Dimension Quick Start Guide

In This Chapter

Dimension is a sampling synthesizer that contains over 1000 programs, and includes extensive manipulation and mutilation tools for combining and editing the sounds.

Here are some procedures to get started.

Loading Programs

A Dimension program is made of up to four Elements. Each Element contains a wave player/synth engine, and a chain of effects, filters, envelope generators, and LFO's. You can turn each Element off or on in the Mix section at the bottom of Dimension's interface. You can also set each Element to respond to a different MIDI channel, if you want to use Dimension as a four-part multi-timbral synth.

Note: many programs use the Mod Wheel to change the sound of the program while the program is playing back. If the program name contains "mw," try applying the Mod Wheel during playback.

To Load a Program

1. Click the program window:

   The Program Browser appears.

2. Navigate to the folder where the desired program is located, and double-click the name of the program. Close the Program Browser after you double-click the program.

Dimension loads the program you double-clicked, and displays the program name in the program window.

You can also load a program by clicking the Program/Element Handling button and choosing ***Load Program*** from the popup menu.

When you load a program, you load up to four elements at a time, along with all the associated effects, filters, etc. You can load a single element at a time if you want, in case you're using Dimension multi-timbrally, or if you want to combine some elements to create a new program.

Loading Elements

Loading a single element loads the samples and effects that a single element contains. This procedure does not clear the samples or effects from the other three elements. If you want to do that, initialize the program first by clicking the Program/Element Handling button and choosing ***Initialize Program*** from the popup menu.

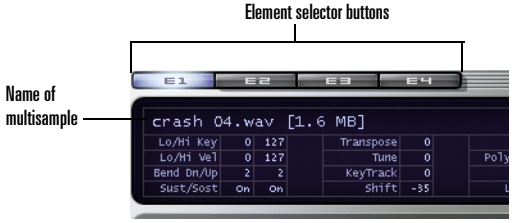
To Load an Element

1. Click the Program/Element Handling button and choose ***Load Element*** from the popup menu:

   The Load Element dialog appears.

2. Navigate to the folder where the desired element is located, click the name of the element, and click the Open button.

Dimension loads the element you clicked, and displays the name of the multisample in the multisample window.



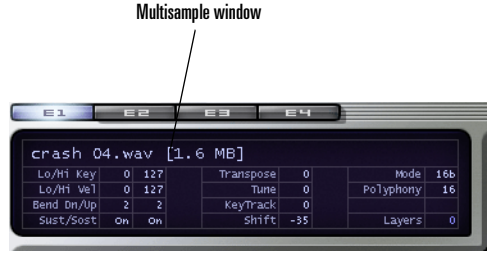
When you load an element, you load all of the element's associated effects, filters, etc. You can load only multisamples if you want, in case you're creating a new program, and want to configure all the effects yourself.

Loading Samples

You can load single samples (wave files), or multisamples, which already contain key mapping and velocity switching assignments. Loading a sample or multisample does not clear the effects that may be patched into Dimension at the time of loading. If you want to clear all effects first, initialize the program by clicking the Program/Element Handling button and choosing ***Initialize Program*** from the popup menu.

To Load a Multisample

1. Click the multisample window.



   The Load Multisample dialog appears.

2. Navigate to the folder where the desired multisample is located, click the name of the multisample, and click the Open button.

Dimension loads the multisample and displays the name in the multisample window.

A multisample consists of a group of samples, their key mapping, and velocity switching. If you want to change key mapping and/or velocity switching, you can edit each multisample's SFZ file, which is found in the multisample folder along with the multisamples. An SFZ editor (not included) is a valuable tool for this type of editing.

To Load a Single Sample

1. Click the multisample window to open the Load Multisample dialog, and navigate to the folder where the desired sample (wave file) is located.

   Note: Dimension streams samples from RAM, so only samples under a minute in length are suitable for loading, depending on the amount of RAM in your computer.

2. Click the name of the sample, and click the Open button.

   Or

- Drag a wave file from the Windows Explorer to the multisample window.

Editing Sample Playback Parameters

If you want to change how a sample responds to MIDI input, you can edit the fields in the multisample window. To edit number fields, drag the number in the field up or down. To reset the field to its default value, double-click it. To edit an On/Off field, click the field.

A multisample consists of a group of samples, their key mapping, and velocity switching. If you want to change key mapping and/or velocity switching for multisamples, you can edit each multisample's SFZ file, which is found in the multisample folder along with the multisamples. An SFZ editor is a valuable tool for this type of editing, but you can use Notepad.

The following table describes how to use the fields in the multisample window. The Lo/Hi Key fields and Lo/Hi Vel fields are useful for working with single samples, but to control the key mapping and velocity range of each sample in a multisample, you need to edit the SFZ file for the multisample.

To Do This...	Do This...
Change the range of notes that trigger the sample(s)	Set the Lo/Hi Key fields.
Change the velocity range that triggers the sample(s).	Set the Lo/Hi Vel fields.
Change the pitch bend range.	Set the Bend Dn (down) and Bend Up fields to the desired number of half-steps.
Change whether the program responds to MIDI Sustain data (cc # 64), or MIDI Soft pedal (cc # 66).	Set the Sust/Sost fields to On or Off.
Transpose the input from your keyboard.	Set the Transpose field to the desired number of half-steps.
Tune the sample(s) up or down.	Set the Tune field to the number of cents, positive or negative, by which you want to adjust the sample(s).
Change the amount that each sample is transposed when the trigger note is raised by a half-step. The default is 100 cents, or one half-step.	Set the KeyTrack field to the number of cents, positive or negative, by which you want to transpose each sample when the trigger note is raised by a half-step.
Transpose the sample(s).	Set the Shift value in half-steps, positive or negative.
Set the polyphony.	Set the Polyphony field to a value between 0 and 8191, inclusive.

See what sample layer is currently playing.	View the value in the Layer field during playback.

After you edit a program, you can save your changes by clicking the Program/Element Handling button and choosing either ***Save Program*** or ***Save Program As*** from the popup menu.

Combining Elements

If you want to combine different elements into a new program, you basically load up to four elements and then save a new program. This is valuable if you want to play different instruments at the same time: for example, you could double strings and piano, or guitar and violin.

Here's the procedure:

To Combine Elements into a New Program

1. Initialize the program to clear all sounds and effects: click the Program/Element Handling button and choose ***Initialize Program*** from the popup menu (click ***Yes*** to the All Current Settings Will Be Discharged prompt).
2. Click the E1 button to display the controls for Element 1.

3. Load an element into Element 1: click the Program/Element Handling button, choose ***Load Element*** from the popup menu, navigate to the desired element, select it and click the Open button.
4. Adjust any effects, filters, etc. for Element 1, and make sure Element 1's On button is enabled in the Mix section:

5. Repeat steps 2-4 for any additional Elements you want to combine for this program (for Element 2, click button E2 to display the controls for Element 2, load an Element into Element 2, adjust effects for Element 2, and make sure Element 2's On button is enabled; for Element 3, click button E3, etc.).
6. When you've loaded and configured up to four Elements, mix the pan, volume, and global effects for the Elements by using the knobs in the Mix section. You can display the controls for the global effects by clicking the FX button. If you want a hard limiter applied to this program, enable the Limiter On button.
7. When the program sounds the way you want it, save the program by clicking the Program/Element Handling button and choosing ***Save Program As*** from the popup menu.

Copying, Unloading, Resetting, and Chaining Elements

If you right-click an Element button (E1 through E4), a popup menu appears, which contains the following commands:

- Unload Multisample—removes the multisample from the multisample window without removing parameter settings.
- Reset Element—removes the multisample from the multisample window and removes all parameter settings.

- Copy Element—places all information from current Element, including multisample assignments and all parameter settings, on the clipboard.
- Paste Element—pastes copied Element data from the clipboard to the current Element: to paste, right-click the Element button of the Element that you want to paste to, and select ***Paste Element*** from the popup menu.
- Chain to Next Element—this command patches the output of one Element into the EQ and delay chain of the next Element. You can chain the first three Elements into the last Element if you want. This allows you to turn off the EQ and delay on the previous Element to conserve CPU, or use the EQ's and delay processors in all the chained Elements. When an Element is chained, the Element's FX1 and FX2 knobs are disabled. Also, if an Element is chained to an Element that contains no multisample, the first Element won't sound. You can load the ELEMENT CHAIN.SFZ multisample into the second Element as a workaround, if you don't want to load an actual multisample. This multisample is found in the 98- Special folder in the Multisamples folder.

Using Dimension as a Multi-timbral Instrument

Each of the four Elements can function as a separate instrument, if you want to use a single instance of Dimension as a four-part multi-timbral instrument.

To Use Dimension as a Multi-timbral Instrument

1. Load the program that you want to use as a multi-timbral program.
2. Click the Options button  . The Options dialog appears.
3. Check the Set Program As Multi-timbral option, and click OK.
4. Save the program, if you want to change it to a multi-timbral program.

When a program is in Multi-timbral mode, the four Elements respond to MIDI channels 1-4, respectively.

Saving Programs and Elements

Once you've configured a Program or an Element the way you want it, you can save it to your Programs or Elements folders.

To Save a Program

1. When the program sounds the way you want it, click the Program/Element Handling button  and choose ***Save Program*** or ***Save Program As*** from the popup menu.
2. If you chose ***Save Program***, Dimension saves the program under its current name in its current folder.
3. If you chose ***Save Program As***, the Save Program dialog appears: navigate to the folder where you want to save the program, type a name for the program, and click the Save button.

To Save an Element

1. When the element sounds the way you want it, click the Program/Element Handling button  and choose ***Save Element As*** from the popup menu. This opens the Save Element dialog.
2. Navigate to the folder where you want to save the element, type a name for the element, and click the Save button.

To Save the Default Program

1. Load the program that you want Dimension to use when you haven't chosen a program.
2. Click the Program/Element Handling button and choose ***Save Default Program*** from the popup menu.
3. Click ***Yes*** when Dimension asks you if this is what you want to do.

Dimension saves the current program as the default program.

Using the LoFi Module

Dimension's LoFi module contains a bit reduction effect and a decimation effect that you can apply to the current Element.

The bit reduction effect emulates the sound of older, low bit-resolution samplers. The decimation effect continuously adjusts the sample rate.

To Use Bit Reduction

1. Enable the On button that's above the Bit Red knob.
2. Adjust the Bit Red knob between 0 and 100% to achieve the desired sound.

To Use Decimation

1. Enable the On button that's above the Decim knob.
2. Adjust the Decim knob between 0 and 100% to achieve the desired sound.

Using the Filter

Dimension's Filter creates a wide selection of filter types, which you choose from the dropdown menu:

The dropdown menu has the following choices:

- Low Pass (LP), one pole (1P), two pole, four pole, or six pole—this is a standard low-pass filter with choices for 6 dB filtering (1P), 12 dB (2P), 24 dB (4P), and 36 dB (6P). Use the Cutoff knob to select the cutoff frequency for the low-pass filter. Resonance is available for all choices except 1P; use the Reso knob to adjust resonance.

  Note: resonance can dramatically increase loudness as the cutoff frequency is reduced. Keep the Limiter in the Mix section turned on when you edit programs that use resonance.

- High Pass (HP), one pole (1P), two pole, four pole, or six pole—this is a standard high-pass filter with choices for 6 dB filtering (1P), 12 dB (2P), 24 dB (4P), and 36 dB (6P). Use the Cutoff knob to select the cutoff frequency for the high-pass filter. Resonance is available for all choices except 1P; use the Reso knob to adjust resonance.
- Band Reject (BR), one pole (1P), or two pole (2P)—this filter rejects the band of frequencies whose center frequency you choose with the Cutoff knob. The volume reduction of the selected band is 6dB (1P), or 12 dB (2P).
- All Pass (AP), one pole (1P)—this very subtle effect

introduces sub-sample delay times, which are useful when phase aligning samples between different elements.

- PK (2P)—peak filtering reinforces the cutoff frequency by 6 dB, and the surrounding frequencies with a slope of 12 dB per octave. The width of the peak is adjusted with the Reso knob.
- Comb filter—this choice creates several frequency notches, which color the sound in a particular way.
- Pink—a multiple knee filter composed of multiple low pass, one-pole filters. When applied to sampled material, the effect is a slight darkening of tone, without changing the sound character.

Using the Drive Module

Dimension's Drive module adds various overdrive effects, which you choose from the dropdown menu:

Try the various choices in the dropdown menu, and use the Shape knob to color each one. The Tone knob is intended to soften the resulting overdriven tone.

Using the EQ's

Dimension's three EQ modules give you tremendous control over the sound of each Element.

Each EQ has the following controls:

- On button—enable this button to use the EQ.
- Low shelf button—when this button is enabled, the EQ modifies all frequencies below the Freq knob value.
- Band pass button—when this button is enabled, the EQ modifies all frequencies surrounding the Freq knob value.
- High shelf button—when this button is enabled, the EQ modifies all frequencies above the Freq knob value.
- Gain knob—turn this knob to the left to cut the selected frequencies by up to 24 dB, or to the right to boost by up to 24 dB.
- Freq knob—turn this knob to select a frequency between 8 and 22350 Hz.
- Q (Quality) knob—turn this knob to the left to narrow the range of affected frequencies, or to the right to widen the range.

Using the Delay Module

Dimension's Delay module offers many delay types in the Type menu, and has a built-in filter that you can select options for in the Filter menu.

The Delay module has the following controls:

- Delay menu—choose the desired type of delay effect.
- Filter menu—choose the type of filter. Choices are Low Pass (LP), Band Pass (BP), High Pass (HP), Band Reject (BR), All Pass (AP), Peak (PK), Comb filter, and Pink. Strength choices are 6 dB(1P) up to 36 dB (6P).
- Delay parameters—Left delay: choose a tempo ratio. Center delay: choose a tempo ratio (knob is greyed-out if the delay type doesn't use a center delay). Right delay: choose a tempo ratio. Feedback: choose from 0 to 100%.
- Filter parameters—choose a cutoff frequency and resonance level. A knob is greyed-out if the chosen filter doesn't support the parameter that the knob controls.
- LFO parameters—if a chosen delay type uses an LFO, set the frequency and depth with these two knobs. Knobs are greyed-out if the relevant parameter is not used.
- Mix parameters—use these knobs to control the delay input level and dry/wet mix.

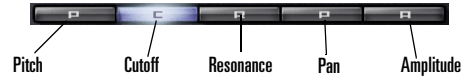
Using the Modulators Module

The Modulators module allows you to generate envelopes to control an Element's pitch, cutoff, resonance, pan, and amplitude.

Here are some procedures for generating envelopes:

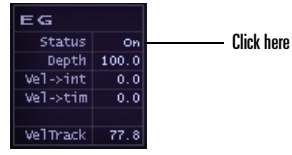
To Display an Envelope

- To display the envelope for pitch, cutoff, resonance, pan, or amplitude, respectively, click the Pitch button, Cutoff button, Resonance button, Pan button, or Amplitude button, respectively.



To Turn On an Envelope Generator

1. Display the desired envelope.
2. Click the EG Status field so that it's on.



To Edit EG Depth and Velocity Response

- To edit EG Depth, drag the Depth field up or down.
- To edit velocity intensity, drag the Vel->int value up or down. This controls the intensity in which the Note-on

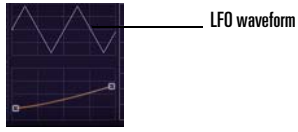
velocity affects the modulation depth.

- To edit how velocity affects EG times, as a multiplier of the time, drag the Vel->tim value up or down.
- To edit how velocity affects the current envelope's value, drag the Vel Track field up or down.

To Control an Envelope's LFO

- Click the LFO Status field to turn the LFO on or off.

- Click the current waveform to select a waveform.

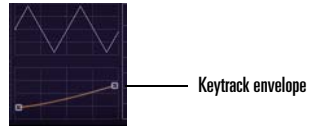


- Drag the LFO Freq field to control LFO frequency.
- Click the LFO Sync field to select tempo sync options. For example, if Sync is set to 1, the LFO will generate one cycle in each beat.
- Drag the LFO Delay field to select LFO Delay options in seconds. This is the time from Note-On message to LFO startup.
- Drag the LFO Fade field to select LFO Fade options in seconds. This is the time it takes the LFO to reach maximum modulation level.
- Drag the LFO Depth field to select LFO Depth options.

To Control Keytracking

- Drag the nodes or curve of the Keytrack envelope where it appears under the LFO waveform. You can drag the line segment into a curve, or reset the line segment by double-clicking it.

Keytracking maps the range of your MIDI controller to changes in the current envelope. For example, if you display the Cutoff envelope, and drag the Keytrack envelope into an upward slope, playing higher notes on your controller will raise the cutoff frequency. On the Amplitude envelope, you can actually use the Keytrack envelope as a global gain—drag both nodes of the Keytrack envelope up or down to control global output volume.



To Copy/Paste a Modulator Value

1. To copy a whole Modulator, just one envelope, an LFO, or a Keytrack setup, right-click an envelope button and choose ***Copy-***(***name of component you want to copy***) from the popup menu.

Right-click one of the five envelope buttons

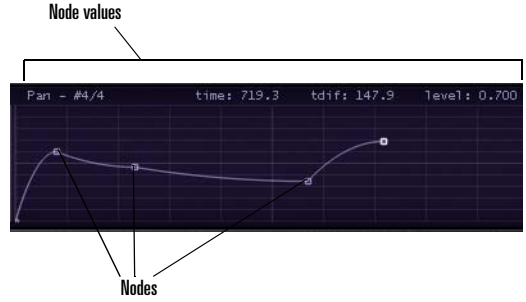
2. To paste what you just copied, right-click the envelope button where you want to paste the copied data, and choose ***Paste-***(***name of component you want to paste***) from the popup menu.

You can paste between instances of Dimension.

To Graph or Edit an Envelope

1. Click an envelope button to display the desired envelope, and make sure the EG Status field is On.
2. Add and edit nodes according to the following table:

To Do This...	Do This...
Add a node to the envelope.	Right-click the envelope. If the envelope does not have any line segments and nodes yet, right-click the graph where you would like to insert a line segment and a node.
Remove a node.	Right-click the node.
Move a node.	Drag the node.
Move a node without moving other nodes.	Ctrl-drag the node.
Edit a line segment.	Drag the line segment.
Reset a line segment.	Double-click the segment.
Remove all nodes.	Press ***r***.
Display the values of a node.	Hold the mouse over the node. The node values appear at the top of the graph, including node number, time, distance from previous node, and level.



Mixing

At the bottom of Dimension's interface is the Mix section, where you mix together the output of the four Elements. The Mix section contains controls for each Element, an FX section to control the two global effects, and a hard Limiter, which can only be turned on or off.

Here is a list of procedures for using the Mix section:

To Turn an Element's Output On or Off

- Click the Element's On button so that it is lit up (enabled) or grey (off).

To Control an Element's Pan or Volume

- Drag the Element's Pan or Vol knobs, respectively.

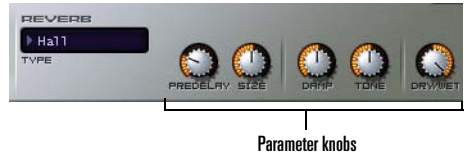
To Send an Element's Output to the Global Effects

- Drag the Element's FX1 knob to the right to send the Element's output to the Modulation FX processor.
- Drag the Element's FX2 knob to the right to send the Element's output to the Reverb processor.

To Choose Global Effects

1. Display the global effects by clicking the FX button in the Mix section.

2. Choose a Modulation effect by clicking the arrow in the Modulation FX window and then choosing an effect from the dropdown menu.
3. Adjust the effect with the parameter knobs.
4. Choose a Reverb effect by clicking the arrow in the Reverb window and then choosing an effect from the dropdown menu.



5. Adjust the Reverb effect by using the parameter knobs.

To Use the Limiter

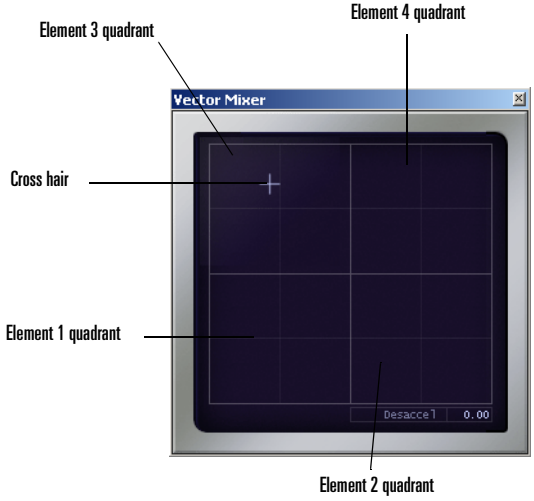
- Turn the Limiter button off or on. This is a hard limiter, which is not adjustable.

Vector Mixing

The Vector Mixer is an extra gain stage located after the Mix section in the signal chain. The Vector Mixer allows you to dynamically mix the output of the four Elements on a graph. You can balance the output of the four Elements by dragging the cross hair through the four quadrants of the graph, or by using a joystick.

The Desaccel field allows you to slow down the response of the cross hair—higher values cause a slower response.

Open the Vector Mixer by clicking the Show/Hide Vector Mixer button  .



Groove Programs

Some Dimension programs contain MIDI patterns that trigger audio patterns in the program. You can drag the MIDI patterns into Project5's Arrange pane, and open them in the Editor if you want to change the cycle of sample triggering in the pattern.

To Drag a MIDI Pattern from Dimension

1. Open a program from the Musical Grooves folder.
2. Drag from within Dimension's interface (for example, where the interface says Dimension) to your Dimension track in Project5.
3. Double-click the pattern in the Arrange pane to view it in the Editor.
4. Rearrange the notes in the pattern, if you want to trigger the program samples in a different order or rhythm.

MIDI Matrix

Dimension's MIDI Matrix works like Project5's remote control feature: use can use a MIDI message to control a Dimension parameter.

To Assign a MIDI Message to a Dimension Parameter

1. Display the MIDI Matrix by clicking the Show/Hide MIDI Matrix button  .
2. In the Source column, click the arrow at the left side of the column to open the MIDI Source menu.
3. Pick a MIDI message that you want to use to control a Dimension parameter.

4. In the Destination column, click the arrow at the left side of the column to open the Destination menu (a list of Dimension parameters).
5. Click the Dimension parameter that you want to control with the MIDI message you chose in the left column.
6. In the Depth column, drag up or down to enter a number that controls how strongly and in which direction the parameter responds to changes in the source (negative numbers produce an inverse relationship).
7. In the Smooth column, drag upward to produce a number that smooths out the response of the Destination to the Source

Sinc Interpolation

When you freeze or play back a Dimension track, you have the option to use a higher-quality algorithm called sinc interpolation. This can increase the time it takes to freeze tracks, and use a little more of your computer's resources when you play back audio. If you're using distortion, you don't need this algorithm.

To Use Sinc Interpolation

1. Open the Options dialog by clicking the Options button  .
2. Check the Use Sinc Interpolation When Freezing/ rendering checkbox.