Fantom X6 X7 X8

HANDBOOK

Roland

About the Fantom-X Handbook

This handbook explains various topics related to how you can use your Fantom-X6/X7/X8. With easily understood, graphics-based explanations, it leads you through the basics of how to select sounds, the procedure for creating your own songs, and how to produce a CD using your computer.

Each section also contains references to the appropriate pages in the Owner's Manual, so you can refer to these pages when you want to learn more about each function or feature.

We hope you will find this handbook a helpful way to begin enjoying the amazing power of the Fantom-X6/X7/X8, and applying it to your performances and music production.

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Using the Fantom-X live

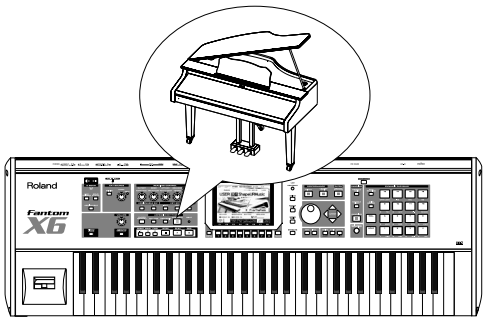
The basics of using the Fantom-X live

What is a Patch?

A "patch" is the basic unit of sound that you play on the Fantom-X; it corresponds to the sound of an individual instrument such as a piano, organ, or guitar.

What is Patch mode?

The easiest way to play the Fantom-X live is in **Patch mode**. This is the simplest way to use the Fantom-X as a piano, organ, etc.

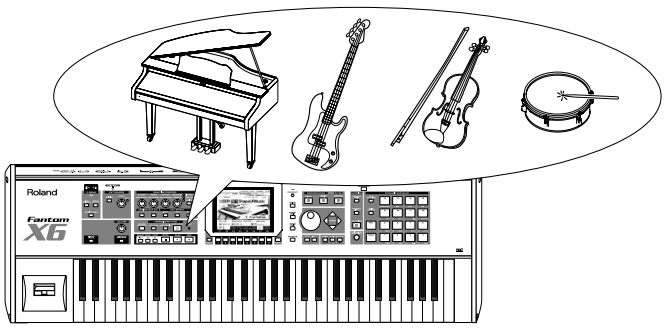


What is Performance mode?

Performance mode lets you play two or more of these basic **patches** simultaneously. Broadly speaking, there are two ways to use the Fantom-X in Performance mode.

One is to play **layers**—setups that simultaneously produce two sounds (e.g., piano and strings) when you play a note. **"Playing two or more sounds simultaneously (Layers)"** (p. 14)

The other is to play **splits**—setups that assign different sounds to the left and right regions of the keyboard so that you can play different instruments with your left and right hands. **"Playing separate sounds with left and right hands (Splits)"** (p. 16)



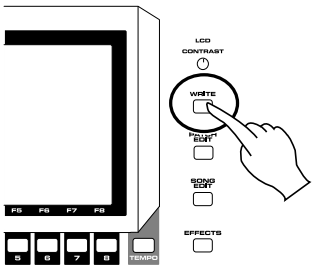
This chapter will focus mainly on how to use the Fantom-X in the most basic way by playing patches. We will also take a look at how Performance mode lets you combine more than one patch.

Saving the settings you create

Once you've created an original patch, you'll need to save it as a user patch if you want to use it again. This is called the "WRITE" operation. The illustration below shows the WRITE procedure.

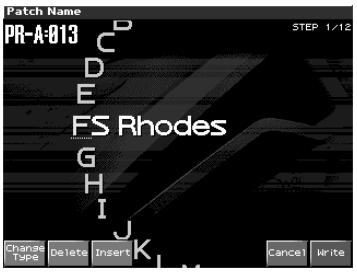
If you select another patch without writing your edited patch, your edits will be lost.

* *User patches and user performances have "USER" displayed in front of their name; e.g., "USER: 002 Concert Piano." These let you store your own original sounds.*



The Write Menu screen will appear.

Assigning a Patch or Performance name.



Select the save destination.

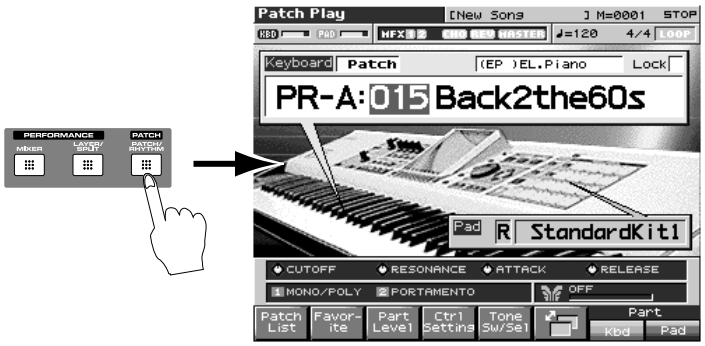
Playing the keyboard

We'll start by explaining **Patch mode**, which is the most basic way to play the Fantom-X.

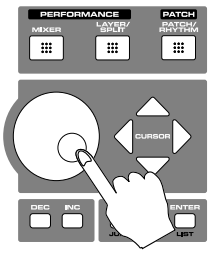
Selecting and playing sounds

Selecting a sound (Patch Mode)

1. Press the PATCH button so the following screen appears.



2. Use the cursor (left/right) buttons to choose the Patch group or Patch number, and use the VALUE VALUE dial or [DEC][INC] to make a selection.



Adjusting the keyboard touch

You can adjust the way in which the volume responds to your playing dynamics.

TIP → **"Keyboard Sens (Keyboard Sensitivity)"** (p. 226) in Owner's Manual

Shifting the octave

By pressing [-OCT]/[+OCT] you can shift the pitch over a range of -3 octaves to +3 octaves.

TIP → **"Octave Shift (Oct)"** (p. 24) in Owner's Manual

TIP What's the procedure for playing in **Performance mode**?
→ **"Selecting a Performance"** (p. 99) in Owner's Manual

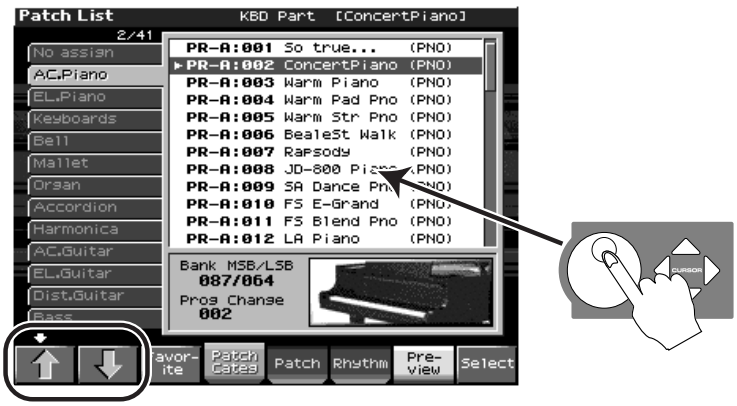
Selecting sounds by category

Another way to choose sounds is to view and select sounds by category, such as piano patches or organ patches.

Selecting a sound

1. In the Patch Play screen, press [F1 (Patch List)] to view the category screen.

2. Use [F1]/[F2] to choose a category, and use the VALUE dial or [DEC][INC] to select a patch. After making your selection, press [F8 (Select)] to finalize it.



TIP For more about patches
→ **"Playing in Patch Mode"** (p. 38) in Owner's Manual

TIP In addition to the built-in sounds, you can install an **SRX series wave expansion board** to add more sounds. The added sounds will also appear in the above Patch List screen, and can be selected and used in the same way as the built-in sounds.
→ **"Installing the Wave Expansion Board"** (p. 240), **"Installation de la carte d'expansion Wave"** (p. 242) in Owner's Manual

TIP You can also play rhythm sounds from the keyboard. In the category screen shown above, press [F6 (Rhythm)] to see a list of the rhythm sets.

Playing two or more sounds simultaneously (Layers)

Layers are setups in which two or more sounds are heard simultaneously; for example, you might add a bell sound to a piano sound.
The illustration below shows an example of adding a bell sound only to the upper range, producing a more brilliant-sounding piano.

Procedure

Here's how to create a layer like the one shown above, starting from a preset performance.

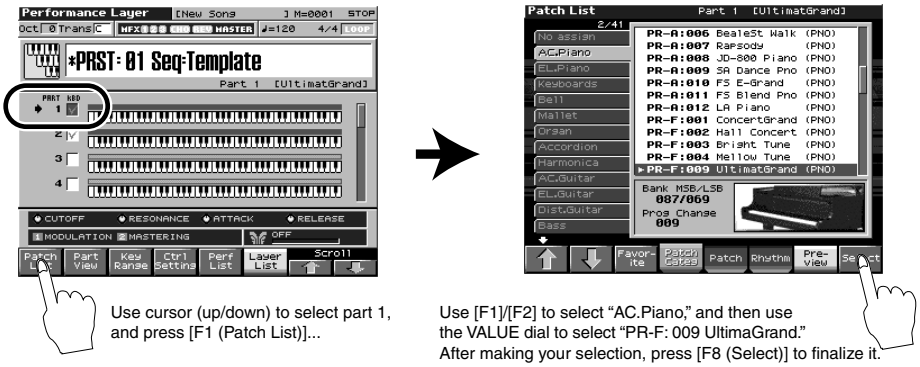
Select a Performance, and use Parts 1 and 2

1. Press [LAYER/SPLIT] to enter Performance mode; then select "PRST 01: Seq:Template."
2. Use ▲ or ▼ to select Part 1.
3. Press [INC] to add a check mark to Part 1.
4. Also add a check mark to Part 2.
   The parts that are checked as shown below are the parts that will sound when you play the keyboard. In this performance, parts 1 and 2 are checked, so these two parts will sound simultaneously.
   This check mark is called the "keyboard switch (Owner's Manual p. 101)."

Parts 1 and 2 will sound simultaneously when you play the keyboard.

Select Patches

1. Change the sound selected for part 1 so that it plays "PR-F:009 UltimatGrand."

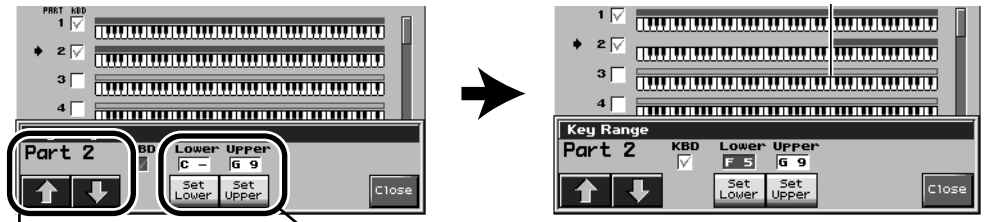


Use cursor (up/down) to select part 1, and press [F1 (Patch List)]...

Use [F1]/[F2] to select "AC.Piano," and then use the VALUE dial to select "PR-F: 009 UltimaGrand." After making your selection, press [F8 (Select)] to finalize it.

Specify the Key ranges in which the bell will sound

In the Performance Layer screen, press [F3 (Key Range)]. The screen lets you specify the key range of each part.

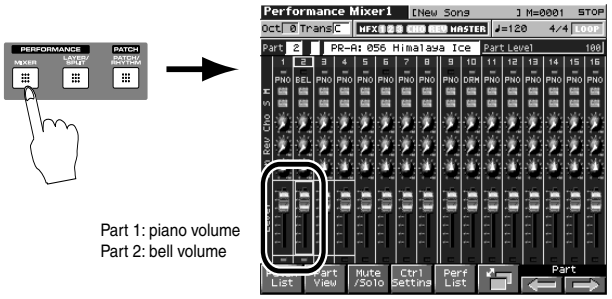


❶ Use cursor (up/down) to select part 2.

❷ Specify the key range in which the selected part will sound. Move the cursor to "Lower" (or "Upper") and use VALUE dial to set the value, then press "Set Lower" (or "Set Upper").

Adjusting the volume balance of the piano and bell

Adjust the balance as desired. For example, you might want the piano to be heard as the main component of the sound, with the bell lightly added to it.

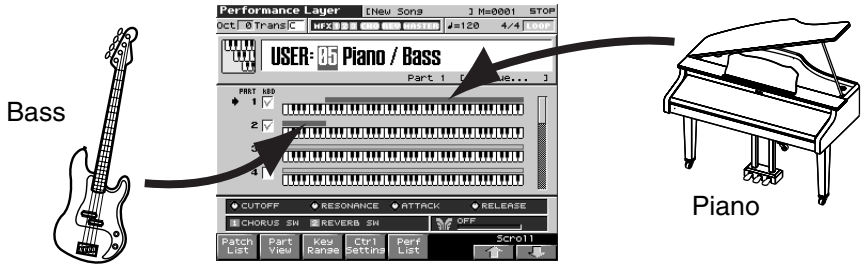


Part 1: piano volume
Part 2: bell volume

Use [CURSOR] (left/right) to select a part, use [CURSOR] (up/down) to select "LEVEL," and then use the VALUE dial to adjust the volume.

Playing separate sounds with left and right hands (Splits)

Splits are setups in which sounds are assigned to separate areas of the keyboard. The illustration below shows an example of using this to play bass with the left hand and piano with the right hand.



Procedure

Here's how to create a split like the one shown above, starting from a preset performance.

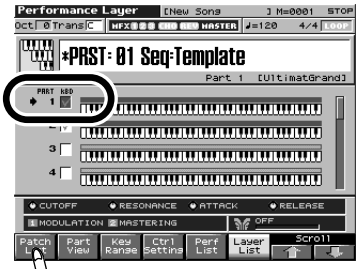
Select a Performance, and use Parts 1 and 2

1. Press [LAYER/SPLIT] to enter Performance mode; then select "PRST 01: Seq:Template."
2. Use ▲ or ▼ to select Part 1.
3. Press [INC] to add a check mark to Part 1.
4. Also add a check mark to Part 2.
   The parts that are checked as shown below are the parts that will sound when you play the keyboard. In this performance, parts 1 and 2 are checked, so these two parts will sound simultaneously.
   This check mark is called the "keyboard switch (Owner's Manual p. 101)."

Parts 1 and 2 will sound simultaneously when you play the keyboard.

Select Patches

1. Change the sound selected for part 1 so that it plays "PR-F:009 UltimatGrand."



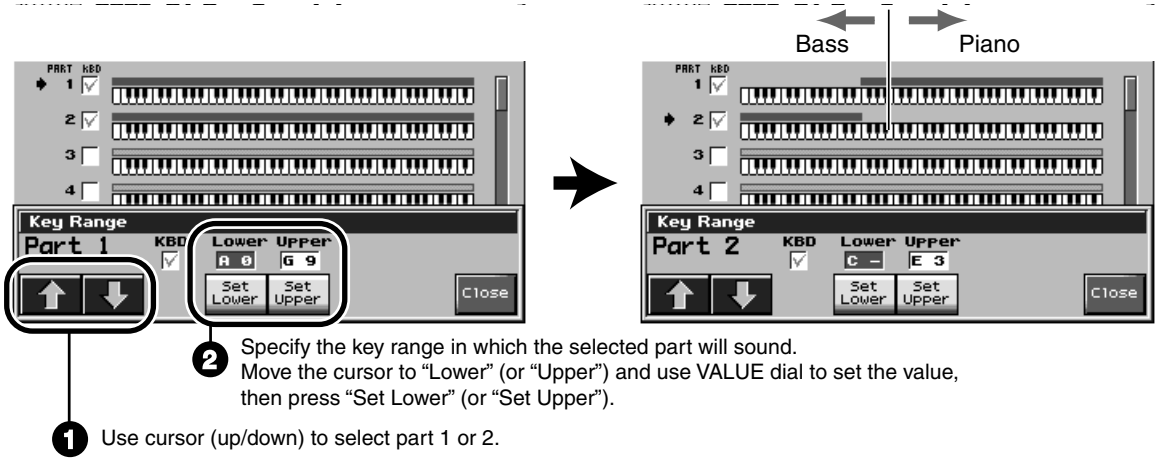
Use cursor (up/down) to select the part 1, and press [F1 (Patch List)]...

Use [F1]/[F2] to select "AC.Piano," and then use the VALUE dial to select "PR-F: 009 UltimaGrand."
After making your selection, press [F8 (Select)] to finalize it.

2. Also change the sound selected for part 2 so that it plays "PR-B: 019 Comp'd JBass (Category: Bass)."

Specify the key ranges in which the piano and bass will sound

In the Performance Layer screen, press [F3 (Key Range)]. The screen lets you specify the key range of each part.

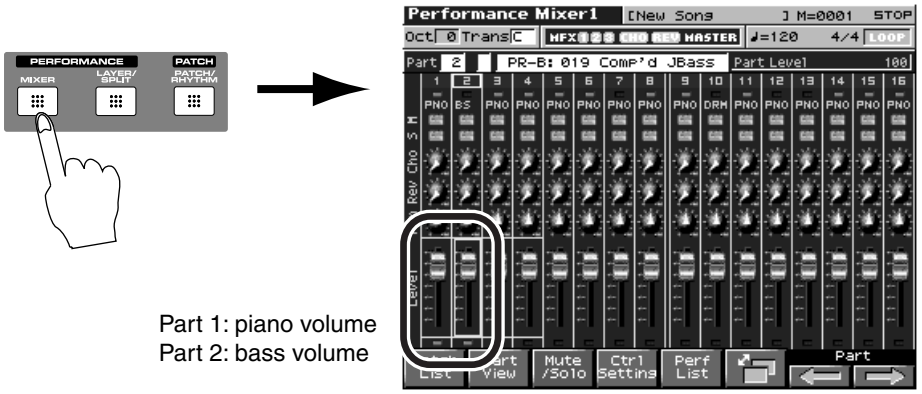


2 Specify the key range in which the selected part will sound.
Move the cursor to "Lower" (or "Upper") and use VALUE dial to set the value, then press "Set Lower" (or "Set Upper").

1 Use cursor (up/down) to select part 1 or 2.

Adjust the volume balance of the piano and bass

Adjust the volume balance so that the piano and bass are at the appropriate level respective to each other.



Part 1: piano volume
Part 2: bass volume

Use [CURSOR] (left/right) to select a part, use [CURSOR] (up/down) to select "LEVEL," and then use the VALUE dial to adjust the volume.

You can do more with Layers and Splits

TIP You can adjust the effect settings appropriately for each part.
-> Owner's manual **"Editing the Part Settings"** (p. 104)

TIP You can specify that the same effect settings as in Patch mode will be used.
-> Owner's manual **"MFX1–3 Source (Multi-Effects 1 Source)"** (p. 212)

Play an arpeggio by holding down a chord

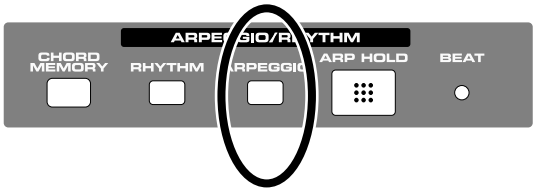
It can be difficult to "manually" play a complex or rapid arpeggio on the keyboard. The Fantom-X's **Arpeggio function** automatically plays an arpeggio based on the chord you hold down on the keyboard. This lets you create dynamically changing phrases simply by changing chord positions.

Using the Arpeggio function

Press [ARPEGGIO] to turn on the Arpeggio function.

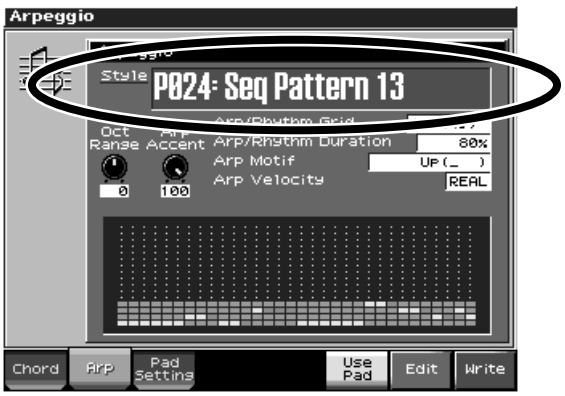
* *In Performance mode you must choose one part that will use the arpeggio function.*

"Selecting the Part that Will Play Arpeggios in Performance Mode (Arp Part)" *(p. 130)*



Changing the arpeggio style

Hold down [SHIFT] and press [ARPEGGIO] to access the Arpeggio screen. Use the VALUE dial to select a style. By selecting different styles you can vary the rhythm of the arpeggio and change the way in which the arpeggiated notes will sound.



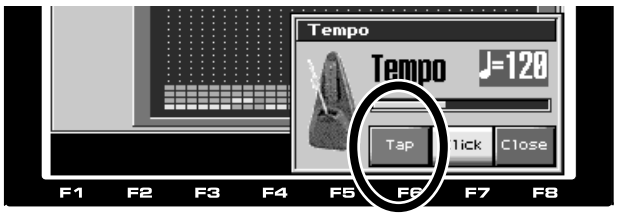
Adding other changes to the phrase

The Arpeggio screen also contains the settings shown below. Even with the same chord held down, changing these settings can produce entirely different phrases. Try out various settings to create the phrase you want. You can also use the knobs to adjust some of these settings directly. (p. 35)

Range	Explanation and suggestions for use
Oct Range	**Changes the octave range of the phrase**: This specifies the range of pitches in which the arpeggiated phrase will sound, in units of one octave. Since the range can be extended as much as three octaves, you can produce phrases that have dramatic changes in pitch. You can also use this knob to adjust the Octave Range while you perform.
Arp Accent	**Changes the way in which accents occur**: This adjusts the volume accents of the arpeggiated phrase. Increasing this value will emphasize the loud/soft dynamics. Lowering this value will produce flatter dynamics, but may give you a greater sense of "speed" for techno-style phrases.
Arp/Rhythm Grid	**Adjusts the speed of the phrase**: This specifies the note value interval at which the arpeggiated phrase will be played. By adjusting this setting you can produce the extremely rapid phrases that can be played only by an Arpeggio.
Arp/Rhythm Duration	**Specifies the duration of the notes**: Smaller values will shorten each note, and greater values will lengthen each note.
Arp Motif	**Specifies the order in which the notes will sound**: This specifies whether the chord you hold down will be arpeggiated upward, downward, in random order, etc.
Arp Velocity	**Keyboard touch sensitivity setting**: This specifies whether your actual playing dynamics on the keyboard will affect the loudness of the notes, or whether they will sound at a pre-determined level regardless of your playing dynamics.

TIP For more details
→ **"Arpeggio Settings"** (p. 129) in Owner's Manual

Matching the tempo of a background performance (Tap Tempo)



When you're playing live, the tempo can change from performance to performance, making it difficult to set the tempo beforehand. In such cases, you can use the Fantom-X's **Tap Tempo** function to set the tempo by repeatedly pressing a button at the desired tempo. If you use this to specify the tempo a few measures before you start playing phrases, the phrase tempo will always be correct.
On the Fantom-X, all phrases (including audio data) can be synchronized to this tempo.

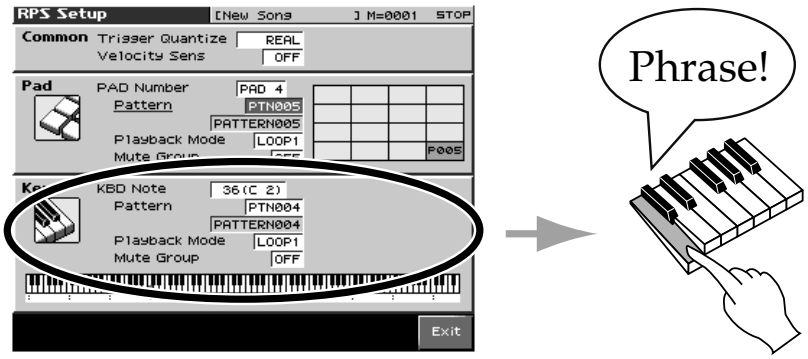
TIP → **"Determining the Tempo for Arpeggio Performances"** (p. 128) in Owner's Manual

Playing a phrase with a single finger

On the Fantom-X you can use the keyboard not just to play "conventionally," but also to trigger musical phrases. The triggered phrases can be patterns you create using the sequencer, or phrase samples (audio data) that you load from a CD-ROM.The Fantom-X gives you various ways to play phrases.

Using a sequencer phrase (the RPS function)

A sequenced phrase can be played from any key that you assign.



1. Use the sequencer to create the pattern that you want to play.

TIP → **"Inputting Data One Step at a Time (Step Recording)"** (p. 174) in Owner's Manual
→ **"Recording Your Performance as You Play It (Realtime Recording)"** (p. 170) in Owner's Manual

2. Make RPS settings to specify the key that will play the pattern.

TIP → **"Settings for the RPS Function"** (p. 203) in Owner's Manual

Using a sampled sound or a sound imported from CD-ROM

You can use the procedure described in "Playing a sound imported from CD-ROM" to import a phrase and use it.

TIP Refer to **"Playing sounds you've imported from a CD-ROM"** (p. 24) of this manual

Matching the tempo of a background performance (Tap Tempo)

You can play back this phrase in synchronization with the tempo.

TIP Refer to **"Matching the tempo of a background performance (Tap Tempo)"** (p. 19) of this manual.

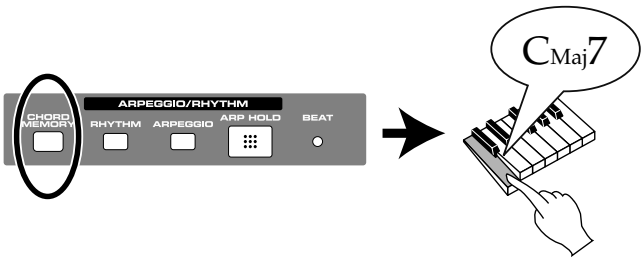
Playing a chord with a single finger

The **Chord Memory** function lets you play a specified chord with a single finger.

* *In Performance mode, the Chord Memory function will be available for the Part you chose to be played by the arpeggiator.*

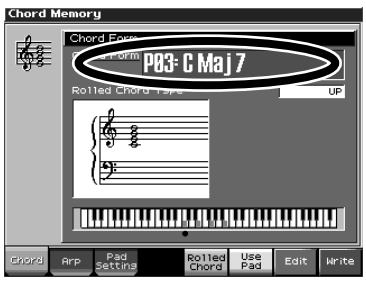
Using Chord Memory

Press [CHORD MEMORY] to turn Chord Memory on. Pressing a single note will sound the chord assigned to that key.



Changing the assigned chord

Hold down [SHIFT] and press [CHORD MEMORY] to access the Chord Memory screen. Use the VALUE dial to select the desired chord.



TIP You can also register chord forms that you create, and use them in the Chord Memory function. → **"Creating Your Own Chord Forms"** (p. 134) in Owner's Manual

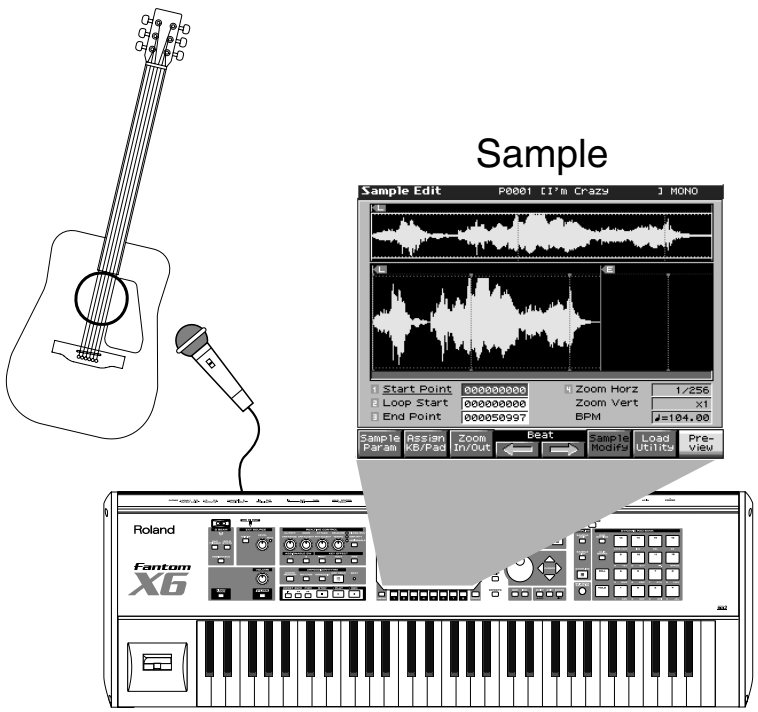
Producing guitar strums (Rolled Chord Function)

When you strum a chord downward on a guitar, the strings are sounded in order from the lowest to the highest string. The Fantom-X provides a function that simulates this, sounding the individual notes of the chord slowly when you play the keyboard softly, or rapidly when you play the keyboard strongly. This is also effective on piano or strings.Press [F5 (Rolled Chord)] to turn this function on. By default, the chord is sounded as an up-stroke, but you can also choose down-stroke or alternate between up and down.

TIP → **"Sounding a chord in the order of its notes (Rolled Chord)"** (p. 134) in Owner's Manual

Playing sampled sounds

Samples (i.e., sounds you've recorded by sampling) can be selected from the patch list in the same way as ordinary patches.



Procedure

1. Sample a sound.

TIP → **"Sampling Procedure"** (p. 142) in Owner's Manual

2. Select a sample from the patch list.
You can play the sample at different pitches in the same way as an ordinary patch.
* *You can also specify that the sample be played using a pad.*

TIP You can also assign samples so they can be played from the pads.
→ **"Assigning Samples to a Pad (Assign To Pad)"** (p. 151) in Owner's Manual

❷ Select the patch that plays the sound you sampled.

❶ Select "USAM" (or "CSAM" if you're using a card).

Tips for sampling the external input

When sampling from the external input, the most important thing is to set the level correctly. It is best to sample at as high a volume as possible, but excessive volume will cause distortion. To get the best results, refer to the following points as you make settings.

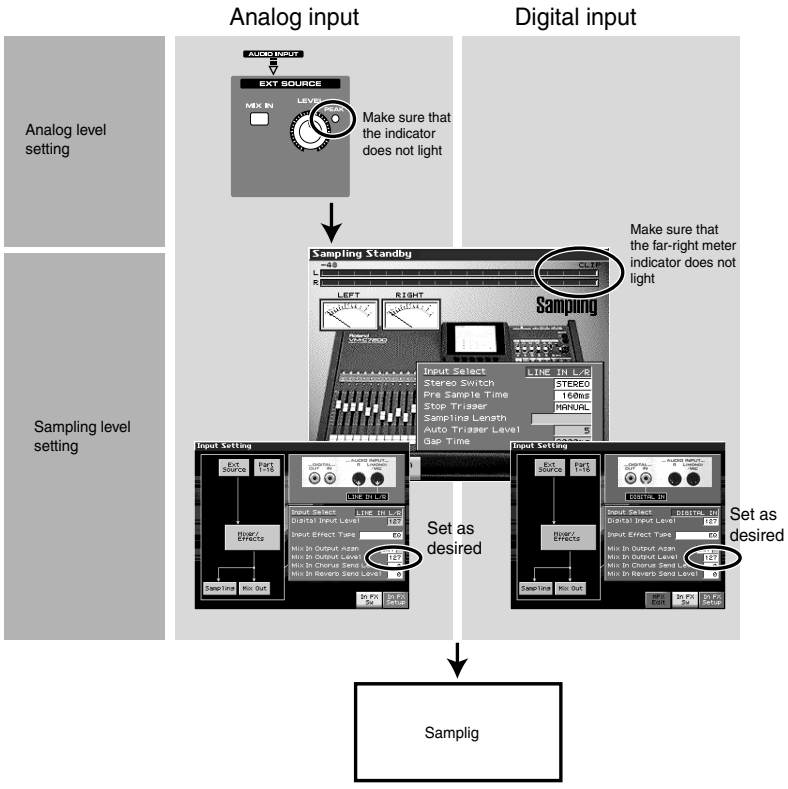
When using analog input

- Use the INPUT level knob to adjust the input level. (Make sure that the red indicator does not light.)
- Press [SAMPLING] to access the Sampling Standby screen.
  Watch the level meter to see whether the far right indicator lights.
- If it lights, hold down [SHIFT] and press [MIX IN], and lower the "Mix In Output Level."

When using digital input

- Press [SAMPLING] to access the Sampling Standby screen.
  Watch the level meter to see whether the far right indicator lights.
- If it lights, hold down [SHIFT] and press [MIX IN], and lower the "Mix In Output Level."

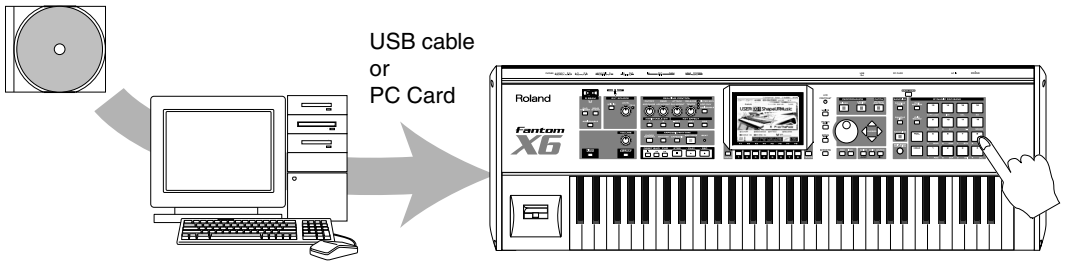
* *When sampling from the digital input, set "Digital Input Level" to 127.*



TIP → **"Making Input Source Settings (Input Setting)"** (p. 141) in Owner's Manual

Playing sounds you've imported from a CD-ROM

You can use your computer to send data from a CD-ROM to the Fantom-X, and play it.



Procedure

1. Load a CD-ROM into your computer.
2. Connect your computer to the Fantom-X via USB, and import the CD-ROM data into the Fantom-X. Alternatively, you can use a PC card to import the data from your computer into the Fantom-X.

   TIP → **"Transferring Files to or from Your Computer (Storage Mode)"** (p. 219) in Owner's Manual (Using USB)
   → **"Using a Memory Card"** (p. 248) in Owner's Manual (Using a PC card)
   → **"File-Related Functions (File Utility)"** (p. 223) in Owner's Manual (Using a file)
3. Load the imported data into the Fantom-X.

   TIP → **"Importing a Audio File"** (p. 148) in Owner's Manual
4. Select a sample from the patch list.

❷ Select the patch that plays the sound you sampled.

❶ Select "USAM" (or "CSAM" if you're using a card).

TIP You can also assign samples so they can be played from the pads.
→ **"Assigning Samples to a Pad (Assign To Pad)"** (p. 151) in Owner's Manual

What are AIFF/.WAV files?

These are sound file formats used by computers. AIFF files are used mainly in Mac OS, and .WAV files are used mainly in Windows. The Fantom-X can use sound files in either AIFF or .WAV format, making it easy for you to handle files from your computer.

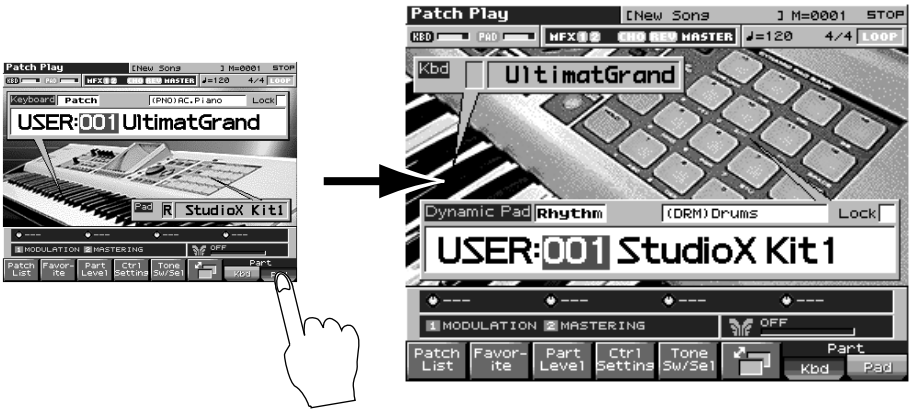
Using the pads

Selecting and playing sounds

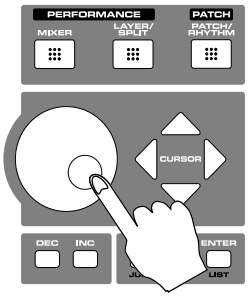
The pads provide a convenient way to play rhythm sounds. By default, a **rhythm set** is selected, letting you use the sixteen pads to play various rhythm sounds.

Selecting sounds

1. Press [PATCH] to access the screen shown below.
2. Press [F8 (Pad Part)] to access the pad sound selection.



3. Use cursor button (left/right) to select the group or patch number, and use the VALUE dial to select a sound.



TIP You can press [F1 (Patch List)] to see a list of rhythm sets.
Choose a set, and then press [F8 (Select)].
→ **"Selecting Patches from the List"** (p. 41) in Owner's Manual

TIP For more details
→ **"Playing in Patch Mode"** (p. 38) in Owner's Manual

Adjusting the touch sensitivity of the pads

You can adjust the way in which the volume responds to the force at which you strike the pads.
Press [PAD SETTING] to access the screen, and set the "Pad Sens" setting.

Range	Pad sensitivity
LIGHT	Even light strikes can produce loud volumes.
MEDIUM	Midway between LIGHT and HEAVY settings.
HEAVY	Loud volumes are produced only by strong strikes.

For more details
→ **"Making Settings for the Pads (Pad Setting)"** (p. 161) in Owner's Manual

Fixing the volume of the pads

For some sounds, you may want the pads to always play at an unchanging volume.
Press [PAD SETTING] to access the screen, and set the "Pad Common Velo" setting.

Range	Pad volume
Real	The volume will correspond to the force of your strike.
1-127	The specified volume will be used regardless of the force of your strike.

For more details
→ **"Making Settings for the Pads (Pad Setting)"** (p. 161) in Owner's Manual

Using the pads to play pitched instrumental sounds

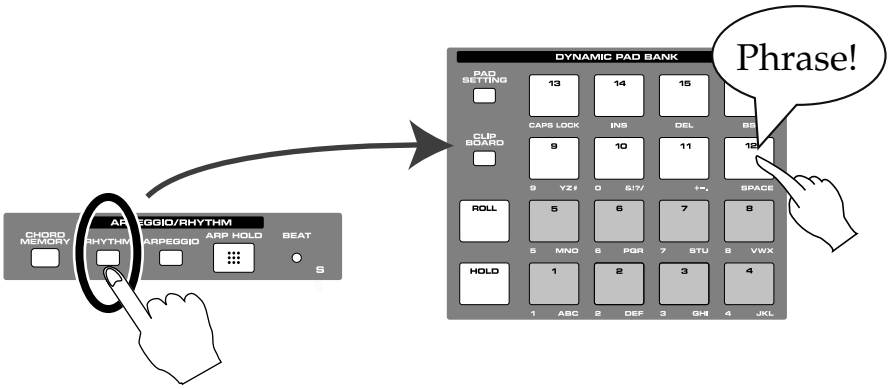
In the Patch Play screen, change "Rhythm" to "Patch" so that you can select pitch instrumental sounds using the pads.
→ **"Functions in the Patch Play screen"** (p. 39) "7" in Owner's Manual

Playing rhythm phrases

Normally the pads are used to play rhythm sounds, but you can also use them to play rhythm pattern.

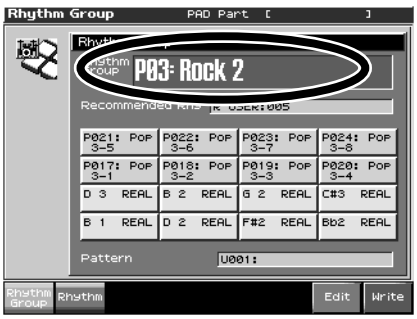
Using the Rhythm Pattern function to create phrases

Press [RHYTHM]. In this state, pads 9–16 will play patterns. Striking a pad will start the pattern, and striking the same pad again will stop the pattern.
You can use pads 9–16 to select pattern variations. The Fantom-X's rhythm patterns will stay in rhythm even when you switch patterns, maintaining musical continuity. This means you can keep switching between patterns to create rhythm phrases.



Switching to a different style

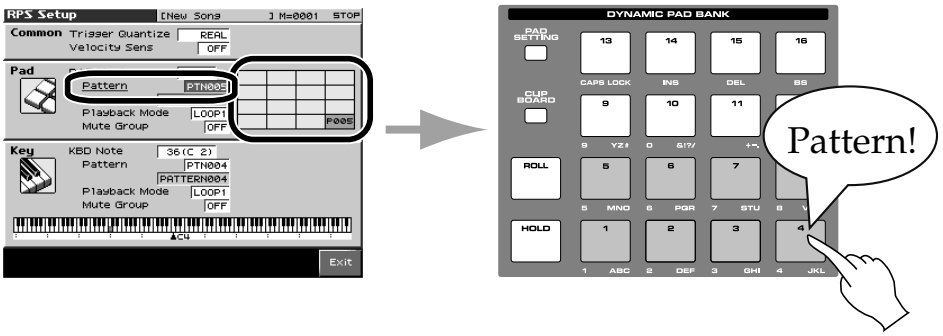
Hold down [SHIFT] and press [RHYTHM]. A setting screen will appear. In this screen, press [F1 (RHYTHM GROUP)] to display the rhythm group, and use the VALUE dial to make your selection.



TIP To create original patterns
→ **"Creating an Rhythm Pattern (Rhythm Pattern Edit)"** (p. 138) in Owner's Manual

Using an original pattern

The **RPS (realtime Phrase Sequence)** function lets You play sequencer patterns that you created. For example, you can make assignments so that pad number 2 will play pattern number 005, and then press that pad to play the corresponding pattern.



TIP Using the sequencer to create patterns
→ **"Recording Your Performance as You Play It (Realtime Recording)"** (p. 170) in Owner's Manual
→ **"Inputting Data One Step at a Time (Step Recording)"** (p. 174) in Owner's Manual

TIP Using the keyboard to play patterns
→ **"Using the RPS Function While You Perform"** (p. 204) in Owner's Manual

Using a sampled sound or a sound imported from CD-ROM

You can import and use phrase data as described in "Playing a sound imported from CD-ROM."

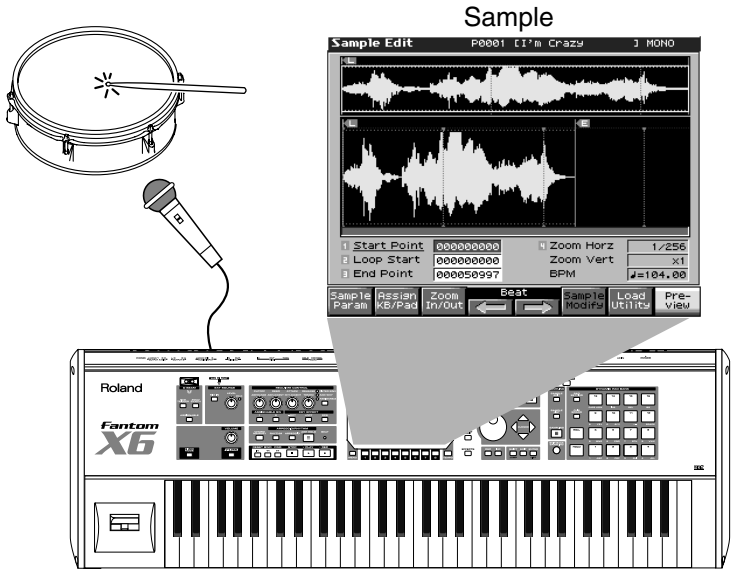
TIP → Refer to **"Playing sounds you've imported from a CD-ROM"** (p. 24) of this manual.

Matching the tempo of a background performance (Tap Tempo)

TIP → For details, refer to **"Matching the tempo of a background performance (Tap Tempo)"** (p. 19) of this manual.

Using the pads to play sampled sounds

Sounds (samples) that you record can be played from the pads or the keyboard. You can record one-shot sounds and play them as percussion instruments. Alternatively, you can sample entire phrases and play them back at a touch.



Procedure

1. Sample the sounds you want to use.

TIP → **"Sampling Procedure"** (p. 142) in Owner's Manual

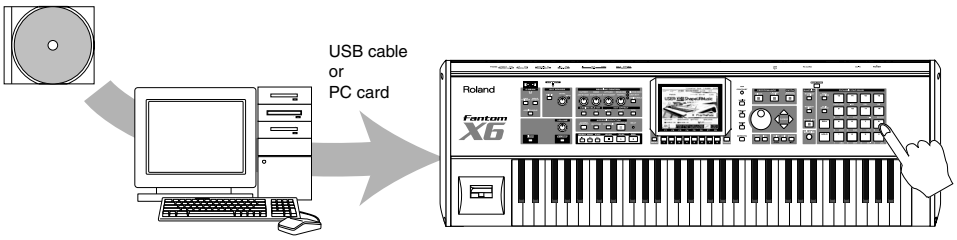
2. Create a **rhythm set** so that you can play the samples from the pads.

TIP → **"Assigning Samples to a Pad (Assign To Pad)"** (p. 151) Owner's Manual

* *These settings will register the samples as a new rhythm set. If you save the samples and rhythm set, you can use them again simply by selecting that rhythm set.*

Using the pads to play sounds imported from CD-ROM

You can use your computer to transfer data from a CD-ROM to the Fantom-X and play it. For example, you can add new percussion instruments to the preset rhythms, or replace just the kick drum with a different sound.



Procedure

1. Import data from a CD-ROM into your computer.
2. Connect your computer to the Fantom-X via USB, and import the CD-ROM data into the Fantom-X. Alternatively, you can use a PC card to import data from your computer into the Fantom-X.

   TIP → **"Transferring Files to or from Your Computer (Storage Mode)"** (p. 219) in Owner's Manual (Using USB)
   → **"Using a Memory Card"** (p. 248) in Owner's Manual (Using a PC card)
   → **"File-Related Functions (File Utility)"** (p. 223) in Owner's Manual (Using a file)
3. Load the imported data into the Fantom-X.

   TIP → **"Importing a Audio File"** (p. 148) in Owner's Manual
4. Specify "Play from the pads."

   TIP → **"Assigning Samples to a Pad (Assign To Pad)"** (p. 151) in Owner's Manual

   * *These settings will register the samples as a new patch. If you save the samples and patch, you can use them again simply by selecting that patch.*

What are AIFF/.WAV files?

These are sound file formats used by computers. AIFF files are used mainly in Mac OS, and .WAV files are used mainly in Windows. The Fantom-X can use sound files in either AIFF or .WAV format, making it easy for you to handle files from your computer.

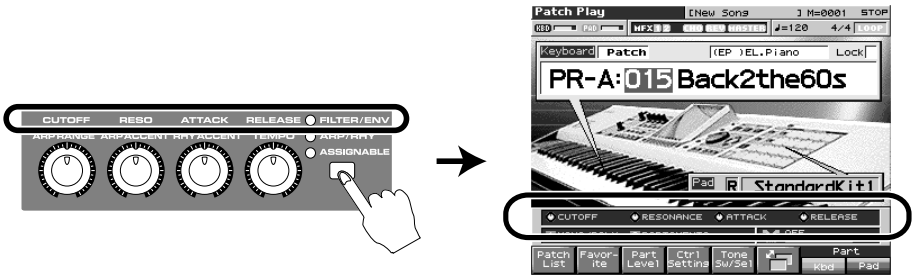
Using the knobs

Modifying the sound while you play

You can use the knobs to control aspects of the sound, such as the brightness (Cutoff), the distinctive "synth-like" character (Resonance), how the sound starts (Attack), and how long the sound continues after you release the note (Release). As an example, let's try using the knobs in Patch mode.

Procedure

Confirm that the FILTER/ENV indicator is lighted. (If it's not lit, press the button below it so it lights.)
The patch screen also shows you what you can control from the knobs.



TIP For more details
→ **"Using Knobs or Buttons to Modify the Sound (Realtime Controller)"** (p. 124) in Owner's Manual

TIP Controlling the sound of the pads in Patch mode
→ **"Specifying the Part that Will be Affected by the Controller"** (p. 47) in Owner's Manual

TIP In Performance mode you'll be using multiple patches, you can select one of the parts and control it.→ **"Make Settings for the Realtime Controllers and D Beam Controller (Ctrl)"** (p. 114) in Owner's Manual

The procedure described above is a convenient way to make temporary adjustments while you play. (The changes you make with the knobs are not saved.)

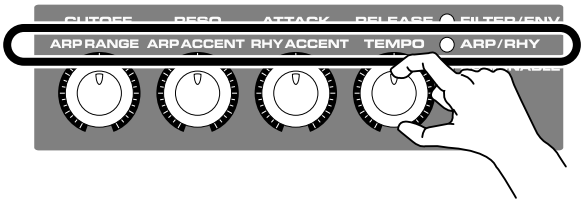
TIP How can I adjust the Cutoff, Resonance, Attack, and Release, and save them as the default settings for that patch?
→ **"Cutoff Frequency"** (p. 69) in Owner's Manual
→ **"Resonance"** (p. 69) in Owner's Manual
→ **"A-Env Time 1–4 (TVA Envelope Time 1–4)"** (p. 73) in Owner's Manual

Changing the way that the Arpeggio sounds

By changing the octave range or accenting of a phrase, you can add variety to a repeating phrase. Even if you continue holding down the same chord on the keyboard, you can make the phrase keep evolving by continuing to turn the knobs.

Procedure

1. Press [ARPEGGIO] to turn on the Arpeggio function.
2. Press the button located at the right of the panel knobs to make the "ARP/RHY" indicator light.
3. Hold down a chord on the keyboard.
4. The four knobs have the following functions.



Range	Explanation and suggestions for use
ARP RANGE	**Changes the octave range of the phrase**: This specifies the range of pitches in which the arpeggiated phrase will sound, in units of one octave. Since the range can be extended as much as three octaves, you can produce phrases that have dramatic changes in pitch. You can also use this knob to adjust the Octave Range while you perform.
ARP ACCENT	**Changes the way in which accents occur**: This adjusts the volume accents of the arpeggiated phrase. Increasing this value will emphasize the loud/soft dynamics. Lowering this value will produce flatter dynamics, but may give you a greater sense of "speed" for techno-style phrases.
RHYTHM ACCENT	Adjusts the accent of the rhythm pattern. Refer to **"Using the Rhythm Pattern function to create phrases"** (p. 28)
TEMPO	**Adjusts the tempo.** It adjusts the tempo of the Arpeggio. This tempo is the same as the tempo of the sequencer. This means that when you use the Arpeggio together with the sequencer, the arpeggio will always stay in synchronization with the song tempo.

TIP

For more details

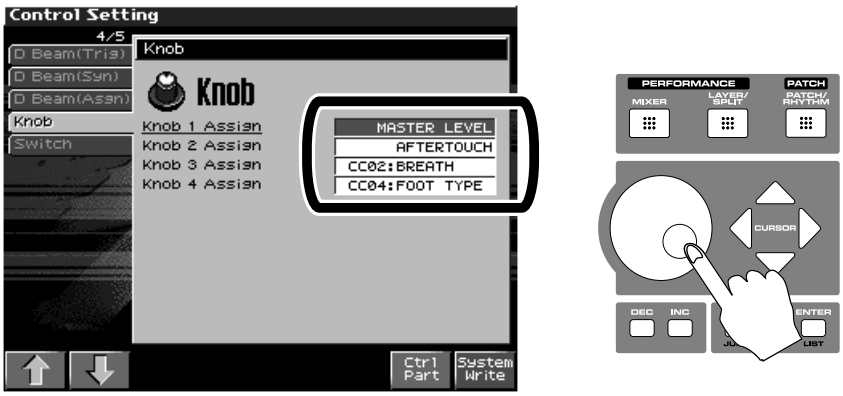
→ **"Hanging the Range of the Arpeggio (Oct Range)"** (p. 131) in Owner's Manual
→ **"Changing the Accent Strength (Arp Accent)"** (p. 130) in Owner's Manual
→ **"Determining the Tempo for Arpeggio Performances"** (p. 128) in Owner's Manual

Using the knobs to control an assigned function

You can use the knobs to control the functions you specify.
For example, if you assign a knob to control "CC91: Reverb," it will control the reverb depth so you can immediately adjust the amount of reverb while you play.

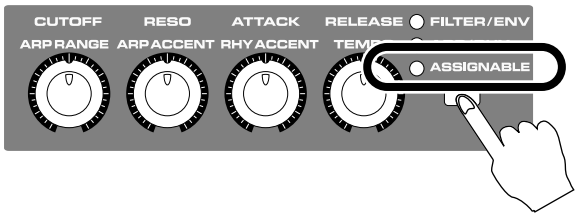
Procedure

1. Hold down [SHIFT] and turn the knob that you want to adjust.
The Control Setting "Knob" screen will appear. Move the cursor, and use the VALUE dial or [DEC][INC] to select what you want to control.



Using your assignments

Press the button below the [ASSIGNABLE] indicator so it lights.



Now the knobs will control the functions you've assigned.

* *Using the knobs for control is a convenient way to make changes while performing, or for quick adjustments that you won't need to save for use at other times or places. (The changes you make with the knobs are not saved.)*

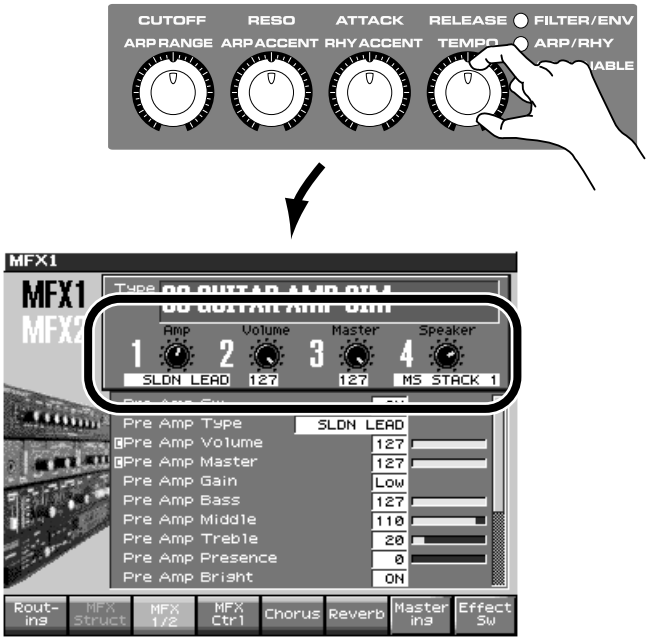
TIP For more details
→ **"Changing Realtime Controller Settings"** (p. 125) in Owner's Manual

Using the knobs to control multi-effects

You can use the knobs to modify the sound as easily as when using a compact guitar effect unit.

Procedure (Patch mode)

1. In Patch mode, press [EFFECTS] to access the setting screen.
2. Press [F3 (MFX1/2)] to access the effect setting screen. The knob graphics shown in this screen indicate what each knob will control.



TIP In Performance mode you can use up to three multi-effects.
→ **"Applying Effects in Performance Mode"** (p. 210) in Owner's Manual

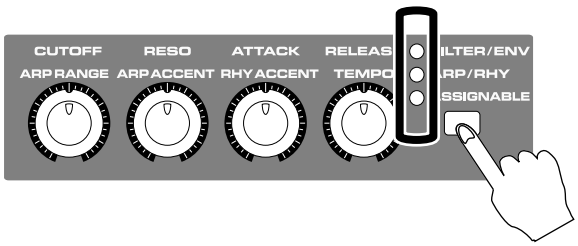
TIP For more details
→ **"Making Multi-Effects Settings (MFX1–3)"** (p. 213) in Owner's Manual

Adjusting the volume balance

When using a layer or split in Performance mode, you can adjust the volume and pan of each patch.

Procedure

1. Enter Performance mode (the MIXER screen).
2. Confirm that the indicators at the right of the knobs are extinguished. (If an indicator is lit, press the button below the indicators a number of times until it goes out.)
   If these indicators are unlit, the knobs are controlling the parameters shown in the display.



3. Select the group of parts that you want to control.
   Use the cursor buttons (up/down) to select the level slider. You can use [F7 (Part ←)] or [F8 (Part →)] to move the green frame (which indicates the four parts being controlled by knobs).

* *To adjust the volume balance between the keyboard and pads in Patch mode, access the Patch screen and press [F3 (Part Level)] to access the "Part Level" screen.*

TIP When you save a performance, the settings you adjusted in the MIXER screen are also saved.
→ **"Saving a Performance You've Created (Write)"** (p. 120) in Owner's Manual

Using the D Beam

Playing a solo from the D Beam

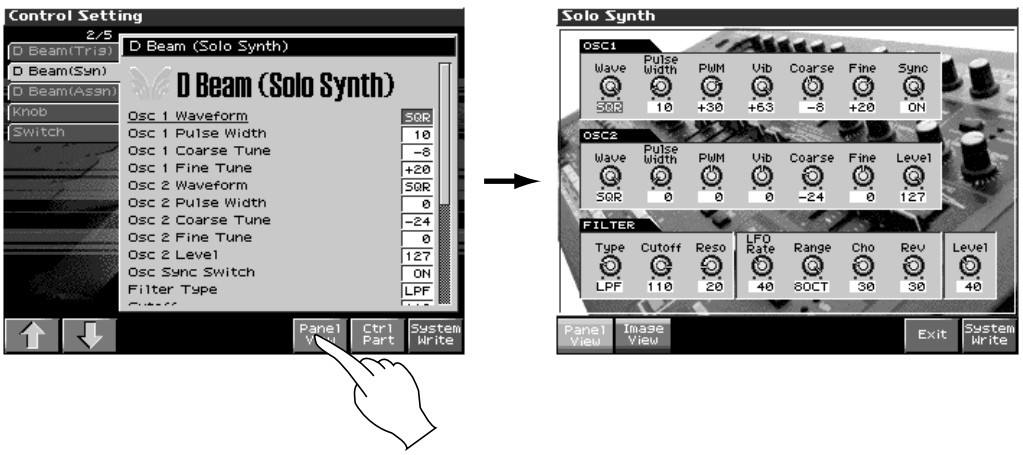
The Fantom-X contains a monophonic synthesizer for use only with the D Beam. It will sound when you place your hand over the D Beam, and you can control the pitch by moving your hand closer or further away. This is called the **solo synthesizer** function.

Using the solo synthesizer

To activate the solo synthesizer, press [SOLO SYNTH] so the button is lit. The sound will play when you place your hand over the D Beam sensor.

To change the sound to your taste

Hold down [SHIFT] and press [SOLO SYNTH]. The setting screen will appear.
You can then press [F6 (PanelView)] to view a graphic editing screen.



TIP For more details
→ **"Solo Synth"** (p. 123) in Owner's Manual

Using the D Beam to play sounds

You can play a snare shot or other sound when you place your hand over the D Beam sensor. From the rhythm set being played by the pads, you can select one sound to be played by the D Beam. This is called the **pad trigger** function.

Using pad trigger

To activate the pad trigger function, press [PAD TRIGGER] so the indicator is lit.
The sound will play when you place your hand over the D Beam sensor.

Changing the sound

1. Select a rhythm set for the pads, and notice which pad is assigned to the sound you want to play from the D Beam.
2. Hold down [SHIFT] and press [PAD TRIGGER]. The setting screen will appear.
3. Change the "PAD Number" to the pad you noted in step 1.

TIP For more details
→ **"Pad Trigger(Pad-related settings)"** (p. 122) in Owner's Manual

Modifying the sound

You can vary the sound by moving your hand closer to, or further from the sensor. You can use this to freely control anything from basic effects such as vibrato to complex combinations that change multiple aspects of the sound.

Procedure

To activate this function, press [ASSIGNABLE] so the indicator is lit. Placing your hand over the sensor will control the sound.

Changing the aspects of the sound that are controlled

Hold down [SHIFT] and press [ASSIGNABLE] to access a screen that lets you specify the control assignment.

TIP For more details
→ **"Assignable"** (p. 122) in Owner's Manual

Effects

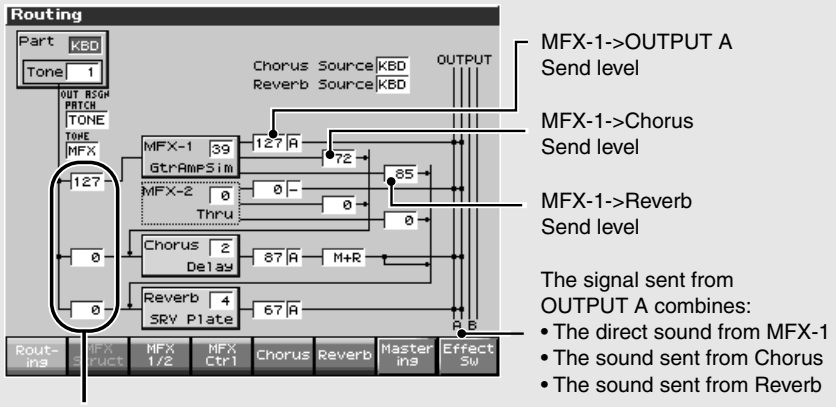
Using effects

The Fantom-X provides five effects processors; multi-effect (MFX), chorus, reverb, mastering and input effect.

Using effects with a patch

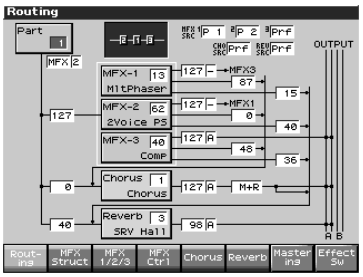
In the Patch mode screen, press the [EFFECTS] button to view a diagram that shows how the effects processors are connected. This shows at a glance the effect types and routing for the patch you are now playing.

Routing screen



Using effects with a performance

In the Performance mode screen, press the [EFFECTS] button to view a diagram that shows how the effect processors are connected. Here you can use up to three multi-effects processors, and even connect them in series. Performance mode is also a good choice if you want to use several effects to create your sound.



TIP You'll need to make special settings if you want the patches to use the same effect settings as in Patch mode.

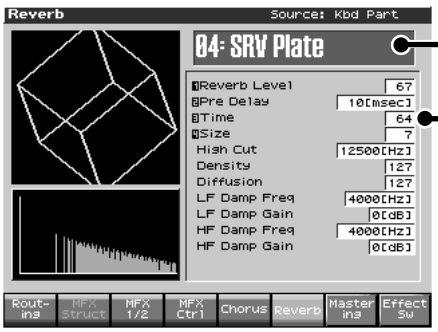
→ **"MFX1–3 Source (Multi-Effects 1 Source)"** (p. 212) in Owner's Manual

Adjust the reverberation (Reverb)

You can adjust the depth and time of the reverberation as desired. For example, your sound will differ significantly depending on whether you are playing in your room or in a live concert situation. By adjusting the reverb according to the acoustics of your location, you can optimize your sound. If you're playing in a particularly reverberant location, your sound may be blurred if you apply the internal reverb in addition to the natural acoustic reverberation. In such cases, you'll probably want to switch the reverb off. → **"Using the effect switch"** (p. 47)

Procedure

1. Press [EFFECTS] to access the setting screen.
2. Press [F6 (Reverb)] to access the reverb settings.



Select the type of reverb.
Start by selecting the desired type of reverb here.

Then adjust the Time as desired.
This adjusts the time over which the reverb decays to silence.

Adding spaciousness and depth (Chorus, Delay)

The chorus effect produces a spacious sense of stereo, giving your sound depth and presence. Delay is an effect that produces echoes, creating a sensation of depth that is different than reverb.

Procedure

1. Press [EFFECTS] to access the setting screen.
2. Press [F5 (Chorus)] to access the chorus settings.

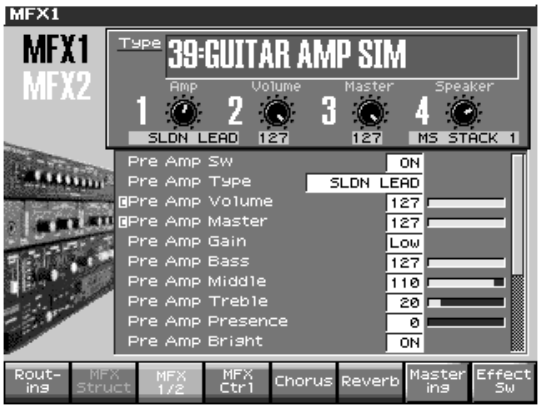
Select whether you will use chorus or delay.
Start by selecting the desired setting here.

Rate adjusts the speed at which the chorus effect is modulated.
In general, slower modulation will produce a more natural-sounding effect.

Depth adjusts the depth of the chorus effect.
You'll probably want to make small adjustments

Using the multi-effect

The Fantom-X's multi-effect processor (MFX) covers virtually existing types of effect. You can use the panel knobs to make quick changes to the most important parameters. You can also make further detailed changes, allowing a level of detailed adjustment that rivals dedicated effect processor units.



TIP For more about multi-effects
→ **"Effects List"** (p. 270) in Owner's Manual
→ **"Making Multi-Effects Settings (MFX1–3)"** (p. 213) in Owner's Manual

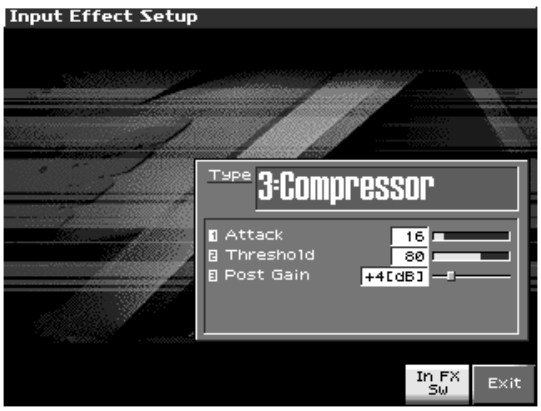
What is a mastering effect?

The mastering effect is a special compressor that splits the signal into high, mid, and low-frequency ranges, and processes each range independently. In contrast to other effects which are used on just a specific part or tone, the mastering effect is used on the final output. It can be used to make the volume more consistent while also improving the overall definition and tonal cohesion.

TIP For more about mastering-effects
→ **"Mastering Effect"** (p. 217) in Owner's Manual

What are input effects?

Input effects are effects designed especially for use on sound that's being input from AUDIO INPUT or DIGITAL IN. The Fantom-X provides six effects that are convenient when you're capturing sound as samples.

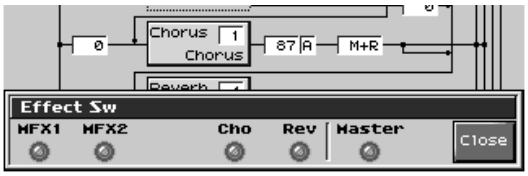


Hold down [SHIFT] and press [MIX IN] to access the Input Setting screen.
Press [F7 (In FX Sw)] in this screen to turn on the input effect.
Press [F8 (In FX Setup)] in this screen to access the input effect select screen.

TIP For more about input effects
→ **Input Effect Setup Settings** (p. 142) in Owner's Manual

Using the effect switch

When auditioning an effect, there's an easy way to switch it on/off without having to raise or lower the effect level.



Press [EFFECTS] to access the Routing screen, and then press [F8 (Effect Sw)]. The Effect Sw screen (shown above) will appear. Here you can press [F1]–[F6] to switch effects on/off.

TIP For more about effect switch
→ **"Turning Effects On and Off"** (p. 206) in Owner's Manual

Going further practical applications

In this section we'll explain more advanced ways to take advantage of the Fantom-X, such as creating and recalling your own sounds.

Making a piano sound harder or softer

By adjusting the release or brilliance, you can make a piano sound sit better in your mix, or make it more responsive to your playing.

Tip 1: Adjust the reverb (Reverb)

Although this is not directly related to making the sound harder or softer, deep reverb will tend to make the sound softer and less defined. When you want a crisp-sounding piano for rock or jazz, you'll probably want to reduce the reverb.

TIP

→ **"Making Reverb Settings (Reverb)"** (p. 216) in Owner's Manual
→ **"Reverb Parameters"** (p. 294) in Owner's Manual

Tip 2: Adjust the decay after the key is released (Release)

With a short release time, the sound will abruptly stop when you take your finger off the key, producing a harder and sharper impression. Conversely, longer release settings will produce a softer impression. You'll need to make detailed adjustments in order to get a natural sound, but this is an important aspect of making a sound that's ideally playable for you.
(The adjustments you make using the knobs in Patch mode (p. 34) are not saved by the WRITE operation.)

TIP

Patch Edit → **"A-Env Time 1–4 (TVA Envelope Time 1–4)"** (p. 73) in Owner's Manual
Realtime control → **"Using Knobs or Buttons to Modify the Sound (Realtime Controller)"** (p. 124) in Owner's Manual

(Example) Considerations when adjusting the release

You probably don't want to set a very long release time for a piano. However, if you feel that the sound is not crisp enough—or too crisp—for your particular performing situation, adjusting the release slightly can sometimes make the sound feel better.

A single unit of change in the parameter value is enough to affect the playing feel. (<- for illust)

Tip 3: Adjust the brightness of the sound

Raising the cutoff setting will brighten the sound, Conversely, you can create a milder sound by lowering the cutoff value.

TIP

Patch Edit → **"Cutoff Frequency"** (p. 69) in Owner's Manual
Realtime control → **"Cutoff"** (p. 123) in Owner's Manual

Tip 4. Use the MFX equalizer

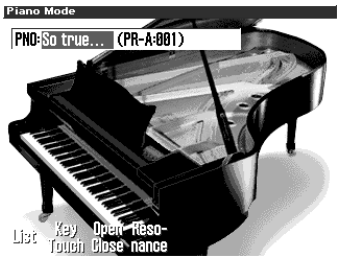
In general, raising the volume of the high-frequency range will brighten the sound, and lowering it will soften the sound. If your piano sound tends to be obscured by other chordal instruments such as guitar, it can be useful to boost the midrange.

TIP

→ **"Making Multi-Effects Settings (MFX1–3)"** (p. 213) in Owner's Manual
→ **"01: EQUALIZER"** (p. 271) in Owner's Manual

Playing in Piano mode

When using Piano mode you can make adjustments specifically for acoustic piano.
→ **"Playing in Piano Mode"** (p. 54) in Owner's Manual

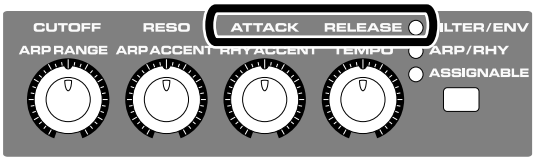


Making a strings sound sharper or softer

The tone produced by an actual string player will differ significantly depending on whether the musician plays staccato notes or a smooth phrase. Here's how you can create this type of change in the sound.

Tip 1: Adjust the attack

By speeding up the attack time you can produce the sensation of a rapidly bowed note. Conversely by slowing down the attack time, you can produce the sensation of a slowly bowed note.



TIP Patch Edit → **"A-Env Time 1–4 (TVA Envelope Time 1–4)"** (p. 73) in Owner's Manual
Realtime control → **"Using Knobs or Buttons to Modify the Sound (Realtime Controller)"** (p. 124) in Owner's Manual

Tip 2: Adjust the release

Shortening the release and playing staccato will make the notes more crisp. Conversely, lengthening the release and playing smoothly will produce a tenuto feel.

TIP Patch Edit → **"A-Env Time 1–4 (TVA Envelope Time 1–4)"** (p. 73) in Owner's Manual
Realtime control → **"Using Knobs or Buttons to Modify the Sound (Realtime Controller)"** (p. 124) in Owner's Manual

Tip 3: Adjust the cutoff

To produce a smooth sound, lower the cutoff setting to make the sound more mellow.

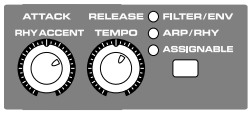
TIP

Patch Edit → **"Cutoff Frequency"** (p. 69) in Owner's Manual
Realtime control → **"Cutoff"** (p. 123) in Owner's Manual

(Example 1) Softening a crisp string sound

Let's use PR-B 099 "Studio Sect." as an example of adjusting the sound.
As the name suggests, this patch is a crisp string ensemble heard close-up. However, simply by adjusting the attack and release time, you can change it to an extremely gradual, flowing sound. This transforms a crisp string sound into a soft string sound that would be suitable for ballads.

a crisp string



Set the knobs to the positions shown in the illustration (<- for illust)

Soft string

(Example 2)

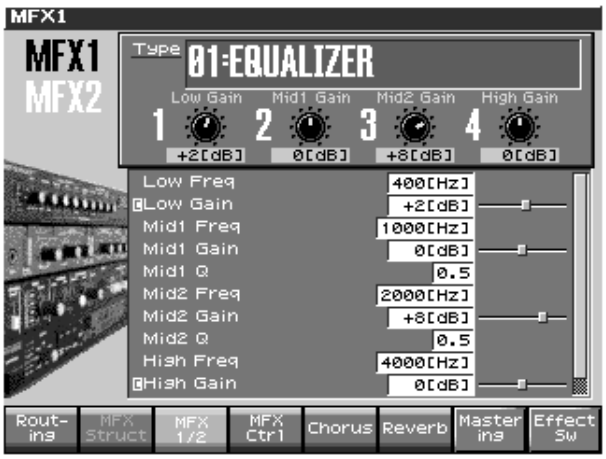
Patches such as PR-G 019 "Full Strings" are an example of sophisticated settings using multiple waveforms in which strongly played notes have a quick attack, while softly played notes have a slower attack.

Making lead instruments stand out

You'll usually want a lead instrument to "cut through the mix" so that it is not masked by the other instruments of the accompaniment.

Tip 1: Use the MFX equalizer and spectrum

Boosting the high-frequency region of a sound will usually produce a brighter sound that cuts through the backing instruments. For some types of accompaniment, boosting the midrange will make a sound stronger and more prominent.



TIP → **"Making Multi-Effects Settings (MFX1–3)"** (p. 213) in Owner's Manual
→ **"01: EQUALIZER"** (p. 271) in Owner's Manual
→ **"02: SPECTRUM"** (p. 271) in Owner's Manual

Tip 2: Use the MFX amp/speaker simulator

These effects are a very important element in creating the sound of electric instrument like a electric guitar. They are also suitable for sounds such as synth leads.

TIP → **"Making Multi-Effects Settings (MFX1–3)"** (p. 213) in Owner's Manual
→ **"39: GUITAR AMP SIMULATOR"** (p. 281) in Owner's Manual
→ **"10: SPEAKER SIMULATOR"** (p. 273) in Owner's Manual

Tip 3: Use the MFX compressor

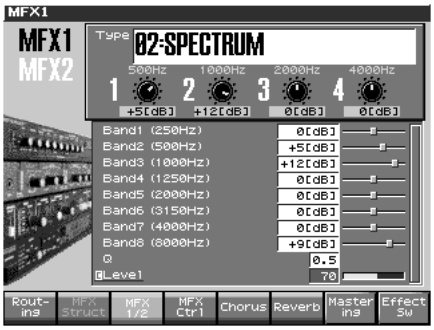
Sounds with a strong attack will be easily heard at the beginning of each note, but the remainder of the note can tend to be obscured by other instruments. In such cases, you can use a compressor to hold down the volume of the attack to a listenable level while keeping the sound prominent in the mix. Since the volume change will be partially replaced by a tonal change, the distinctive character of the attack portion will still be preserved.

TIP

→ **"Making Multi-Effects Settings (MFX1–3)"** (p. 213) in Owner's Manual
→ **"40: COMPRESSOR"** (p. 282) in Owner's Manual
→ **"57: LOFI COMPRESS"** (p. 287) in Owner's Manual

(Example) PR-C 095 "FS Syn Ld"

This patch uses MFX "7: ENHANCER" to bring out the great-sounding highs of this sound. We're going to change the MFX to "2: SPECTRUM" to give the sound more body.



1. Press [EFFECTS] to access the Routing screen, and change MFX-1 to "2: SPECTRUM."
2. Next, press [F3 (MFX1/2)] to access the MFX1 screen, and make settings as shown in the above screen shot.
   We'll give the sound more midrange presence by adding a +5 boost at 500 Hz and a +12 boost at 1000 Hz, but since this makes the sound a bit drab, we'll compensate by adding +9 at 8000 Hz to give the sound better balance.
3. Finally, let's lower the Level to 70 in order to maintain the volume balance in relation to other patches. This will avoid a sudden change in level when switching to another patch.

TIP

To audition the MFX-1 effect, use the [F8 (Effect Sw)] in the above screen to access the effect switch, and try switching MFX1 on/off. Notice how the Spectrum effect gives the sound more body.

Creating a distinctively synth-like sound

A synthesizer can produce distinctive sounds that could never be played by an acoustic instrument. The "mewing" sound of a sharp filter closing down is an example of a sound we associate with synthesizers.

Tip 1: Cutoff and resonance

To create the distinctive character of an analog synthesizer, start by adjusting the resonance, and then adjust the cutoff. These two parameters are the basis for typical analog synth lead or pad sounds and techno-sequence sounds.

TIP

Cutoff

Patch Edit → **"Cutoff Frequency"** (p. 69) in Owner's Manual

Realtime control → **"Using Knobs or Buttons to Modify the Sound (Realtime Controller)"** (p. 124) in Owner's Manual

TIP

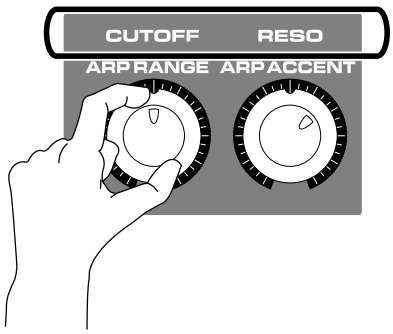
Resonance

Patch Edit → **"Resonance"** (p. 69) in Owner's Manual

Realtime control → **"Using Knobs or Buttons to Modify the Sound (Realtime Controller)"** (p. 124) in Owner's Manual

Tip 2: Turn the knobs while you play

It's effective to adjust the cutoff (described in Tip 1, above) while you perform. Even simple phrases will become more interesting if you move the cutoff while the sound continues. Using this technique, you can even create a memorable phrase from a single note.



Adding the distinctive depth of an electric instrument

Electric instruments have a distinctive tonal character that is produced by the idiosyncrasies of their electrical circuitry. The Fantom-X uses powerful modeling technology that can replicate this distinctive "warmth" and "depth."

Tip 1: Use the MFX amp simulator

For electrical instruments such as electric piano, guitar, and bass, the amp is an important element in determining the character of the sound. The Fantom-X contains a "guitar amp simulator" that models actual guitar amps, replicating aspects of the sound such as the distortion that gradually increases in proportion to the level of the input, and responding to your playing touch.

"Making Multi-Effects Settings (MFX1–3)" (p. 213) in Owner's Manual
"39: GUITAR AMP SIMULATOR" (p. 281) in Owner's Manual
"10: SPEAKER SIMULATOR" (p. 273) in Owner's Manual

Tip 2: Use a MFX compressor

The original purpose of a compressor is to make the volume more consistent, but you can also take advantage of a compressor's characteristic tonal changes to give your sound more punch. When a high volume is input, the compressor will hold down the volume but will simultaneously give the sound a powerful and punchy character. You can take advantage of this tonal change to create a rich variety of tones while maintaining a consistent volume. To give you optimal control over this, the Fantom-X provides two types of compressors (COMPRESSOR and LO-FI COMPRESS), letting you create virtually any type of compressed sound.

"Making Multi-Effects Settings (MFX1–3)" (p. 213) in Owner's Manual
"40: COMPRESSOR" (p. 282) in Owner's Manual
"57: LOFI COMPRESS" (p. 287) in Owner's Manual

Tip 3: Use detune and chorus

Chorus is extremely common to hear these effects applied to electric instruments. You can obtain beautiful tones by applying these to any electric piano sound or to clean electric guitar sounds.
For more about these settings.
Detune is a method of giving the sound depth and spaciousness by simultaneously playing two sounds of slightly different pitches.

TIP For details on using these settings
"Tone Fine Tune" (p. 67) in Owner's Manual
"Making Chorus Settings (Chorus)" (p. 215) in Owner's Manual
"29: 3D CHORUS" (p. 278) in Owner's Manual

Playing in Piano Mode

When using Piano mode, you can access a screen containing the most appropriate effects for electric piano, and use the knobs to adjust the settings instantly.

TIP **"Playing in Piano Mode"** (p. 54) in Owner's Manual

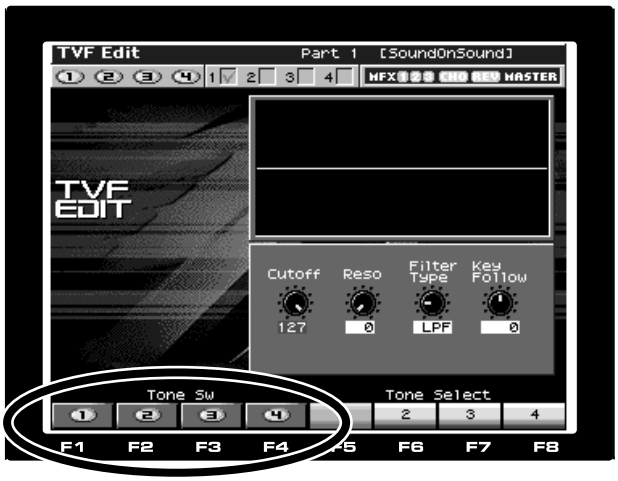
Playing just one component of a patch

Suppose you have found a favorite patch that combines piano and strings, and would like to play just the piano component of this patch. In such cases, you can easily mute just the strings sound.

Procedure

1. In the Patch screen, select a sound and press [PATCH EDIT].
The PATCH EDIT screen will appear.

2. Press [F8 (Tone Sw/Sel)].
The tone switches will appear for [F1]–[F4].
In this screen, you can press [F1]–[F4] to turn on/off each of the four tones that make up the patch. Turn on only the sounds that you want to play.



TIP For more about the **Tones** that make up each Patch
"Selecting the Tones That Will Sound (Tone On/Off)" (p. 46) in Owner's Manual

Creating a set of sounds for use in a live concert

The Fantom-X provides a **live setting** function that lets you list your most frequently used patches, performances, and songs, and register these sounds so that you can step through them when playing a live concert. For example, you can create a list of the sounds that you'll use for the first song of your next concert, and easily select patches/performances /songs from that list.

Overview

Patches, performances, or songs you've registered in this screen can be selected at a touch by pressing [F1]–[F8] to select numbers 1–8, or holding down [SHIFT] and pressing [F1]–[F8] to select numbers 9–16. You can store up to twenty such sets ("banks") of sounds.

TIP For details on how to use this function
"Creating a list of frequently used Patches and Performances (Live Setting)" (p. 42) in Owner's Manual
"Improved functionality in Live Setting" (p. 51) in Guide to the Added Functionality

TIP A text note you created on your computer can also be displayed in the screen (using letters of the alphabet only).
"Displaying text memos in the Live Setting screen (Import Text)" (p. 221) in Owner's Manual

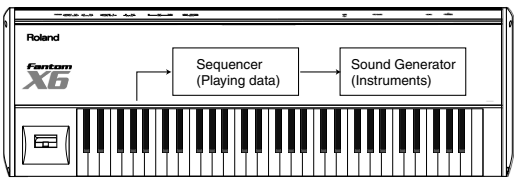
Creating songs on the Fantom-X

What is a sequencer?

A sequencer can record and play back what you play on the keyboard or pads in real time (i.e., in the exact timing at which you play) or input using step recording.

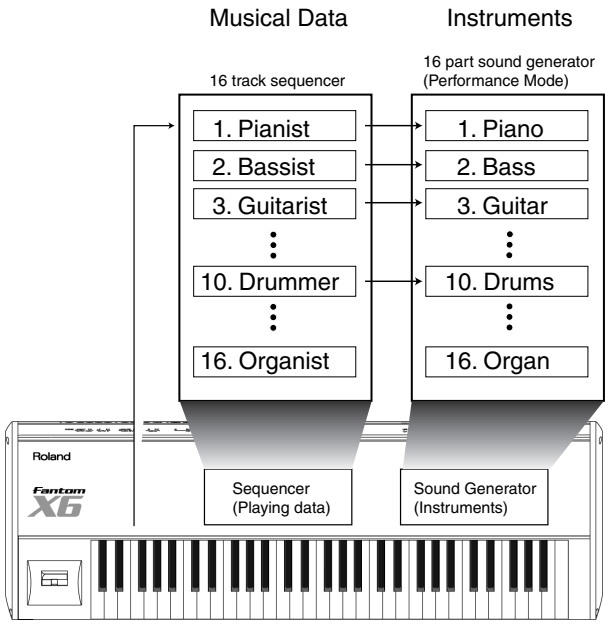
A sequencer records and plays back musical performances

A sequencer records a variety of information, including that describing which keys were pressed, when they were pressed, and how long they were held. When you play back this data, you'll hear the recorded performance.



Recording the performance of one instrument on one track (Single Channel Recording)

"Tracks" are memory areas within the sequencer that hold performances. The Fantom-X's sequencer provides sixteen tracks. For example, you might record the pianist's performance on track 1, the Bassist's performance on track 2, and so on to create your song.
For the sound generator, you should set up each part so it produces the appropriate instrument sound (such as piano or Bass) for each of the sequencer tracks.

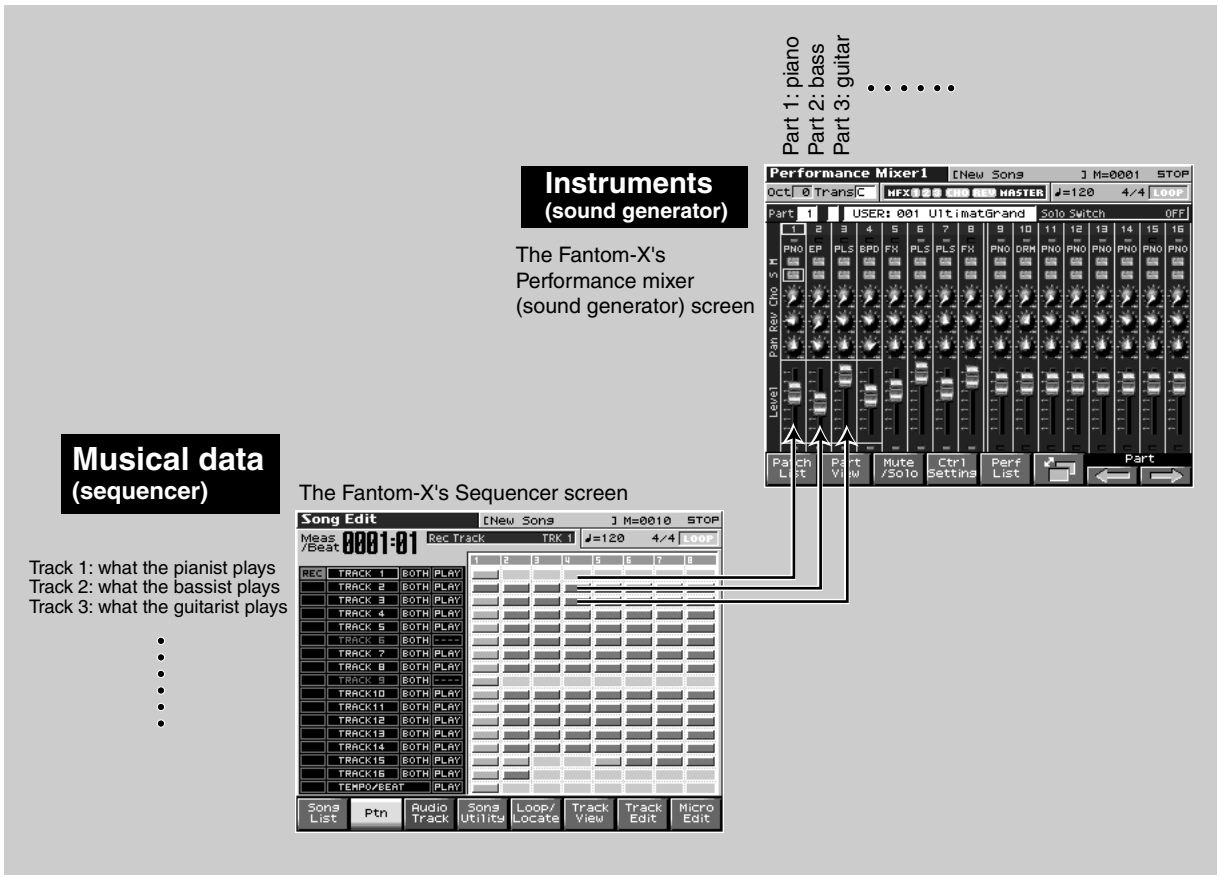


Viewing musical data in the Song Edit screen

The Song Edit screen graphically shows the existence of data in each track; it's somewhat like a chart that shows which of the sixteen "musicians" are playing at each point in your song.

For songs, use the sound generator in Performance mode

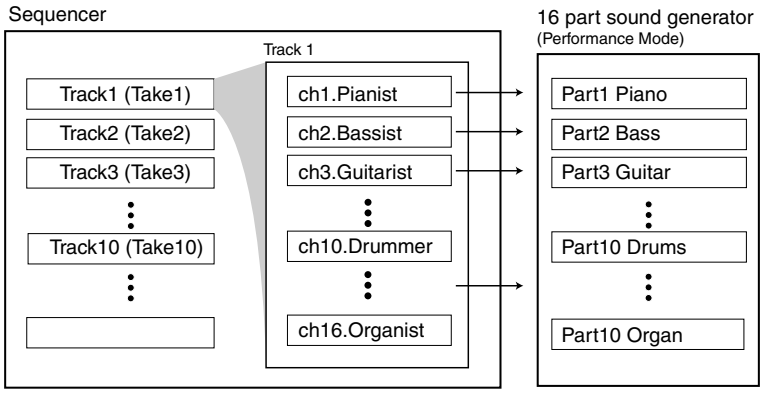
When creating a song, you'll normally use the Fantom-X's sound generator in Performance mode. Performance mode lets you use up to sixteen instruments (patches).
The Fantom-X's Mixer screen lets you control the sound of each instrument, just as if you were using a mixing console.



Recording multiple instruments on a single track (Multi Channel Recording)

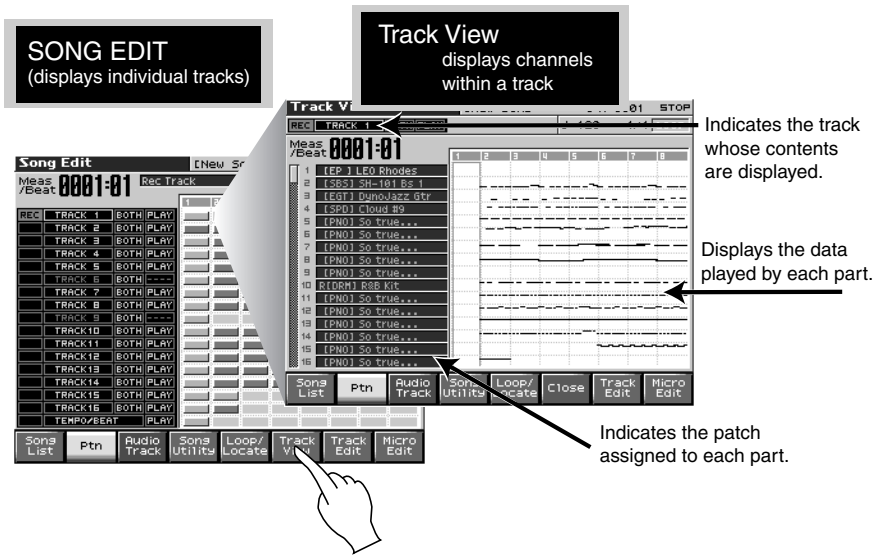
You can create a song using just one track

With this method, you can create an ensemble performance on just a single track, and line up as many as sixteen songs! For example, you might create different versions of your song (version 1, version 2, etc.) and choose the best one later. Within a single track, performances for separate instruments are differentiated by their "channel" data.



What are MIDI channels?

The Fantom-X has a "Track View" screen that shows the contents of one track. Within the Track View, the performances of separate instruments are distinguished by their channel.



Some terms

Song

On the Fantom-X, the term "song" refers to a composition you create using the sequencer. The song contains musical data together with settings for the sound generator. In other words, a song can contain all the information for an entire composition. When you're finished creating your song, you can save it as a SONG file. Later, you can load this song file to reproduce the complete state of your song, including the musical phrases, settings for the sound generator, and the effects (but not the mastering-effect).

→ **"Playing Back a Song"** (p. 164) in Owner's Manual
→ **"Recording Songs"** (p. 168) in Owner's Manual
→ **"Editing Songs"** (p. 177) in Owner's Manual

Track

Inside the Fantom-X's internal sequencer, a "track" is an area that holds musical performance data. There are sixteen tracks (1–16).

Patch

"Patches" are equivalent to individual instruments such as bass, piano, and guitar.

→ **"Playing in Patch Mode"** (p. 38) in Owner's Manual

Performance

On the Fantom-X, a "performance" contains settings that let you use up to sixteen patches simultaneously.

→ **"Playing in Performance Mode"** (p. 97) in Owner's Manual

Part

A performance contains sixteen "parts." For each part you can adjust the volume, pan, and other settings. For example, you can assign a piano patch to part 1, a guitar patch to part 2, etc., and adjust the volume balance of each instrument.

→ **"Using the Mixer Screen"** (p. 103) in Owner's Manual

Channel

The sequencer uses "channels" to communicate with the sound generator. Here's an example:

- In the sequencer: record the bass on channel 2.
- In the sound generator: set the bass to receive channel 2

In this example, the musical performance data on channel 2 will play the bass sound.

→ **"Viewing the data within a track"** (p. 178) in Owner's Manual

Getting ready to create a song

Let's set up the sequencer and sound generator for creating a song. We'll use the simplest method of recording; using one sequencer track for the musical performance data of one instrument. This is the simplest way to create a sixteen-part song.

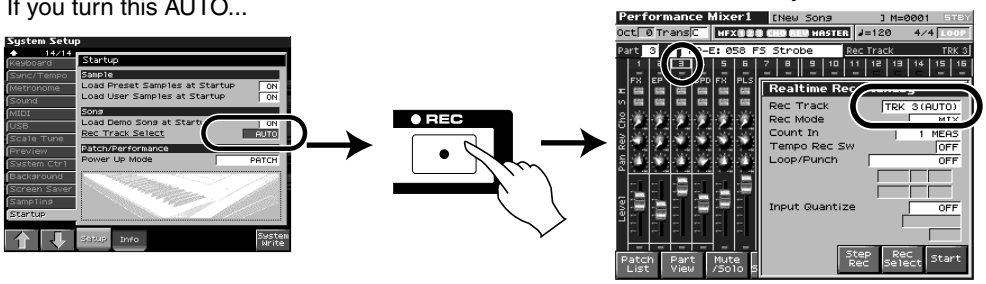
Using single channel recording

"Single channel recording" is when you record one instrument on one track. This is comparable to the experience of using a multi-track recorder, and is the simplest way to use the system.
In the System settings, set "Rec Track Select" to "AUTO." With this setting, the identically numbered track is automatically selected when you select a sound generator part for recording.

TIP → **"Rec Track Select (Recording Track Select)"** (p. 234) in Owner's Manual

If you turn this AUTO...

the track of the same number as the sound generator part will automatically be selected.

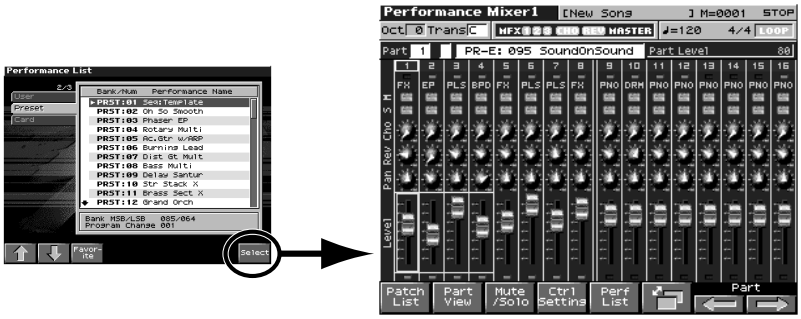


Selecting a performance

Select the performance PRST 01 "Seq: Template."

* *Since this performance sets the volume, panpot, reverb, and chorus of all parts to their default values, it's a convenient choice when you're creating a song from scratch.*

TIP → **"Selecting a Performance"** (p. 99) in Owner's Manual

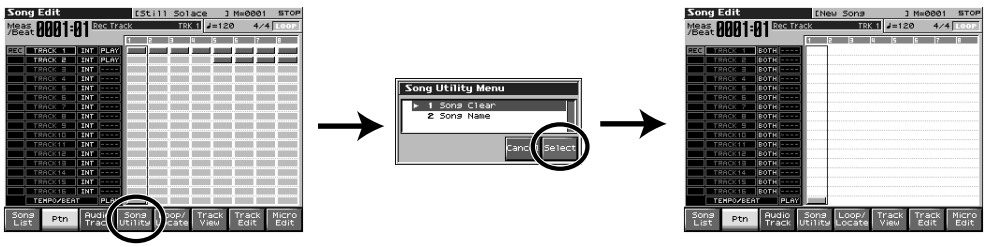


Clearing the sequencer

At the factory settings, demo song data will be loaded into the Fantom-X each time you switch it on. Before you create your own song, you'll need to clear the sequencer memory.

1. Press [SONG EDIT] to access the Song Play screen, and then press [F4 (Song Utility)].
   The Song Utility Menu window will open.
2. Use ▲ or ▼ to select "1 Song Clear."
3. Press [F8 (Select)] to clear the song.
   A message will ask you for confirmation.
4. Press [F8 (Exec)] to execute.

TIP → **"Erasing the Song/Pattern from Temporary Song (Song Clear)"** (p. 168) in Owner's Manual



Using the internal sounds to create the rhythm

Using the pads for real-time recording

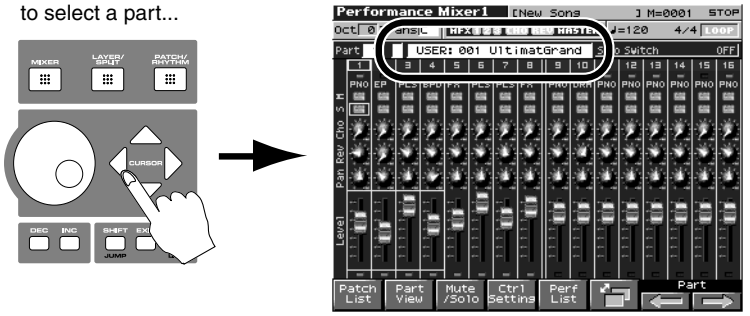
The pads offer a convenient way to play rhythm instruments. Real-time recording is the method of recording whereby what you play on the pads is recorded "as is."

Selecting a rhythm set and making adjustments

Press the PERFORMANCE [MIXER] button to access the MIXER screen.

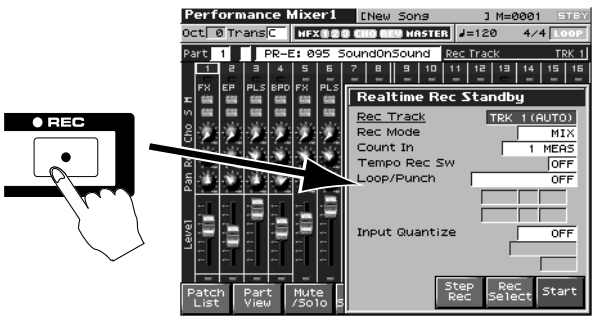
Use the cursor (left/right) to select a part...

and use the VALUE dial to select a rhythm set.



1. Select the part on which you want to record your pad playing. For this example we'll select part 10.

2. Press [REC] to start the metronome. (Track 10 is automatically selected as the REC Track.)



3. Press [TEMPO] to access the Tempo screen. Use the VALUE dial to set the tempo.

4. Press [PLAY] to start recording.

5. When you've finished recording, the data will be stored in the sequencer.
Press [SONG EDIT] to access the Song Edit screen, where you can view the data you just recorded.

* *You can also play the rhythm sounds using the keyboard instead of the pads.*

TIP

→ **"Using the Mixer Screen"** (p. 103) in Owner's Manual
→ **"Recording Your Performance as You Play It (Realtime Recording)"** (p. 170) in Owner's Manual
→ **"Viewing the data within a track"** (p. 178) in Owner's Manual

If you make a mistake (UNDO)

If you played several measures but aren't satisfied with the results, you can use [MENU]-[UNDO] to easily return to the previous state. This is an easy way to revert only the just-recorded material to its previous state.

If you make a minor mistake, edit the data

You can use the Micro Edit function to edit individual items of the recorded data in great detail. For example, if your performance was almost perfect but you hit one wrong note, it's easy to erase just that single note, or to correct its pitch or volume.

* *To access the Micro Edit screen, press [SONG EDIT]-[F8 (Micro Edit)].*

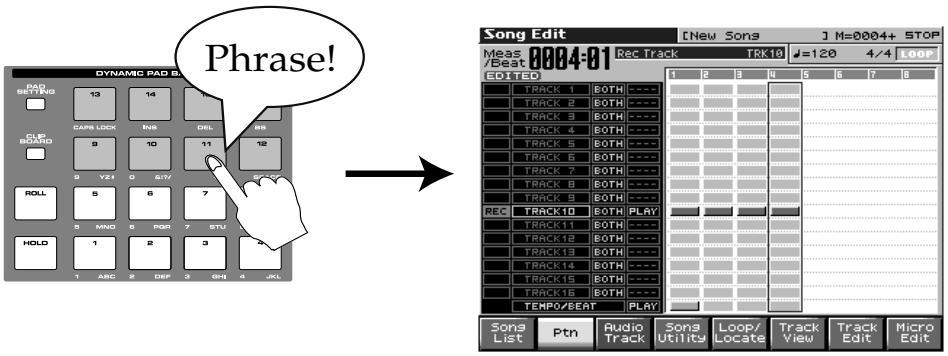
For details on using Micro Edit, refer to **"Editing Individual Items of Sequencer Data (Micro Edit)"** (p. 192) in the Owner's Manual.

Using quantization to fix inaccurate timing

If you're not satisfied with the overall rhythmic feel, you can use quantization to correct the timing. For details on using Quantize, refer to **"Aligning a Song's Timing (Quantize)"** (p. 181) in the Owner's Manual.

Using the pads to play rhythm patterns and record them

The Fantom-X contains a wide variety of rhythm patterns. If you play these during real-time recording, they will be recorded into the sequencer just as you hear them. This means that you can rapidly create a rhythm track by successively playing patterns, fills and variations.

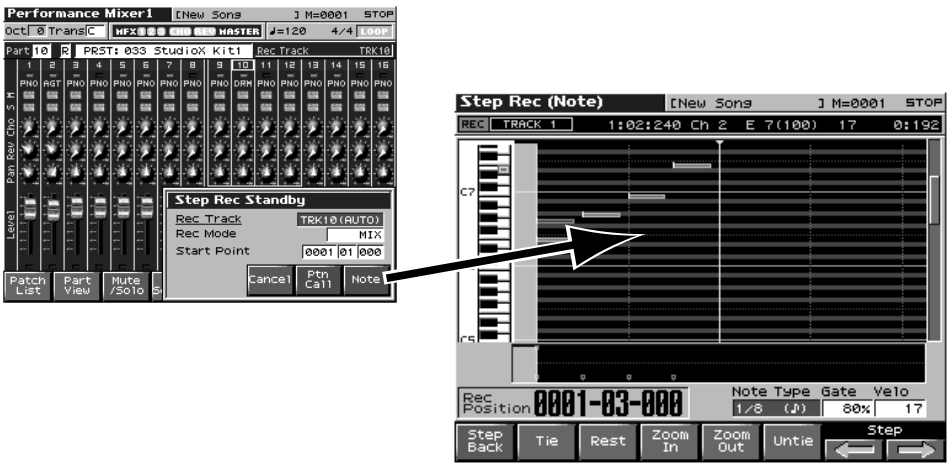


TIP → **"Playing Rhythm"** (p. 135) in Owner's Manual

Using the pads to input notes one by one

Another way to use the pads is to input notes one by one as if you were writing notes on a sheet of staff paper. This method is called "step recording." It's a way to create a phrase while deliberately considering each note.

Press [REC] twice in succession; the step recording standby screen will appear. Then press F8 [Note] to access the input screen.



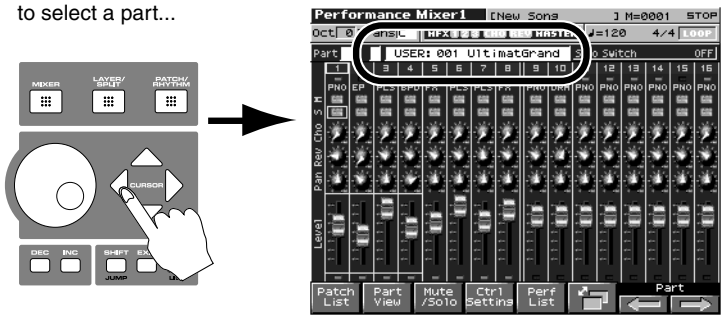
TIP → **"Inputting Data One Step at a Time (Step Recording)"** (p. 174) in Owner's Manual

Selecting a sound and making adjustments

Next, select part 1 and choose the sound you want to use for recording. You might want to adjust the volume balance relative to the drums, or make adjustments to the effects.

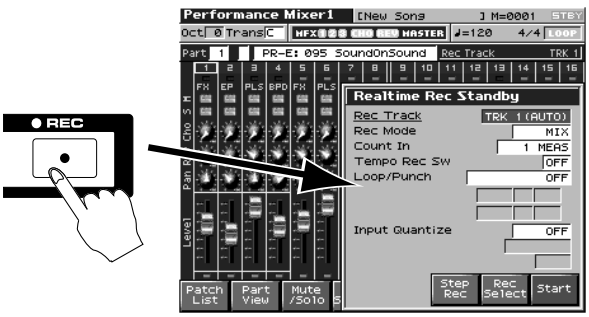
Use the cursor (left/right) to select a part...

and use the VALUE dial to select a patch.



Real-time recording from the keyboard

Now we're going to use the keyboard to record additional parts while listening to the drums you recorded in the preceding section. Press [REC] to get the recording standby screen. Press [PLAY] to begin recording.



TIP

→ **"Using the Mixer Screen"** (p. 103) in Owner's Manual

→ **"Recording Your Performance as You Play It (Realtime Recording)"** (p. 170) in Owner's Manual

→ **"Viewing the data within a track"** (p. 178) in Owner's Manual

If you want to record without playing the drum sounds → **"Silencing the Playback of a Specific Part (Mute)"** (p. 105)

If you make a mistake (UNDO)

If you played several measures but aren't satisfied with the results, you can use [MENU]-[UNDO] to easily return to the previous state. This is an easy way to revert only the just-recorded material to its previous state.

If you make a minor mistake, edit the data

You can use the Micro Edit function to edit individual items of the recorded data in great detail. For example, if your performance was almost perfect but you hit one wrong note, it's easy to erase just that single note, or to correct its pitch or volume.
To access the Micro Edit screen, press [SONG EDIT]-[F8 (Micro Edit)].
For details on using Micro Edit, refer to **"Editing Individual Items of Sequencer Data (Micro Edit)"** (p. 192) in the Owner's Manual.

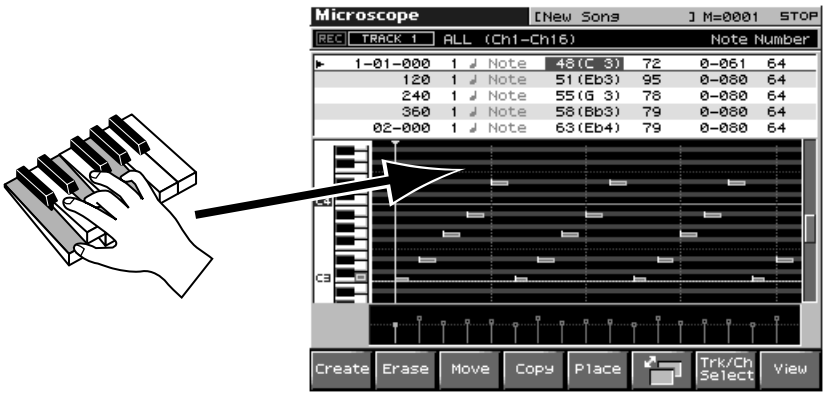
Using quantization to fix inaccurate timing

If you're not satisfied with the overall rhythmic feel, you can use quantization to correct the timing.For details on using Quantize, refer to **"Aligning a Song's Timing (Quantize)"** (p. 181) in the Owner's Manual.

Recording with the arpeggio function

By using the Fantom-X's arpeggio function you can automatically produce arpeggiated phrases simply by holding down a chord on the keyboard. The phrases produced by the arpeggio function can be recorded into the sequencer in real time.

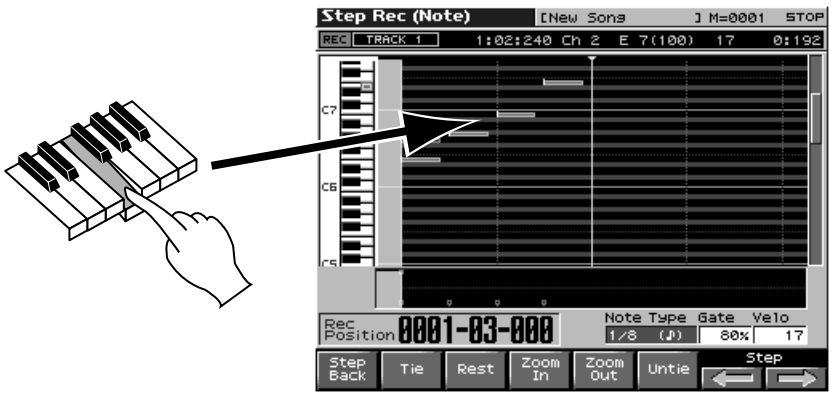
TIP → **"Playing Arpeggios"** (p. 128) in Owner's Manual



Using the keyboard to input notes one by one

As an alternative to playing in real time, you can input notes one by one just as if you were writing notes on a sheet of staff paper. This allows you to create song data that would be difficult or impossible to play in real time.

TIP → **"Inputting Data One Step at a Time (Step Recording)"** (p. 174) in Owner's Manual



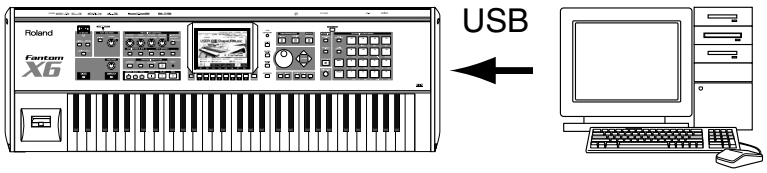
Using CD-ROM samples in your song

Importing samples into the Fantom-X from your computer via USB cable

If your computer has a USB connector, you can import samples into the Fantom-X.

TIP *Refer to the Owner's Manual for details on the requirements for your computer and the supported operating systems.*

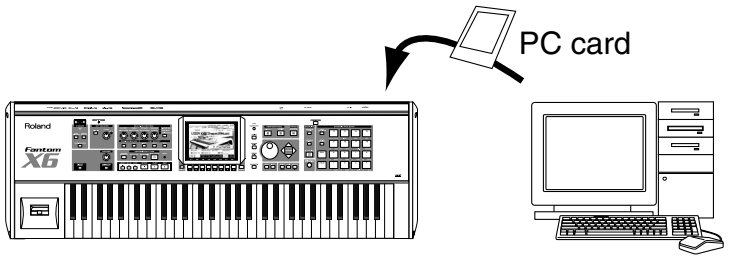
→ **"About USB Functions"** (p. 218) in Owner's Manual



Importing data via PC card

If your computer can use PC cards (or has a PC card reader / writer), you can use this method to import data from CD-ROM into the Fantom-X.

TIP By using a PC card type adaptor, you can also use CompactFlash or SmartMedia as well as PC card memory devices.



TIP Data you've loaded can be selected from the patch list in the same way as an ordinary patch.

2 Select the patch that plays the sound you sampled.

1 Select "USAM" (or "CSAM" if you're using a card).

TIP → **"Assigning Samples to a Pad (Assign To Pad)"** (p. 151)

Sampling and using a live vocal or guitar performance

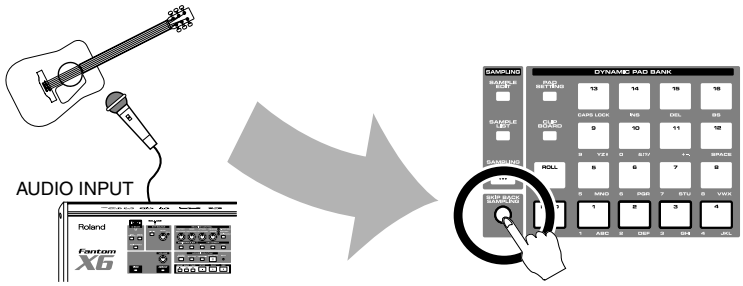
You can connect a mic to the INPUT jacks or DIGITAL IN jack, and sample a live performance on vocals or guitar for use in your song.

Going back in time to sample phrases

The Skip Back Sampling feature lets you press a single button to capture a phrase you've just played. If you've just played a brilliant phrase you'd like to keep, simply press this button to capture the phrase as audio data.

TIP → **"Sampling Procedure"** (p. 142) in Owner's Manual

→ **"Sampling Earlier in Time (Skip Back Sampling)"** (p. 145) in Owner's Manual



Editing a sampled sound

After you've sampled or imported audio data, you can edit it in a variety of ways for use in your song. You can do all of this work completely on the Fantom-X itself. Since the Fantom-X provides a detailed waveform display, it's easy to perform very precise editing.

TIP → **"Editing a Sample"** (p. 146) in Owner's Manual

TIP Data you've loaded can be selected from the patch list in the same way as an ordinary patch.

❷ Select the patch that plays the sound you sampled.

❶ Select "USAM" (or "CSAM" if you're using a card).

TIP → **"Assigning Samples to a Pad (Assign To Pad)"** (p. 151)

Synchronizing a sample to the sequencer tempo

The Fantom-X provides a Realtime Time Stretch function. When this function is used, samples being played from the sequencer or the audio tracks will stay in synchronization even if you modify the sequencer tempo.

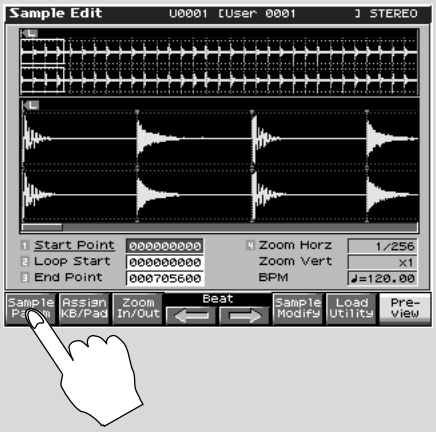
Using the Realtime Time Stretch function

Example: We'll assume you're using a sample that was originally performed at BPM=140.
With this sample already loaded into the Fantom-X, here's how to use the Realtime Time Stretch function.

Make settings for the sample

Specify the sample's tempo as 140.

In the Sample Edit screen, press [F1 (Sample Param)].



Move the cursor to "BPM" and set it to 140.

If you don't know the original tempo of your sample, use a metronome (Click) function to measure the tempo.

Using samples in audio tracks

If you're using samples in a song, it's convenient to use the sequencer's audio tracks.

What is an audio track?

An audio track is a track that's specifically for the purpose of inserting samples. You can edit the structure of your song while viewing a graphic representation of the data, just as you can for a song track. Audio tracks can also be played back from the middle of a sample. If the settings described on p. 76 are made for the sample, it will synchronize to the tempo of the song when it's inserted into an audio track. Even if you change the tempo of the song later, the sample will play back at that tempo.

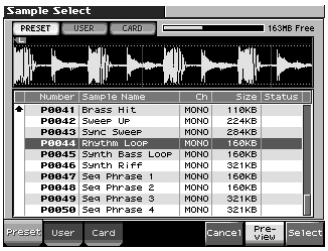
Inserting a sample into an audio track

In the Song Edit screen, press [F3 (AUDIO TRACK)] to access the AUDIO TRACK screen.

Use the cursor buttons (up/down) to select the desired track. You can specify the location at which the sample will be inserted using the following units.

Location units	Button operations
Measures	[BWD]/ [FWD]
16th notes (120 ticks)	[VALUE] dial
1 tick	[INC]/[DEC]

When you've specified the desired location, press [F6 (Insert)].



The sample list will appear.
Select the sample you want to use, and press [F8 (Select)].

The sample will be inserted into the audio track.

TIP For more about audio tracks
"Using audio tracks" (p. 13) in Guide to the Added Functionality

TIP You can also insert a sample directly into an audio track while sampling.
→**"Recording an audio track"** (p. 24) in Guide to the Added Functionality

Editing an audio track

You can edit an audio track by moving or copying the samples within the audio track.

Moving a sample

You can change the location at which a sample plays back, or move it to a different audio track.
Use the cursor buttons to select the sample you want to move (the sample will change color to orange), and move it to the desired location by using the buttons as described below.

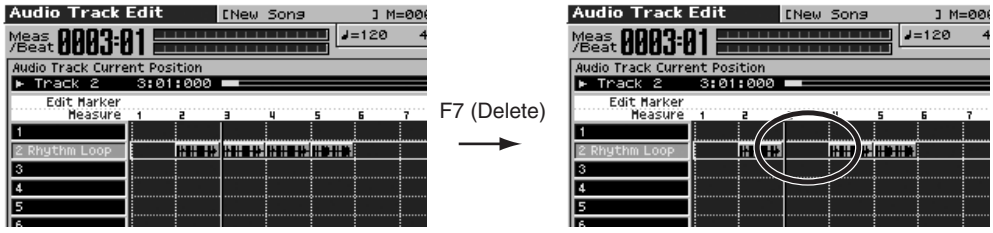
Location units	Button operations
Measures	[SHIFT]+ cursor (left/right) buttons
16th notes (120 ticks)	[SHIFT]+[VALUE] dial
1 tick	[SHIFT]+[INC]/[DEC]

Copying a sample

This operation creates a copy of a sample immediately after a sample you've already inserted in a track.
This is a way to rapidly copy a sample if you want a phrase loop to play repeatedly for several measures.
Use the cursor buttons to select the sample you want to copy, and press F8 (Copy) to copy the sample to a location immediately following the existing location.

Deleting a sample

This operation deletes a sample from an audio track.
Use the cursor buttons to select the sample you want to delete, and press F7 (Delete) to delete the sample.



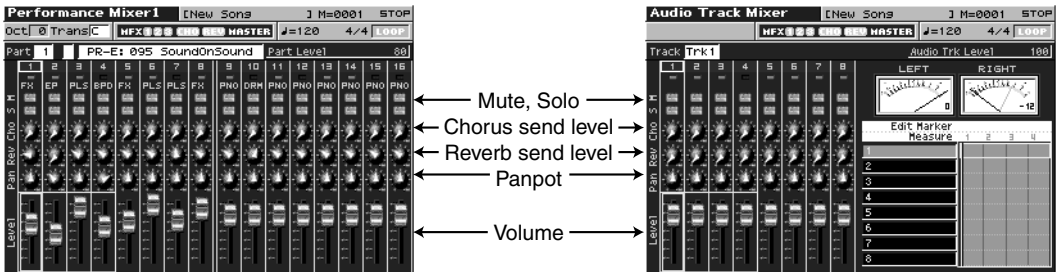
TIP For more about audio tracks editing
→**"Recording an audio track"** (p. 24) in Guide to the Added Functionality

Adjusting the balance of the entire song

When you've finished recording, you'll need to adjust the balance of the parts. You can add finishing touches to your song by adjusting the sound to create a good-sounding blend and by bringing out the parts you want to emphasize. This process is called "mixing."
Press [MIXER] to access the Mixer screen. Here you can make the following adjustments.

Performance Mixer screen
Press PERFORMANCE [MIXER].

Audio Track Mixer screen
With the Audio Track Edit screen displayed, press [F1 (Audio Mixer)].



Mixing balance

Volume, Mute, and Solo

The volume adjusts the balance between the instruments. If you're using numerous parts and find it difficult to tell them apart, you can use **Mute** or **Solo** to mute instruments (drums, bass, piano, etc.) one by one as you create the balance.

Panpot

It's most common to place the drums and bass in the center. Panning the chordal instruments to the left and right will create a nice, stable ensemble. Lead instruments are best placed near the center, but panning them slightly to left or right can sometimes make the mix sound better.

Reverb

Reverb creates the acoustical sensation of playing in a studio or hall. However, applying reverb excessively will make the sound blurry and indistinct. The patches of the Fantom-X use stereo samples that include a small amount of ambience. This means that they won't sound unnatural even if you turn off the reverb entirely.
Since low frequencies tend to become muddy when reverberation is applied, it's usual to apply no reverberation at all to kick drum and bass. On the other hand, you can add depth and interest to your song by applying deep reverb to specific phrases such as a brief piano riff.

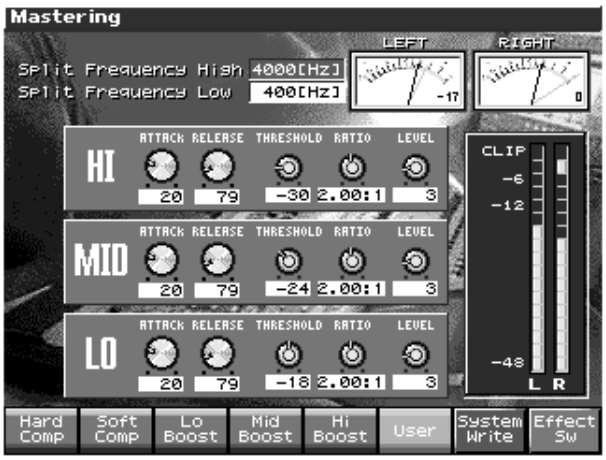
Chorus

Applying chorus will spread the sound to left and right, making it more spacious. Chorus is very often applied to guitar and electric piano, so you'll probably have many occasions to use it. However, it will usually be more effective if you make a clear distinction between parts that use chorus and parts that don't.

About mastering

Mastering is the process of using a compressor or equalizer to add finishing touches to the final sound. If your completed song somehow lacks punch, or if it sounds drastically different when played back in a different location, it's time to make some mastering adjustments.

Using mastering to add the finishing touches



The Fantom-X's mastering effect provides various preset settings that make it easy for you to try out different types of mastering.

[F1 (Hard Comp)] **[F2 (Soft Comp)]**	These settings let you select hard or soft compression. You can start by trying these two settings to see which you like better, and then make fine adjustments as necessary.
[F3 (Lo Boost)] **[F4 (Mid Boost)]** **[F5 (Hi Boost)]**	These settings adjust the output of individual frequency bands while applying compression. This means they also include an equalizer-like effect.

TIP **For the detail → "Mastering Effect"** (p. 217)

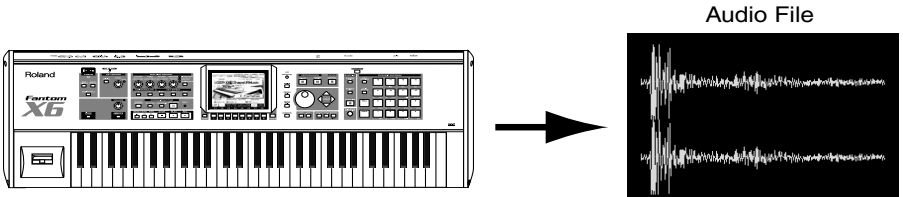
Creating a CD

You can export your song in the form of audio data from the Fantom-X to your computer, either via USB cable or by saving the Fantom-X data to CompactFlash media.
Then by using the CD-R writing functionality of your computer, you can burn this data to an audio CD.
As you've seen, the Fantom-X provides all of the necessary functionality for creating an entire song; you can then export the completed data to your computer and create an original CD.

Sample your completed song to a stereo audio file

The playback of the audio tracks and MIDI tracks can be combined into a single audio track for the region you specify. A sample that you create in this way can be saved on your computer as the audio data for the entire song.

TIP → **"Combining the contetns of the tracks into one audio track (Mixdown)"** (p. 19) in Guide to the Added Functionality

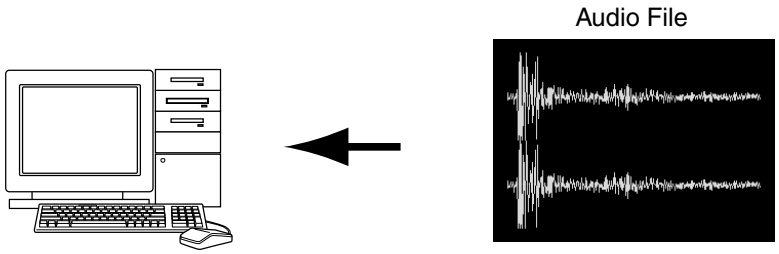


With the Audio Track Edit screen displayed, hold down [SHIFT] and press [F1 (Mixdown)].

Exporting the audio file to your computer

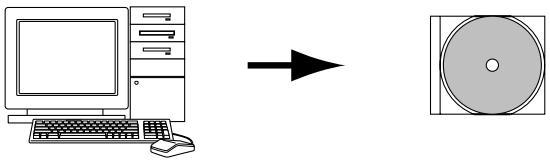
To export the audio file to your computer, you can either use a USB cable to connect the Fantom-X to your computer, or transfer the data via PC card.

TIP → **"Transferring Files to or from Your Computer (Storage Mode)"** (p. 219) in Owner's Manual (Using USB)
→ **"Using a Memory Card"** (p. 248) in Owner's Manual (Using a PC card)
→ **"File-Related Functions (File Utility)"** (p. 223) in Owner's Manual (Using a file)



Use your computer to burn a CD

On your computer, create an audio CD by burning the audio file (.WAV file) to a disc. (Your computer will need to have the appropriate drive, either internally installed or externally connected. Windows XP and Mac OS X provide this functionality as part of the operating system. For details, refer to the documentation for your computer.)



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