. For this example, select **001**.

⑤ **If you have been sampling previously and one or more samples already exist, use "Sample Select" to select the sample that you wish to assign.**

Repeat steps ④ and ⑤ to assign a sample to each index. Complete the multisample in this way.

When you play the keyboard in the area of an index to which a sample has been assigned. that sample will play back.

⑥ **If you wish to first create two or more indexes for the multisample before you start sampling, and then continue sampling for each of these indexes, select the index for sampling in step ④, and use either manual sampling or auto sampling to record a sample for that index (☞"Manual sampling" or "Auto sampling").**

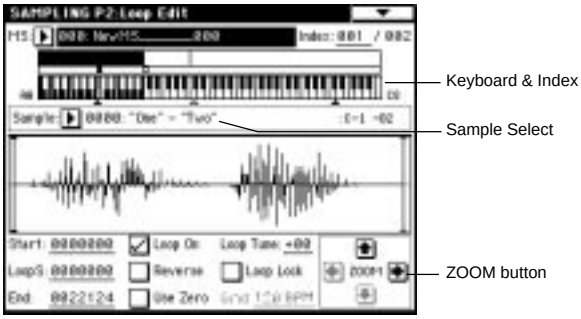
Create a multisample by selecting an index and then sampling.

note The number and order of the indexes in the multisample, the zone of each index, and the original key location can be edited later if desired (☞p.84 "Multisample editing").

Loop settings

With the default settings after the power is turned on, the sounds you sample will automatically be looped (P0: Recording page Preference tab “Auto Loop On.”) To edit the loop and other playback address settings for the sample, use the P2: Loop Edit page.

① **Select P2: Loop Edit.**

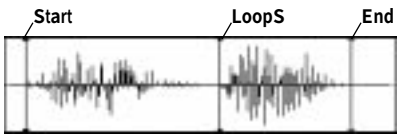


The waveform data for the currently selected sample will be displayed. It will play back “Keyboard & Index” when you play the highlighted in the Keyboard when you play the highlighted in the area. You can use “Sample Select” to select the sample that you wish to edit. When you do so, the assignment to the index will also change. When you change indexes, the waveform data for the sample assigned to that index will appear.

Waveform data for a sample that was sampled with a “Sampling Mode” of **Stereo** will be displayed in two lines. The upper line is the waveform display for the L channel, and the lower line is for the R channel.

② **Specify the start address in “Start,” the loop start address in “LoopS,” and the end address in “End.”**

Press “Start” (it will be highlighted), and use the [VALUE] controllers to change the setting. The corresponding vertical line will move. Set “LoopS” and “End” in the same way. In the example shown below, “Start” is immediately before the first waveform, “LoopS” is immediately before the second waveform, and “End” is set to an arbitrary location.



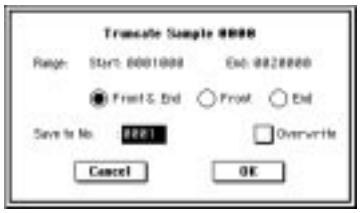
note By using the **ZOOM buttons** you can change the range that is displayed. When “Start” is highlighted, zoom will be performed from the start address (☞p.88 in the *Parameter Guide*).

note If the “Use Zero” check box is **checked**, only those addresses where the waveform data **crosses the zero level** will be found automatically when searching, and can be set. This lets you easily make address settings where noise is less likely to occur when looping.

③ **Use the “Loop On” check box to turn loop playback on/off. When the box is checked, looping will be on.**

Loop On: “Start” fi “End” fi “LoopS” fi “End” fi (“LoopS” fi “End”) repeated
Loop Off: “Start” fi “End”

④ **If necessary, use the page menu command “Truncate” to delete unwanted data that falls outside the start (or loop start) and end addresses.**



Set the parameters, and press the OK button to execute the operation.

☞p.95 in the *Parameter Guide*

For cautions regarding “Save to No.” and the “Overwrite” check box (☞p.83 “A note on saving samples”).

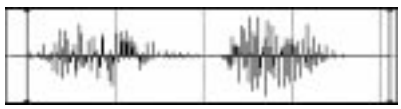
The grid display

The page menu command “Grid” overlays the waveform display with a grid based on the BPM tempo value. This makes it easy to make loop settings that are synchronized to the tempo.

note In the same way, the grid display can also be used in P1: Sample Edit. The grid can help you to edit the waveform in synchronization with the tempo.

① **Select the page menu command “Grid.”**

Turn the radio button **On**, set the “Resolution” as desired, and press the **OK button**. A dotted grid will be displayed.



② **Set “Grid” to the desired BPM tempo value.**

③ **Set the end address so that it coincides with a dotted line of the grid.**

This will cause the loop interval to be the same length as the BPM value.

The grid display will be based at “LoopS” if looping is on. If looping is off, the grid will be based at “Start.”

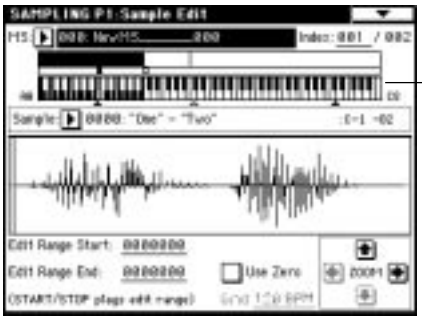
④ **To cancel the grid display, select the “Grid” page menu command, set the radio buttons Off, and press the OK button.**

The grid is displayed according to the playback pitch of the base key (the key shown in gray in the "Keyboard & Index" area).
You can select the base key by holding down the [ENTER] key and playing a note on the keyboard.

Sample (waveform data) editing

Editing the waveform data of the sample is done in P1: Sample Edit. You can use commands such as cut, copy, and normalize to edit the waveform data.

① **Select P1: Sample Edit.**

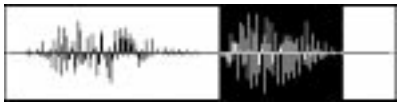


The waveform data of the currently selected sample will be displayed. It will play back when you play the keyboard (in the highlighted region in th "Keyboard & Index").
You can use "Sample Select" to select the sample that you wish to edit.
When you change indexes, the waveform data of the sample specified for that index will be displayed.

Sample waveforms that were recorded with a "Sampling Mode" of **Stereo** will be shown in two lines. The upper line is the L channel waveform, and the lower line is the R channel waveform.

② **Use "Edit Range Start" and "Edit Range End" to specify the range that you wish to edit.**

The selected range will be highlighted.



If you wish to audition the selected range, press the [START / STOP] key.
The waveform will play back at the pitch of the base key (the key shown in gray in the keyboard display). You can select the base key by holding down the [ENTER] key and playing a note on the keyboard.

note The **ZOOM buttons** and the "User Zero" check box can be used in the same way as in P2: Loop Edit.

③ **From the list of page menu commands, select the desired editing command. Make the appropriate settings in the dialog box, and press the OK button to execute.**

For details on each command (☞p.89 in the *Parameter Guide).*

A note on saving samples

In the dialog boxes of some page menu commands, there is a "Save to No." setting that lets you specify the sample number to which the edited sample will be saved. At this time, a vacant sample number will be selected automatically, so you will change the setting only if you want to specify the save destination number.

If you **check** "Overwrite" in the dialog box of the command, the data prior to editing will be deleted, and will be overwritten by the edited data. Normally, you will leave this **unchecked**, so that the data prior to editing will be preserved as you edit. Samples that are no longer needed when you have completed your editing can be deleted by the "Delete Sample" page menu command.

In Sampling mode, there is no Compare function that lets you compare the data before and after editing.
If you wish to preserve the unedited state of the multisample or sample, use "Copy MS" or "Copy Sample" (☞p.83, 84 in the *Parameter Guide*) to copy the multisample or sample before you begin editing it.
For some page menu commands in P1 or P2, you can execute without **checking** the "Overwrite" setting in the dialog box, so that the sample data previous to editing will be preserved.

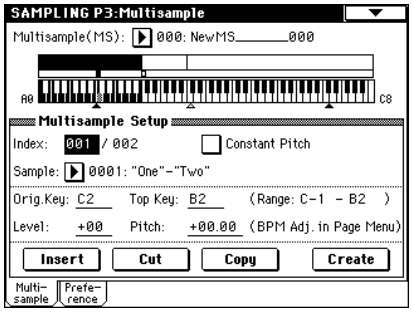
Multisample editing

Editing a multisample consists of creating indexes for the multisample and assigning a sample to each index (these basic settings can also be performed in P0), editing operations such as deleting, copying, and inserting indexes, and detailed settings such as sample level and pitch for each index.
Multisample editing is performed in P3: Multisample.

Editing the indices

To change the number or order of the indexes, use the **Insert**, **Cut**, **Copy**, and **Create buttons**.

① **Press P3: Multisample.**



② **Use Multisample (MS) to select the multisample that you wish to edit.**

③ **Select the "index."**

You can also select an index by holding down the [ENTER] key and playing a note on the keyboard.

④ **Press the buttons to modify the number or order of the indices, and edit them.**

To delete the selected index, press the **Cut button**. The **Insert button** is used in conjunction with the **Cut** and **Copy buttons**. The contents of the index that was Cut or Copied will be inserted.
The **Create button** has the same function as the **Create button** in P0: Recording (☞p.81 "Creating multisample indexes and sampling").

Modifying the settings of an index

① **Make the settings described in steps ①–③ of "Editing the indexes."**

② **Set parameters for the selected index.**

For details on each parameter, refer to p.96 in the *Parameter Guide*.

- Changing the "Top Key" will change the upper limit of the zone. Simultaneously, the lower limit of the next-numbered index will also change.
- If you **check** "Constant Pitch," all notes in the index zone will sound the sample at its original pitch.
- "Pitch" adjusts the sample pitch for each index. You can use the "Pitch BPM Adjust" page menu command to set the loop interval to a desired BPM value (☞p.97 in the *Parameter Guide).*

Converting a multisample to a program

In pages P0–P4, you can select and execute the "Convert MS To Program" page menu command. When you execute this command, the settings of the currently selected multisample will be converted into a program. In Program mode you can make filter, amp and effect settings etc., and play the sample as a program. The resulting program can be used in a combination or song.

For details on the "Convert MS To Program" page menu command (☞p.84 in the *Parameter Guide).*