

## Selecting Fantom-G and ARX-Series Sounds Via MIDI

Roland's acclaimed ARX-Series sound expansion boards add amazing new sounds to the Roland Fantom-G6, -G7, and -G8 workstation keyboards. A Fantom-G can accommodate two ARX boards, each of which is actually a self-contained synthesizer powered by Roland's revolutionary SuperNATURAL™ sound technology. ARX sounds are uniquely organic and expressive, and enhanced by specially optimized effects. Every ARX board also has a powerful suite of intuitive visual editing tools for tweaking sounds and creating your own.

You can select ARX sounds from the Fantom-G front panel or via MIDI messages. When you're working with an external sequencer—perhaps finishing up some sequencing you've begun on the Fantom-G—or a MIDI controller, you may want to select Fantom-G sounds from the external device via MIDI.

Throughout this document, you'll come across information that's labeled with one of the following symbols.



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



A tip offers suggestions for using the feature being discussed.

## ARX Sounds and MIDI Messages

Roland has permanently assigned MIDI Bank Select and Program Change messages to each ARX expansion board sound. This system simplifies MIDI sound-selection, especially when you use someone else's synth. (Of course, they'll still need to have the required ARX expansion boards installed.) When you send Bank Select and Program Change messages to any of your Fantom-G's parts, the corresponding sound is selected. ARX expansion-board sounds are correctly found and selected regardless of the slot in which your expansion boards are installed.

Each part responds to MIDI data on a specific MIDI channel. See the Fantom-G documentation to learn more about parts.

This document provides an overview of how Bank Select and Program Change messages work for internal and ARX sounds, and lists the MIDI messages that select ARX sounds.

## Bank Select and Program Change Messages

The sounds in a Fantom-G are organized into "banks." (For internal sounds, these banks are hidden, but they're there.) Each bank can contain up to 128 sounds. Before you can select an individual sound via MIDI, you have to select its bank.

Banks are selected using two MIDI Control Change messages:

- The MSB (for "Most Significant Byte") Bank Select message signifies the type of bank you want to select.

For Fantom-G internal sounds:

- an MSB value of 87—selects patch banks.
- an MSB value of 86—selects rhythm set banks.

For ARX sounds, the MSB value selects a specific ARX board.

- Once the synth knows the *type* of bank you want in a Fantom-G, you can select the specific bank you want using the LSB ("Least Significant Byte") Bank Select message. Each bank has been assigned its own LSB value. ARX boards, however, always use an LSB value of "0" since they contain a single bank of sounds.



Some external sequencers and controllers show MSB Bank Select values by name, while others show them as CC00 values. "CC00" stands for "Control Change Number 00." Some sequencers and controllers show LSB Bank Select values as CC32 values.

Each internal patch and rhythm kit—and each ARX sound—has its own Program Change number, from 1-128. Once you've selected the desired bank, you select the sound by sending its Program Change value to the part.



Some sequencers and controllers abbreviate "Program Change" as "PC."

Bank Select and Program Change messages must always be sent to a part in a specific order:

1. The Bank Select MSB value tells the part the type of bank you want, or selects the desired ARX board.
2. The Bank Select LSB value selects the individual bank to which the desired sound belongs in the Fantom-G, or contains a "0" value for ARX sounds.
3. The Program Change value selects the desired sound itself.



If a part is already using a sound from the bank that contains the sound you want to select, you can save time by using the new sound's Program Change value without any Bank Select messages.



If you're using an external sequencer, leave some blank space—one measure's usually enough—at the beginning of a song so the Fantom-G has time to call up the desired sounds before the music actually begins.

## About Selecting Sounds from An External Device

When you select sounds on the Fantom-G itself, you don't have to be concerned with Bank Select and Program Changes messages at all. Selecting a sound automatically sends the correct Bank Selects and Program Changes to the Fantom-G's internal sound engine.

Working with a MIDI controller or an external sequencer requires a bit more thought. With a MIDI controller, you've got to send Bank Select and Program Change messages to the Fantom-G when you need new sounds, following the three-part structure we noted in the right-hand column of Page 2. When you're working with an external sequencer, you have a couple of other options.

## Selecting Sounds from an External Sequencer

If you use an external sequencer that supports patch lists, configure it for use with your Fantom-G so you'll be able to select sounds by name right from the sequencer.

If an external sequencer doesn't use patch lists, you can select sounds by manually placing the necessary Bank Select and Program Change messages at the desired time location(s) on the sequencer's tracks. When the sequencer plays back the tracks, the messages will be sent and the desired sound will be selected. In a little bit, we'll tell you how to learn the required Bank Select and Program Change messages for any Fantom-G internal patch and rhythm set, and list the messages you'll need to select any ARX expansion board sound.

## Combined MIDI Bank Select Messages

Some external devices select banks by combining the MSB and LSB into one single "MIDI Bank Select" message. They calculate the necessary MIDI Bank Select value using the equation  $(MSB \times 128) + LSB$ . Check your device's documentation to learn if it uses a combined MIDI Bank Select message.



A device will either use standard Bank Select messages or a MIDI Bank Select value—it will not use both.

## MIDI Values for Selecting Internal Sounds

To find the Bank Select MSB and LSB and Program Change values for an internal Fantom-G patch or rhythm set, go to the patch list and select the sound—its Bank Select and Program Change values appear beneath the list, as shown below.



Sounds' Bank Select MSB and LSB and Program Change values are displayed in the patch list starting with Version 1.30 of the Fantom-G's operating system software. To obtain this free update, [click here](#).



If your external device uses combined MIDI Bank Select messages, multiply an internal sound's MSB by 128, and then add the LSB value to figure out the required combined Bank Select value.

## MIDI Values for Selecting ARX Sounds

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Here are the Bank Select MSB and LSB, and Program Change values to send to the Fantom-G to select ARX sounds via MIDI. The right-hand column shows the required combined MIDI Bank Select messages you'll need if your external device uses these combined messages.

<i>Exp. Board</i>	<i>Patch</i>	<i>MSB</i>	<i>LSB</i>	<i>PC</i>	<i>MIDI Bank Select</i>
ARX-01	1-50	64	0	1-50	8192
ARX-02	1-50	65	0	1-50	8320
ARX-03	1-50	66	0	1-50	8448



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