



DX Simulator Manual

Important Notices

The DX Simulator provides an easy, intuitive way to edit and create your own original DX voices for the PLG150-DX Advanced DX/TX Plug-in Board.

NOTE

- Do not use any of the panel controls on an external tone generator while editing the DX voices with the DX Simulator, since this may inadvertently change the settings of the PLG150-DX.

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About this manual

- The screens shown in this manual are almost all on Windows systems. Although some screens may differ for Macintosh systems, the basic operations are the same.
- Keyboard shortcuts referred in this manual are effective for only Windows system.

For Windows users

When you use the DX Simulator, set "Font Size" to "Small Fonts" at the "Control Panel | Display | (Settings |) Advanced" page. If "Large Fonts" is selected, messages in some dialog boxes may not be displayed properly.

About the DX Simulator

The DX Simulator is providing an exceptionally simple and convenient way to edit and control all of the [parameters](#) on the PLG150-DX Advanced DX/TX Plug-in Board — even providing the same control format as used on the original DX7.

DX Simulator lets you [store](#) your edits as an original Custom voice and [save](#) up to 64 Custom voices directly to the PLG150-DX. Naturally, you can save additional sets of 64 Custom voices to floppy disks or your hard disk drive as [DX Cartridge Files](#). The DX Simulator also features a convenient, easy-to-use [DX Librarian](#) that lets you organize your Custom voices.

Editing on the DX Simulator can be done from two different windows: [Edit Panel](#) or [Edit List](#). The DX Simulator lets you edit the Part parameters the sound of the DX voices from the software side (Host application) without actually having to save the changes to a Custom voice.

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

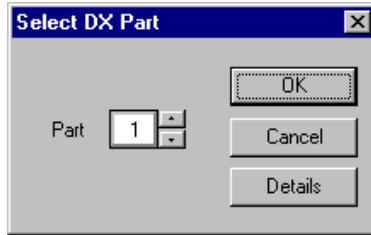
Assigning the PLG150-DX to a Part

NOTE

- The following information pertains only to the Plug-in Editor.

In order to play and edit the PLG150-DX, the DX voice must be assigned to a Part on the tone generator/sound card. This can be done from two separate menus on the DX Simulator: the initial [Select DX Part](#) pop-up menu (which appears automatically whenever you start the DX Simulator) and [DX Simulator Setup](#).

Select DX Part Pop-up Menu



NOTE

- “Cancel” button may not be available depending on the editor you use.

1 Select the desired Part.

The Select DX Part pop-up menu appears when you first call up the DX Simulator. Select the desired Part from the Part combo box.

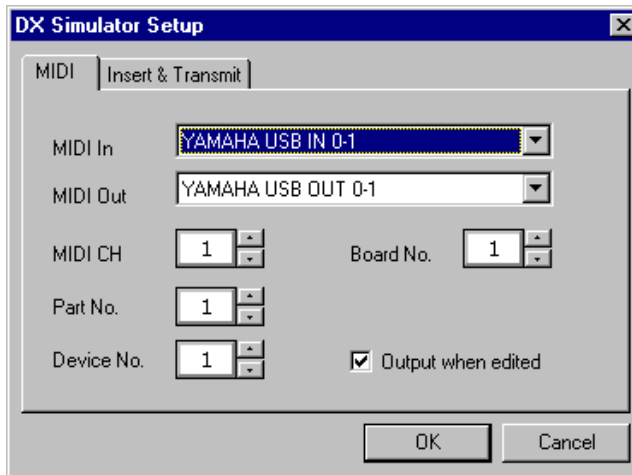
2 Click “OK.”

NOTE

- Click “Details” to call up the [DX Simulator Setup](#) menu for making more detailed settings.

DX Simulator Setup

Even after you've set the DX Part from the pop-up menu, you can change the setting during an editing session from the DX Simulator Setup dialog box.



1 Select “DX Simulator Setup.”

While the DX Simulator is active and selected, click “Setup” on the menu bar, then select “DX Simulator Setup.” (Keyboard shortcut: [Alt], [U], [U], then [ENTER].)

NOTE

- “DX Simulator Setup” can also be selected from the [toolbar](#).

2 Select the desired Part.

Do this from the Part No. combo box in the MIDI tab. Make other settings if necessary. (See [DX Simulator Setup](#).)

3 Click “OK.”

Selecting a DX Voice

Selecting a DX voice is the important first step in [editing](#). Once you've edited a voice you can [store it to the PLG150-DX](#) or save it to a floppy disk/hard disk drive with other voices as a [DX Cartridge File](#).

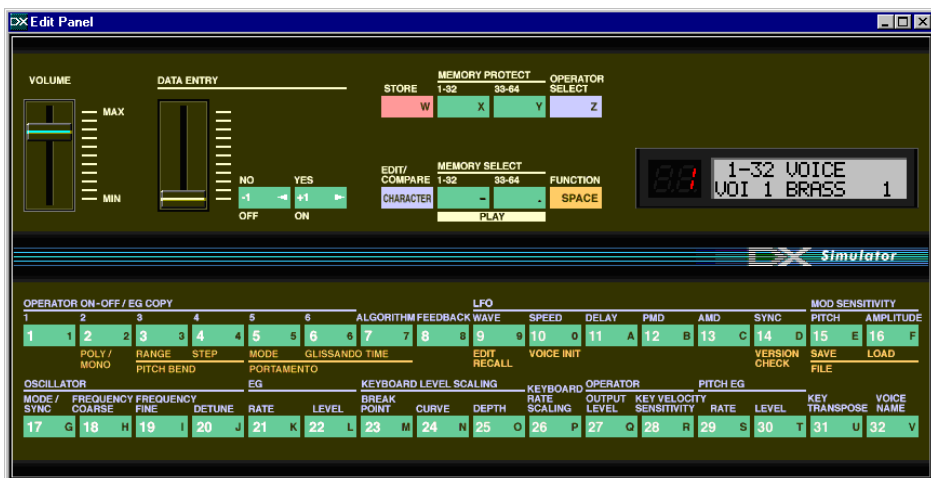
DX voices can be selected from either the Edit Panel window or the Edit List window.

NOTE

- Only Custom voices can be selected in the DX Simulator.
- Make sure to store your edits to a voice before selecting another voice. If you've edited the DX Simulator parameters and then select a different voice, all your edited parameters will be replaced by those of the newly selected voice.

Selecting a Voice From the Edit Panel Window

- 1 **Call up the Play mode.**
Click one of the MEMORY SELECT buttons ([1 - 32] or [33 - 64]), depending on the desired voice number.
- 2 **Click the desired Voice Select button, [1] - [32] or [33] - [64].**
The LED displays the voice number, and the LCD displays the voice name and number.

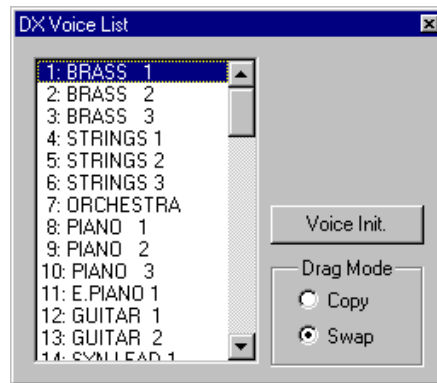


Selecting a Voice From the Edit List Window

1 Select “DX Voice List.”

Click “Edit” on the menu bar, then select “DX Voice List.” (Keyboard shortcut: [Alt], [E], [V].)

You can also quickly call up this dialog box by right-clicking any inactive part of the window (on the Macintosh, click while holding the CONTROL key) and clicking “DX Voice List” in the pop-up menu.



2 Select the desired voice.

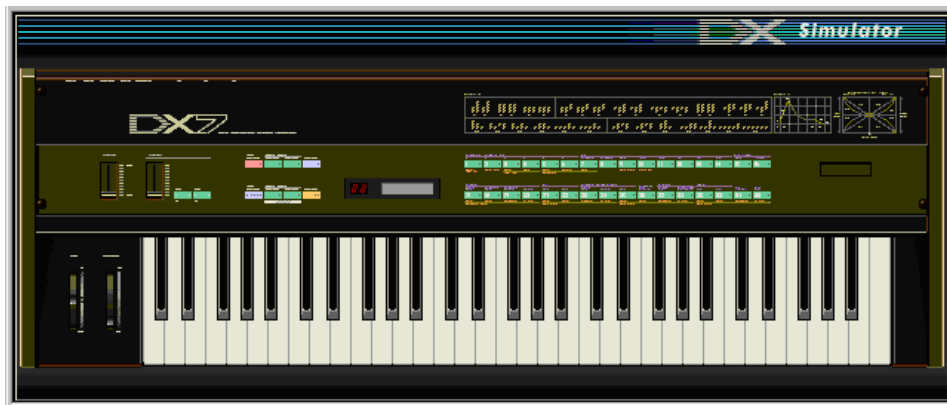
Click on the desired voice, then close the dialog box (click the close button) to return to the Edit List window.

HINT

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

Opening the Various Windows

DX Simulator Window

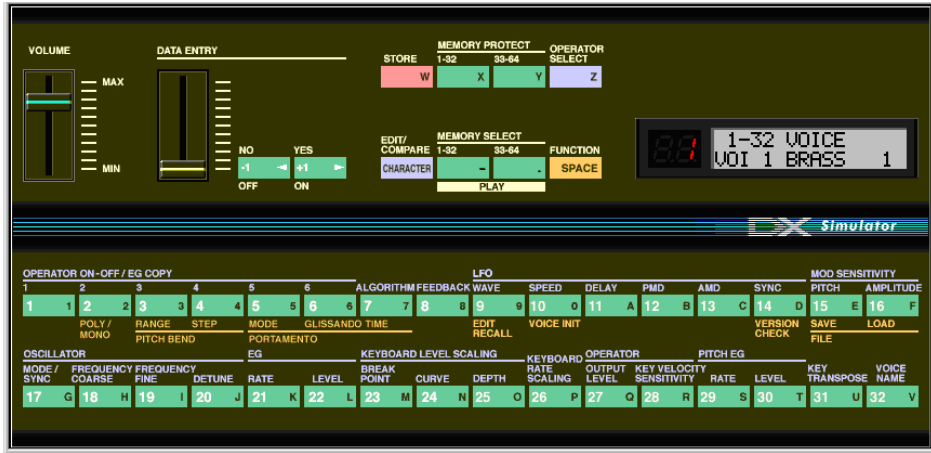


This window automatically appears when you open the DX Simulator and serves as the “front end” of the plug-in module. For the most part, no editing functions are available from the DX Simulator window. However, from this window you can:

- Audition the currently selected voice by clicking on the keys of the keyboard.
- Open a DX Cartridge File by clicking on the cartridge or cartridge slot.
- Open the Edit Panel and Edit List windows (below).

Closing the DX Simulator window exits from the DX Simulator plug-in module.

Edit Panel Window



This window provides a “virtual” DX7 panel, and lets you edit the voices much as you would if you were operating the panel controls of an actual DX7 keyboard. (For more information, see [Editing a DX Voice](#) and [DX Simulator Window](#).)

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



Edit List Window

The screenshot shows the 'Edit List Window' in the DX Simulator. It features a dark green background with various control panels and tables. At the top left, there's an 'ALGORITHM' dropdown set to 22 and a 'VOICE NAME' field containing 'BRASS 1'. Below these are several smaller control panels for 'FEEDBACK' (7), 'LFO' (wave form: SIN, speed: 37, delay: 0, PMD: 5, AMD: 0, sjno: OFF, mode: sngl), and 'PITCH ENVELOPE GENERATOR' (ratio: R1=84, R2=95, R3=95, R4=60, level: L1=50, L2=50, L3=50, L4=50, range: 8va, rs: 0, velo: OFF, KEY TRANS: C3). The main part of the window is a large table with columns for 'OSCILLATOR', 'ENVELOPE GENERATOR', 'KEYBOARD LEVEL SCALING', 'KEY BOARD RATE SCALING', 'OPERATOR', and 'MOD SENS'. The table contains 6 rows of data for different voices.

OP No.	OSCILLATOR		ENVELOPE GENERATOR								KEYBOARD LEVEL SCALING				KEY BOARD RATE SCALING		OPERATOR		MOD SENS	
	mode	freq	rate	R1	R2	R3	R4	L1	L2	L3	L4	break point	L	R	L	R	output level	velo	pitch	amp
1	Ratio	0.500	7	72	76	99	71	99	88	96	0	C3	+LIN	+LIN	0	14	0	98	0	0
2	Ratio	0.500	7	62	51	29	71	82	95	96	0	C2	+LIN	-EXP	0	7	0	86	0	0
3	Ratio	1.00	-2	77	76	82	71	99	98	98	0	C3	+LIN	+LIN	0	0	0	99	2	0
4	Ratio	1.00	0	77	36	41	71	99	98	98	0	C3	+LIN	+LIN	0	0	0	99	2	0
5	Ratio	1.00	1	77	36	41	71	99	98	98	0	C3	+LIN	+LIN	0	0	0	98	2	0
6	Ratio	1.00	0	49	99	28	68	98	98	91	0	C3	-EXP	-EXP	54	50	4	82	2	0

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

To call up this window, click the DX7 logo in the DX Simulator window.



Alternately, click "Edit" on the menu bar, then select "DX Edit List." (Keyboard shortcut: [Alt], [E], [X].) You can also call it up from the [toolbar.](#)

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.

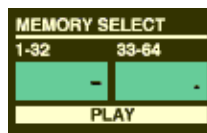
• Play Mode

In the Play mode, you can:

- Select one of the 64 Custom voices.
- Play the selected voice (from the connected MIDI keyboard or from the keys in the DX 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 voice, 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 voice (printed in yellow below the appropriate buttons). These include other miscellaneous Function parameters as well, such as Edit Recall and Voice Initialize.

To select the Function mode:

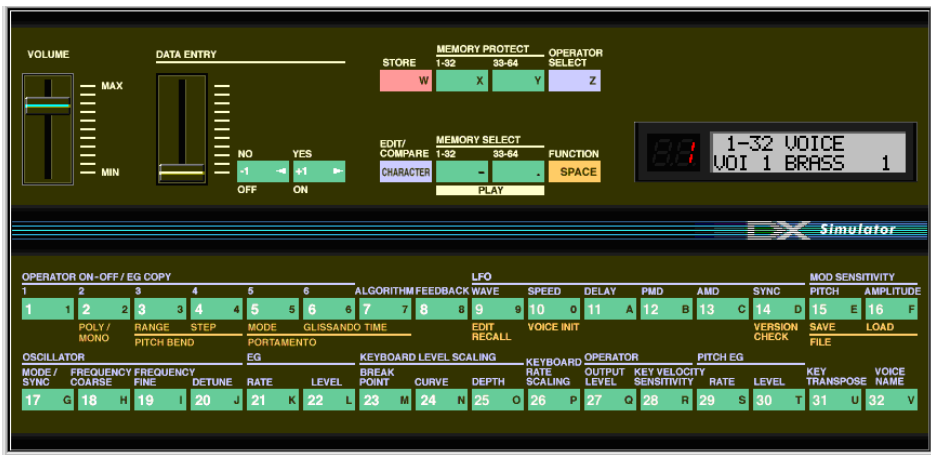
Click the [FUNCTION] button.



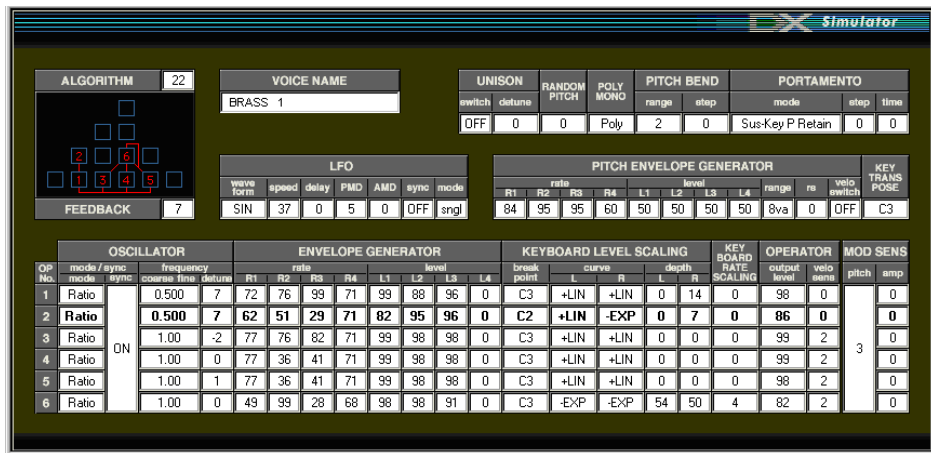
Editing a DX Voice

- 1 **Select the desired voice.**
Refer to [Selecting a DX Voice](#).

- 2 **Edit the voice parameters as desired from one of the editing windows: Edit Panel or Edit List.**
The [Edit Panel window](#) provides a “virtual” DX7 panel, and lets you edit the voices much as you would if you were operating the panel controls of an actual DX7 keyboard.



The [Edit List window](#) provides a comprehensive, at-a-glance display of all voice parameters, and allows you to easily change any desired parameter.



3 Store the edited settings as a Custom voice, then save it with other edited voices as a DX Cartridge File.

Use the [Store](#) operation to store your newly edited voice. Then use the [Save](#) operation to save that edited voice with other Custom voices to a DX Cartridge File.

Both the Store and Save operations are necessary to ensure that your voice 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 voice you've edited.

Compare

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

Using Compare From the Edit Panel Window

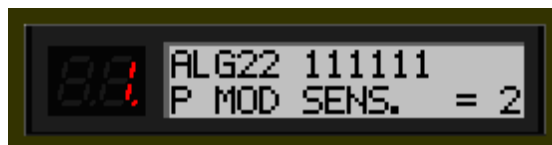
1 Select the Edit mode.

Click the [EDIT/COMPARE] button.



2 Edit the voice as desired.

As soon as any parameter has been edited, a dot appears at the bottom right of the voice number in the LED.



3 Select Compare.

Click the [EDIT/COMPARE] button. In the Compare condition, the voice number in the LED flashes. Play the connected MIDI keyboard (or click the keys in the DX Simulator window) to hear the original un-edited voice.

While Compare is active, the voice cannot be edited. (Moving the DATA ENTRY slider has no effect.)

4 Click [EDIT/COMPARE] again to return to the edited condition.

Click the [EDIT/COMPARE] button as often as you wish to go back and forth between the two conditions.

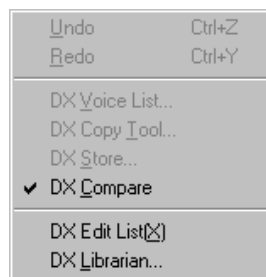
Using Compare From the Edit List Window

1 **Edit the voice as desired.**

2 **Select “DX Compare.”**

Click “Edit” on the menu bar, then select “DX Compare.” (Keyboard shortcut: [Alt], [E], [C].)

You can also quickly use Compare by right-clicking any inactive part of the window (on the Macintosh, click while holding the CONTROL key) and clicking “DX Compare” in the pop-up menu.



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

3 **Select “DX 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

- “DX Compare” is ghosted and cannot be selected if the voice has not yet been edited.

Initializing a DX Voice to the Default Settings

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

The currently selected voice can be initialized from either the Edit Panel window or the Edit List window.

Initializing a Voice From the Edit Panel Window

1 Select the Function mode.

Click the [FUNCTION] button.



2 Initialize the voice.

To do this:

- 1) Click the [VOICE INIT] button.
- 2) At the “VOICE INIT?” prompt, click the [YES] button.
- 3) At the “ARE YOU SURE?” prompt, click [YES] again to actually execute the operation. Click [NO] to cancel.

Initializing a Voice From the Edit List Window

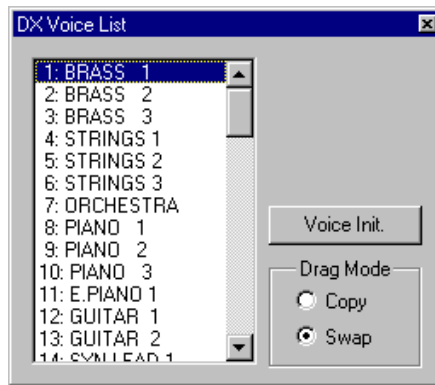
NOTE

- Keep in mind that this operation automatically erases all the settings of the selected voice.

1 Select “DX Voice List.”

Click “Edit” on the menu bar, then select “DX Voice List.” (Keyboard shortcut: [Alt], [E], [V].)

You can also quickly call up this dialog box by right-clicking any inactive part of the window (on the Macintosh, click while holding the CONTROL key) and clicking “DX Voice List” in the pop-up menu.

**2 Select the desired voice to be initialized.**

Click on the desired voice.

3 Initialize the voice.

Click the “Voice Init.” button in the dialog box. The specified voice is initialized and automatically selected for editing.

Storing a DX Voice

This operation lets you store your voice edits as a Custom voice. The currently edited voice can be stored from either the Edit Panel window or the Edit List window.

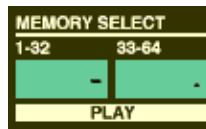
NOTE

- To ensure that your new voice is available for future recall, make sure to also [save](#) the voice (with other voices) to a DX Cartridge File.

Storing a Voice From the Edit Panel Window

- 1 **Select the Play mode, and the destination bank (1 - 32, or 33 - 64) to which the edited voice will be stored.**

Click the desired [MEMORY SELECT] button: [1-32] or [33-64]. If necessary, turn [Memory Protect](#) off for the selected bank.



- 2 **Click the [STORE] button.**
- 3 **Select the destination voice number to which the edited voice will be stored.**

Click the desired voice select button (1 - 32, or 33 - 64). The specified voice is replaced with the newly edited voice.

Storing a Voice From the Edit List Window

1 Select “DX Store.”

Click “Edit” on the menu bar, then select “DX Store.” (Keyboard shortcut: [Alt], [E], [S].)

You can also quickly call up this dialog box by right-clicking any inactive part of the window (on the Macintosh, click while holding the CONTROL key) and clicking “DX Store” in the pop-up menu.



2 Select the destination voice.

Click on the desired voice in the dialog box.

3 Store the voice.

Click the “Store” button in the dialog box. The specified voice is replaced with the newly edited voice.

NOTE

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

Saving Voices to a DX Cartridge File

Once you've edited a DX voice to your satisfaction you can save it to a DX Cartridge File. Each DX Cartridge File can contain up to 64 voices, and these can be called up at any time with the [Open](#) function. (Also see [Calling Up Voices from a DX Cartridge File](#).)

Additional DX Cartridge Files of 64 Custom voices each can be saved to floppy disks or your hard disk drive as [DX Cartridge Files](#) — giving you unlimited storage for your original voices. For organizing the voices in the DX Cartridge Files, use the convenient [DX Librarian](#) function.

1 Select “Save DX Cartridge File.”

Click “File” on the menu bar, then select “Save DX Cartridge File.” (Keyboard shortcut: [Alt], [F], [W].)

NOTE

- “Save DX Cartridge File” can also be selected from the [toolbar](#).

2 Select the desired folder, type in the file name, and click “Save.”

When a DX Cartridge File has been saved, a cartridge appears in the cartridge slot of the DX Simulator window.



Calling Up Voices from a DX Cartridge File (Open)

Once you've saved a set of Custom voices to one or more DX Cartridge Files (see [Saving Voices](#)), you can instantly call up the desired voices with this command.

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

1 Select “Open DX Cartridge File.”

Click “File” on the menu bar, then select “Open DX Cartridge File.” (Keyboard shortcut: [Alt], [F], [R].)

2 Select the desired folder and file name, then click “Open.”

NOTE

- “Open DX Cartridge File” can also be selected by clicking on the cartridge slot in the DX Simulator window. (When a DX Cartridge File has been opened, a cartridge is shown in the slot.)



Inserting Edited Voice Data to a Track

NOTE

- The following information pertains only to the Plug-in Editor.

Custom voice data can be inserted to a host application's track (using [Insert DX Bulk Dump Data](#)). By inserting appropriate data at appropriate points in the song, you can have the DX voices change automatically as needed.

- 1 Select “Insert DX Bulk Dump Data” from the **Setup menu**, or from the **toolbar**.
- 3 Set the location (Track, Measure, Beat, and Clock).
- 2 Click “OK.”

Extracting Edited Voice Data from a Track

NOTE

- The following information pertains only to the Plug-in Editor.

This operation lets you extract Custom voice data contained in a host application's track (by using [Extract DX Bulk Dump Data](#)).

- 1 Select “Extract DX Bulk Dump Data” from the **Setup menu**, or from the **toolbar**.
- 3 Set the location (Track, Measure, Beat, and Clock).
- 2 Click “OK.”

HINT

- By using the [Insert](#) and [Extract](#) functions together, you can record and recall your edits as needed — giving you an unlimited amount of “undos.” For each major edit, use Insert to save the edited condition to a section of a track (inserting each edit to subsequent sections of the same track). Then, to recall any given edit, use the Extract function and select the appropriate range of measures.

Receiving Voice Data from a DX7/DX7II

This operation lets you transfer voice data from a DX7, DX7II or other DX-compatible instrument. A single voice or 32 voices can be received. (See [Receive DX Bulk Dump Data](#)).

- 1 Select “Receive DX Bulk Dump Data” from the **Setup menu**.
- 2 Select the desired Receive Method (“1 Voice” or “32 Voices”). When “32 Voices” is selected, specify the desired set of voices (“1 - 32,” or “33 - 64”).
- 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 DX7 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 host application “MIDI In” setting: Setup menu → System Setup dialog box → Device tab → “MIDI In.”)

- 5 As soon as the DX Simulator 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

Most of the DX Simulator parameters for editing the DX voices are contained in the virtual “main control panel” screen. From this main panel, you can also jump to other windows for controlling additional PLG150-DX functions (such as the [EditPanel](#) and [EditList](#)).

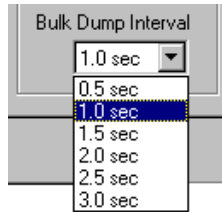
Setting and Changing Parameter Values

NOTE

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

- **Combo boxes**

For combo boxes, 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.

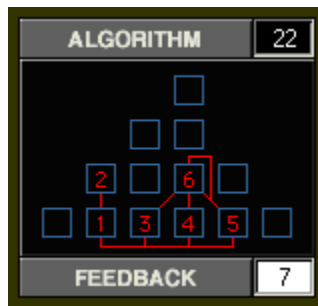


- **Incrementing/decrementing values**

Values and settings in the Edit List window can be changed by clicking on the value box, and then dragging the cursor up or down, in the direction of the desired change. To increment or decrement a value, click the right or left mouse button, respectively. Holding down either mouse button continuously increases or decreases through the value. The cursor keys on the keyboard can be used to move around the parameter grid of the Edit List window.

- **Typing values directly**

Most parameters in the [Edit List 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. (To cancel the type-in value, press Esc.) Once a value box has been selected, you can also use the left and right mouse buttons as decrement and increment controls, respectively.

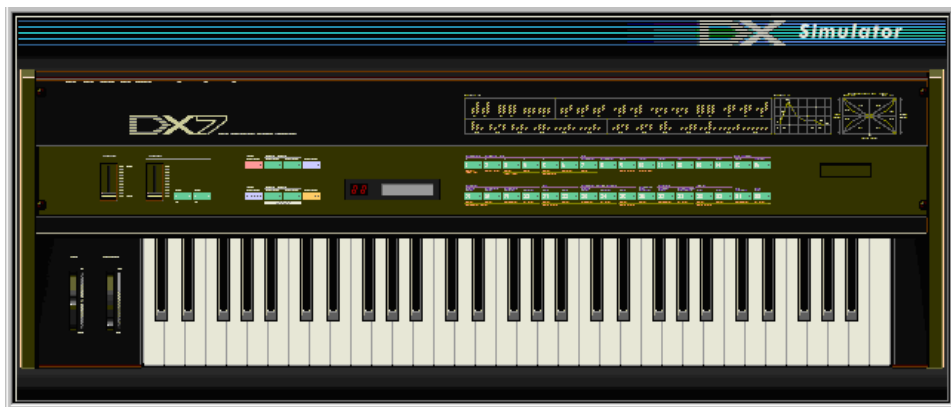


NOTE

- The ENTER and ESC keys have no effect in the Voice Name parameter.

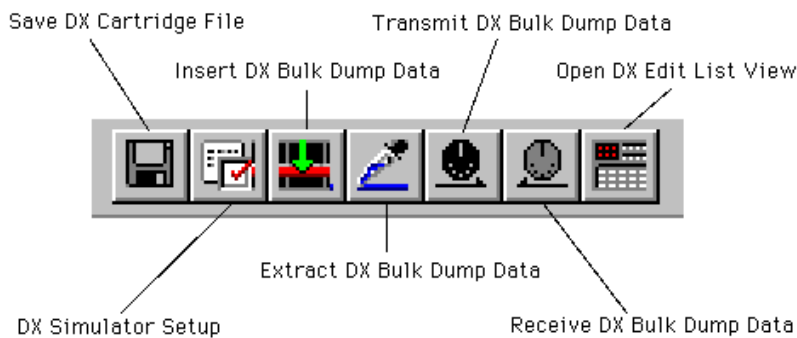
DX Simulator Window

This is the main control panel for the DX Simulator, and is comprised of the virtual “panel” controls.



• 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.



Save DX Cartridge File

This is the same as the corresponding command in the File menu. It lets you save the current set of Custom voices as a DX Cartridge File for future recall. (See File Menus, [Save DX Cartridge File.](#))

DX Simulator Setup

This is the same as the corresponding command in the Setup menu. It lets you make various important settings for configuring the DX Simulator with the PLG150-DX. (See Setup Menus, [DX Simulator Setup](#).)

Insert DX Bulk Dump Data (Plug-in Editor only)

This is the same as the corresponding command in the Setup menu. It lets you insert the current DX Simulator settings to a specified track/position in the host application song. (See Setup Menus, [Insert DX Bulk Dump Data](#). Also see [Inserting Edited Voice to a Track](#).)

Extract DX Bulk Dump Data (Plug-in Editor only)

This is the same as the corresponding command in the Setup menu. It lets you import Part parameter settings in the sequence data to the DX Simulator. (See Setup Menus, [Extract DX Bulk Dump Data](#). Also see [Extracting Edited Voice Data from a Track](#).)

Transmit DX Bulk Dump Data

This is the same as the corresponding command in the Setup menu. It lets you transmit the current DX Simulator settings as MIDI data to the PLG150-DX board. (See Setup Menus, [Transmit DX Bulk Dump Data](#).)

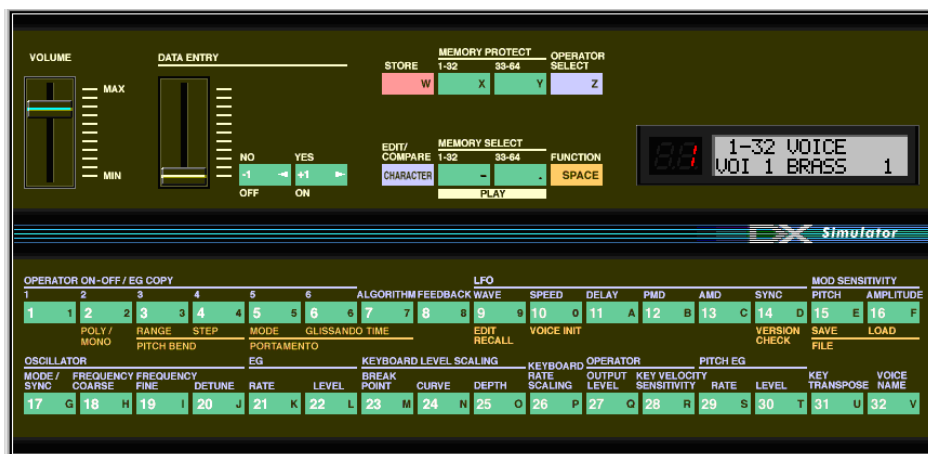
Receive DX Bulk Dump Data

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

Open DX Edit List View

This is the same as the corresponding command in the Edit menu. It lets you call up the Edit List window for editing a voice. (See Edit Menus, [DX Edit List](#).) You can also call up the Edit List window by clicking on the DX7 logo in the DX Simulator window.

Edit Panel Window / Play and Edit Modes



To select the Play mode, click either one of the [MEMORY SELECT] buttons.
To select the Edit mode, click the [EDIT/COMPARE] button.

- **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 voice.

- **[STORE] button**

This button calls up the [Store](#) operation, for storing the selected voice to the memory of the PLG150-DX. In the Edit mode, this selects the [EG Copy](#) function.

NOTE

- After you've stored a voice to the PLG150-DX, make sure to [save](#) the voice to a [DX Cartridge File](#).

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

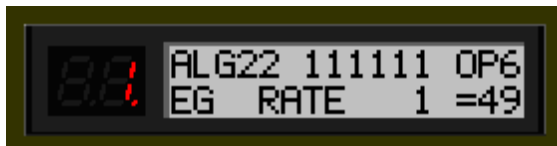
These buttons let you view and change the MEMORY PROTECT status.

NOTE

- These are effective only when using the Store operation in the 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 two voice banks of the Custom voices: 1-32 or 33-64. 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 voice or instrument (printed in yellow below the appropriate voice buttons).

- **LED display**

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

- **LCD display**

The LCD window displays the current status of the PLG150-DX. In the Play mode, it indicates the selected voice bank, and the selected voice 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).

- **Voice Select buttons**

In the Play mode, these are used to select voices 1-32 (or 33-64) on the PLG150-DX. 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 voice, 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 [Voice Name](#) parameter.

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 [Voice 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 List Window

The screenshot shows the 'Edit List Window' in the DX Simulator. The window title is 'DX Simulator'. The main area is divided into several sections:

- ALGORITHM:** 22
- VOICE NAME:** BRASS 1
- UNISON:** switch OFF, detune 0
- RANDOM PITCH:** 0
- POLY MONO:** Poly
- PITCH BEND:** range 2, step 0
- PORTAMENTO:** mode Sus-Key P Retain, step 0, time 0
- FEEDBACK:** 7
- LFO:** wave form SIN, speed 37, delay 0, FMD 5, AMD 0, sync OFF, mode snl
- PITCH ENVELOPE GENERATOR:** rate R1:84, R2:95, R3:95, R4:60; level L1:50, L2:50, L3:50, L4:50; range 8va, re 0, velo switch OFF, KEY TRANS POSE C3

The bottom section contains a table with columns: OP No., mode / sync, frequency, envelope generator, keyboard level scaling, key board rate scaling, operator, and mod sens.

OP No.	mode / sync	frequency	ENVELOPE GENERATOR								KEYBOARD LEVEL SCALING				KEY BOARD RATE SCALING		OPERATOR		MOD SENS		
			coarse	fine	detune	R1	R2	R3	R4	L1	L2	L3	L4	break point	curve	depth	L	R	output level	velo sens.	pitch
1	Ratio	0.500	7	72	76	99	71	99	98	96	0	C3	+LIN	+LIN	0	14	0	99	0		
2	Ratio	0.500	7	62	51	29	71	82	95	96	0	C2	+LIN	-EXP	0	7	0	86	0		
3	Ratio	1.00	-2	77	76	82	71	99	98	98	0	C3	+LIN	+LIN	0	0	0	99	2		
4	Ratio	1.00	0	77	36	41	71	99	98	98	0	C3	+LIN	+LIN	0	0	0	99	2		
5	Ratio	1.00	1	77	36	41	71	99	98	98	0	C3	+LIN	+LIN	0	0	0	98	2		
6	Ratio	1.00	0	49	99	28	68	98	98	91	0	C3	-EXP	-EXP	54	50	4	82	2		

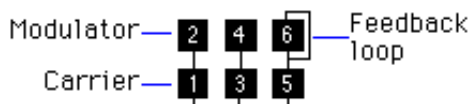
To call up this window, click the DX7 logo in the DX Simulator window. Or click "Edit" on the menu bar, then select "DX Edit List."

Parameter Descriptions

Algorithm

Range: 1 ... 32

This determines the algorithm used for the voice. The algorithm determines how the operators are configured for the voice. The FM synthesis system of the PLG150-DX 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 voice. 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 voice, 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 voice. 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.

Voice Name

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

In the Edit List window:

- 1) Click on the VOICE NAME box.



- 2) At the cursor position, type the desired name. Up to ten characters (uppercase or lowercase) can be entered.
- 3) [Store](#) the voice, if desired.

In the Edit Panel window:

- 1) Click the [EDIT] button to call up the Edit mode.
- 2) Click the [VOICE NAME] button.
- 3) Click the [CHARACTER] ([EDIT/COMPARE]) button.
- 4) Click the [NO]/[YES] buttons to select the cursor position.
- 5) Click the desired character (printed on the right part of the relevant button).
 - Numbers 0 - 9 and letters A - V are selected from the Voice Select buttons.
 - Letters W - Z are selected respectively from the STORE, MEMORY PROTECT, and OPERATOR SELECT buttons.
 - Hyphen, period, and space are selected respectively from the MEMORY SELECT and FUNCTION buttons.



OPERATOR ON-OFF / EG COPY				LFO										MOD SENSITIVITY																	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17															
	POLY / MONO	RANGE	STEP	MODE	GLISSANDO	TIME			EDIT RECALL	VOICE INIT			VERSION CHECK	SAVE	LOAD	FILE															
		PITCH BEND		PORTAMENTO																											
OSCILLATOR		EG				KEYBOARD LEVEL SCALING				KEYBOARD		OPERATOR		PITCH EG																	
MODE / SYNC	FREQUENCY COARSE	FREQUENCY FINE	DETUNE	RATE	LEVEL	BREAK POINT	CURVE	DEPTH	RATE	SCALING	OUTPUT LEVEL	KEY VELOCITY SENSITIVITY	RATE	LEVEL	KEY TRANSPOSE	VOICE NAME															
17	G	18	H	19	I	20	J	21	K	22	L	23	M	24	N	25	O	26	P	27	Q	28	R	29	S	30	T	31	U	32	V

- 6) Click the [CHARACTER] ([EDIT/COMPARE]) button to exit from the Voice Name operation.
- 7) [Store](#) the voice, if desired.

LFO Parameters

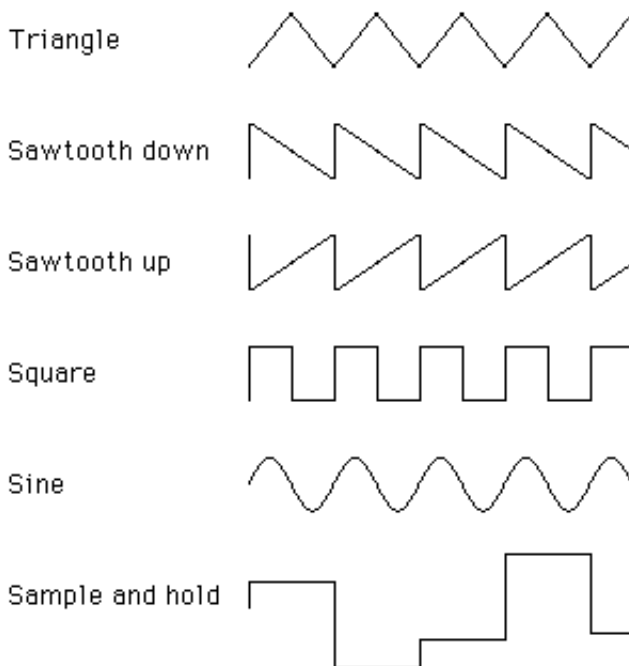
The LFO (Low Frequency Oscillator) parameters are used to regularly modulate the pitch or volume of a voice, letting you create vibrato, tremolo, or “wah” effects. These are also related to the [Modulation Sensitivity parameters](#).

- **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 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.

- **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 voice, or how widely pitch is modulated by the LFO. This produces a vibrato effect for the voice. 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 voice, 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.

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 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).

- **LFO Mode**

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

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

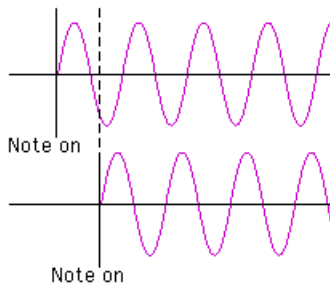
When set to “sngl,” a single LFO affects all notes played. In other words, the LFO effect begins when the first key is played, and continues in the same way at the same phase for all subsequent notes. (This is true when **LFO Sync** is off; when **LFO Sync** is on, the waveform is interrupted and begins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

When set to “mult,” there are sixteen independent LFOs, one for each of the sixteen polyphonic notes of the PLG150-DX. 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 voices, especially when **LFO Delay** is set to an appropriate value.

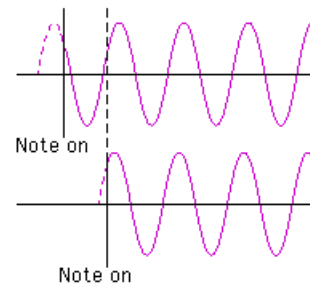
NOTE

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

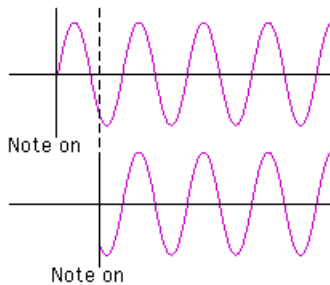
LFO Sync = ON
Mode = multi



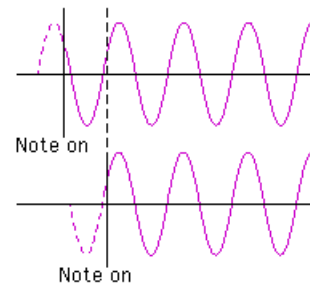
LFO Sync = OFF
Mode = multi



LFO Sync = ON
Mode = single



LFO Sync = OFF
Mode = single



Modulation Sensitivity Parameters

The Modulation Sensitivity parameters (Pitch and Amplitude) determine the degree to which LFO modulation affects the voice — 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 voices.

- **Pitch Modulation Sensitivity**

Range: 0 ... 7

This determines sensitivity of the voice (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 voice 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.

Oscillator Parameters

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

OSCILLATOR MODE/SYNC in the Edit Panel window:

To select the Oscillator Mode and Sync parameters in the Edit Panel window, click Voice Select button [17] repeatedly. The editor toggles between Mode and Sync each time you click this button.

- **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 continue 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 voices, 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.

In the Edit List window:

Type in the desired value in the appropriate value box or use the mouse to change the value. When using the mouse, the most efficient method is to click the value box, then clicking the left/right buttons to decrement/increment the value. Holding down either button rapidly decreases/increases the value.

In the Edit Panel window:

This parameter is actually divided into two separate but linked parameters: Frequency Coarse and Frequency Fine. Clicking button [18] (FREQUENCY COARSE) and using the DATA ENTRY controls lets you make large changes in the current operator's frequency. Clicking button [19] (FREQUENCY FINE) and using the DATA ENTRY controls lets you make small changes in the current operator's frequency. Use these in tandem to set the oscillator's frequency.

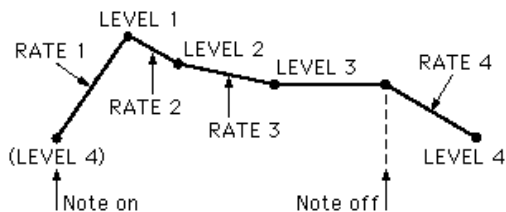
Detune

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 voice 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.

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.

The [EG Copy](#) function (in the Edit Panel window) and [DX Copy Tool](#) (in the Edit List 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 voice will continue to sound indefinitely. Also, Level 1 should be set to an appropriate value, such as “50” or greater, for proper EG operation.

In the Edit List window:

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

In the Edit Panel window:

Click button [21] (EG RATE) repeatedly to call up Rate 1, 2, 3, and 4 in succession. Likewise, click button [22] (EG LEVEL) repeatedly to call up Level 1, 2, 3, and 4 in succession. Use the DATA ENTRY controls to set the value for each parameter.

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 Edit List window, use [DX Copy Tool](#).)

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

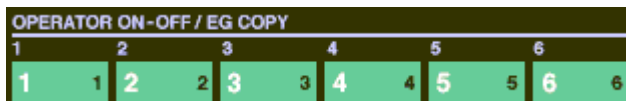
The currently selected operator number is shown at the top right of the LCD.



- 2 Click the [STORE] button.



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

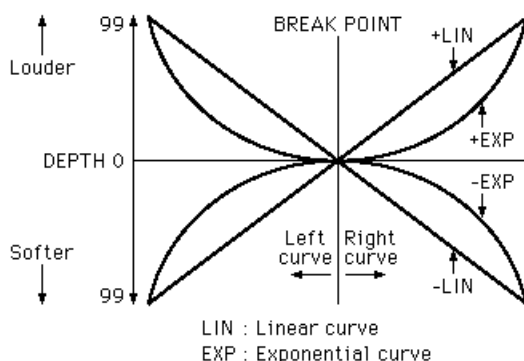


The source operator values are automatically copied to the destination operator. (The LCD shows the source operator values.)

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 Edit List 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

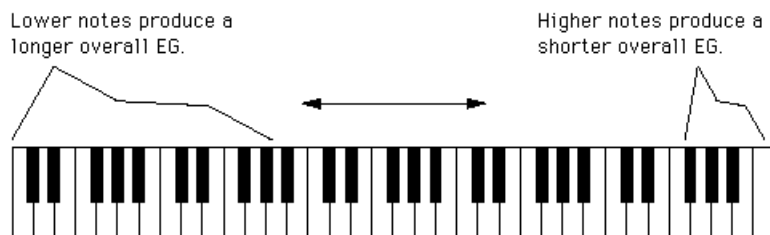
- For values near the maximum, there has to be some “headroom” — in other words, some operator output level must be available for increasing. For example, if the [Operator Output Level](#) is set to “90,” and a positive () curve is set, the greatest curve depth that can be achieved is “9” (the difference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

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 voice; 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.

In the Edit Panel window:

Click the appropriate [OPERATOR ON/OFF] button (1 - 6) repeatedly to turn the desired operator on or off.



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.

In the Edit List window:

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

OP No.	mode / sync	OSCILLATOR				ENVELOPE GENERATOR								KEYBOARD LEVEL SCALING				KEY BOARD RATE SCALING		OPERATOR		MOD SENS	
		frequency	coarse	fine	detune	R1	R2	R3	R4	L1	L2	L3	L4	break point	L	curve	R	depth	L	R	output level	velo sens	pitch
1	Ratio	0.500	7	72	76	99	71	99	88	96	0	C3	+LIN	+LIN	0	14	0	98	0			0	0
2	Ratio	0.500	7	62	51	29	71	82	95	96	0	C2	+LIN	-EXP	0	7	0	86	0			0	0
3	Ratio	1.00	-2	77	76	82	71	99	98	98	0	C3	+LIN	+LIN	0	0	0	99	2			0	0
4	Ratio	1.00	0	77	36	41	71	99	98	98	0	C3	+LIN	+LIN	0	0	0	99	2			0	0
5	Ratio	1.00	1	77	36	41	71	99	98	98	0	C3	+LIN	+LIN	0	0	0	98	2			0	0
6	Ratio	1.00	0	49	99	28	68	98	98	91	0	C3	-EXP	-EXP	54	50	4	82	2			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 voice. To actually turn an operator off, set its [Output Level](#) to "0."

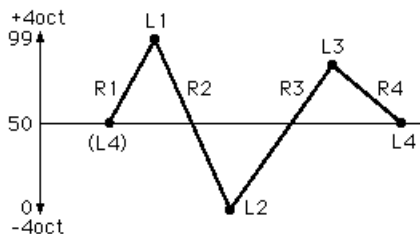
- **Operator Key Velocity Sensitivity**

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.

Pitch Envelope Generator (Pitch EG) Parameters

These parameters (eleven altogether) determine how the pitch of the voice 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.

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 voice 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:

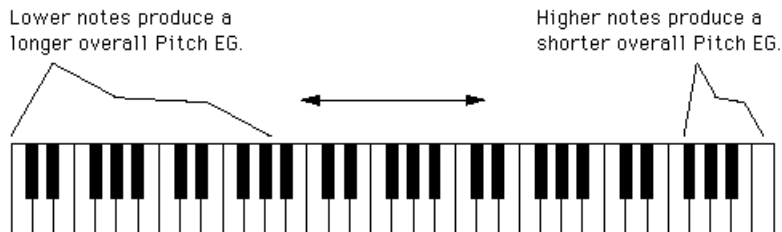
- 1/2v (six semitones)
- 1va (one octave)
- 2va (two octaves)
- 8va (eight octaves)

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 voice 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.

Key Transpose

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

This determines the overall pitch (key) transposition setting for the voice. The default value is C3 (60). Use this control to change the octave setting of a voice, or change it to a key for ease in playing. For example, to play the voice in the key of C but have it sound in the key of F, enter a value of F3 or F2 (depending on whether you want to transpose up or down).

In the Edit List window:

Click KEY TRANSPOSE, then type in the value (36 - 84) 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 Voice Select button [31] (KEY TRANSPOSE).
- 2) Select the DX Simulator 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 voice.

Unison Parameters

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

The PLG150-DX features sixteen-note polyphony, meaning that sixteen notes can be played simultaneously. In effect, a voice 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 PLG150-DX 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 voice.

NOTE

- The overall polyphony of the PLG150-DX 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 PLG150-DX’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.

Random Pitch

Range: 0 ... 7

This function lets you randomize the overall pitch of the voice 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.

Poly/Mono

Settings: Poly, Mono

This determines how notes of the voice 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.

Pitch Bend Parameters

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

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 voice.

NOTE

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

• 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.

• Glissando (Step)

Settings: OFF, 1 ... 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 PLG150-DX 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.”

Edit Recall

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

- 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.

Voice Init (Initialize)

The Voice Initialize function lets you create a “blank slate” starting point for programming a new voice.

- 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 voice 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 Voice Initialize function is also available in the Edit List window from the [DX Voice List](#) dialog box.

Version Check

This Edit Panel window function is used to check the current version of the DX Simulator 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 DX Cartridge File data from the Edit Panel window.

• SAVE

This lets you save the current set of 64 voices to a DX Cartridge File.

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

• LOAD

This lets you load (open) a set of 64 Custom voices from an existing DX Cartridge 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 DX Cartridge File dialog box.
(Refer to [Open DX Cartridge File](#) for detailed instructions.)

File Menus

When the DX Simulator is active and selected, the following functions appear in the File menu:

- **New DX Cartridge File**
- **Open DX Cartridge File**
- **Save DX Cartridge File**
- **Save DX Cartridge File As**

These are used for creating, saving, and opening your original DX Cartridge Files. Using the Save (or Save As) command here saves all 64 Custom voices to a selected DX Cartridge File. (The special .DXC extension allows you to easily organize the files.)

By keeping a library of your original voices as DX Cartridge 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 Custom voices as a DX Cartridge File, make sure to **store** the voice currently being edited. If a voice is not properly stored, it will not be contained in the DX Cartridge File data.

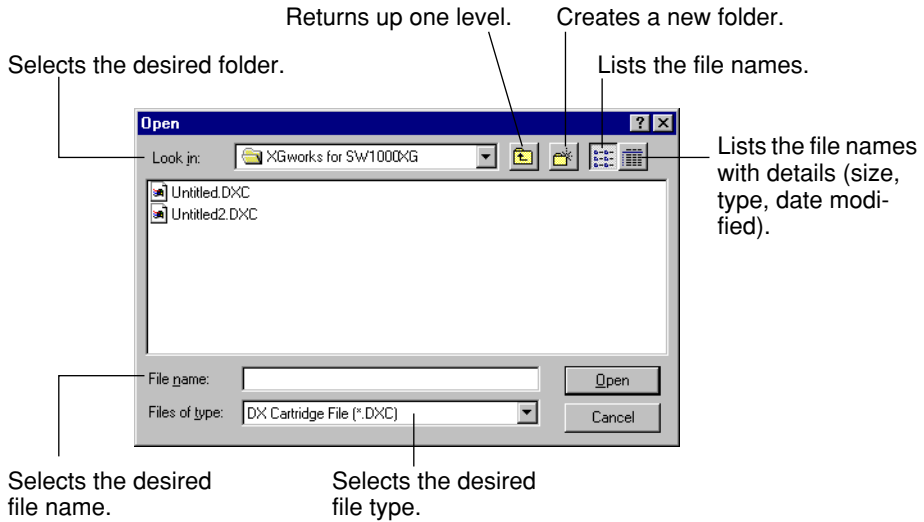
New DX Cartridge File

Use this function to create a new DX Cartridge File. (Keyboard shortcut: [Alt], [F], [I], then [ENTER].)

If the currently selected voice has been edited, the display prompts you to store the voice before opening a new DX Cartridge File. (See [Storing a DX Voice](#).) The new DX Cartridge File contains the factory preset 64 Custom voices. (These are the same voices that are automatically loaded when you open the DX Simulator.)

Open DX Cartridge File

Use this function to open an existing DX Cartridge File. (Keyboard shortcut: [Alt], [F], [R], then [ENTER].)

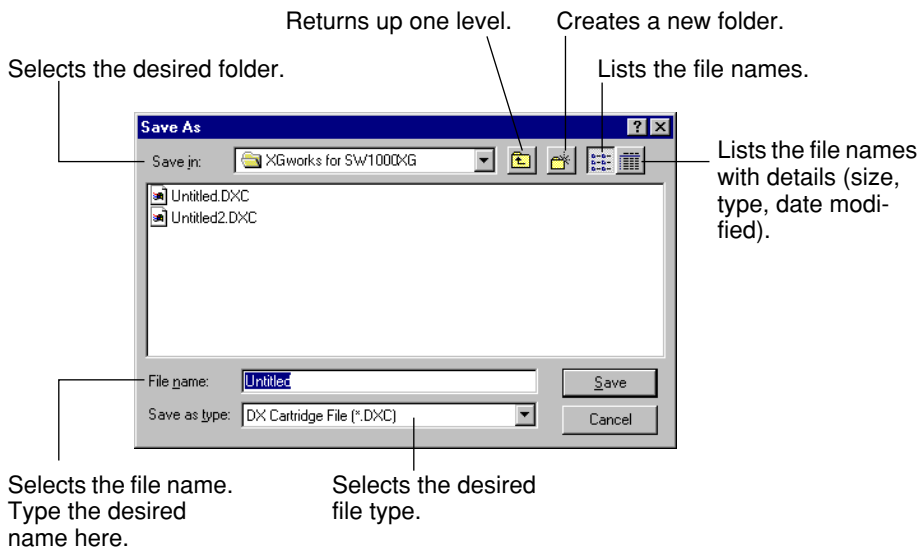


Save DX Cartridge File / Save DX Cartridge File As

Use these commands to save the current set of Custom voices to a DX Cartridge File. (The “Save As” command lets you specify a different file name than the original one.)

“Save” keyboard shortcut: [Alt], [F], [W], then [ENTER].

“Save As” keyboard shortcut: [Alt], [F], [M], then [ENTER].



NOTE

- “Save DX Cartridge File” can also be selected from the [toolbar](#).

Edit Menus

When the DX Simulator is active and selected, the following functions appear in the Edit menu:

- **DX Edit List**
- **DX Librarian**

The following functions are also available from the Edit List window:

- **DX Voice List**
- **DX Copy Tool**
- **DX Store**
- **DX Compare**

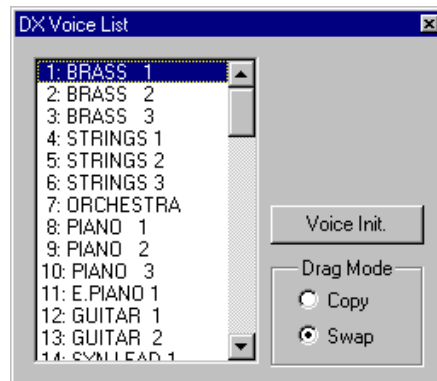
DX Voice List

In the DX Voice List dialog box you can:

- **Select a Custom voice for editing.**
- **Initialize a Custom voice to the default settings.**
- **Copy or swap voices in the Custom voice banks.**

NOTE

- “DX Voice List” is only available from the Edit List window. It can also be selected from a pop-up menu by right-clicking on any inactive part of the Edit List window (on the Macintosh, click while holding the CONTROL key).



Voice List Box

Select a voice by clicking on the desired voice name in the list.

- **Copying a voice to another voice location**

- 1 **Set Drag Mode to “Copy.”**
- 2 **Click the desired voice and drag it to the desired location. Keep in mind that this replaces (and erases) the voice at the location.**

- **Swapping the location of two voices**

- 1 **Set Drag Mode to “Swap.”**
- 2 **Click the desired voice and drag it to voice you wish to swap it with. This simply moves the voice to the selected location; it does not affect the actual data.**

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

Voice Init.

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

Drag Mode

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

DX Copy Tool

The DX 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 DX Copy Tool:

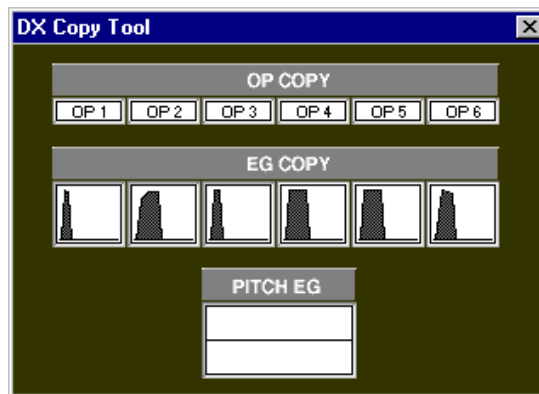
Click on any of the following title bars in the Edit List window:

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

This directly calls up the DX Copy Tool box. It can also be selected from a pop-up menu by right-clicking on any inactive part of the Edit List window (on the Macintosh, click while holding the CONTROL key).

NOTE

- “DX Copy Tool” is only available from the Edit List window. (The menu item is ghosted and cannot be selected from the DX Simulator window or Edit Panel 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.

DX Store

Use the DX Store dialog box to store the voice currently being edited to one of the Custom voice memory spaces. Once a voice or voices have been stored in this way, you can [save](#) the entire set of 64 Custom voices to a [DX Cartridge File](#).

NOTE

- “DX Store” is only available from the Edit List window. It can also be selected from a pop-up menu by right-clicking on any inactive part of the Edit List window (on the Macintosh, click while holding the CONTROL key).



1 Click the desired location for the newly edited voice.

2 Click “Store” to store the voice to the selected location.

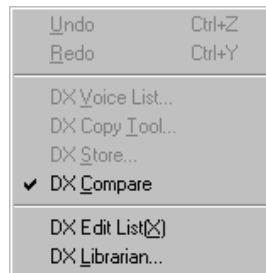
Keep in mind that this replaces (and erases) the voice at the location with the newly edited one.

DX Compare

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

- 1 **Edit the voice.**
- 2 **Select “DX Compare.”**

You can do this from the Edit menu, or with the keyboard shortcut, [Alt], [E], [C]. You can also quickly select Compare by right-clicking any inactive part of the window (on the Macintosh, click while holding the CONTROL key) and clicking “DX Compare” in the pop-up menu.



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

- 3 **Select “DX 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

- “DX Compare” is ghosted and cannot be selected if the voice has not yet been edited.
- “DX Compare” is only available from the Edit List window. However, an identical Compare function is available in the Edit Panel window. (See [Compare](#).)

DX Edit List

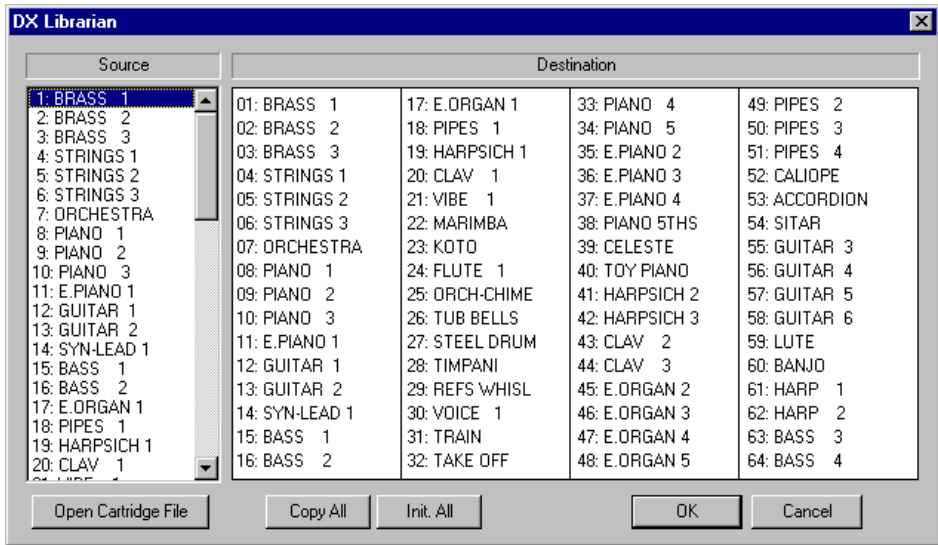
Selecting this calls up the [Edit List window](#).

NOTE

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

DX Librarian

The Librarian dialog box gives you a set of convenient, easy-to-use tools for organizing the Custom voices of your DX Cartridge Files.



The Source box shows Custom voices contained in the opened DX Cartridge File (see Open Cartridge File below). The Destination box contains the set of Custom voices currently in the DX Simulator, and represents the new DX Cartridge File to be created.

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

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

- 1) Click the desired voice in the Source box. (This is the voice you will be copying.)
- 2) Drag the highlighted voice to the Destination box, and drop it at the desired number. (This is the location to which the voice will be copied. The previous voice 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 Custom voices as a DX Cartridge File.

• Open Cartridge File

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

• Copy All

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

NOTE

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

• Init. All

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

NOTE

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

• 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 DX Simulator is active and selected, the following functions appear in the Setup menu:

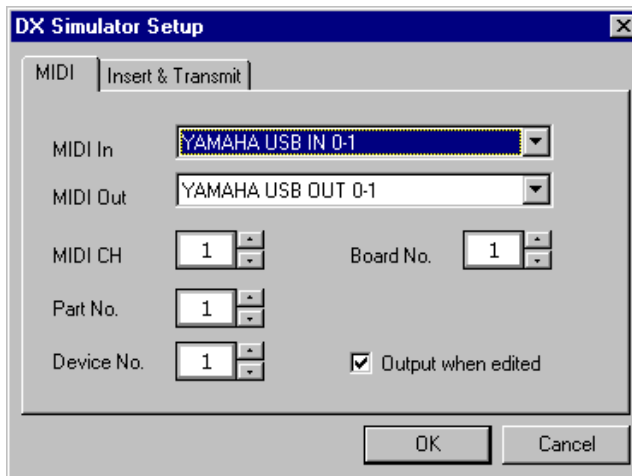
- **DX Simulator Setup**
 - MIDI Tab
 - Insert & Transmit Tab
- **Insert DX Bulk Dump Data** (Plug-in Editor only)
- **Extract DX Bulk Dump Data** (Plug-in Editor only)
- **Transmit DX Bulk Dump Data**
- **Receive DX Bulk Dump Data**
- **Transmit XG System On**

DX Simulator Setup

NOTE

- “DX Simulator Setup” can also be selected from the **toolbar**.
- **OK**
Click this to apply all MIDI tab and Insert & Transmit tab settings.
- **Cancel**
Click this to exit the DX Simulator dialog box without changing the MIDI tab and Insert & Transmit tab settings.

MIDI Tab



- **MIDI In**

Settings: Device, In port number

This determines which MIDI input device (interface) and port is used for transmitting DX Simulator data.

- **MIDI Out**

Settings: Device, Out port number

This determines which MIDI output device (interface) and port is used for sending DX Simulator data. There are four available devices/ports, as specified in the System Setup parameters (Setup → System Setup). (For details on System Setup, refer to the host application's manual.)

- **MIDI Channel**

Range: 1 ... 16

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

- **Part Number**

Range: 1 ... 16

This determines which Part is to be used for the DX voice.

- **Device Number**

Range: 1 ... 16

This determines which tone generator the DX Simulator will send data to. This should be set to same number as the Device Number of the tone generator/sound card to which the PLG150-DX is installed. 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 DX Simulator. If you are using only one tone generator, this should be set to "1."

- **Board Number**

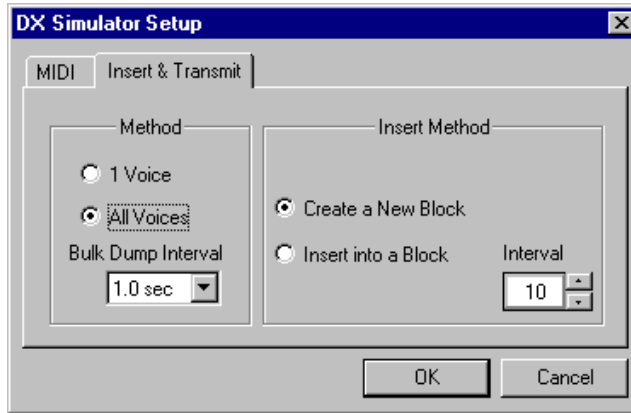
Range: 1 ... 8

This determines which tone generator card (or board) the DX Simulator will send data to. If you have multiple tone generator cards in your MIDI setup and each is set to a different Board Number (in numerical order from 1), this parameter lets you select which card will be affected by the DX Simulator. If you are using only one tone generator card, this is automatically set to "1."

- **Output when edited**

When this is checked, any edits that you make with the DX Simulator are instantly and automatically transmitted to the PLG150-DX. This ensures that you can audition edits as soon as you make them.

Insert & Transmit Tab



This tab features various settings related to how the DX data is inserted to the host application sequence data (using the [Insert DX Bulk Dump Data](#) function) or transmitted to the PLG150-DX (using the [Transmit DX Bulk Dump Data](#) function).

- **Method**

- **1 Voice**

- When this is selected, only the edited data for one voice will be inserted or transmitted.

NOTE

- **Be careful when using “1 Voice.”** If you’ve inserted “1 Voice” (only the edited data) and then change the voice on the PLG150-DX, you may not be able to revert back to the edited voice. Use [Transmit DX Bulk Dump Data](#) to transmit the desired data to the PLG150-DX.

- **All Voices**

- When this is selected, the data for all 64 Custom voices will be inserted or transmitted.

- **Bulk Dump Interval**

- This determines the amount of time (in seconds) that separates each “packet” of data inserted or transmitted. If the tone generator or sound card “chokes” on the incoming MIDI data, or the insert/transmit operation doesn’t seem to work as expected, try setting the Interval to a higher number.

- **Insert Method** (Plug-in Editor only)

- **Create a New Block**

- When this is selected, a new block (containing the inserted DX bulk dump data) is created to a track in host application.

- **Insert into a Block**

- When this is selected, the inserted DX bulk dump data is put into an existing block in host application.

- **Interval**

- This determines the amount of time (in clocks) that separates each insertion. If the tone generator or sound card “chokes” on the incoming MIDI data, or host application has trouble sending all the data properly, or the DX voices don’t seem to work as expected, try setting the Interval to a higher number.

Insert DX Bulk Dump Data

NOTE

- The following information pertains only to the Plug-in Editor.

This is used for inserting the edited DX voice data to a song track in host application. (This is affected also by the [DX Simulator Setup](#) settings.) By inserting appropriate data at appropriate points in a song, you can have the DX voice change automatically as needed.



NOTE

- “Insert DX Bulk Dump Data” can also be selected from the [toolbar](#).

• Track

This determines the track to which the DX voice data will be inserted.

NOTE

- Only tracks that have been set to the “MIDI” type can be selected here.

• Measure / Beat / Clock

This determines the precise location in the track to which the DX voice data will be inserted. You can specify the Measure (Meas), Beat, and Clock. Make sure to enter this at the beginning of a song, before any note data.

• OK

Click this to insert the selected DX voice data to the specified location.

• Cancel

Click this to abort the operation.

Extract DX Bulk Dump Data

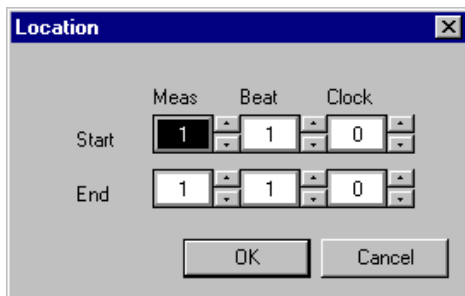
NOTE

- The following information pertains only to the Plug-in Editor.

This is used for importing the DX voice data contained in a host application sequence data to the DX Simulator. Specify the range (Start and End points) from which you want to extract the data. All current voice data will be replaced by the extracted data. This function has no effect if there is no DX voice data in the specified range.

NOTE

- “Extract DX Bulk Dump Data” can also be selected from the [toolbar](#).



- **Start**

Measure / Beat / Clock

This determines the beginning point in the track from which the DX bulk dump data will be extracted. You can specify the Measure (Meas), Beat, and Clock.

- **End**

Measure / Beat / Clock

This determines the end point in the track from which the DX bulk dump data will be extracted. You can specify the Measure (Meas), Beat, and Clock.

- **OK**

Click this to extract the data at the specified location.

- **Cancel**

Click this to abort the operation.

Transmit DX Bulk Dump Data

This is used for directly transmitting the current DX Simulator voice data as MIDI bulk dump data to the PLG150-DX board. To use this, highlight the command in the menu, then click.

NOTE

- “Transmit DX Bulk Dump Data” can also be selected from the [toolbar](#).

Receive DX Bulk Dump Data

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



- **Receive Method**

- **1 Voice**

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

NOTE

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

- **All Voices**

- When this is selected, the data for 32 Custom voices will be received. Select the desired memory bank of voices (1 - 32 or 33 - 64) from the combo box at the right.

- **Receive DX Bulk Dump**

- **Start**

- Click this to start reception of the data. 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.

Transmit XG System On

This is used for directly transmitting an XG System On message to the tone generator/sound card, initializing all XG settings. To use this, highlight the command in the menu, then click.

NOTE

- This operation initializes all XG parameters (System parameters and Part parameters) and DX Native Part parameters. On an XG Plug-in System “mother” device, the XG parameters of that device are also initialized. However, on a Modular Synthesis Plug-in System (MSPS) “mother” device, the parameters are not initialized.

Appendix

Initial Voice Default Settings

DX Simulator Edit List

ALGORITHM: 1

VOICE NAME: INIT VOICE

UNISON: switch OFF, detune 0

RANDOM PITCH: 0

POLY MONO: Poly

PITCH BEND: range 2, etap 0

PORTAMENTO: mode Sus-Key P Retain, step 0, time 0

FEEDBACK: 0

LFO: wave form TRI, speed 35, delay 0, PMD 0, AMD 0, sync ON, mode singl

PITCH ENVELOPE GENERATOR: rate R1-R4 99, level L1-L4 50, range 8va, re 0, velo switch OFF, KEY TRANS POSE C3

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

Algorithm List

