

# Using the Yamaha DSP Factory with Cakewalk

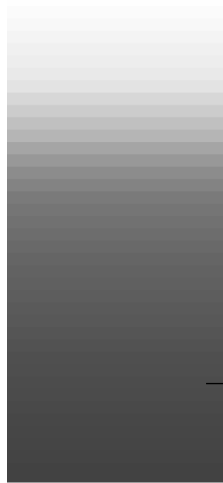
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# Preface

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*Using the Yamaha DSP Factory™ with Cakewalk™* is a guide that shows you how to use Cakewalk to take full advantage of the Yamaha DSP Factory's impressive capabilities. Both Cakewalk and the DSP Factory have extensive effects available, giving you an extremely wide array of tools to enhance your projects. The new AudioX Console view that you open from Cakewalk gives you complete control of all the DSP Factory's features.

## Installing the DSP Factory and Driver

To install the DSP Factory hardware and software driver, follow your Yamaha documentation.

## Uninstalling the DSP Factory and Driver

If you are going to remove the Yamaha DSP Factory hardware from your computer, **uninstall the driver first** . If you don't, you may experience system crashes.

To uninstall the driver: from the Windows Start menu choose **Settings-Control Panel-Add/Remove Programs** , click Yamaha DSP Factory AudioX Driver, and click the Add/Remove button. Follow the screen instructions from there.

## About This Guide

This guide refers to the Yamaha DSP Factory as “the DSP Factory.”

*Using the Yamaha DSP Factory™ with Cakewalk™* is organized as follows:

Chapter 1 introduces the DSP Factory, explains the AudioX Console view that you control it with, and gets you started recording with a Tutorial.

Chapter 2 explains how to direct signal flow both within the DSP Factory, and to and from Cakewalk. It also describes the Clock Chooser options.

Chapter 3 explains how to group faders and controls in the AudioX Console view and how to manipulate them by remote control.

Chapter 4 explains how to use the DSP Factory's onboard effects.

**Note:** Your screen will look slightly different from the screen described in this guide, depending on what hardware you install. For instance, the more breakout boxes (AX-44's) you install, the more choices you will have in the Output Patcher dialog box. Also, if you install a second DSP 2416 mixing card, you will have twice as many Channels--two groups of 24 instead of one group.



# 1

# Introducing the DSP Factory

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## **In This Chapter**

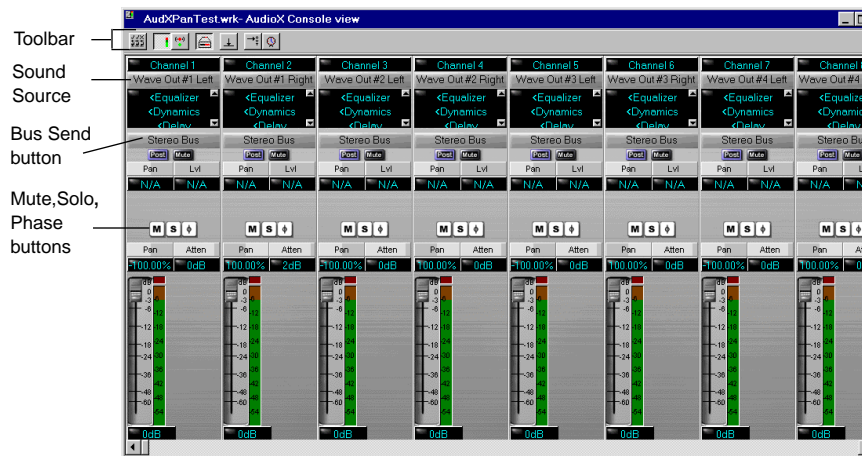
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## Introduction

The Yamaha DSP Factory is a digital recording and mixing system containing a DS2416 Digital Mixing Card. You can expand the DSP Factory by adding AX44 expansion units, an AX88, another DS2416 card, and an AX16AT ADAT interface. The DSP Factory uses its own processor and not the computer's CPU. This frees your computer's CPU to process more tracks and/or effects while the DSP Factory processes its own separate effects. The DSP Factory can add its effects on both inputs and outputs. You control the DSP Factory from the AudioX Console view.

## The AudioX Console View








The AudioX Console view is a virtual mixer for the DSP Factory. This mixer gives you complete control over signal flow and the onboard effects processors. Besides the faders and buttons that a traditional mixer has, the AudioX Console view has a toolbar to provide more control over the mixer's display, signal flow, and clock settings (see table on next page).





## The AudioX Console view

The following table describes the tools in the toolbar, along with their functions:





Tool	Name	Function
	Module Manager	Controls which Channels, Busses, and Aux Busses appear in the AudioX Console view.
	Playback Meters	Controls whether playback meters are displayed next to each Channel, Bus, and Aux Bus.
	Peaks Only	Controls whether playback meters display only excessive signal level (peaks).
	Allow zoomable controls	Controls whether Pan and Attenuation controls expand into zoom bars when you click and drag them.
	Reset Controls	Resets all of the AudioX Console view's faders, settings, and controls to Yamaha factory defaults.
	Output Patcher	Controls where all Busses, Aux Busses, and the Stereo Bus send their signals.
	Clock Source	Controls what clock source the DSP Factory uses.


## Tutorial

This tutorial takes you through opening the AudioX Console view, recording two tracks, applying some effects, and sending your mix out through the DSP Factory outputs. It assumes you have properly installed the DSP Factory and its driver.

**Note:** Your screen will look slightly different from the screen described in this guide, depending on what hardware you install. For instance, the more breakout boxes (AX-44's) you install, the more choices you will have in the Output Patcher dialog box. Also, if you install a second DSP 2416 mixing card, you will have twice as many Channels--two groups of 24 instead of one group.

To record two tracks:

1. Plug two instruments (or one stereo instrument) into Analog Input L and Analog Input R of the DSP card.
2. Open a new file in Cakewalk (press Ctrl-N).
3. Open the Audio X Console view (choose **View-AudioX Console-Yamaha DSP Factory** ).  
The AudioX Console view appears.
4. Make sure that the Playback Meters button  is depressed and the Peaks Only button  is not depressed.
5. Press the Right-arrow to scroll to channels 17 and 18, which should be labeled Analog Input (Left) and Analog Input (Right).
6. Play your instruments. You should see levels on Channels 17 and 18, the Stereo Bus, and Busses 1-8. By default, the AudioX Console view patches each Channel through the Stereo Bus and Busses 1-8. Aux busses are muted by default. If necessary, drag the input faders up on Channels 17 and 18. You can click and drag the Atten (attenuation) control  on Channels 17 and 18 to boost or cut the signal further.
7. Now send the signals from Busses 1 and 2 to Cakewalk through a Wave In:
  - a. Click the Output Patcher button  . The Output Patcher dialog box appears.
  - b. Under Select a Patch Group, choose Bus1/2 from the dropdown menu.
  - c. Under Available Outputs, choose Wave In #1 (Stereo) and click OK.
8. In the Cakewalk Track view, Right-click the Source column of track 1 and choose Track Properties. In the Track Properties dialog box, set the Source to Left DS2416 #1 WAVE IN. Set the Port to DS2416 #1 WAVE OUT and click OK.
9. Right-click the Source column of track 2 and choose Track Properties. In the Track Properties dialog box, set the Source to Right DS2416 #1 WAVE IN. Set the Port to DS2416 #1 WAVE OUT and click OK.
10. Arm track 1 and set Pan to 0 (this sends all of track 1's signal to Channel 1, Wave Out #1 **Left** in the AudioX Console view); arm track 2 and set Pan to

- 127 (this sends all of track 2's signal to Channel 2, Wave Out #1 **Right** in the AudioX Console view).
11. In Cakewalk, open the Console view (**View-Console** ).
  12. Make sure the Record Meters button is depressed and the Peaks Only button is **not** depressed. Play your instrument(s). You should see input levels in Cakewalk's Console view on tracks 1 and 2. If necessary, adjust input levels in the AudioX Console view in Channels 17-18.
  13. In Cakewalk, click the Record button, record some input, and click Stop. Your recorded data appears in the Clips pane.
  14. Open the Output Patcher dialog box (press  ). Under Select a Patch Group click the Stereo Bus, and under Available Outputs, click Analog Output (Stereo). Make sure you have connected the outputs of the DSP card to your monitoring system. Click the Play button to hear your tracks.

To apply some effects:

1. In Channel 1 of the AudioX Console view, double-click the name of an effect. The parameters dialog box for the effect you clicked appears.
2. Set the parameters for the effect you chose, or choose a preset effect from the Presets field. Close the dialog box.
3. Repeat steps 1-2 for any additional effects you want on Channel 1 and follow the same procedure for Channel 2.

Play your tracks and adjust effects parameters, if desired. The above procedure uses the three effects that are hard-coded into each channel module. To take advantage of the much greater selection of effects in the two Yamaha FX 1000 effects units, send your channel's signal through Aux busses 5 and 6, which go to Effects Units 1 and 2. See Busses and Aux Busses on page 10, and Chapter 4, Effects.





# 2

# Signal Flow

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## Basic Signal Flow

**Note:** The terms “Wave In” and “Wave Out” tell you which way a signal flows in Cakewalk, not in the AudioX Console view. In the AudioX Console view, “Wave In” sends a signal to Cakewalk and “Wave Out” refers to a signal coming back from Cakewalk.

Signal flow in the DSP Factory is extremely flexible, however certain channels have dedicated functions and are labeled as such. The following table shows the channel numbering and use:

Channel Function	Channel #
Wave Out #”n” Left and Right	1-16
Analog Inputs Left and Right	17-18
Digital Inputs Left and Right	19-20
Effects 1 Return Left and Right	21-22
Effects 2 Return Left and Right	23-24

Typical signal flow between the DSP Factory and Cakewalk looks something like this (diagram on next page):

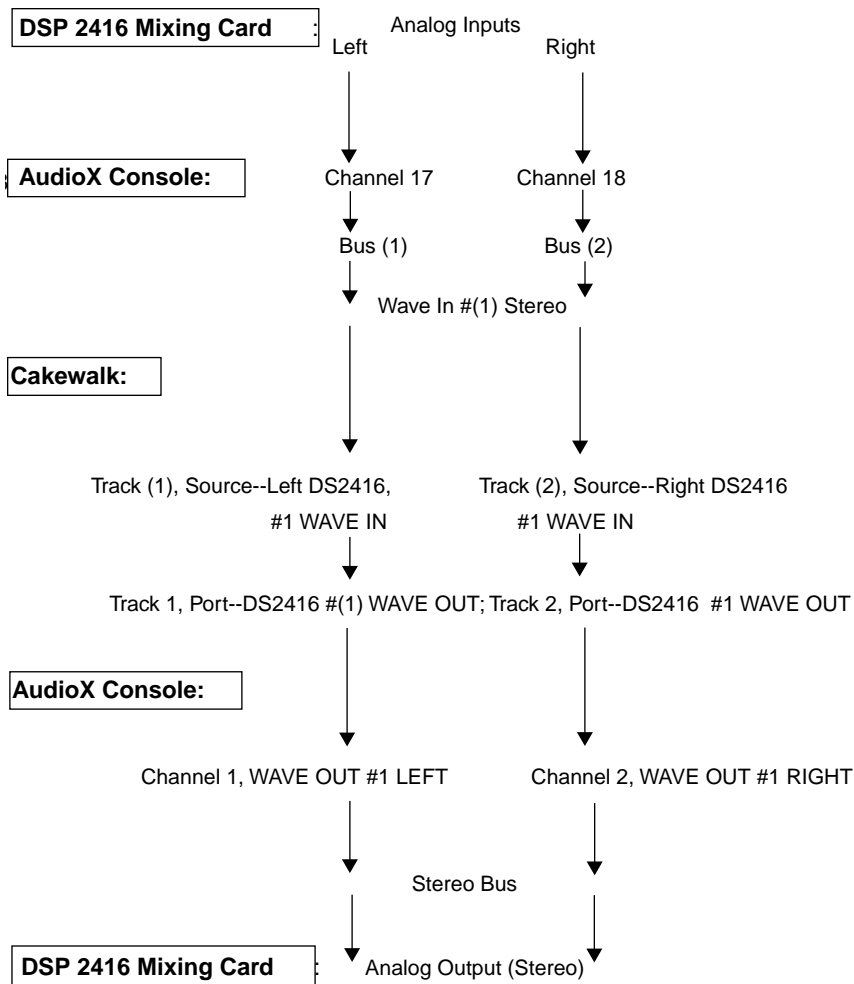
- Recorded audio flows into the AudioX Console view from the DSP 2416 Mixing Card’s Analog Inputs Left and Right and/or Digital Inputs Left and Right.
- Audio flows from the AudioX Console view into Cakewalk through the Wave Ins. In Cakewalk’s Track view, the Source column settings determine which signals from the AudioX Console view flow into each track. You have 3 choices from each of the 8 DSP WAVE IN Channels: Left DS2416 #”n” WAVE IN, Right DS2416 #”n” WAVE IN, and Stereo DS2416 #”n” WAVE IN (“n” stands for numbers 1-8).
- Audio flows back to the AudioX Console view from Cakewalk through the Wave Outs. Cakewalk’s Port settings and Pan controls determine exactly where the signal flows back into the AudioX Console view:
  - There are 8 choices of Port settings for each track--DS2416 #1 WAVE OUT sends the signal to Channels 1 and 2 of the AudioX Console view, DS2416 #2 WAVE OUT sends the signal to Channels 3 and 4 of the AudioX Console view, etc.
  - Cakewalk’s Pan controls direct a track’s signal back to either a Wave Out #”n” Left Channel, a Wave Out #”n” Right Channel, or a mixture of the two.
- When the signal reenters the AudioX Console view, you direct it with the Bus Send buttons on each Channel and with the Output Patcher dialog box:
  - The Bus Send buttons direct a signal from an individual Channel to any

combination of Busses 1-8, Aux busses 1-6, and the Stereo Bus.

- The Output Patcher dialog box directs signals from Busses 1-8, Aux busses 1-6, and/or the Stereo Bus to the Digital or Analog Outputs, and/or back to Cakewalk through the Wave Ins.

### Typical Signal Flow between the DSP Factory and Cakewalk:

**Note :** Numbers in parentheses represent arbitrary numbers.




## Busses and Aux Busses

The busses and aux busses in the AudioX Console view provide enormous flexibility in signal flow. You can send any of the 24 channels to any combination of 8 Busses, 6 Aux busses, and the Stereo Bus. From there you can direct the signal to any combination of the Analog Outputs, Digital Outputs, and the Wave Ins.

**Note:** Aux busses 5 and 6 always go to Effects Units 1 and 2 ( the two, onboard Yamaha FX 1000 processors) and return through Channels 21 through 24. You can then send channels 21-24 to any of the choices in the Bus Send popup menu (see below).

To send a Channel through a Bus, Aux bus, or the Stereo Bus:

1. Find the Channel in the AudioX Console view you want to send, and click

the Bus Send button  in that channel (the button is labeled Stereo Bus by default).

The Bus Send popup menu appears.

2. In the Bus Send popup menu, click the name of a bus that you either want to send the Channel to or mute. The popup menu closes and the name of the bus you chose appears on the Bus Send button.

**Note:** By default, every channel is sent to Busses 1-8 and the Stereo Bus. All Aux busses are muted by default.

3. Do one of the following:
  - If you don't want to send the channel through the bus you clicked, click the Mute button under the Bus Send button while the name of that particular bus appears on the Bus Send button.
  - If you do want to send the channel through the bus you clicked, either do nothing or, optionally, one or both of the following:
    - Adjust the Lvl control (level control) that's located just below the Mute button. This controls how much of the channel's signal you send to the bus.  
**Note:** When the Bus Send button is labeled Stereo Bus, the Lvl control reads "N/A" for not applicable.
    - Click the Pre/Post button that's located just under the Bus Send button to change the sent signal from pre-fader to post-fader.
4. Click the Bus Send button again and repeat steps 2-3 to finish choosing busses. Choose Aux busses 5 and/or 6 if you want to send the channel to Effects Units 1 and/or 2.

When you finish choosing Busses, play your track and observe the Channel Meters for all the Busses you chose. You should see the Channel signal displayed in each one.

Repeat this procedure for each Channel you want to direct. When you are through, you can decide where all those Busses will send their signals to by using the Output Patcher.



## The Output Patcher

The Output Patcher controls where the Busses, Aux busses, and the Stereo Bus send their signals. You can direct the signals to any of the Analog Outputs, Digital Outputs, or the Wave Ins.

For example, suppose you want to send your finished mix back to two new tracks in Cakewalk. You could send all relevant Channels, including the effects return Channels (21-24), through Aux 1 and Aux 2. Then you could use the Output Patcher to send Aux 1/2 to one of the Wave Ins, and choose that Wave In as the Source for your two new tracks in Cakewalk. To do this, make sure Simultaneous Record/Playback is enabled in Cakewalk (Options > Audio > Advanced).

To send Busses, Aux busses or the Stereo Bus through desired outputs:

1. Click the Output Patcher button.  
The Output Patcher dialog box appears.
2. In the Select a Patch Group field, click the drop-down arrow to display the drop-down list of Patch Groups.
3. Click one of the Patch Groups.
4. In the Available Outputs field, click any combination of outputs for the Patch Group you chose in step 3 and click OK.

**Note:** Each of the Available Outputs can only accept one Patch Group as an input. When you match up an Available Output with a Patch Group, any other Patch Groups that were routed to that output become deselected.

Now play your tracks and watch the appropriate Channel meters for input. It's a good idea to click all the choices in the Select a Patch Group field to see where they are being sent.

## Choosing a Clock Source

The DSP Factory has its own internal wordclock. Set this at the same rate as the sampling rate of your project. The DSP Factory can be the master or the slave in a project. See your Yamaha documentation for more details.

To set the clock source:

1. In the AudioX Console view toolbar, click the Clock Source button.  
The Select Clock Source(s) dialog box appears.
2. Select from the following choices:
  - 44.1 kHz Clock--This is the standard for CD's and is probably what you will use most of the time. Click the Done button after you select this.
  - 44.1 kHz Varispeed Clock--Choose this if you need to raise or lower the clock by a certain percentage to synchronize with a film project. Consult the documentation from your video equipment for more details.
  - 48 kHz Clock--This is the speed ADAT machines sometimes use.

- 48 kHz Varispeed Clock--Consult your video equipment documentation for more details.
- External Clock on Digital Input--Choose this when you want to slave the DSP Factory to a DAT machine or similar external source. See your Yamaha documentation about wordclocks.



# 3

# Remote Control and Grouping

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## Grouping Controls

You can group faders, pan and attenuation sliders, and/or mute and phase buttons in the AudioX Console view. Groups are collections of controls whose movements are linked together. For example, two volume faders can be grouped so that when you increase or decrease the volume of one channel, the volume of the other channel changes in exactly the same way. Mute buttons can be grouped so that when you click the mute button of channel 1, channel 2 becomes muted and channels 3 and 4 are un-muted.

In the AudioX Console view, faders that are grouped display a colored group indicator on the controls in each group. The controls in group A display a red indicator, the controls in group B a green indicator, and so on. You can't group faders and buttons together. When you group buttons together, the way they work is based on their positions when you create the group: buttons that are in the same position when you group them will turn on and off together at all times. Buttons that are in opposite positions when you group them will always remain in opposite positions.

To add a control to a group:

1. Right-click on the control.  
The Group popup menu appears.
2. Slide the cursor over the word Group to display the drop-down list of available group letters and their associated colors. If you are grouping buttons, only letters without colors are available group names. Choose a group from the drop-down list.

Cakewalk adds the control to the group. Faders display the group's color indicator; buttons do not.

To remove a control from its group:

1. Right-click the control.
  2. Choose Ungroup from the menu.
- Cakewalk removes the control from the group and the control displays the neutral color indicator.

## **Absolute, Relative, and Custom Grouping**

There are three ways to group controls, depending on how you want them to react to each other:

- **Absolute** --The range of motion in all controls in the group is identical. When you move one control in the group, all other controls in the group move the same amount in the same direction. The controls do not necessarily need to start at the same level.
- **Relative** --The range of motion for controls in the group is not the same. All controls in the group have the same value at one point--zero for send, return, and volume levels, and center for pan controls. AudioX maintains the initial value difference between controls as soon as the current values allow it.
- **Custom** --Sometimes you want to define a more complex relationship between the controls in a group. For example, you want two controls to operate in reverse--when one fader drops, the other increases. You want two volume faders grouped so that they are locked together at maximum level, but drop at different rates. You want two faders to be locked together with the same range of motion, but a third fader grouped with them to have a different range of motion. Custom groups let you set the range of motion for each control in the group by entering a starting and ending value. As any one control in the group is moved from its starting position to its ending position, the other controls in the group exercise their full range of motion. When you have defined a custom group, you can adjust the starting and ending position of each control using the Group Settings dialog box or using popup menus on the controls in the group.

To set the group type to relative or absolute:

1. Right-click any control in the group and choose Group Properties to display the Group Properties dialog box.
2. Select Absolute or Relative as the group type.
3. Click OK.

Cakewalk uses the type to determine the range of motion for the group's controls.

To create a custom group:

1. Right-click any control in the group and choose Group Properties to display the Group Properties dialog box.
2. Select Custom as the group type. The starting and ending values for each control appear.
3. To change the starting or ending value for a control, click that control in the list and enter new values in the Start Value and End Value fields located at the bottom of the dialog box.
4. To swap the starting and ending value, click the Swap button.
5. Click Close when you are done.

Cakewalk uses the control type to determine the range of motion for the group's controls.

To adjust the start value or end value of a control:

1. Set the control to the desired starting or ending value.

2. Right-click the control.
3. Choose either Set Start = Current or Set End = Current.  
Cakewalk sets the starting or ending value of the control. Setting the Start and End values for a control is an effective way to limit its movement to a certain range when another control in the group moves.

To set the Snap-To value to the current position:

1. Right-click a fader.  
The Group/Ungroup popup menu appears.
2. Choose Set Snap-To = Current from the menu.

Now you can click anywhere along a fader's path and the fader will snap to that position.

## Using Remote Control

In the AudioX Console view, you can use a MIDI device to remotely control faders, sliders, and buttons.

For example, you can:

- Use a key on your keyboard to temporarily mute a track
- Work the send level in an Aux Bus with your pitch bend wheel
- Set the main volume levels with NRPN messages

If you set up remote control for a grouped control, the remote control works all controls in the group. You select the type of MIDI message used to work a control by choosing options in the Remote Control dialog box. The options are as follows:

Message Option	Message Effect on Buttons	Message Effect on Faders and Controls
None	No remote control	No remote control
Note On	Button state toggles.	The fader moves alternately to maximum and minimum levels.
Note On/Off	Button state toggles when AudioX console receives Note On and toggles again when AudioX receives Note Off.	The fader moves to maximum level when AudioX console receives Note On, and moves to minimum when AudioX receives Note Off.
Controller	N/A	The fader moves to the controller value.

<b>Message Option</b>	<b>Message Effect on Buttons</b>	<b>Message Effect on Faders and Controls</b>
Wheel	N/A	The fader moves to the wheel value, with values transposed from their original range of +-8,191 to a range of 0-127.
RPN	N/A	The fader moves to the RPN value, with values transposed from their original range of 0-16,383 to a range of 0-127.
NRPN	N/A	The fader moves to the NRPN value, with values transposed from their original range of 0-16,383 to a range of 0-127.

To set up remote control for a fader, slider, or button:

1. Right-click the control you want to work by remote control and choose Remote Control from the popup menu.  
The Remote Control dialog box appears.
2. Select the remote control type, as described in the table above.
3. Set the note or controller number if applicable.
4. Click OK.

You can now work the control from your MIDI device.





# 4 Effects




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## EQ

The Yamaha DSP Factory has a 4-band parametric EQ on all Channels and the Stereo Bus. Set the EQ by using the following controls in the Equalizer dialog box, which appears when you double-click the word “Equalizer” that appears near the top of every Channel module:

- Presets--Clicking the dropdown arrow on the right side of the Presets field displays a dropdown list of preset EQ settings. Click the name of a preset to instantly configure your EQ. You can choose from the default list or create your own settings and save them.
- Save button--The disk icon  next to the Preset field is the Save button. Type a name into the Preset field and click the Save button to save any EQ settings you create.
- Delete button--The “X” icon  next to the Save button is the Delete button. Click the name of a preset you want to delete from the Preset field and then click the Delete button to remove it from the list.
- Reset and Cancel button--The Reset and Cancel button  located at the far right of the dialog box just under the Close button, closes the dialog box and restores all your settings to the values they had the last time you closed the dialog box.
- Band 1 (also 2,3,and 4)--This field contains the following fields:
  - Bypass--Click the Bypass checkbox in any Band to bypass the settings in that Band (choosing 0 in the Gain field accomplishes the same thing).
  - (presets)--Next to the Bypass checkbox is a list of preset settings for the Band you are configuring. Click the dropdown arrow to display the list and click the name of the one you want from the list.
  - Gain--Drag the Gain slider to the left or right to cut or boost the Frequency of the Band you are configuring.
  - Freq--Drag the Frequency slider to set the frequency you want to affect in the Band you are configuring.
  - Q--Drag the Q slider to set the width of the affected frequency spectrum around the particular Frequency you chose with the Frequency slider.

## Dynamics Processing

The Yamaha DSP Factory has a dynamics processor on all Channels and the Stereo Bus. Choose the type of processing and the settings by using the following controls in the Dynamics dialog box, which appears when you double-click the word “Dynamics” that appears near the top of every Channel module:




- Presets--Click the dropdown arrow on the right side of the Presets field to display the dropdown list of preset settings. Click the name of the one you want to instantly configure your dynamics processing.
- Save button--Next to the Preset field is a disk icon  that you can click to save any settings that you create in this dialog box. Type a name in the Preset field and click the Save button (disk icon) to save your settings.
- Delete button--Next to the Save button is the “X” icon  which acts as a delete button. Click the name of a Preset you want to delete and then click the Delete button to remove that Preset from the dropdown list.
- Reset and Cancel button--The Reset and Cancel button , located at the far right of the dialog box just under the Close button, closes the dialog box and restores all your settings to the values they had the last time you closed the dialog box.
- Dynamics On--This checkbox turns the dynamics effect on this Channel on or off. The fields below it are greyed-out when this checkbox is unchecked.
- Type--Click the dropdown arrow on the right side of the Type field to display the dropdown list of processor types. Click the name of the type of processor you want.
- Trigger--Click the dropdown arrow on the right side of the Trigger field to display the dropdown list of available triggering signals. Click the name of the one you want.
- Input--Click the dropdown arrow on the right side of the Input field to display the dropdown list of available input signals.
- Link to channel “N”--If you are configuring the dynamics on an odd-numbered Channel, the Link to channel “N” field displays the next higher numbered Channel; even-numbered Channels link to the next lower numbered Channel. This is because Wave Out signals from Cakewalk show up in the AudioX Console view as Wave Out Left and Right signals on consecutively numbered Channels. Click the Link checkbox to apply the dynamics in this dialog box to the adjacent of two paired Channels.
- Parameter and Value field--To change the value of a parameter, click the name of the parameter to highlight it and then drag the slider (located just to the right of the

Parameter and Value field) to change its value. The Value column next to the name of the parameter changes as you drag the slider.

- Gain Reduction--This field acts as a meter that shows you the actual reduction in dB your settings produce. While the Dynamics dialog box is open and you have some dynamics configured and turned on, click the Play button in Cakewalk and watch the Gain Reduction meter.

## Delay




The Delay effect that appears in Channels 1-20 is not a conventional delay effect. It is a timing offset that enables you to synchronize a Channel with another Channel or Bus whose timing has been delayed by heavy effects processing. The delay is measured in samples. Once you find the number of samples that sounds right, you can save that number as a Preset and apply it to all Channels that need it. Set the delay with the following controls in the Delay dialog box, which appears when you double-click the word “Delay” that appears near the top of every Channel module:

- Presets--Click the dropdown arrow on the right side of the Presets field to display the dropdown list of settings that you’ve saved and labeled previously.. Click the name of the one you want to instantly set the delay for this Channel..
- Save button--Next to the Preset field is a disk icon  that you can click to save any settings that you create in this dialog box. Type a name in the Presets field and click the Save button (disk icon) to save your settings.
- Delete button--Next to the Save button is the “X” icon  which acts as a delete button. Click the name of a Preset you want to delete and then click the Delete button to remove that Preset from the dropdown list.
- Reset and Cancel button--The Reset and Cancel button , located at the far right of the dialog box just under the Close button, closes the dialog box and restores all your settings to the values they had the last time you closed the dialog box.
- Delay On--This checkbox turns the delaying effect on this Channel on or off.
- Samples--Drag the slider next to the word “Samples” to set the number of samples by which you want to delay this Channel. The number is greyed-out when the Delay On checkbox is unchecked.

## FX1000 Effects Processor

The Yamaha DSP Factory has 2 FX100 Effects Processors--one on Aux 5 labeled Effect #1, and one on Aux 6 labeled Effect #2. Use the Bus Send button to send a Channel that you want to add effects to through Aux 5 and/or Aux 6. Aux 5 returns through Channels 21-22 and Aux 6 returns through Channels 23-24.

You can configure both effects processors from the same dialog box. Choose the effects you want and configure them by using the following fields in the FX100 Effects Processor dialog box, which appears when you double-click the word "<FX1000>" that appears near the top Aux 5 and Aux 6:

- Presets--Click the dropdown arrow on the right side of the Presets field to display the dropdown list of preset settings. Click the name of the one you want to instantly configure your effects settings.
- Save button--Next to the Preset field is a disk icon  that you can click to save any settings that you create in this dialog box. Type a name in the Preset field and click the Save button (disk icon) to save your settings.
- Delete button--Next to the Save button is the "X" icon  which acts as a delete button. Click the name of a Preset that you want to delete and then click the Delete button to remove that Preset from the dropdown list.
- Reset and Cancel button--The Reset and Cancel button , located at the far right of the dialog box just under the Close button, closes the dialog box and restores all your settings to the values they had the last time you closed the dialog box.
- Effect #1-- Click the dropdown arrow on the right side of the Effect #1 field to display the dropdown list of preset effects. Click the name of the one you want; the Parameter and Value field changes to display the appropriate parameters for that effect.
- Parameter and Value field--Click the name of the Parameter you want to change to highlight it, and drag the slider (located just below the Parameter and Value field) to change its value. The Value column changes as you drag the slider.
- Effect #2--Use this field and the Parameter and Value field under it to configure Effect #2 just as you configure Effect #1.



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