



# DX200 Editor Manual

## Important Notices

The DX200 Editor is a comprehensive editing software program specially designed for the DX200 Desktop Control Synthesizer - providing an easy, intuitive way to edit and create your own original DX200 patterns for the DX200 Desktop Control Synthesizer.

### IMPORTANT:

- Do not use any of the panel controls on an external synthesizer while editing the Patterns with the DX200 Editor, since this may inadvertently change the settings of the DX200.

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YAMAHA CORPORATION

# About the DX200 Editor

The DX200 Editor is a full-featured editing software program for the DX200 Desktop Control Synthesizer, providing an exceptionally simple and convenient way to edit and control all of the [parameters](#) on the DX200 Desktop Control Synthesizer --- even providing the same control format as used on the original DX7.

DX200 Editor lets you [store](#) your edits as an original pattern and [save](#) up to 64 patterns directly to the DX200. Naturally, you can save additional sets of 128 patterns to floppy disks or your hard disk drive as [DX200 Files](#). The DX200 Editor also features a convenient, easy-to-use [DX Librarian](#) that lets you organize your patterns.

Generally, editing on the DX200 Editor is done from the [Main window](#) (the window that automatically appears when you call up the Editor). However, you can also use a second window (the [DX7 Edit Panel](#)) to edit the Patterns. This lets you perform all edits just as if you were using an actual DX7 synthesizer.

For general instructions and explanations on how to use the DX200 Editor, see [Setting and Changing Parameter Values](#) and [Toolbar](#). For information on specific, commonly used operations, see [Operations](#).

## Selecting a DX200 Pattern

Selecting a DX200 pattern is the important first step in [editing](#). Once you've edited a pattern you can [store it to the DX200](#) or save it to a floppy disk/hard disk drive with other patterns as a [DX200 File](#).

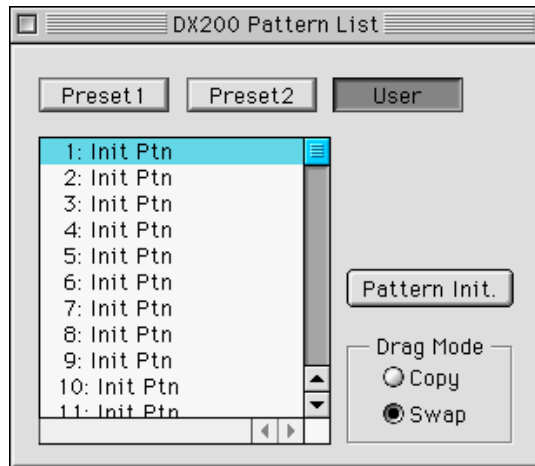
### NOTE

- Make sure to store your edits to a pattern before selecting another pattern. If you've edited the DX200 Editor parameters and then select a different pattern, all your edited parameters will be replaced by those of the newly selected pattern.

### 1 Select "DX200 Pattern List."

Click "Edit" on the menu bar, then select "DX200 Pattern List."

You can also quickly call up this dialog box by clicking any inactive part of the window pressing control key and clicking "DX200 Pattern List" in the pop-up menu. Or, you can click "Edit" on the menu bar, then select "DX200 Pattern List."



### 2 Select the desired pattern.

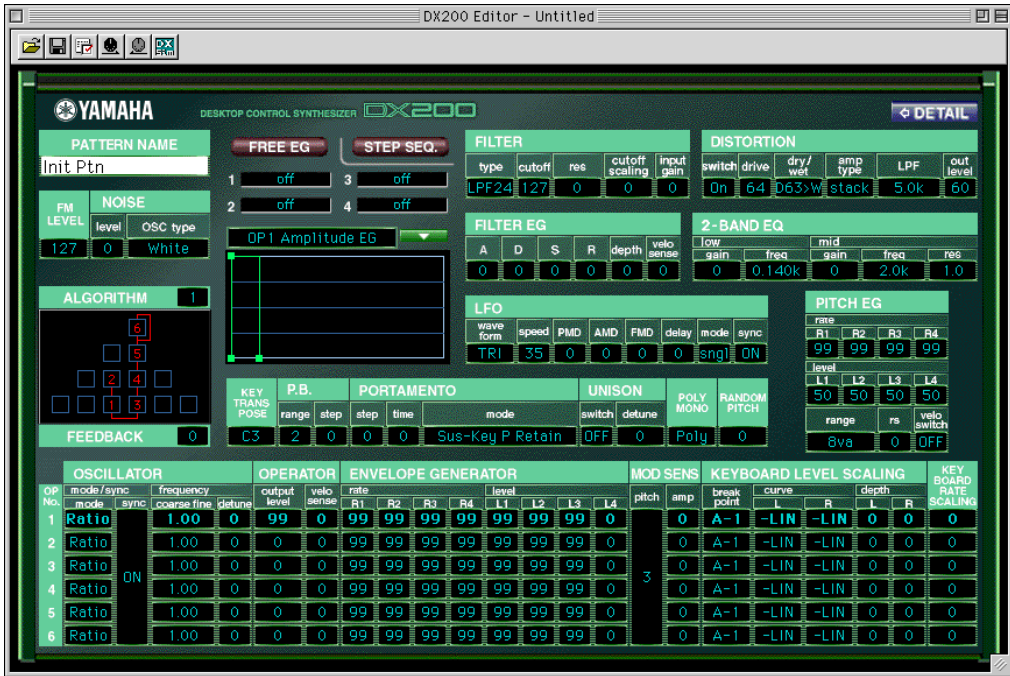
Click on the desired pattern, then close the dialog box (click the close button) to return to the DX200 Editor window.

### HINT

- You can play the currently selected pattern by clicking on the keys of the keyboard in the [DX7 Simulator window](#).

# Opening the Various Windows

## DX200 Editor Main Window



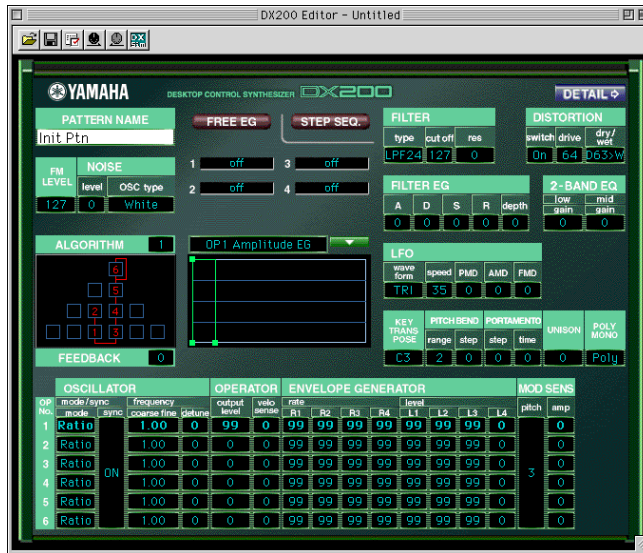
This window provides a comprehensive, at-a-glance display of all DX200 pattern parameters, and allows you to easily change any desired parameter. (For more information, see [Editing a DX Pattern.](#))



Alternately, click "Edit" on the menu bar, then select "DX7 Simulator." You can also call it up from the [toolbar.](#)

- About the [≡ DETAIL] button

Clicking this button lets you toggle between the full editing display (with all parameters shown) and a smaller editing display (with a limited parameter set). The smaller display leaves out many of the more detailed parameters, making the editing display less cluttered and easier to handle.



### Free EG Window



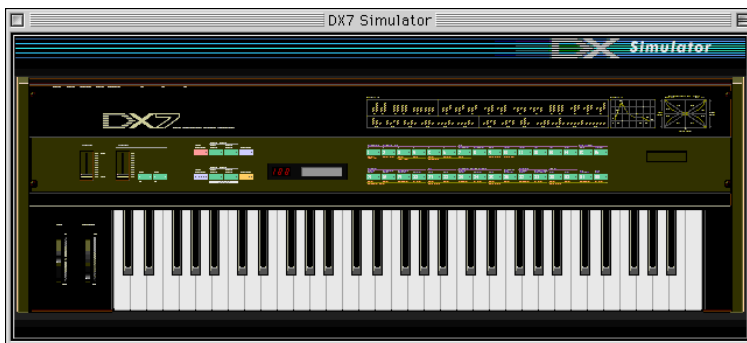
This window contains the versatile Free EG function, which gives you four tracks for recording complex real-time parameter changes. To call up the window, click the "FREE EG" button at the top of the Main window.

## Step Sequencer Window



This window contains the convenient Step Sequencer function, which allows you to quickly and easily create sophisticated looped Sequences. To call up the window, click the "STEP SEQ." button at the top of the Main window.

## DX7 Simulator Panel Window

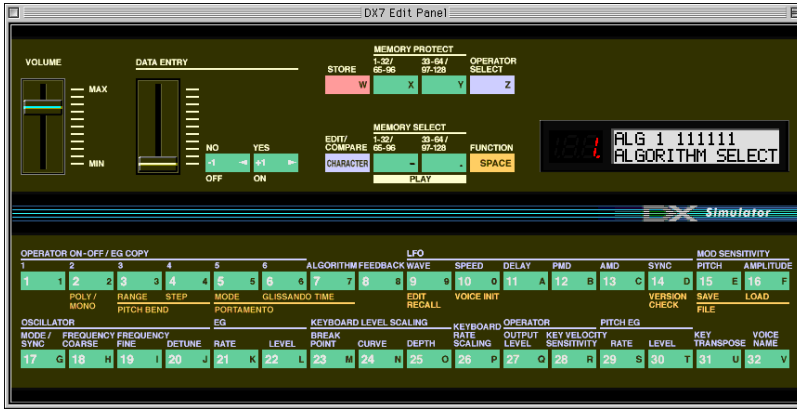


Select this window by clicking "Edit" on the menu bar, then selecting "DX7 Simulator." You can also call it up from the [toolbar](#).

No editing functions are directly available from the DX7 Simulator window. However, from this window you can:

- Audition the currently selected pattern by clicking on the keys of the keyboard.
- Open a DX200 File by clicking on the cartridge or cartridge slot.
- Open the Edit Panel windows (below).

## DX7 Edit Panel Window



This window provides a "virtual" DX7 panel, and lets you edit the patterns much as you would if you were operating the panel controls of an actual DX7 keyboard. (For more information, [DX7 Edit Panel Window](#).)

To call up this window, click anywhere on the panel control area of the DX7 Simulator Panel window.



## Selecting a Mode – Play, Edit or Function

In the Edit Panel window, you can select from among the three main modes: Play, Edit and Function.

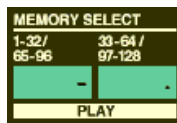
### • Play Mode

In the play mode, you can:

- Select one of the 128 patterns.
- Play the selected pattern (from the DX200's keyboard or from the keys in the DX7 Simulator window).

To select the Play mode:

Click one of the [MEMORY SELECT] buttons: [1-32] or [33-64].



### • Edit Mode

In the Edit mode, you can:

- Edit the pattern, using the [Edit parameters](#) (printed in lavender above each button).

To select the Edit mode:

Click the [EDIT] button.



### • Function Mode

In the Function mode, you can:

- Edit the [Function \(global\) parameters](#) of the pattern (printed in yellow below the appropriate buttons). These include other miscellaneous Function parameters as well, such as Edit Recall and Pattern Initialize.

To select the Function mode:

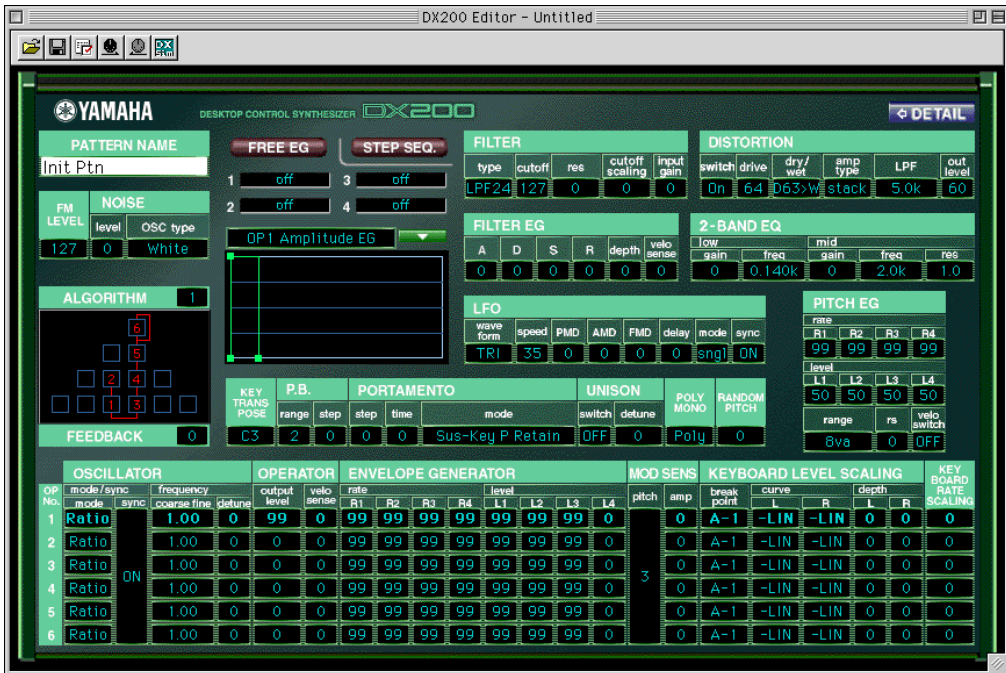
Click the [FUNCTION] button.





## Editing a DX200 Pattern

- 1 **Select the desired pattern.**  
Refer to [Selecting a DX200 Pattern](#).
  
- 2 **Edit the pattern parameters as desired.**



- 3 **Store the edited settings as a pattern, then save it with other edited patterns as a [DX200 File](#).**

Use the [Store](#) operation to store your newly edited pattern. Then use the [Save](#) operation to [save](#) that edited pattern with other User Patterns to a DX200 File.

Both the [Store](#) and [Save](#) operations are necessary to ensure that your pattern is saved properly. Failing to do so would be roughly similar to writing a letter but not putting it in an envelope. Make sure to execute both operations when you wish to keep a pattern you've edited.

## Compare

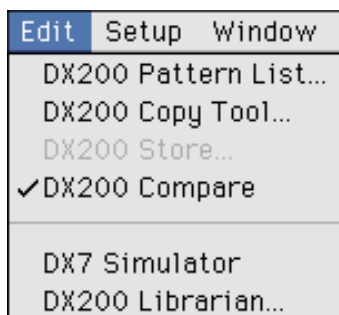
This function lets you switch back and forth between the current edited condition of the pattern and its original un-edited condition. This allows you to easily hear and compare the changes you make to a pattern with its original condition.

**1 Edit the pattern as desired.**

**2 Select "DX200 Compare."**

Click "Edit" on the menu bar, then select "DX200 Compare."

You can also quickly use Compare by clicking any inactive part of the window pressing control key and clicking "DX Compare" in the pop-up menu.



In the Compare condition, a check appears beside "DX200 Compare" in the menu. All parameter values are ghosted (in gray) and cannot be edited. Play the connected MIDI keyboard (or click the keys in the DX7 Simulator window) to hear the original un-edited pattern.

**3 Select "DX200 Compare" again to return to the edited condition.**

Do this as often as you wish to go back and forth between the two conditions.

**NOTE**

- "DX200 Compare" is ghosted (gray) and cannot be selected if the pattern has not yet been edited.
- The Compare function can be used with the parameter in the Main Window and with Tempo and Swing in the Step Sequencer window.

## Initializing a DX200 Pattern to the Default Settings

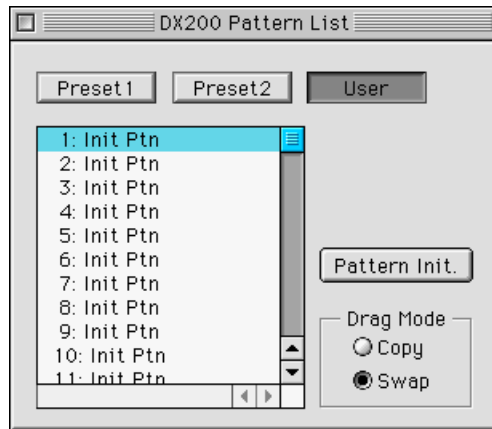
This function allows you to reset all the parameters of the selected pattern to the [factory "initial pattern default values"](#). This gives you a "blank slate" from which you can create your own pattern.

Keep in mind that this operation automatically erases all the settings of the selected pattern. If you wish to save the pattern for future recall, use the [Store](#) and [Save](#) functions.

### 1 Select "DX200 Pattern List."

Click "Edit" on the menu bar, then select "[DX200 Pattern List](#)."

You can also quickly call up this dialog box by clicking any inactive part of the window pressing control key and clicking "DX200 Pattern List" in the pop-up menu.



### 2 Select the desired pattern to be initialized.

Click on the desired pattern.

### 3 Initialize the pattern.

Click the "Pattern Init." button in the dialog box. The specified pattern is initialized and automatically selected for editing.

To return to the DX200 Editor window, close the dialog box (click the close button).

## Storing a DX200 Pattern

This operation lets you store your pattern edits as a User pattern.

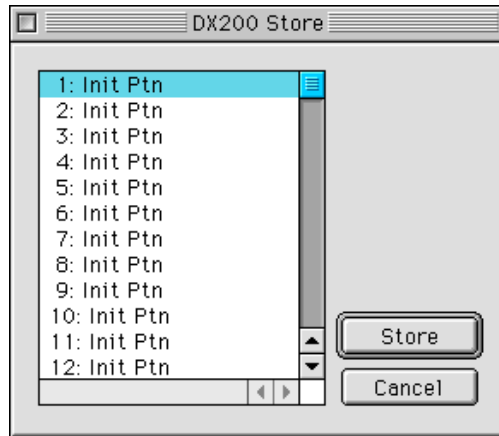
### NOTE

- To ensure that your new pattern is available for future recall, make sure to also save the pattern (with other patterns) to a DX200 File.

### 1 Select "DX200 Store."

Click "Edit" on the menu bar, then select "DX200 Store."

You can also quickly call up this dialog box by clicking any inactive part of the window pressing control key and clicking "DX200 Store" in the pop-up menu.



### 2 Select the destination pattern.

Click on the desired pattern in the dialog box.

### 3 Store the pattern.

Click the "Store" button in the dialog box. The specified pattern is replaced with the newly edited pattern.

### NOTE

- This operation deletes the original pattern data at the destination.

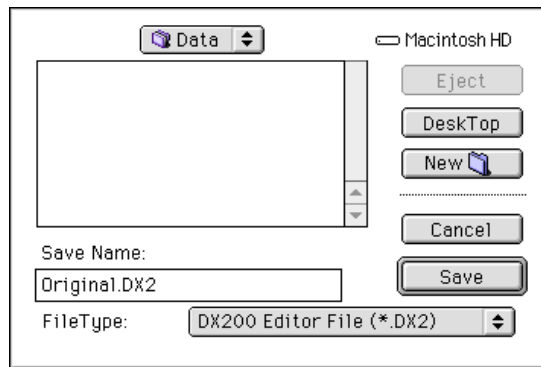
## Saving Patterns to a DX200 File

Once you've edited a DX200 pattern to your satisfaction you can save it to a DX200 File. Each DX200 File can contain up to 64 patterns, and these can be called up at any time with the [Open](#) command. (Also see [Calling Up Patterns from a DX200 File.](#))

Additional DX200 Files of 128 patterns each can be saved to floppy disks or your hard disk drive as [DX200 Files](#) --- giving you unlimited storage for your original patterns. For organizing the patterns in the DX200 Files, use the convenient [DX200 Librarian](#) function.

### 1 Select "Save DX200 File."

Click "File" on the menu bar, then select "Save DX200 File."



#### NOTE

- "Save DX200 File" can also be selected from the [toolbar](#).

### 2 Select the desired folder, type in the file name, and click "Save."

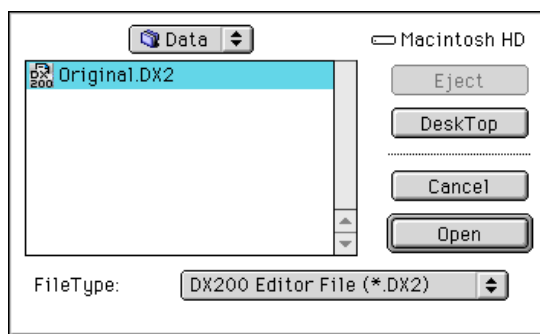
## Calling Up Patterns from a DX200 File (Open)

Once you've saved a set of User patterns to one or more DX200 Files (see [Saving Patterns](#)), you can instantly call up the desired patterns with this command.

To create a new DX200 File, use the [New DX200 File](#) command.

### 1 Select "Open DX200 File."

Click "File" on the menu bar, then select "Open DX200 File."



### 2 Select the desired folder and file name, then click "Open."

#### NOTE

- "Open DX200 File" can also be selected by clicking on the cartridge slot in the DX7 Simulator window. (When a DX200 File has been opened, a cartridge is shown in the slot.)



### Receiving Pattern/Voice Data from a DX200/DX7 Series Instrument

This operation lets you transfer pattern data from an instrument of the DX7 Series. A single pattern or 128 patterns can be received. (See [Receive DX200 Bulk Dump Data](#)).

- 1 Select "Receive DX200 Bulk Dump Data" from the **Setup menu**.
- 2 Select the desired Receive Method ("1 Voice/Pattern" or "All Patterns/Voices") and Machine (DX200 or DX7 Series).
- 3 Click "Start." The "Start" button changes to "Stop" and the operation is set to standby (waiting for incoming data).
- 4 Transmit the data from the DX200 or other instrument. (See the owner's manual of the instrument for instructions.)

#### NOTE

- Make sure that the MIDI connections and settings are appropriate. (This includes the "DX200 Editor Setup.")

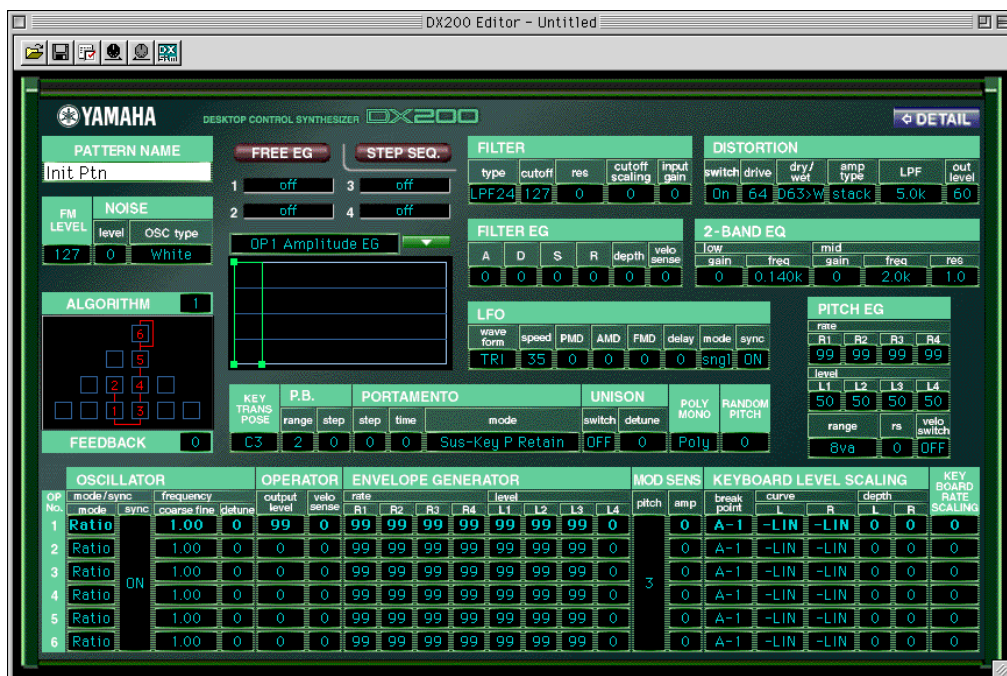
- 5 As soon as the DX200 Editor starts receiving data, the progress bar moves, indicating the amount of data received. When the bar is completely filled, the operation is complete. To cancel the operation, click "Stop."
- 6 Click "OK" to exit the operation.

# Parameters

Virtually all of the DX200 Editor parameters for editing the DX200 patterns are contained in the Main control panel window. From this main panel, you can also jump to other windows for controlling additional DX200 functions (such as the [Free EG](#), [Step Sequencer](#), and [DX7 Simulator](#)).

## DX200 Editor Main Window

This is the primary editing window for the DX200 Editor. Virtually all editing functions and operations are done from this window.



To change any of the parameter values, click on the desired parameter so it is highlighted, then type in the value from the keyboard and press [ENTER].

You can also use the mouse to change the values or settings. Click on the desired parameter, move the cursor to the top or bottom of the box (to select the "up" arrow or the "down" arrow, respectively), then click the mouse button to increase or decrease the value. (Clicking with the "up" arrow increases the value; clicking with the "down" arrow decreases it.)

Alternately, drag the mouse to continuously change values. Click on the parameter and drag horizontally or vertically as desired. Dragging to the left or down decreases the value, and dragging right or up increases it. The parameter value changes accordingly. Any parameter changes are output as MIDI data, to the DX200.



- **About the EG combo box and EG window**

Also contained in the Main window is a special EG window, from which you can use the mouse to "draw" envelopes for each Operator's EG, as well as the Pitch EG and Filter EG.



To use this, click on the down arrow above the window, and select the EG you wish to edit. Then, click on one of the box "joints" and drag it to change the EG settings. The current relevant EG values appear at the cursor as you drag it.

- **About the DX200 Copy Tool**

This convenient function lets you copy the various settings (including EG) from one Operator to another Operator. Click on any inactive part of the panel in the Main window pressing control key and select "DX Copy Tool" from the pop-up menu. Then, from the Copy Tool window, click and drag the Operator or EG you want to copy to the destination Operator or EG. (For more information, see [\[DX200 Copy Tool\] dialog.](#))

**NOTE**

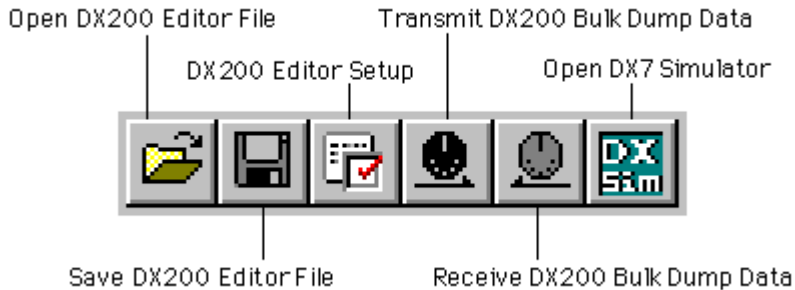
- The Pitch EG is displayed in the DX200 Copy Tool window only for viewing the EG shape. It cannot be copied to an Operator, nor can an Operator EG be copied to it.

- **About the [ $\leftarrow$  DETAIL] button**

Clicking this button lets you toggle between the full editing display (with all parameters shown) and a smaller editing display (with a limited parameter set). The smaller display leaves out many of the more detailed parameters, making the editing display less cluttered and easier to handle.

## • Toolbar

The toolbar gives you quick access to some important functions and controls. These buttons let you easily execute the desired function without having to select a menu.



### Open DX200 Editor File

This is the same as the corresponding command in the File menu. It lets you select and open an existing DX200 File. (See File Menus, [Open DX200 File](#).)

### Save DX200 Editor File

This is the same as the corresponding command in the File menu. It lets you save the current set of User patterns as a DX200 Editor File for future recall. (See File Menus, [Save DX200 File](#).)

### DX200 Editor Setup

This is the same as the corresponding command in the Setup menu. It lets you make various important settings for configuring the DX200 Editor with the DX200. (See Setup Menus, [DX200 Editor Setup](#).)

### Transmit DX200 Bulk Dump Data

This is the same as the corresponding command in the Setup menu. It lets you transmit the current DX200 Editor settings as MIDI data to the DX200. (See Setup Menus, [Transmit DX200 Bulk Dump Data](#).)

### Receive DX200 Bulk Dump Data

This is the same as the corresponding command in the Setup menu. It lets you receive the current DX200 Editor settings as MIDI data from a DX7, DX7II or other DX-compatible instrument. (See Setup Menus, [Receive DX200 Bulk Dump Data](#). Also see [Receiving Pattern/Voice Data from a DX200/DX7 Series Instrument](#))

### Open DX7 Simulator

This is the same as the corresponding command in the Edit menu. It lets you open the DX7 Simulator. (See Edit Menus, [Open DX7 Simulator](#).)

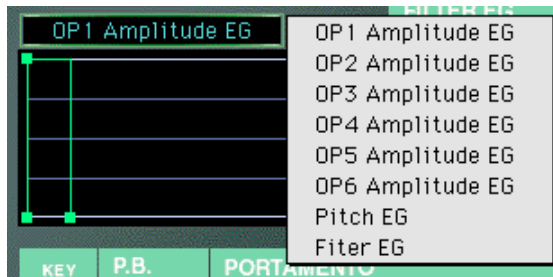
## ■ Setting and Changing Parameter Values .....

### NOTE

- The conventions described here pertain primarily to the [DX200 Editor Main Window](#). For information on the controls in the Edit Panel window, see [Edit Panel Window / Play and Edit Modes](#).

### • Combo boxes

For combo boxes (such as the EG select box in Main, or Track Parameter in Free EG), click the down arrow to expand the box, then highlight the desired setting.



### • Parameter sliders

For parameter sliders, click and hold the slider, then drag as desired. Alternately, click and hold any position along the slider path; the slider automatically snaps to the new position.



- **Incrementing/decrementing values**

Values and settings in the Main window can be changed by clicking on the value box, and then dragging the cursor up or down (or right/left), in the direction of the desired change. To increment or decrement a value, click on the desired parameter, move the cursor to the top or bottom of the box (to select the "up" arrow or the "down" arrow, respectively), then click the mouse button to increase or decrease the value. (Clicking with the "up" arrow increases the value; clicking with the "down" arrow decreases it.) The cursor keys on the keyboard can be used to move around the parameter grid of the DX200 Editor window.

- **Typing values directly**

Most parameters in the [Main Window](#) can also be set by typing the value directly in the value box. Click on the box, then type the desired value and press [enter]. Once a value box has been selected, you can also use the mouse to change the value (as described above).



FILTER				
type	cutoff	res	cutoff scaling	input gain
LPF24	123	0	0	0

**NOTE**

- The [enter] key have no effect in the Pattern Name parameter.

## ■ DX200 Parameters .....

### Pattern Name

**Settings:** 1 ... 0, A ... Z, -, ., space, (ASCII 20H ... 7FH)

This determines the name of the pattern being edited. Up to ten characters can be entered. (In the DX200 Editor window, both uppercase and lowercase letters can be entered.)

- 1) Click on the **PATTERN NAME** box.
- 2) At the cursor position, type the desired name. Up to ten characters (uppercase or lowercase) can be entered.
- 3) **Store** the pattern, if desired.

### FM Level

**Range:** 0 ... 127

This determines the level of FM signal.

### Noise Parameter

- **Noise level**

**Range:** 0 ... 127

This determines the level of the Noise. The higher the value, the greater the Noise Level. When not using Noise, set the value to "0."

- **Noise OSC Type**

**Settings:** White, Pink, UpSlow, UpMid, UpHigh, DownSlow, DownMid, DownHigh, PitchScale1...4, Variation1...4

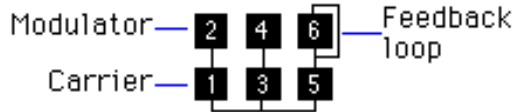
This is used to select the type of Noise signal.

For detail of types, refer to the DX200 Editor Owner's Manual.

## Algorithm

**Range: 1 ... 32**

This determines the algorithm used for the pattern. The algorithm determines how the operators are configured for the pattern. The FM synthesis system of the DX200 has 32 of these configurations, called "algorithms." (Refer to the [Algorithm List](#).)



This section displays the signal path, showing which operators are "carriers" and which are "modulators." The carriers are in the bottom row of the algorithm and are the actual sound producers for the pattern. Modulators are stacked above the carriers and alter the timbre or tonal quality of the carriers. A modulator stacked on top of another modulator alters the timbre even further. Simply put, the carriers produce the sound, and the modulators change the character of the sound.

### NOTE

- Changing the algorithm may result in drastic changes to the pattern, and could produce unexpectedly loud and noisy sounds.

## Feedback

**Range: 0 ... 7**

This determines the level of feedback. Each algorithm provides a feedback operator, in which the output signal of the operator is looped back to its input. As its name implies, Feedback produces harsh noise-like harmonics in the pattern. The degree of harshness or amount of noise depends not only on this setting, but also on the level of the feedback operator and its position in the algorithm.

## Free EG button

Open [\[Free EG\] window](#).

## Step Sequencer button

Open [\[Step Sequencer\] window](#).

## Filter Parameters

The Filter parameters are a special addition to the DX200, not found on the original DX-series synthesizers. The Filter lets you control the tone in various ways, using the same filter types, functions and parameters as found on analog synthesizers.

The DX200 also features a Filter EG, letting you control the filter operation over time. (See [Filter EG Parameters](#).)



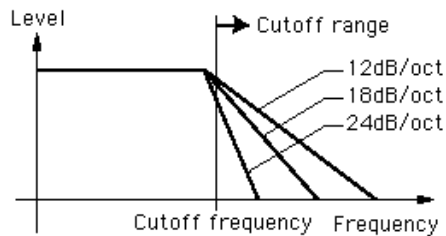
### • Filter Type

Determines the filter type used for the VCF section. The filter passes only a specified range of frequencies while cutting off the rest. There are several completely different types, as well as a variety of filter slopes (see below).

**Settings:** LPF24 (Low Pass Filter 24dB/octave), LPF18 (LPF 18dB/octave), LPF12 (LPF 12dB/octave), BPF (Band Pass Filter), HPF12 (High Pass Filter 12dB/octave), BEF (Band Eliminate Filter)

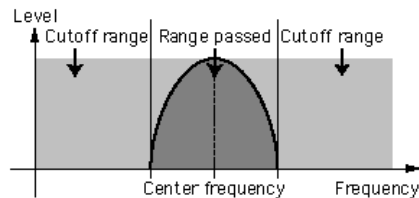
#### LPF24, LPF18, LPF12

The Low Pass Filter passes only those frequencies below the specified cutoff point. Cutoff curves of 24dB/octave, 18dB/octave and 12dB/octave can be selected.



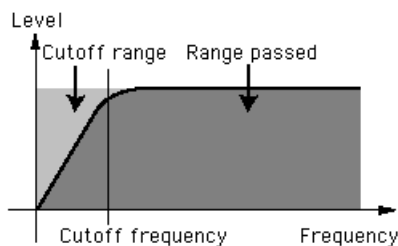
#### BPF

The Band Pass Filter passes only those frequencies in the specified range, with a cutoff curve of 12dB/octave.



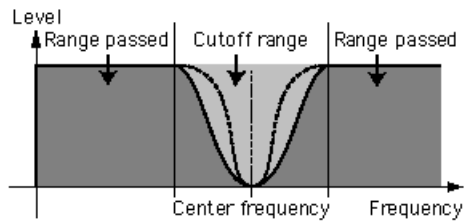
#### HPF12

The High Pass Filter passes only those frequencies above the specified cutoff point, with a cutoff curve of 12dB/octave.



**BEF**

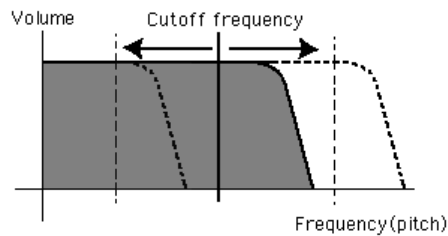
The Band Eliminate Filter passes only those frequencies outside the specified frequency range. The Resonance setting (below) determines the eliminate range.



- **Filter Cutoff**

**Range: 0 ... 127**

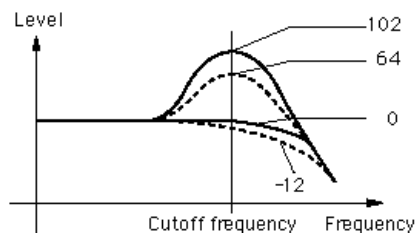
Determines the frequency at which the Filter effect starts. The higher the value, the higher the frequency.



- **Filter Resonance (res)**

**Range: -16 ... 100**

Determines the emphasis of the resonant peak of the Filter (at the Cutoff frequency).





- **Filter Cutoff Scaling**

**Range: -64 ... 63**

This determines how the Filter Cutoff Frequency follows the keyboard. For a setting of "0," the particular notes played on the keyboard have no effect on the Filter.

- **Filter Input Gain**

**Range: -12 ... 12 (dB)**

Determines the level of the signal sent to the Filter. If the Filter doesn't seem to have much effect on the sound, try increasing this parameter. If the Filter effect seems too boomy, loud or harsh, try decreasing this.

## Distortion Parameters

Distortion lets you apply a wide variety of distortion and overdrive effects to the sound, and simulate the effect of various guitar amplifiers and speakers.

- **Distortion Switch**

**Range: On, Off**

This turns the Distortion effect on or off.

- **Distortion Drive**

**Range: 0 ... 100**

This determines the amount of distortion "drive" for the guitar amplifier simulation effect block. The higher the value, the greater the degree of distortion in the sound.

- **Distortion Dry/Wet**

**Range: D63>W ... D=W ... D<W63**

This determines the level balance of the unprocessed (dry) original sound of the pattern, and the distortion processed (wet) sound. A setting of D=W results in an equal balance of dry and wet sound. (In the display, "D" indicates "dry," and "W" indicates "wet.")

- **Distortion Guitar Amp. Type**

**Settings: Off, Stack, Combo, Tube**

This determines the type of guitar amplifier simulated by the Distortion effect. Each produces a slightly different distortion sound, recreating the characteristics of an actual amplifier. "Stack" simulates a separate amp and speaker setup, "Combo" simulates a single cabinet transistor amp and speaker, and "Tube" simulates a single cabinet tube amp and speaker. When this is set to "Off," some of the guitar amplifier simulation effect is cancelled (however, Distortion Drive and LPF are still applied to the sound).

- **Distortion Low Pass Filter**

**Range: 1.0 kHz ... 18.0 kHz, Thru**

This determines the frequency of the low pass filter that is applied to the distortion sound. Depending on the Guitar Amp. Type setting, this parameter can be used to "fatten" the sound or make it piercing and brittle. When this is set to "Thru," no filtering is applied to the distortion sound.

- **Distortion Output Level**

**Range: 0 ... 100**

This determines the output volume of the distortion sound. Keep in mind that this may not have any effect unless the Distortion Dry/Wet is set to an appropriate value.

## Filter EG Parameters

The Filter EG parameters determine how the timbre of the pattern changes over time. This lets you produce subtle or pronounced filter effects (such as wah, for example).

You can also conveniently edit the Filter EG parameters from the EG window. To make changes to this, click on the down arrow above the EG window, and select the Filter EG. Then, click on one of the box "joints" and drag it to change the EG settings. The current relevant Filter EG values appear at the cursor as you drag it.

- **Filter EG Attack Time**

**Range: 0 ... 127**

This determines the attack time of the Filter EG, which is the time it takes for the signal to reach its maximum cutoff frequency level after a key is pressed (key on). Higher values produce a longer Attack time. (See illustration below.)

- **Filter EG Decay Time**

**Range: 0 ... 127**

This determines the decay time of the Filter EG, which is the time it takes for the signal to reach its sustain level from the maximum level while a key is held. Higher values produce a longer Decay time. (See illustration below.)

- **Filter EG Sustain Level**

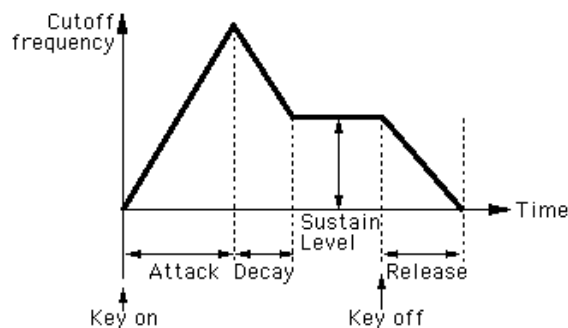
**Range: 0 ... 127**

This determines the level of sustain of the Filter EG, which is the fixed level of the cutoff frequency maintained as long as the key is held. Higher values increase the Sustain level. (See illustration below.)

- **Filter EG Release Time**

**Range: 0 ... 127**

This determines the release time of the Filter EG, which is the time it takes for the filter to reach its initial level after a key is released (key off). Higher values increase the Release time. (See illustration below.)



- **Filter EG Depth**

**Range: -64 ... 0 ... +63**

This determines the range of movement of the cutoff frequency. This must be set to a proper level for the Filter EG parameters (Attack, Decay, Sustain, and Release) to have an effect on the sound. Positive values increase the Filter EG Depth. Negative values reverse the shape of the envelope.

- **Filter EG Velocity Sense**

**Range: -64 ... 0 ... +63**

This determines how the Filter responds to keyboard velocity. The higher the value (positive), the more sensitive the Filter is to your keyboard playing strength. Negative values produce the opposite effect; in other words, the Filter effect gets stronger the lighter you play.

## **2-Band EQ Parameters**

This flexible 2-Band EQ gives you comprehensive control over the sound, with both Gain and Frequency parameters --- plus a Resonance control on the Mid Frequency band.

- **2-Band EQ Low Gain**

**Range: -12 ... 0 ... +12 (dB)**

This determines the gain or level of the low frequency band. Positive values boost the level of the frequency and negative values attenuate it.

- **2-Band EQ Low Frequency**

**Range: 32Hz ... 2.0kHz**

This determines the specific frequency that is controlled by the Low Gain parameter (above).

- **2-Band EQ Mid Gain**

**Range: -12 ... 0 ... +12 (dB)**

This determines the gain or level of the mid frequency band. Positive values boost the level of the frequency and negative values attenuate it.

- **2-Band EQ Mid Frequency**

**Range: 100Hz ... 10.0kHz**

This determines the specific frequency that is controlled by the Mid Gain parameter (above).

- **2-Band EQ Mid Resonance**

**Range: 1.0 ... 12.0**

This determines the resonant boost applied to the Mid Frequency.

## LFO Parameters

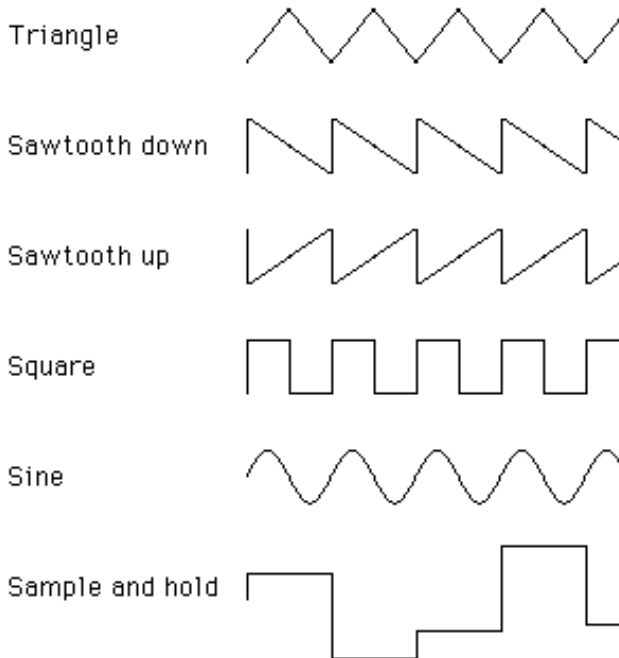
The LFO (Low Frequency Oscillator) parameters are used to regularly modulate the pitch or volume of a pattern, letting you create vibrato, tremolo, or "wah" effects. These are also related to the [Modulation Sensitivity parameters](#).

- **LFO Waveform**

**Settings:**

- TRI (triangle)**
- SAW- (sawtooth down)**
- SAW+ (sawtooth up)**
- SQU (square)**
- SIN (sine)**
- S/Hold (sample and hold)**

This determines the waveform of the LFO: triangle, sawtooth down, sawtooth up, square, sine, or sample and hold.



- **LFO Speed**

**Range: 0 ... 99**

This determines the speed or frequency of the LFO, with higher values resulting in higher frequencies (greater speed).

- **LFO PMD (Pitch Modulation Depth)**

**Range: 0 ... 99**

This determines the amount of Pitch Modulation Depth. This sets the degree to which LFO modulation affects the pitch of the pattern, or how widely pitch is modulated by the LFO. This produces a vibrato effect for the pattern. This has no effect if [Pitch Modulation Sensitivity](#) is set to zero.

- **LFO AMD (Amplitude Modulation Depth)**

**Range: 0 ... 99**

This determines the amount of Amplitude Modulation Depth. This sets the degree to which LFO modulation affects the volume of the pattern, or how widely volume is modulated by the LFO. When applied to a carrier operator, this produces a tremolo effect; when applied to a modulator, it produces a "wah" effect. This has no effect if [Amplitude Modulation Sensitivity](#) is set to zero.

- **LFO FMD (Filter Modulation Depth)**

**Range: 0 ... 99**

This determines the amount of Filter Modulation Depth. This sets the degree to which LFO modulation affects the filter of the pattern, or how widely filter is modulated by the LFO.

- **LFO Delay**

**Range: 0 ... 99**

This determines the delay time for the LFO, or the amount of time that elapses between the press of a key and onset of the LFO effect. This is useful in producing delayed vibrato or tremolo effects (often used by singers or instrumentalists). Higher values result in a longer delay time.

**NOTE**

- Both Pitch and Amplitude are modulated together by the LFO; LFO cannot be set to modulate these independently. However, by using the Sensitivity and Depth controls, you can set different degrees of the LFO effect for each.

- **LFO Mode**

- **Settings: snl (single), mult (multi)**

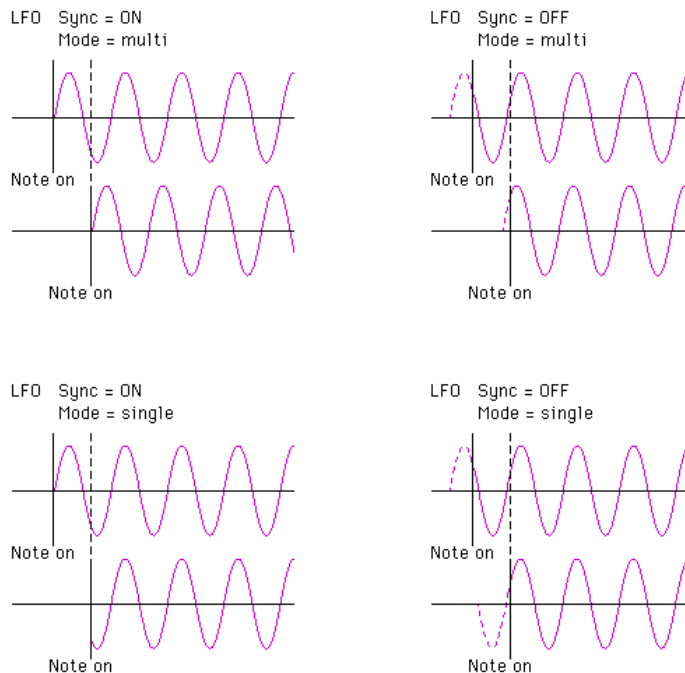
This determines the operating mode of the LFO; in effect, it determines how many LFOs are used to modulate the pattern (when several notes are played simultaneously).

When set to "snl," a single LFO affects all notes played. In other words, the LFO effect begins when the first key is played, and continues in the same way at the same phase for all subsequent notes. (This is true when LFO Sync is off; when LFO Sync is on, the waveform is interrupted and begins anew for each note played.)

When set to "mult," there are sixteen independent LFOs, one for each of the sixteen polyphonic notes of the DX200. This means that when you play several notes in succession, the LFO will affect each note individually, depending on when each note is played. This creates an exceptionally rich and natural modulation effect for sustained notes in strings and pad patterns, especially when [LFO Delay](#) is set to an appropriate value.

**NOTE**

- These illustrations show the various LFO conditions for different Sync and Mode settings.



- **LFO Sync (Key Synchronization)**

- **Settings: ON, OFF**

This determines whether LFO Key Synchronization is on or off. When Sync is ON, the LFO is automatically reset to the beginning of the selected waveform each time you play a note. When sync is OFF, the LFO waveform continues in a "free running" condition; when you play a note, the result will vary depending on where the LFO is in the cycle. The effect can be easily detected at low LFO frequencies (i.e., [LFO Speed](#) settings below 10).

## Key Transpose

### Range: C1 - C5 (MIDI notes 36 - 84)

This determines the overall pitch (key) transposition setting for the pattern. The default value is C3 (60). Use this control to change the octave setting of a pattern, or change it to a key for ease in playing. For example, to play the pattern in the key of C but have it sound in the key of F#, enter a value of F#3 or F#2 (depending on whether you want to transpose up or down).

#### In the DX200 Editor window:

Click KEY TRANSPOSE, then type in the value MIDI note value (36 - 84; note names cannot be typed) and press [enter] on the computer keyboard. Or use the mouse buttons to increment/decrement the values.

#### In the Edit Panel window:

- 1) Click on Pattern Select button [31] (KEY TRANSPOSE).
- 2) Select the DX200 Editor window.
- 3) Click the desired key on the "virtual" keyboard. (The DATA ENTRY controls in the Edit Panel window cannot be used to change the value.)
- 4) Return to the Edit Panel window to continue editing or save the pattern.

## Pitch Bend Parameters

These parameters determine how the Pitch Bend wheel (on the connected MIDI keyboard) affects the pitch of the pattern.

### NOTE

- The Pitch Bend parameters are **Function mode** parameters in the Edit Panel window.

#### • Pitch Bend Range

### Range: 0 ... 12 semitones

This determines the maximum amount of pitch change with the Pitch Bend wheel, up or down. When set to "0," there is no pitch change. When set to the default of "2," pitch can be raised or lowered by a maximum of 2 semitones (1 whole step). The maximum setting of "12" gives you a full two-octave range (one octave down, one up).

### NOTE

- This parameter is automatically set to "12" and cannot be changed unless Pitch Bend Step (below) is set to "0."

- **Pitch Bend Step**

**Range: 0 ... 12 (semitones)**

This determines the size of the increments by which the Pitch Bend wheel (on a connected MIDI keyboard) changes the pitch. A setting of "0" results in perfectly smooth pitch bending. Values other than "0" represent the number of semitones by which the pitch will "jump" as you move the wheel. For example, the maximum setting of "12" will cause the wheel to change the pitch in a single, one-octave jump.

**NOTE**

- When this parameter is set to a value other than "0," Pitch Bend Range (above) is automatically set to "12." (In order to change Pitch Bend Range, this parameter must be set to "0.")

## Portamento

These three parameters are used to set portamento (glide) and glissando (stepped glide) effects, and to control certain sustain characteristics of the keyboard. The particular effects available will change, depending on the [Poly/Mono](#) setting of the pattern.

**NOTE**

- The Portamento parameters are [Function mode](#) parameters in the Edit Panel window.

- **Step**

**Settings: 0 ... 12 (semitones)**

When Glissando is set to 1...12, the glide in pitch occurs in discrete semitone steps. This effect is best heard with a slower rate and when two widely separated notes are played one after the other. When Glissando is set to "OFF," normal (continuous) Portamento is available.

- **Time**

**Range: 0 ... 99**

This determines the time of the Portamento or Glissando effects. A setting of "0" produces no effect, while a setting of "99" produces the longest (slowest) pitch changes. This is contrary to the operation of most DX200 rate controls for which higher values result in faster (shorter) times. In order to turn Portamento or Glissando off, make sure to set this to "0."

- **Mode**

**Settings:**

**In Mono mode:**

**Fingered Porta**

**Full Time Porta**

**In Poly mode:**

**Sus-Key P Follow**

**Sus-Key P Retain**



When the keyboard is in **Mono** mode, the available settings are "Fingered Porta" and "Full Time Porta." Fingered Portamento is glide that occurs only when you play legato --- in other words, playing successive notes smoothly, not releasing a previously played note until after the next note is played. Full Time Portamento produces glide from one note to the next even when you play staccato (releasing one note before playing the next).

When the keyboard is in **Poly** mode, the available settings are "Sus-Key P Follow" and "Sus-Key P Retain." In Sustain-Key Pitch Follow mode, if you play a note or chord and then play another note or chord, the sustain from the original note/chord glides to the pitch of the most recently played note/chord. In Sustain-Key Pitch Retain mode, the pitch of the new note or chord glides from that original pitch(es) without interrupting the sustain of the original note or chord.

## Unison Parameters

These parameters let you "fatten" up sound of a pattern, by grouping together four detuned "copies" of the pattern for every note played.

The DX200 features sixteen-note polyphony, meaning that sixteen notes can be played simultaneously. In effect, a pattern is made up of sixteen sound generating "elements," one for each note of polyphony.

The Unison parameters let you reconfigure the element assignment of the DX200 such that four elements sound together in unison when you play a single note. The elements can be detuned from each other by a variable amount, adding warmth and richness to the sound of the pattern.

### NOTE

- The overall polyphony of the DX200 is reduced when Unison is on. Normally, polyphony is sixteen; when Unison is on, it is four. (Naturally, when **Poly/Mono** is set to "Mono," polyphony is fixed at one, no matter what the Unison setting is.)
- These parameters are not available in the Edit Panel window.

#### • Unison Switch

##### Settings: ON, OFF

This determines whether the Unison function is on or not. When set to "ON," four of the DX200's sixteen sound generating "elements" are sounded in unison for each note played. Keep in mind that this reduces the overall polyphony of the instrument.

#### • Unison Detune

##### Range: 0 ... 7

This determines the amount of detuning applied for the Unison function. This setting has no effect unless Unison Switch is set to "ON." A value of "0" results in no detuning; higher values shift the tuning of the four sound generating "elements" further away from each other, creating a warm, fat sound.

## Poly/Mono

### Settings: Poly, Mono

This determines how notes of the pattern are allocated. The "Mono" (monophonic) setting allows only one note to be sounded at a time. This is useful for reproducing "classic" synthesizer lead and bass sounds, and is also ideal for playing parts in which you deliberately want the end of one note to be cut off by the next. The "Poly" setting allows you to play up to sixteen notes simultaneously.

#### NOTE

- Poly/Mono is a **Function mode** parameter in the Edit Panel window.

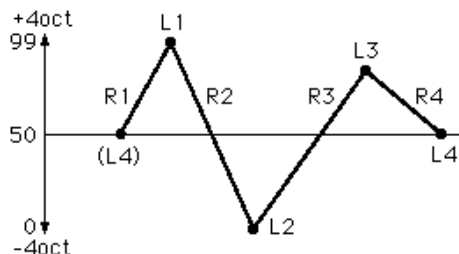
## Random Pitch

### Range: 0 ... 7

This function lets you randomize the overall pitch of the pattern for each note you play. When this is set to "0," Random Pitch is turned off. Higher values produce greater amounts of random pitch change for successively played notes.

## Pitch Envelope Generator (Pitch EG) Parameters

These parameters (eleven altogether) determine how the pitch of the pattern changes over time. The Pitch EG parameters affect all operators equally.



The four Level parameters determine the pitch of the operator at five different points, and the four Rate parameters determine the amount of time that elapses between changes of pitch. Range, Rate Scaling, and Velocity Switch parameters give you further detailed control over the Pitch EG effect.

Pitch EG can be used to reproduce the subtle pitch changes of acoustic instruments (for example, at the beginning and/or end of a note). At extreme settings, it also can be used to create unusual special effects.

You can also conveniently edit the Pitch EG parameters from the EG window. To make changes to this, click on the down arrow above the EG window, and select the Pitch EG. Then, click on one of the box "joints" and drag it to change the EG settings. The current relevant Pitch EG values appear at the cursor as you drag it.

#### NOTE

- A real-time pitch controller, such as the Pitch Bend wheel on a connected MIDI keyboard, can be used to augment (or cancel) the "automatic" pitch changes made in the Pitch EG parameters.

- **Pitch EG Rate 1 - 4**

**Range: 0 ... 99**

These determine the amount of time that elapses between changes in the pitch (as set in Level 1 - 4 below).

- **Pitch EG Level 1 - 4**

**Range: 0 ... 99**

These determine the overall pitch of the pattern at five points in time. A value of "50" corresponds to normal pitch, or no pitch change. Values under "50" lower the pitch, and values above "50" raise it. The actual pitch range here depends on the Pitch EG Range parameter setting. (Higher Pitch EG Range settings result in greater pitch variation.) The amount of time that elapses between these pitch change points is set in Rate 1 - 4 above.

**In the Edit Panel window:**

Click button [29] (PITCH EG RATE) repeatedly to call up Rate 1, 2, 3, and 4 in succession. (This includes the [Pitch EG Rate Scaling](#) parameter.) Likewise, click button [30] (PITCH EG LEVEL) repeatedly to call up Level 1, 2, 3, and 4 in succession. (This includes the Pitch EG Level Range parameter.) Use the DATA ENTRY controls to set the value for each parameter.

- **Pitch EG Range**

**Settings:**

**1/2v (six semitones)**

**1va (one octave)**

**2va (two octaves)**

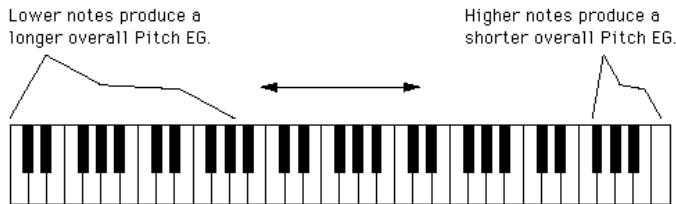
**8va (eight octaves)**

This determines the maximum range of pitch change with the Pitch EG. For example, when this is set to "1va," the full range of the Pitch EG Level 1 - 4 parameters is one octave (six semitones above and below the normal pitch value of "50"). The minimum setting of "1/2v" lets you create subtle pitch changes, whereas the maximum setting of "8va" is for extreme pitch variations.

- **Pitch EG Rate Scaling**

**Range: 0 ... 7**

This determines how the **Rate** times of the **Pitch EG** respond to keyboard position. In other words, this lets you automatically speed up or slow down the overall Pitch EG time (**Rate 1 - 4**) of the pattern depending on which range of the keyboard you play. This parameter controls the degree of scaling; a value of "0" produces no scaling, and higher values produce a more pronounced scaling effect. For values other than "0," the higher the note played, the shorter its overall Pitch EG time.



Pitch EG Rate Scaling is useful for simulating the natural pitch scaling found on many acoustic instruments --- for example, as on a cello or double bass, for which the beginnings of lower notes may have a slower rise in pitch. It's also useful for producing unusual pitch change effects depending on key position.

- **Pitch EG Velocity Switch**

**Settings: ON, OFF**

This determines whether Pitch EG intensity is touch sensitive or not. When set to "ON," the range of pitch change of the Pitch EG is affected by key velocity. This gives you exceptionally realistic and expressive control over Pitch EG changes.

## Oscillator Parameters

The Oscillator parameters give you detailed control over the pitch or frequency of the individual operators of a pattern.

- **Oscillator Mode**

**Settings: Ratio, Fixed**

This determines whether each operator changes pitch according to the notes played. When set to "Ratio" (Frequency Ratio Mode), the corresponding operator tracks the keyboard pitch normally. In other words, playing higher notes on the keyboard results in correspondingly higher frequencies on the operator. When set to "Fixed" (Fixed Pitch Mode), the keyboard does not affect the operator's frequency; the operator plays at the same pitch no matter what key is played.

**NOTE**

- The term "oscillator" refers to the frequency or waveform generating element of the operator.

- **Oscillator Sync (Key Synchronization)**

**Settings: ON, OFF**

This determines whether Oscillator Key Synchronization is on or off --- whether or not the waveforms of all operators start at the beginning of the wave cycle when a key is pressed. Note that this affects all operators together.

When Sync is ON, the oscillators are automatically reset to the beginning of their waveforms each time you play a note. When sync is OFF, the waveforms continues in a "free running" condition; when you play a note, the result will vary depending on where the waveform is in the cycle. This creates subtle differences in the sound, even when you play the same note repeatedly. Keep in mind that for certain patterns, there may be little or no audible effect.

## Frequency Coarse/Fine

**Range (in Ratio mode): 0.500 ... 61.69**

**Range (in Fixed mode): 1.000 Hz ... 9772 Hz**

This determines the frequency for each individual operator.

Type in the desired value in the appropriate value box or use the mouse to change the value.

## Detune

**Range: -7 ... +7**

Detune is a "super fine" frequency adjustment for each operator. Mild detuning between carrier operators can make the overall sound of the pattern more full, rich and natural, and reproduce the subtle pitch differences found in actual acoustic instruments. Maximum detuning between carriers can be used to produce chorusing effects or simulate an ensemble of multiple instruments.

## Operator Parameters

These parameters let you set the Output Level and Velocity Sensitivity for each operator.

- **Operator Output Level**

**Range: 0 ... 99**

This determines the level of each operator. The setting made here affects the workings of many other parameters. For example, [Feedback](#), [EG Level 1 - 4](#), and [Velocity Sensitivity](#) may have little or no audible effect if Output Level is set too low. On the other hand, [Keyboard Level Scaling](#) settings may have little or no effect if Output Level is set too high.

When applied to a carrier operator, this affects the volume of the pattern; when applied to a modulator, it affects the timbre.

### About Operator On/Off Controls

Each operator can be independently turned on and off during editing --- an important tool in hearing the effects of your edits. For example, you may want to temporarily mute one carrier operator to better hear the edits you are making on another carrier. Or you may want to turn an operator alternately on and off to hear how its presence and absence affects the overall sound.



The numbers in the top row indicate the operators' on/off status: "1" for on, "0" for off. In this example, operator 3 is off.

Click the appropriate "OP No." (Operator Number) button (1 - 6). When an operator is off, all its parameters are ghosted.

OP No.	OSCILLATOR		OPERATOR				ENVELOPE GENERATOR				MOD SENS		KEYBOARD LEVEL SCALING				KEY BOARD RATE SCALING		
	mode / sync	frequency	output	velo	rate	level				pitch	amp	break	curve		depth		L	R	
	mode	coarse	level	sense	R1	R2	R3	R4	L1	L2	L3	L4		point	L	R	L	R	
1	Ratio	1.00	0	99	0	99	99	99	99	99	99	0	0	A-1	-LIN	-LIN	0	0	0
2	Ratio	1.00	0	0	0	99	99	99	99	99	99	0	0	A-1	-LIN	-LIN	0	0	0
3	Ratio	1.00	0	0	0	99	99	99	99	99	99	0	0	A-1	-LIN	-LIN	0	0	0
4	Ratio	1.00	0	0	0	99	99	99	99	99	99	0	0	A-1	-LIN	-LIN	0	0	0
5	Ratio	1.00	0	0	0	99	99	99	99	99	99	0	0	A-1	-LIN	-LIN	0	0	0
6	Ratio	1.00	0	0	0	99	99	99	99	99	99	0	0	A-1	-LIN	-LIN	0	0	0

Keep in mind that Operator On/Off is used only temporarily in editing and the on/off status is not saved with the pattern. To actually turn an operator off, set its **Output Level** to "0."

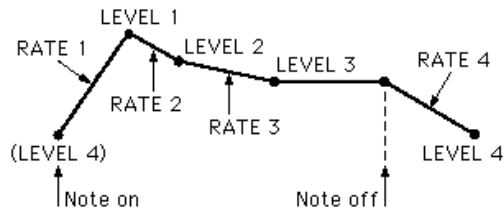
- **Operator Key Velocity Sensitivity**

**Range: 0 ... 7**

This determines the touch sensitivity of an operator, or how its level responds to your playing strength. When Velocity Sensitivity is set to a value other than "0," the harder you play a key, the greater the level of the corresponding operator. The softer you play a key, the lower the level. When this is set to "0," the operator level remains the same, no matter how softly or strongly you play the key. Higher values give you greater dynamic range between low and high levels. Setting this to an appropriate value for a carrier operator gives you touch control over volume; setting it for a modulator gives you touch control over timbre.

## Envelope Generator (EG) Parameters

These parameters (eight for each operator) determine how the level of the operator changes over time. EG applied to a carrier operator changes the volume of the sound over time, while EG applied to a modulator changes the timbre or the tonal characteristics.



The four Level parameters determine the levels of the operator at five different points, and the four Rate parameters determine the amount of time that elapses between changes of levels. Together, these eight settings give you detailed control over the shape (attack, decay, sustain and release) of the sound, both in volume and timbre.

You can also conveniently edit the Operator EG parameters from the EG window. To make changes to this, click on the down arrow above the EG window, and select the desired Operator's EG (1 - 6). Then, click on one of the box "joints" and drag it to change the EG settings. The current relevant EG values appear at the cursor as you drag it.

The [EG Copy](#) function (in the Edit Panel window) and [DX Copy Tool](#) (in the DX200 Editor window) let you easily copy all EG Rate and Level values of one operator to another operator.

- **Rate 1 - 4**

**Range: 0 ... 99**

These determine the amount of time that elapses between changes in the operator level (as set in Level 1 - 4 below).

- **Level 1 - 4**

**Range: 0 ... 99**

These determine the levels of the operator at five points in time. The amount of time that elapses between these points is set in Rate 1 - 4 above.

**NOTE**

- For most normal applications --- and especially for carrier operators --- the Level 4 parameter (which determines both the starting and ending level of the operator) should be set to "0." Otherwise, the pattern will continue to sound indefinitely. Also, Level 1 should be set to an appropriate value, such as "50" or greater, for proper EG operation.

Type in the desired value in the appropriate value box or use the mouse to change the value.

## Modulation Sensitivity Parameters

The Modulation Sensitivity parameters (Pitch and Amplitude) determine the degree to which LFO modulation affects the pattern --- in other words, the intensity of the LFO effect. Modulation Sensitivity is effectively a master control for all modulation --- whether it is automatically applied when the notes are played, or whether it is applied only by using the "real time" modulation controls on the MIDI keyboard, such as the Modulation Wheel, Foot Control, Breath Control or After Touch. If the Pitch or Amplitude Modulation sensitivity is set at zero, then none of the external controllers can affect the patterns.

- **Pitch Modulation Sensitivity**

**Range: 0 ... 7**

This determines sensitivity of the pattern (all operators) to LFO pitch modulation. Higher values result in greater sensitivity, or greater intensity of pitch modulation. This parameter setting affects all operators of the pattern equally.

- **Amplitude Modulation Sensitivity**

**Range: 0 ... 7**

This determines sensitivity of each operator to LFO amplitude (volume) modulation. Higher values result in greater sensitivity, or greater intensity of volume modulation. When applied to [carrier](#) operators, this produces a tremolo effect. When applied to a [modulator](#) operator, this varies the timbre, producing a "wah" effect.

**NOTE**

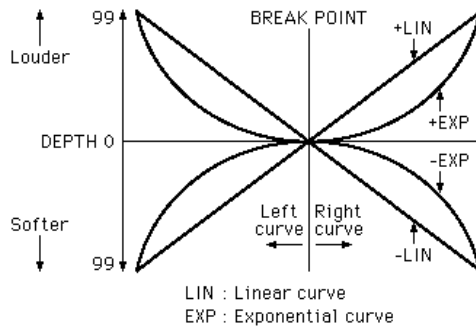
- These settings may have little or no effect on the sound if the [Operator Level](#) is set to a low value.



## Keyboard Level Scaling Parameters

The Keyboard Level Scaling parameters determine how the [Output Level](#) settings of the operators track the keyboard. In other words, these let you automatically change the level of individual operators depending on which range of the keyboard you play. Each operator can be programmed to respond according to any of four curves on either side of an adjustable break point.

Keyboard Level Scaling can be used to make the tone and/or volume change as you play in different octaves, for more realistic acoustic instrument simulations. Extreme settings can also be used for "split keyboard" effects.



The Depth of each curve can also be adjusted.

- **Keyboard Level Scaling Break Point**

**Range: A-1 ... C8**

This determines the middle point for the curve. The level is scaled up or down independently on either side of the Break Point in the curve. For most applications and best results, this should be set somewhere near the middle range of your connected MIDI keyboard (for example, C3).

**In the DX200 Editor window:**

Type in the desired value in the appropriate value box (MIDI note numbers only; for example, to select C3, type "60") or use the mouse to change the value.

- **Keyboard Level Scaling Curve Left (L), Curve Right (R)**

**Settings:**

- LIN (Linear, negative)
- EXP (Exponential, negative)
- EXP (Exponential, positive)
- LIN (Linear, positive)

These parameters determine the left and right Keyboard Scaling Curves for each of the operators. Curve Left corresponds to the keys on the keyboard lower than the Break Point, and Curve Right corresponds to the keys higher than the Break Point. Any one of the Left Curves can be used with any one of the Right Curves, giving you sixteen different curve variations to choose from.

Negative curves decrease the operator level as you play notes further away from the Break Point, and positive curves increase the level.

Exponential curves feature a more gradual change in level near the Break Point, and change the level more drastically the further you play away from the Break Point. Linear curves provide a "straight line," proportional relationship between the note played and the resulting operator level.

- **Keyboard Level Scaling Depth Left (L), Depth Right (R)**

**Range: 0 ... 99**

These parameters determine the depth of the selected left or right curve. At a minimum setting ("0"), there is no scaling, and you can increase (or decrease, for negative curves) the level up to maximum of "99."

**NOTE**

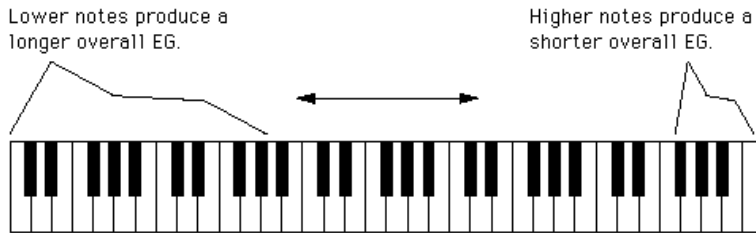
- For values near the maximum, there has to be some "headroom" --- in other words, some operator output level must be available for increasing. For example, if the [Operator Output Level](#) is set to "90," and a positive (+) curve is set, the greatest curve depth that can be achieved is "9" (the difference between the maximum Output Level and the actual set value).

In this example, while the curve Depth can be set to a value greater than 9, there will be no more effect than if it were set at 9; if you want more boost as you move up or down the keyboard, then you'll have to set the operator Output Level at a lower value so that more "headroom" is available for the scaling to boost the level to the maximum of 99.

- **Keyboard Rate Scaling**

**Range: 0 ... 7**

This determines how the **Rate** times of the **EG** respond to keyboard position. In other words, this lets you automatically speed up or slow down the overall EG time (**Rate 1 - 4**) of individual operators depending on which range of the keyboard you play. This parameter controls the degree of scaling; a value of "0" produces no scaling, and higher values produce a more pronounced scaling effect. For values other than "0," the higher the note played, the shorter its overall EG time.



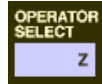
Keyboard Rate Scaling is useful for simulating the natural scaling found on many acoustic instruments --- for example, as on an acoustic piano, on which higher notes decay more quickly than lower notes.

## EG Copy

This convenient function (in the Edit Panel window) allows you to easily copy all EG Rate and Level values of one operator to another operator. (In the DX200 Editor window, use [DX200 Copy Tool](#).)

- 1 Select the source operator, by repeatedly clicking the [OPERATOR SELECT] button.

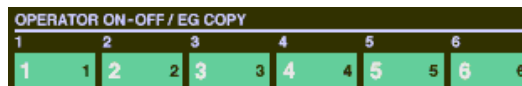
The currently selected operator number is shown at the top right of the LCD.



- 2 Click the [STORE] button.



- 3 Click the desired [EG COPY] button (1 - 6), corresponding to the number of the destination operator.



The source operator values are automatically copied to the destination operator. (The LCD shows the source operator values.)

## Free EG Window

The Free EG function gives you four independent tracks to which you can record complex real-time parameter changes, over a specified length of time, either in measures or seconds.

In this window, you can draw a custom Free EG "curve" for each track that controls a single selectable parameter (such as filter, resonance, LFO, etc.) over time. Four of these curves --- each affecting a different parameter --- can be played back automatically by simply playing the pattern. A variety of drawing and editing tools are available for creating unique, continuous parameter changes that would be impossible to achieve with conventional EGs.

Naturally, Free EG parameters and data are stored as pattern data, allowing each pattern to have its own Free EG settings.



### Individual Track Parameters

These parameters apply to each individual track (1 - 4) of the Free EG function. Each track can have its own EG "curve" and parameter. When a pattern is played, all Free EG tracks playback simultaneously, controlling the assigned parameters in real time.

- **EDIT SELECT**

**Settings:** Track 1, Track 2, Track 3, Track 4

This determines the particular track for editing.

- **TRACK PARAMETER Switch**

**Settings: ON, OFF**

This determines whether the specified track is active (ON) or not (OFF). This must be set to "ON" for the Free EG of the track to have any effect.

When this is set to "ON," two red dotted lines appear in the Free EG display. These represent the range over which the selected parameter (set in Track Parameter below) can be changed by the Free EG curve. The position of these two lines depends on the particular parameter and its current value or setting. A Free EG curve can extend above or below these lines; however, the portions that extend will have no further effect on the parameter (beyond the values represented by the lines).

- **TRACK PARAMETER**

This determines which DX200 parameter will be played by the EG "curve" in the selected Free EG track. Only one parameter can be selected for a track.

- **VALUE Display**

This shows the current value or setting for the selected Track Parameter. Keep in mind that this is only a display indication; the value/setting cannot be changed here, but must be changed from the appropriate parameter in the main control panel window (or the Details page).

- **TRACK Display Buttons 1 - 4**

Click on each of these to display the Free EG curves of two or more tracks simultaneously. Each track's curve is shown in a different color, making it easy to distinguish between the tracks.

## TRACK COMMON PARAMETERS

- **LENGTH**

**Settings:**

**1/2, 1, 3/2, 2, 3, 4, 6, 8 bars (number of measures)**

**1.0 ... 16.0 sec (seconds)**

The Length setting determines the time for recording and play of the Free EG sequence. There are two Length types, including length determined by number of measures (bars) or by absolute time (seconds).

**NOTE**

- Setting the Length to a number of bars automatically causes the Free EG to be affected by [Tempo](#).

- **TRIGGER**

**Settings : Free, MIDI In Notes, All Notes, Seq Start**

This determines how the Free EG track playback is triggered, as described below.

**Free**

After selecting a pattern, the first key pressed on the keyboard triggers the Free EG.

**MIDI in Notes**

The Free EG is triggered by a note on message from a connected MIDI instrument or sequencer.

**All Notes**

The Free EG is triggered by either a Note On message from a connected MIDI instrument or sequencer, or from the first recorded Step of the Step Sequencer.

**Seq Start**

The Free EG is triggered by the start of the Step Sequencer.

**• LOOP TYPE****Settings: Off, Forward, Forward Half, Alternate, Alternate Half**

This determines the type of loop for play of the Free EG sequence, as described below.

**Off**

The Free EG sequence plays once but does not loop. The parameter settings at the end of the Free EG sequence remain in effect.

**Forward**

The Free EG sequence loops from start to end.

**Forward Half**

The Free EG sequence loops from the middle to the end.

**Alternate**

The Free EG sequence loops from start to end, then end to start.

**Alternate Half**

The Free EG sequence loops from middle to end, then end to middle.

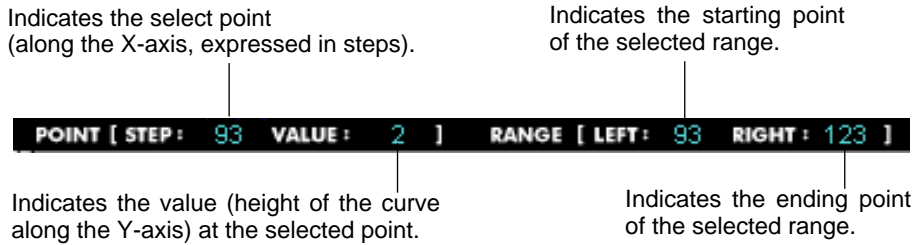
**• TEMPO****Range: 20 - 300 bpm (beats per minute)**

This determines the tempo or speed at which the selected Free EG track plays back.

**NOTE**

- The Tempo setting also affects the Step Sequencer patterns.

## Edit Tools



The toolbar at the left of the Free EG window contains the Edit tools. They are divided into two basic types: the Drawing tools (which include special wave tools) and the Transform tools.

### Using the Drawing Tools

#### 1) Click on the desired Drawing tool.

For details on each tool, refer to the descriptions in step #2 below.

#### 2) Hold down the mouse button at the desired start point, and simultaneously drag the mouse to draw the curve. Release the button to stop drawing.

For the pencil tool, the curve is immediately changed. For the other tools, a "ghost" curve temporarily appears (along with the original one) while you are drawing to indicate the new curve. Release the mouse button, and after a slight pause, the newly drawn curve replaces the old one. However, for any area left undrawn, the original curve remains.

#### pencil

The "pencil" tool lets you draw the desired curve in freehand.

#### straight

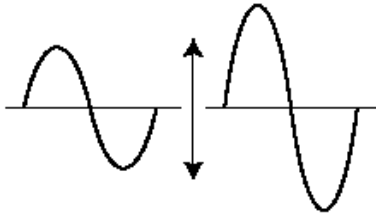
The "straight" tool lets you draw a perfectly straight line by "pulling" the cursor away from the starting point.



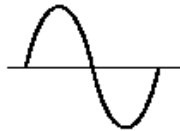
**pulse**  
**triangle**  
**sine**

These three wave tools let you easily draw the respective waveforms. The example illustrations below (using the sine wave) show how dragging the mouse affects the wave.

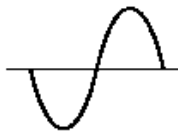
- Dragging the mouse up or down increases the amplitude of the wave, or the degree to which the parameter value will change.



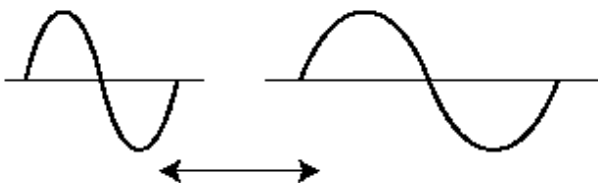
- Dragging up creates a waveform of normal phase.



- Dragging down reverses the phase by 180 degrees.



- Dragging to the right decreases the frequency, or makes the parameter value change slower, while dragging to the left increases the frequency.



## Using the Transform Tools

1) Click on the "cursor" button.

2) **Highlight (define) the area you wish to transform.**

Move the cursor to the beginning point of the desired area, then hold down the mouse button and drag the mouse to the right, highlighting or defining the area to be changed. Release the button to set the highlight end point.

### NOTE

- The Transform tools are "ghosted" unless an area is defined.

3) **Click on the desired Transform tool.**

For the "smooth" and "random" tools, clicking on the respective button starts the operation. After a short pause, the Free EG curve changes according to the transform.

#### **smooth**

As its name suggests, this transform "smooths" jagged edges in the curve. Use this repeatedly to make the edges as round as desired.

#### **random**

This transform randomly assigns different values at successive points in the curve. To a certain extent, this is the opposite of "smooth" above, since it produces jagged jumps and edges in the curve.

4) **If using "scale" or "move," use the mouse to adjust the setting as desired.**

For the "scale" and "move" tools, hold down the mouse button and drag the mouse in the appropriate direction, releasing it at the desired point.

#### **scale**

This useful tool lets you compress or expand the overall "dynamic range" of the curve. For example, if the changes in the Free EG are too sudden or dramatic, use this to compress the curve and make the changes more subtle. Dragging away from the central axis expands the range; dragging toward the axis compresses it. Dragging up maintains the original phase; dragging it down reverses the phase by 180 degrees.

#### **move**

This is a combination copy-and-paste operation, allowing you to "grab" a defined section of the curve and move it to another place. The copied section can be moved freely in any direction, and it replaces the original curve at the destination.

## Step Sequencer Window

The Step Sequencer is a powerful, versatile feature that allows you to quickly and easily create sophisticated looped Sequences. It's also highly interactive, since it can be triggered from the keyboard in a variety of ways, and can be used with the various real-time controls of the DX200. Each individual step event (Note, Velocity, Gate Time, and Control Change) can be accessed and edited by a specific "panel knob," over a maximum of 16 steps. The Step Sequencer features extensive memory as well, letting you save one Sequence pattern with each pattern (128 total).

The Step Sequencer share a set of "Common" parameters for added flexibility and control.



### Effect Block

- **PARAM (Parameter)**

**Settings: 0 ... 127**

This determines the degree for the effect selected in Type below.

- **TYPE**

**Settings: Delay 1-3, Reverb, Flanger 1-2, Chorus, Phaser 1-3, AmpSim (Amp Simulator) 1-3**

Determines the Effect type.

## COMMON Block

### • TEMPO

#### Settings: 20 ... 300 bpm (beats per minute)

The Tempo setting determines the tempo for the DX200's internal clock in beats per minute (BPM), between a range of 40 and 240 BPM. The Tempo setting controls Step Sequencer playback.

#### NOTE

- When Tempo is set to "MIDI," the DX200's clock can be controlled by the clock of an external MIDI device such as a music sequencer, connected to the MIDI [IN] terminal.
- When the [Free EG Length](#) parameter is set to one of the "bar" values, the Free EG sequence will be synchronized with the Tempo set here.

### • BEAT

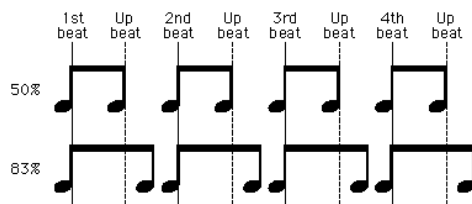
#### Settings: 8, 12, 16

Determines the number of steps in the selected Sequence for playback.

### • SWING

#### Settings: 50 ... 83%

The Swing parameter lets you apply a Swing rate to the Sequence to slightly shift certain beats in order to create a "swing" feel. A setting of "50%" produces no Swing and "83%" produces maximum Swing. For information about how the Swing levels affect the rhythm of the Sequence, see the illustration below.



### • REVERSE

#### Setting: On, Off

This function lets you completely turn the Sequence around, and play all the notes backwards.

### • GATE TM (Gate Time)

#### Settings: 1 ... 200%

This is an offset control and determines the note length of the notes of the Sequence, making all notes either shorter or longer, as a percentage of the original. This lets you, for example, set the note to play staccato, so that its sound switches off well before its step time is over. Or you can have the note hold right up to the start of the subsequent step so that it slurs (legato) into the next note. A setting of "100%" maintains the original relationship between notes. Lower values decrease the Gate Time, and higher values increase it.

#### NOTE

- When the combined value of any individual note's Gate Time (as set from the [Gate Time Bank knobs](#)) and the offset Gate Time (set here) exceeds 100%, the note is played legato.

## TRACK PARAMETER block

- **CUTOFF (Cutoff Frequency)**

**Settings:** Synth track 0 ... 127

Rhythm 1 ... 3 track -64 ... 63

Determines the frequency at which the Filter effect starts of each track. The higher the value, the higher the frequency.

- **RES (Resonance)**

**Settings:** Synth track -16 ... 100

Rhythm 1 ... 3 track -64 ... 63

Determines the emphasis of the resonant peak of the Filter (at the Cutoff frequency) of each track.

- **VOLUME**

**Settings:** 0 ... 127

Controls the volume level of each track.

- **PAN**

**Settings:** Synth track C, L63 ... C ... R63

Rhythm 1 ... 3 track RND (Random), L63 ... C ... R63

Determines the panning position (the left or right placement in the stereo image) spectrum of each track. The Random setting (available only for Rhythm tracks) automatically and randomly specifies a Pan position for each instrument sound.

- **WET**

**Settings:** 0 ... 127

Changes the depth or degree of the Effect of each track. When set to the 0 (all the way left), the Effect sound cannot be heard.

## PLAY/STOP buttons

Click the [PLAY] button to start the Sequence. The Sequence repeats (loops) until you click the [STOP] button to stop it.

## NOTE NO./INST.SELECT/VELOCITY/GATE TIME/PITCH

The Step Sequencer allows you to enter notes and other parameter settings to a Sequence one-by-one.

- **NOTE NO. (Note Number) Bank (Synth track only)**

**Range:** C-2 ... G8 (MIDI note numbers 0 ... 127)

This bank of 16 virtual "knobs" lets you set the note number for each step of the Sequence. To set the note, adjust the parameter normally by "turning" the appropriate knob, or click on the value window above the knob to call up the pop-up value list, and click the desired note number.

- **INST. SELECT Bank (Rhythm tracks only)**

**Settings: Refer to "Inst List" of the DX200 Owner's Manual.**

This bank of 16 virtual "knobs" lets you select the instrument sound (drums, percussion, bass, sound effects) for each step of the Sequence. To set the instrument, adjust the parameter normally by "turning" the appropriate knob, or click on the instrument window above the knob to call up the pop-up list, and click the desired instrument.

- **VELOCITY Bank**

**Range: Rest, 1 ... 127**

This bank of 16 virtual "knobs" lets you set the note velocity for each step of the Step Sequencer pattern. To set the velocity, you can use one of these methods:

- Adjust the parameter normally by "turning" the appropriate knob.
- Move the cursor to the value window above the knob and click in the top half of the window to step up through the values, or click in the bottom half to step down. You can also continuously fast-forward/-reverse through the values by clicking and dragging --- either up/down, or right/left.
- Use [shift] and the cursor keys to step or fast-forward/-reverse through the values.
- Enter the value directly from the computer keyboard.

When set to "Rest," a rest (no sound) is inserted for the step.

- **GATE TIME Bank**

**Range: 1 ... 1600%**

This bank of 16 virtual "knobs" lets you set the gate time (or note length) for each step of the Step Sequencer pattern. To set the gate time, you can use one of these methods:

- Adjust the parameter normally by "turning" the appropriate knob.
- Move the cursor to the value window above the knob and click in the top half of the window to step up through the values, or click in the bottom half to step down. You can also continuously fast-forward/-reverse through the values by clicking and dragging --- either up/down, or right/left.
- Use [shift] and the cursor keys to step or fast-forward/-reverse through the values.
- Enter the value directly from the computer keyboard.

Keep in mind that the final gate time of all the notes in the pattern is also determined by the Common [Gate Time](#) control.

- **PITCH Bank (Rhythm tracks only)**

**Range: -64 ... +24**

This bank of 16 virtual "knobs" lets you set the pitch for each step of the Step Sequencer pattern.

To set the pitch, you can use one of these methods:

- Adjust the parameter normally by "turning" the appropriate knob.
- Move the cursor to the value window above the knob and click in the top half of the window to step up through the values, or click in the bottom half to step down. You can also continuously fast-forward/-reverse through the values by clicking and dragging --- either up/down, or right/left.
- Use [shift] and the cursor keys to step or fast-forward/-reverse through the values.
- Enter the value directly from the computer keyboard.

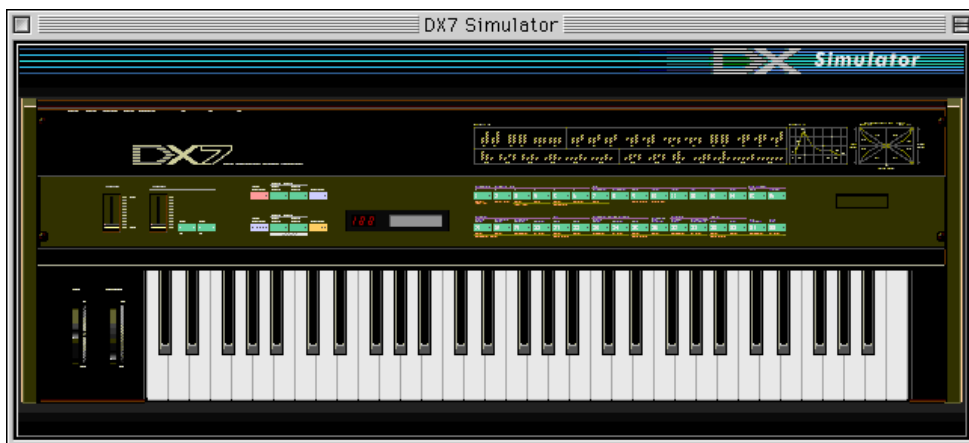
- **Step Mute buttons**

These determine whether the individual step of the track is on (sounded) or off (muted).

## DX7 Simulator Window

Select this window by clicking "Edit" on the menu bar, then selecting "DX7 Simulator ." You can also call it up from the [toolbar](#). Keep in mind that you can't directly do any editing from this window. However, you can do three things here:

- 1) Play the virtual keys --- and hear the connected DX200 sounds.
- 2) Open a new Pattern, or store a Pattern that you've been editing --- by clicking on the virtual cartridge slot.
- 3) Click on the virtual panel controls --- and call up the Edit Panel window, for editing in the fashion of an actual DX7.

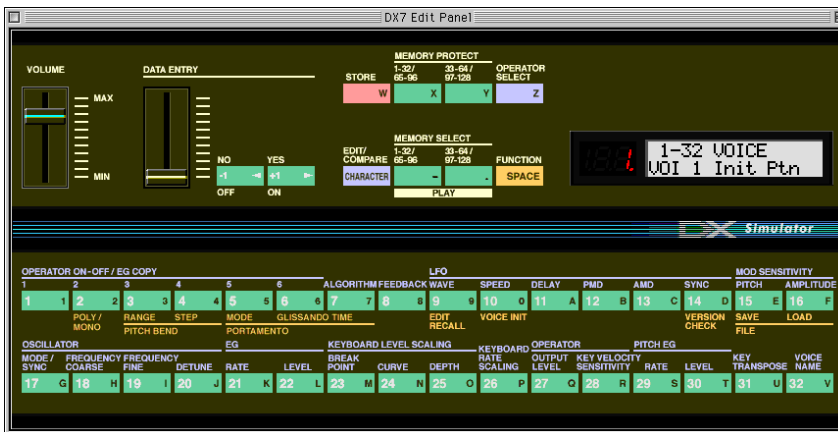


## DX7 Edit Panel Window

This window provides a "virtual" DX7 panel, and lets you edit the patterns much as you would if you were operating the panel controls of an actual DX7 keyboard. To call up this window, click anywhere on the panel control area of the DX7 Simulator window.

### DX7 Edit Panel Window / Play and Edit Modes

To select the Play mode, click either one of the [MEMORY SELECT] buttons.



- **Volume slider**

This adjusts the overall output level.

- **DATA ENTRY slider**

This is used for making rapid or large changes. Moving it all the way down and up covers the full range available for each parameter.

- **[NO]/[YES] buttons**

These are used to increment or decrement parameter values, to turn a function on or off, answer display prompts, and to move the cursor when naming a pattern.

- **[STORE] button**

This button calls up the [Store](#) operation, for storing the selected pattern to the memory of the DX200. In the Edit mode, this selects the [EG Copy](#) function.

**NOTE**

- After you've stored a pattern to the DX200, make sure to [save](#) the pattern to a [DX200 File](#).



- **[MEMORY PROTECT 1-32/65-96]/[MEMORY PROTECT 33-64/97-128] buttons**

These buttons let you view and change the MEMORY PROTECT status.

**NOTE**

- These are effective only when using the Store operation in the DX7 Edit Panel window.

- **[OPERATOR SELECT] button**

This button is used to select the desired operator (1-6) for editing in the Edit mode. Each successive click of the button steps through the available operators. (If an operator is off, it will be unavailable.) The operator number is shown at the top right of the LCD for the appropriate parameters.



Currently selected operator (Operator 6).

Use this button when editing the following Edit parameters:

- Amplitude Modulation Sensitivity
- Oscillator
- Envelope Generator (EG)
- Keyboard Level Scaling
- Keyboard Rate Scaling
- Operator (Output Level and Velocity Sensitivity)

These parameters can all be edited independently for each of the operators.

- **[EDIT/COMPARE] button**

This button is used to select the [Edit mode](#) or the [Compare](#) function.

- **[MEMORY SELECT 1-32/33-64] buttons**

These buttons are used to select the four pattern banks of the User patterns: 1-32/65-96 or 33-64/97-128. Clicking either of these buttons also activates the [Play mode](#).

- **[FUNCTION] button**

This button is used to select the [Function mode](#), which lets you edit certain global parameters of the pattern or instrument (printed in yellow below the appropriate voice buttons).

- **LED display**

The LED window indicates the number of the selected pattern. It also indicates whether the original or edited pattern is active when using the [Compare](#) function.

- **LCD display**

The LCD window displays the current status of the DX200. In the Play mode, it indicates the selected pattern bank, and the selected pattern name and number. In the Edit and Function modes, it shows the selected parameter, function, or operation, along with the relevant value(s) or setting(s).

- **Pattern Select buttons**

In the Play mode, these are used to select patterns 1-32/65-96 (or 33-64/97-128) on the DX200. In the Edit mode, the buttons are used to select the Edit parameters (printed in lavender above the buttons). In the Function mode, they are used to select the Function parameters (printed in yellow below the appropriate buttons).

The following descriptions explain each button's use in the Edit mode.

- **[1] - [6] OPERATOR ON/OFF-EG COPY (1-6)**

These buttons have two functions: 1) to turn individual operators on and off while you are programming a pattern, and 2) to select the operator to which you wish to **copy** certain **envelope generator** (EG) settings.

- **[7] ALGORITHM**

This button is used to select the **Algorithm** parameter.

- **[8] FEEDBACK**

This button is used to select the **Feedback** parameter.

- **[9] - [14] LFO**

These buttons are used to select the **LFO** (Low Frequency Oscillator) parameters.

- **[9] WAVE**

This is used to select the **LFO Waveform** parameter.

- **[10] SPEED**

This is used to select the **LFO Speed** parameter.

- **[11] DELAY**

This is used to select the **LFO Delay** parameter.

- **[12] PMD**

This is used to select the **LFO Pitch Modulation Depth** parameter.

- **[13] AMD**

This is used to select the **LFO Amplitude Modulation Depth** parameter.

- **[14] SYNC**

This is used to select the **LFO Key Synchronization** parameter.

- **[15], [16] MOD SENSITIVITY**

These buttons are used to select the **Modulation Sensitivity** parameters.

- **[15] PITCH**

This is used to select the **Pitch Modulation Sensitivity** parameter.

- **[16] AMPLITUDE**

This is used to select the [Amplitude Modulation Sensitivity](#) parameter.

- **[17] - [20] OSCILLATOR**

These buttons are used to select the [Oscillator](#) parameters.

- **[17] MODE/SYNC**

These buttons are used to alternately select the [Oscillator Mode](#) and [Oscillator Sync](#) parameters.

- **[18] FREQUENCY COARSE**

This is used to select the [Oscillator Frequency Coarse](#) parameter, letting you make large changes in the current operator's frequency.

- **[19] FREQUENCY FINE**

This is used to select the [Oscillator Frequency Fine](#) parameter, letting you make small changes in the current operator's frequency.

- **[20] DETUNE**

This is used to select the [Oscillator Detune](#) parameter.

- **[21], [22] EG**

These buttons are used to select the [EG Rate 1 - 4](#) and [EG Level 1 - 4](#) parameters.

- **[21] RATE**

This is used to select the [EG Rate 1 - 4](#) parameters.

- **[22] LEVEL**

This is used to select the [EG Level 1 - 4](#) parameters.

- **[23] - [25] KEYBOARD LEVEL SCALING**

These buttons are used to select the [Keyboard Level Scaling](#) parameters.

- **[23] BREAK POINT**

This is used to select the [Keyboard Level Scaling Break Point](#) parameter.

- **[24] CURVE**

This is used to select the [Keyboard Level Scaling Curve](#) parameters.

- **[25] DEPTH**

This is used to select the [Keyboard Level Scaling Depth](#) parameters.

- **[26] KEYBOARD RATE SCALING**

This is used to select the [Keyboard Rate Scaling](#) parameter.

- **[27], [28] OPERATOR**

These buttons are used to select the [Operator](#) parameters.

- **[27] OUTPUT LEVEL**

This is used to select the [Operator Output Level](#) parameter.

- **[28] KEY VELOCITY SENSITIVITY**

This is used to select the [Operator Velocity Sensitivity](#) parameter.

- **[29], [30] PITCH EG**

These buttons are used to select the [Pitch EG](#) parameters.

- **[29] RATE**

This is used to select the [Pitch EG Rate 1 - 4](#) and [Pitch EG Rate Scaling](#) parameters.

- **[30] LEVEL**

This is used to select the [Pitch EG Level 1 - 4](#) and [Pitch EG Level Range](#) parameters.

- **[31] KEY TRANSPOSE**

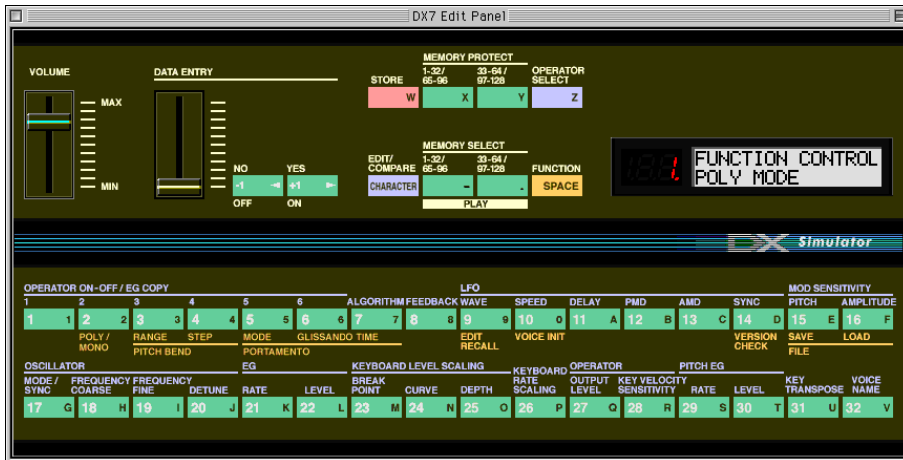
This is used to select the [Key Transpose](#) parameter.

- **[32] VOICE NAME**

This is used to select the [Pattern Name](#) parameter.

## DX7 Edit Panel Window / Function Mode

To select the Function mode, click the [FUNCTION] button.



- **[2] POLY/MONO**

This is used to select the [Poly/Mono](#) parameter.

- **[3], [4] PITCH BEND**

These buttons are used to select the [Pitch Bend](#) parameters.

- **[3] RANGE**

This is used to select the [Pitch Bend Range](#) parameter.

- **[4] STEP**

This is used to select the [Pitch Bend Step](#) parameter.

- **[5] - [7] PORTAMENTO**

These buttons are used to select the [Portamento](#) parameters.

- **[5] MODE**

This is used to select the [Portamento Mode](#) parameter.

- **[6] GLISSANDO**

This is used to select the [Portamento Glissando \(Step\)](#) parameter.

- **[7] TIME**

This is used to select the [Portamento Time](#) parameter.

- **[9] EDIT RECALL**

This is used to select the [Edit Recall](#) function.

- **[10] VOICE INIT**

This is used to select the [Pattern Initialize](#) function.

- **[14] VERSION CHECK**

This is used to select the [Version Check](#) function.

- **[15], [16] FILE**

These buttons are used to select the [File Save](#) and [File Load](#) operations.

- **[15] SAVE**

This is used to select the [File Save](#) operation.

- **[16] LOAD**

This is used to select the [File Load](#) operation.

## Edit Recall

This Edit Panel window function is used to recall the edited settings of a pattern, in the event you have inadvertently left the editing mode and selected another pattern.

- 1) Click [FUNCTION] to enter the Function mode.
- 2) Click [EDIT RECALL].
- 3) Answer the display prompts "EDIT RECALL ?" and "ARE YOU SURE ?" by clicking [YES] twice.

### NOTE

- Edit Recall is available only in the Edit Panel window.

## Pattern Init (Initialize)

The Pattern Initialize function lets you create a "blank slate" starting point for programming a new pattern.

- 1) Click [FUNCTION] to enter the Function mode.
- 2) Click [VOICE INIT].
- 3) Answer the display prompts "VOICE INIT ?" and "ARE YOU SURE ?" by clicking [YES] twice.

The resulting initialized pattern has the following settings:

- \* Algorithm 1
- \* No modulation
- \* Operator 1 Output Level set to 99; all other operators off
- \* "Square" envelopes (EGs)
- \* All frequency ratios set to 1.00

### NOTE

- Although this operation pertains to the Edit Panel window, a similar Pattern Initialize function is also available in the DX200 Editor window from the [DX Pattern List](#) dialog box.

## Version Check

This Edit Panel window function is used to check the current version of the DX200 Editor software.

- 1) Click [FUNCTION] to enter the Function mode.
- 2) Click [VERSION CHECK].

The current software version is shown in the LCD.

## File Operations

These two file-related operations let you Save or Load DX200 File data from the Edit Panel window.

- **SAVE**

This lets you save the current set of 128 patterns to a DX200 File.

- 1) Click the **[FUNCTION]** button.
- 2) Click **[SAVE]** to call up the **Save DX200 File dialog box**.  
(Refer to [Save DX200 File](#) for detailed instructions.)

- **LOAD**

This lets you load (open) a set of 128 User patterns from an existing DX200 File.

- 1) Click the **[FUNCTION]** button.
- 2) Click **[LOAD]**.
- 3) Answer the display prompts **"64 VOICES LOAD?"** and **"ARE YOU SURE?"** by clicking **[YES]** twice.  
This calls up the Open DX200 File dialog box.  
(Refer to [Open DX200 File](#) for detailed instructions.)



# File Menus

When the DX200 Editor is active and selected, the following functions appear in the File menu:

- **New DX200 File**
- **Open DX200 File**
- **Save DX200 File**
- **Save DX200 File As**

These are used for creating, saving, and opening your original DX200 Files. Using the Save (or Save As) command here saves all 128 User patterns to a selected DX200 File. (The special .DXC extension allows you to easily organize the files.)

By keeping a library of your original patterns as DX200 Files, you can easily call up the settings you need (with the Open command) and quickly insert them to a song or transmit them to your tone generator/sound card.

## NOTE

- Before saving a set of User patterns as a DX200 File, make sure to **store** the pattern currently being edited. If a pattern is not properly stored, it will not be contained in the DX200 File data.

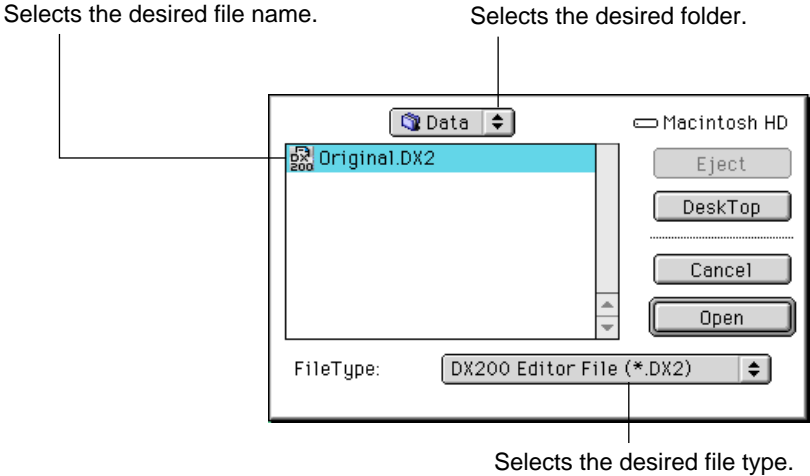
## New DX200 File

Use this function to create a new DX200 File.

If the currently selected pattern has been edited, the display prompts you to store the pattern before opening a new DX200 File. (See [Storing a DX200 Pattern.](#)) The new DX200 File contains the factory preset 256 patterns. (These are the same patterns that are automatically loaded when you open the DX200 Editor.)

## Open DX200 File

Use this function to open an existing DX200 File.

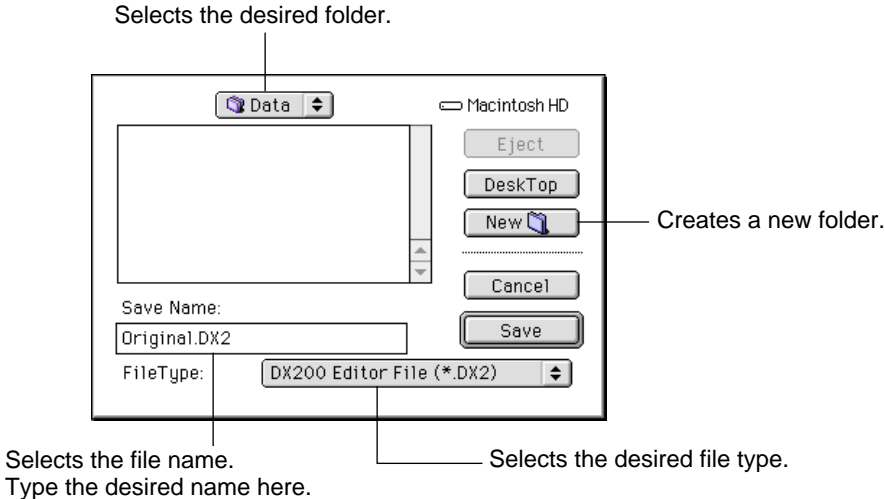


**NOTE**

- The "\*\*\*\*.DXC" file can be selected and opened with FileType.

## Save DX200 File / Save DX200 File As

Use these commands to save the current set of User patterns to a DX200 File. (The "Save As" command lets you specify a different file name than the original one.)



**NOTE**

- Save DX200 File" can also be selected from the toolbar.

# Edit Menus

When the DX200 Editor is active and selected, the following functions appear in the Edit menu:

- **DX7 Simulator**
- **DX200 Librarian**

The following functions are not available from the DX7 Simulator and the DX7 Edit Panel window;

- **DX200 Pattern List**
- **DX200 Copy Tool**
- **DX200 Store**
- **DX200 Compare**

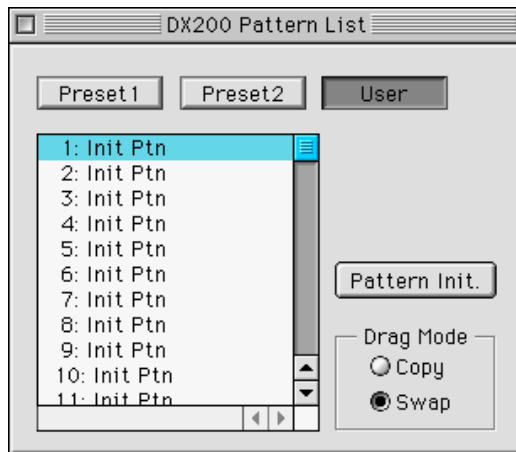
## DX200 Pattern List

In the DX200 Pattern List dialog box you can:

- **Select a pattern for editing.**
- **Initialize a pattern to the default settings.**
- **Copy or swap patterns in the Preset pattern banks.**

### NOTE

- "DX200 Pattern List" is only available from the DX200 Editor window. It can also be selected from a pop-up menu by clicking any inactive part of the DX200 Editor window pressing control key.



## Pattern List Combo Box

Select a pattern by clicking on the desired pattern name in the list, and 1 Pattern Bulk data is transmitted automatically.

- **Copying a pattern to another pattern location**

- 1) Set Drag Mode to "Copy."

- 2) Click the desired pattern and drag it to the desired location. Keep in mind that this replaces (and erases) the pattern at the location.

- **Swapping the location of two patterns**

- 1) Set Drag Mode to "Swap."

- 2) Click the desired pattern and drag it to pattern you wish to swap it with. This simply moves the pattern to the selected location; it does not affect the actual data.

Copy and Swap operations can also be executed from the [DX200 Librarian](#) dialog box.

## Pattern Init.

Click this to initialize the selected pattern to its [default parameter values](#). This gives you a "blank slate" from which to create a new pattern.

## Drag Mode

In the Pattern List combo box, a pattern can be dragged to another pattern location. This setting determines the result of that operation: whether the pattern is copied to the new location, or swapped with the pattern at the new location.

## DX200 Copy Tool

The DX200 Copy Tool box allows you to quickly copy the parameter values of one operator to another. You can copy all operator parameter values or just the EG values. This box also allows you to view the shapes of each operator's EG and the Pitch EG --- giving you quick, at-a-glance information about all current settings for the EGs.

### To select DX200 Copy Tool:

Click on any of the following title bars in the DX200 Editor window:

- PITCH ENVELOPE GENERATOR
- OSCILLATOR
- ENVELOPE GENERATOR
- KEYBOARD LEVEL SCALING
- KEYBOARD RATE SCALING
- OPERATOR
- MOD SENS

This directly calls up the DX200 Copy Tool box. It can also be selected from a pop-up menu by clicking any inactive part of the DX200 Editor window pressing control key.

#### NOTE

- "DX200 Copy Tool" is only available from the DX200 Editor window.



### To use the Copy Tool:

Click on the desired operator or EG and drag it to the operator/EG to which you wish to copy. For example, to copy the EG settings of Operator 6 to Operator 2, click on the EG corresponding to Operator 6 and drag it to the EG corresponding to Operator 2.

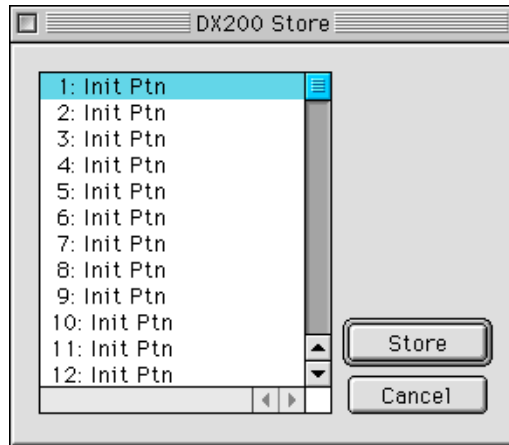
The top row of boxes ("OP COPY") lets you copy all parameter values of one operator to another. The second row ("EG COPY") is for copying only EG values of the operators. The "PITCH EG" box is only for viewing edits made to the Pitch EG parameters.

## DX200 Store

Use the DX200 Store dialog box to store the pattern currently being edited to one of the User pattern memory spaces. Once a pattern or patterns have been stored in this way, you can [save](#) the entire set of 128 User patterns to a [DX200 File](#).

**NOTE**

- "DX200 Store" is only available from the DX200 Editor window. It can also be selected from a pop-up menu by clicking any inactive part of the DX200 Editor window pressing control key.



**1) Click the desired location for the newly edited pattern.**

**2) Click "Store" to store the pattern to the selected location.**

Keep in mind that this replaces (and erases) the pattern at the location with the newly edited one.

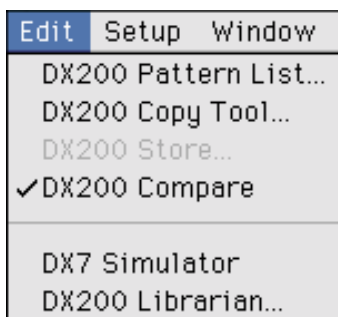
## DX200 Compare

The Compare function lets you switch back and forth between the current edited condition of the pattern and its original un-edited condition. This allows you to easily hear and compare the changes you make to a pattern with its original condition.

### 1) Edit the pattern.

### 2) Select "DX200 Compare."

You can do this from the Edit menu. You can also quickly select Compare by clicking any inactive part the window pressing control key and clicking "DX200 Compare" in the pop-up menu.



In the Compare condition, a check appears beside "DX200 Compare" in the menu. All parameter values are ghosted and cannot be edited. Play the connected MIDI keyboard (or click the keys in the DX200 Editor window) to hear the original un-edited pattern.

### 3) Select "DX200 Compare" again to return to the edited condition.

Do this as often as you wish to go back and forth between the two conditions.

#### NOTE

- "DX200 Compare" is ghosted and cannot be selected if the pattern has not yet been edited.
- "DX200 Compare" is only available from the DX200 Editor window. However, an identical Compare function is available in the Edit Panel window. (See [Compare](#).)

## DX7 Simulator

Selecting this calls up the [DX7 Simulator Window](#).

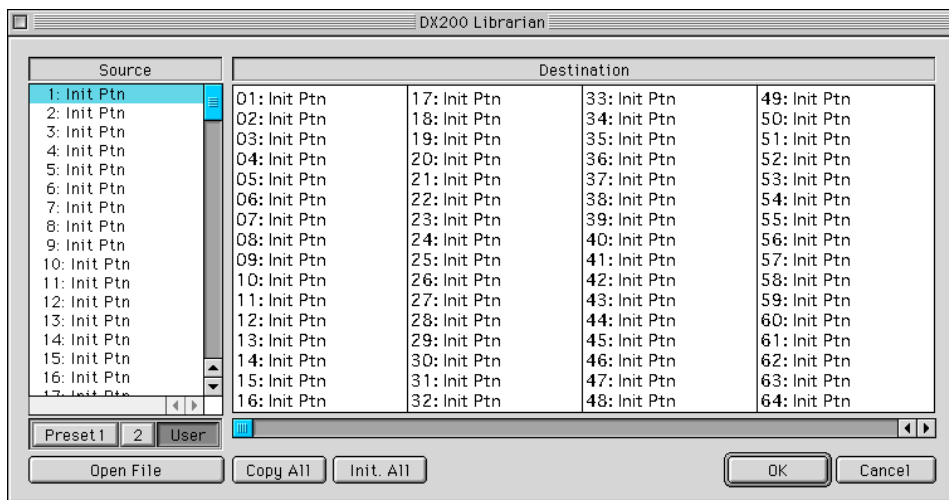
**NOTE**

- You can also call up the DX7 Simulator window from the [toolbar](#).



## DX200 Librarian

The Librarian dialog box gives you a set of convenient, easy-to-use tools for organizing the User patterns of your DX200 Files.



The Source box shows User patterns contained in the opened DX200 File (see Open Cartridge File below). The Destination box contains the set of User patterns currently in the DX200 Editor, and represents the new DX200 File to be created.

First copy the desired patterns from the Source to the Destination, then exit the Librarian and save the new set of patterns as a DX200 File. You can open different DX200 Files one by one, and freely copy the desired patterns to the Destination before saving.

Copying a pattern from the Source box to the Destination box:

- 1) Click the desired pattern in the Source box. (This is the pattern you will be copying.)
- 2) Drag the highlighted pattern to the Destination box, and drop it at the desired number. (This is the location to which the pattern will be copied. The previous pattern at the location is erased and replaced with the new one.)
- 3) Click "OK" to exit the Librarian.
- 4) [Save](#) the newly created set of User patterns as a DX200 File.

- **Open DX200 File**

Click this to select and open an existing DX200 File. (See [Open DX200 File.](#)) The patterns of the opened DX200 File are shown in the Source box.

- **Copy All**

Clicking this button copies all the patterns listed in the Source box to the Destination box. (This is the same as [Open DX200 File.](#))

**NOTE**

- This operation erases all previous patterns in the Destination box and replaces them with the Source patterns.

- **Init. All**

Clicking this button initializes all the Destination patterns to their default settings. (See [Initial Pattern Default Settings.](#))

**NOTE**

- This operation erases all previous patterns in the Destination box and replaces them with identical initialized patterns.

- **OK**

Click this to actually execute any of the Librarian operations and exit from the Librarian box.

- **Cancel**

Click this to exit the Librarian box without executing any of the Librarian operations.

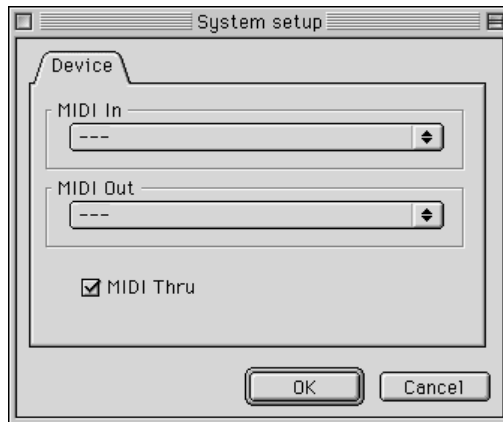
# Setup Menus

When the DX200 Editor is active and selected, the following functions appear in the Setup menu:

- **System Setup**
- **DX200 Editor Setup**
- **Transmit DX200 Bulk Dump Data**
- **Receive DX200 Bulk Dump Data**

## System Setup

This opens the Properties dialog for setting the MIDI In/Out of the OMS driver.



- **MIDI In**

This box is for selecting the MIDI input device. The device corresponds to the DX200's MIDI OUT is selected here.

- **MIDI Out**

This box is for selecting the MIDI output device. The parameters of the DX200 Editor are transmitted to the device selected here. The device corresponds to the DX200's MIDI IN is selected here.

- **MIDI Thru**

When this is checked, the MIDI signal received from the MIDI IN will pass through the device selected with MIDI Out (see above) before being sent to tone generator.

**NOTE**

- The names of devices vary with the setup files. Use the setup file appropriate to your system.
- You need the serial port MIDI interface for using the serial port, and the USB MIDI interface for using the USB port.

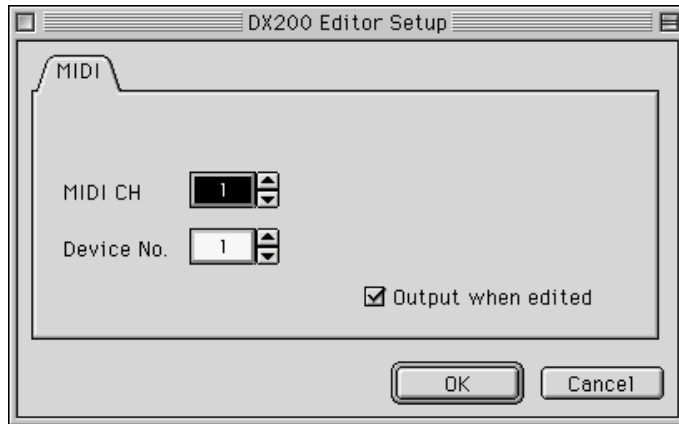
- **OK**

Click this to apply the setting and exit from the System Setup dialog.

- **Cancel**

Click this to exit the System Setup dialog box without changing the setting.

## DX200 Editor Setup



### NOTE

- "DX200 Editor Setup" can also be selected from the [toolbar](#).

#### • MIDI Channel

**Range: 1 ... 16**

This determines which MIDI channel is used for sending DX200 Editor data. Set this to match the receive channel for the Part you wish to control.

#### • Device Number

**Range: 1 ... 16**

This determines which tone generator the DX200 Editor will send data to. This should be set to same number as the Device Number of the external device. If you have multiple tone generators in your MIDI setup and each is set to a different Device Number, this parameter lets you select which tone generator will be affected by the DX200 Editor. If you are using only one tone generator, this should be set to "1."

#### • Output when edited

When this is checked, any edits that you make with the DX200 Editor are instantly and automatically transmitted to the DX200. This ensures that you can audition edits as soon as you make them.

#### • OK

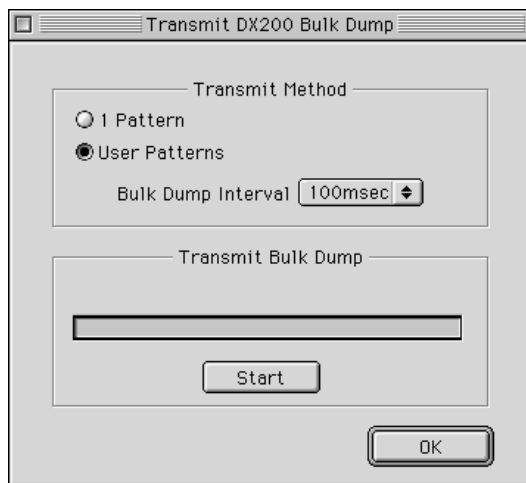
Click this to apply the setting.

#### • Cancel

Click this to exit the DX200 Editor dialog box without changing the setting.

## Transmit DX200 Bulk Dump Data

This is used for directly transmitting the current DX200 Editor pattern data as MIDI bulk dump data to the DX200. To use this, highlight the command in the menu, then click.



### NOTE

- When you want to store the data to the User Pattern memory of the DX200, the Memory Protect should be turned "Off."

### • Transmit Method

#### 1 Pattern

When this is selected, only the data for the currently selected pattern will be transmitted.

#### User Patterns

When this is selected, User patterns will be transmitted.

#### Bulk Dump Interval

##### Range: 0msec ... 1.5sec

This parameter is available when "User Patterns" above is selected. Bulk Dump Interval determines the amount of time (in clocks) that separates each data transmission. If the DX200 "chokes" on the incoming MIDI data, or DX200 Editor has trouble sending all the data properly, or some other trouble occurs, try setting the Interval to a higher number.

### • Transmit DX200 Bulk Dump

#### Start

First, click this button to start transmission of the data. Then start transmitting the bulk data.

### • OK

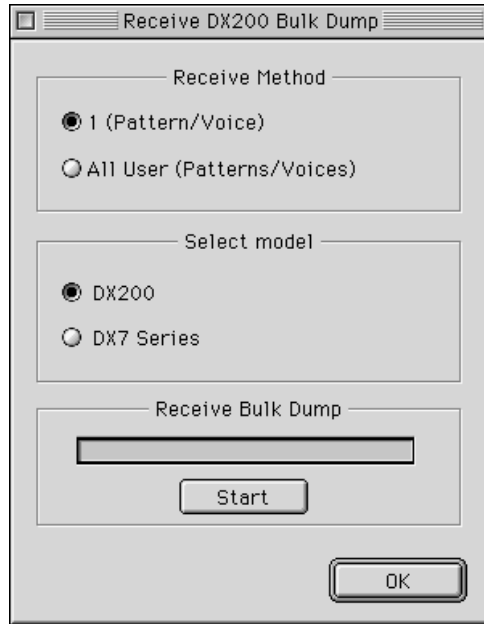
Click this to exit from the dialog box once all data has been transmitted.

### NOTE

- "Transmit DX200 Bulk Dump Data" can also be selected from the [toolbar](#).

## Receive DX200 Bulk Dump Data

This is used for importing DX200 pattern data from a DX200 or DX7/DX7II. All current settings will be replaced by the received data.



### NOTE

- Make sure the connection of the MIDI IN/OUT jacks of transmitting device and the OUTPUT/INPUT of computer. (When the DX7 transmits to the computer, connect only MIDI OUT jack of DX7 and the INPUT of computer. Also transmit data from the DX7 after starting the bulk receiving on "Receive DX200 Bulk Dump" dialog.
- Refer to the "MIDI Data Format" in the DX200 Owner's Manual about the data compatibility with transmitting device.

### • Receive Method

#### 1 (Pattern/Voice)

When this is selected, only the data for one pattern/voice will be received. This data is loaded into the edit buffer (temporary memory storage).

### NOTE

- Make sure to store the received pattern/voice after executing this operation. Otherwise the data will be lost upon selecting a different pattern/voice.

#### All User (Patterns/Voices)

When this is selected, the data for 128 User patterns/voices will be received.

- **Select Model**

- **DX200**

- Click this when receiving data from the DX200.

- **DX7 Series**

- Click this when receiving data from the DX7 Series.

- **Receive DX200 Bulk Dump**

- **Start**

- First, click this button to start reception of the data. Then start transmitting the bulk data from DX200.

- The progress bar indicates how much data has been received. When the bar is completely filled, all data has been received.

- **OK**

- Click this to exit from the dialog box once all data has been received.

## Initial Pattern Default Settings

**PATTERN NAME**  
Init Ptn

**FREE EG** 1 off 3 off  
2 off 4 off

**STEP SEQ.**

**FILTER**  
type cutoff res cutoff scaling input gain  
LPF24 127 0 0 0

**DISTORTION**  
switch drive dry/wet amp type LPF out level  
On 64 0.63 W stack 5.0k 60

**FM LEVEL** level OSC type  
127 0 White

**NOISE**

**ALGORITHM** 1

**OP1 Amplitude EG**

**FILTER EG**  
A D S R depth velo sense  
0 0 0 0 0 0

**2-BAND EQ**  
low gain freq mid gain freq res  
0 0.140k 0 2.0k 1.0

**LFO**  
wave form speed PMD AMD FMD delay mode sync  
TRI 35 0 0 0 0 0 sngl ON

**PITCH EG**  
rate  
R1 R2 R3 R4  
99 99 99 99  
level  
L1 L2 L3 L4  
50 50 50 50  
range rs velo switch  
8va 0 OFF

**KEY TRANS POSE** range step step time mode switch detune  
C3 2 0 0 0 Sus-Key P Retain OFF 0

**PORTAMENTO**

**UNISON**

**POLY MONO**

**RANDOM PITCH**

**FEEDBACK** 0

OP No.	OSCILLATOR			OPERATOR		ENVELOPE GENERATOR								MOD SENS		KEYBOARD LEVEL SCALING				KEY BOARD RATE SCALING	
	mode / sync	frequency coarse fine	detune	output level	velo sense	rate R1 R2 R3 R4	level L1 L2 L3 L4	pitch	amp	break point	curve L R	depth L R									
1	Ratio	1.00	0	99	0	99	99	99	99	99	99	99	99	0	0	A-1	-LIN	-LIN	0	0	0
2	Ratio	1.00	0	0	0	99	99	99	99	99	99	99	99	0	0	A-1	-LIN	-LIN	0	0	0
3	Ratio	1.00	0	0	0	99	99	99	99	99	99	99	99	0	0	A-1	-LIN	-LIN	0	0	0
4	Ratio	1.00	0	0	0	99	99	99	99	99	99	99	99	0	0	A-1	-LIN	-LIN	0	0	0
5	Ratio	1.00	0	0	0	99	99	99	99	99	99	99	99	0	0	A-1	-LIN	-LIN	0	0	0
6	Ratio	1.00	0	0	0	99	99	99	99	99	99	99	99	0	0	A-1	-LIN	-LIN	0	0	0



## Algorithm List

