

**USER MANUAL**

# **Chorus DIMENSION-D**

**ARTURIA**

\_The sound explorers

# Special Thanks

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**Product version: 1.0**

**Revision date: 13 August 2020**

# Thank you for purchasing Arturia's Chorus DIMENSION-D...!

This manual covers the features and operation of the Chorus DIMENSION-D.

**Be sure to register your software as soon as possible!** When you purchased Chorus DIMENSION-D you were sent a serial number and an unlock code by e-mail. These are required during the online registration process.

## Special Messages

### Specifications Subject to Change:

The information contained in this manual is believed to be correct at the time of printing. However, Arturia reserves the right to change or modify any of the specifications or features without notice or obligation.

### IMPORTANT:

The software, when used in combination with an amplifier, headphones or speakers, may be able to produce sound levels that could cause permanent hearing loss. DO NOT operate for long periods of time at a high level or at a level that is uncomfortable.

If you encounter any hearing loss or ringing in the ears, you should consult an audiologist.

# Introduction

## **Congratulations on your purchase of Arturia's Chorus DIMENSION-D...!**

Arturia's passion for synthesizers and sonic purity has given demanding musicians the best software instruments for professional audio production.

Arturia also has a growing expertise in the audio field, and in 2017 launched the [AudioFuse](#), a pro studio quality audio interface that features two proprietary DiscretePRO® microphone preamplifiers and a set of top-notch AD/DA converters. This line was recently expanded with the launch of the [AudioFuse Studio](#) and the [AudioFuse 8Pre](#). Arturia has also been busy making effect plug-ins, launching in 2018 the first Arturia effects bundle, which included the [Pre 1973](#), the [Pre TridA](#), and the [Pre V76](#).

Other bundles followed, dedicated to compressors, filters, delays, and reverbs. With the launching of these new effects, this time dedicated to modulation, Arturia consolidates its position as a leader in audio effect plug-ins.

The ARTURIA Chorus DIMENSION-D is one of the new modulation effects plug-ins included in the FX Collection, and benefits from decades of experience in recreating the most iconic tools of the past.

ARTURIA has a passion for excellence and accuracy. This led us to conduct an extensive analysis of every aspect of one of the most sought-after chorus units of the past. But, as has been usual and became a fundamental characteristic in all of our plug-ins, we didn't just model the sound and behavior of this unique unit, we also added several features that were unimaginable in the days the original was being manufactured.

Chorus DIMENSION-D runs as a plug-in in all major formats inside your DAW.

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## **The Arturia team**

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# 1. WELCOME

## 1.1. What is a modulation effect?

Modulation effects work by modifying the sound in a certain way, usually by means of modulation controlled by a Low-Frequency Oscillator (LFO). For example, they can add one or more slightly delayed versions of the the sound to itself, while modulating the pitch of those versions over time.

We can obtain three main effect types with modulation: chorus, flanging, and phase shifting. Of these three, chorus is perhaps the most sought-after one, since it allows to create "richer" versions of the sound. Chorus effect works by taking the audio signal and mixing it with one or more delayed, pitch-modulated copies of itself. The pitch of the added voices is modulated by an LFO, which makes the overall effect similar to that of the flanger, except with longer delays and less modulation.

This effect may be used to recreate the one that naturally occurs when individual sounds, with approximately the same time and very similar pitches, converge and are perceived as one, like what happens when we listen to a voice choir or a string ensemble (also sometimes designated as a "string choir") - hence the "chorus" name, and also the presence of "ensemble" presets in many chorus effects, and even some special tailored chorus effects called "ensemble" or even "symphony". We can say that the "chorus" effect sounds like multiplying while widening and thickening the sound. It also allows to create a stereo image out of a mono signal.

Flanger is an effect similar to the Chorus, produced by mixing two identical signals, with one signal delayed by a small and gradually changing amount of time and modulated through an LFO, which produces a characteristic undulating (sweeping) effect, but with a sound resembling the result of a comb filtering. Speeding up the LFO accentuates the modulation effect. As we said, the effect is similar to the Chorus, but here we use shorter delays for the delayed signal.

Also, part of the signal is usually fed-back into the input, producing a resonance effect. The phase of the feedback signal can also be inverted, to achieve further variations of the flanger effect.

The Phaser (phase-shifter) is another modulation effect, with results somehow similar to Flanger. It is produced by splitting the audio signal in two paths, one being treated by all-pass filters, which preserve the amplitude of the original signal but alter its phase. Here, we use no delayed signal. The two paths are mixed again, after the all-pass filtering, and the frequencies that are out of phase will cancel each other, producing the phaser's characteristic "whoosh" sweeping effect.

So, the phaser works by canceling bands of frequencies to obtain the desired effect. No delay is used in this effect, which differentiates it from the other two.

Modulation effects can create a huge range of sonorities, and the results may be perceived as a fuller, richer sound. No wonder they have been used extensively since they appeared. Also, they have been an almost obligatory addition to almost any synthesizer since the eighties.



## 1.2. What about the Chorus DIMENSION-D?

The Arturia Chorus DIMENSION-D is part of a new set of effects, proposing three new iconic vintage modulation effect units.

This unit was a stereo chorus rack that became a studio legend since its introduction in 1979. Loved for its delicate spatial enhancement and subtle modulation, this chorus unit became the go-to sweetener for vocals, piano and guitar throughout the eighties. Among the the people that used it extensively we can find big names like Brian Eno, Talking Heads, Peter Gabriel, Steve Ray Vaughan and Kate Bush.

It is remarkable for its simplicity. In fact we only have four buttons to operate it. The unit is preset based, and each button selects one chorus preset. Only the fourth button, when pressed, increases the effect obtained with each one of the first three buttons.

The distinctive sound of this device is mostly due to its BBD (bucket-brigade delay) chip architecture, the original output signal dry/wet cross mix and the addition of built-in compressor/expander and filters. This results in a unique warm analog sound and character, with a slight low-pass feel.

The bucket-brigade architecture owes its name to the analogy to a line of people passing buckets of water from hand to hand. That's exactly what happens in a chip architecture like this, where the signal passes from capacitor to capacitor with delays added, one step per clock cycle.

But that's not all. Chorus DIMENSION-D comes equipped with some extra tools to allow you to go beyond what you could achieve with the original unit. Here, we get extra waveforms for the modulation LFO, a stereo width control, and a dynamic color control.

### 1.3. Where can we use a chorus unit like this?

A chorus has a multitude of uses. As was mentioned already it works great to add dimension to a mono sound, transforming it in stereo (when used in a configuration mono-to-stereo). Also, it may contribute with an extra degree of density to any sound, transforming a solo in a choir or ensemble (exactly what's implied in the effect's name).

Those that know the Juno-60 (and also the JX synths, but especially the first) may remember the ubiquitous chorus effect that was featured in the control panel. The chorus was so important to the sound of that synth that some even say the Juno-60 was a chorus unit with a synth attached. In fact never before did a single oscillator synthesizer sounded so rich and full.

That said, it's the sounds that naturally demand ensemble and dimension effects that can take greatest advantage of a chorus effect. Sounds like strings, brass, and winds, can come up bigger with chorus. A solo instrument like guitar or voice, for example, can also benefit with the addition of a chorus effect.



Vocals, naturally, can take great advantage of a chorus unit, especially background vocals. But lead vocals too can take benefit of the extra dimension added by a good chorus unit.

We already mentioned the ensemble sounds, but keyboards in general can grow a lot with the addition of chorus. Organs (of course - of any kind), but also pianos, especially the electric piano (eventually complemented with other modulation effects... but we will get there).

Longer delay values in the chorus effect can work well to create the illusion of a double performance, and this takes us back to the solos (as in guitar solos), which may sometimes be "doubled" with a chorus unit.

But you can use chorus pretty much anywhere, and in many ways. Experiment extensively. Use your imagination. Don't fear to make mistakes. We all made mistakes, and we all learned a lot by making them. The most important thing is to have a great time using this unit, and create great sounds with it.



## 2. ACTIVATION AND FIRST START

The Arturia Chorus DIMENSION-D plug-in works on computers equipped with:

Windows 7 or later and macOS 10.10 or later.

You can use the Chorus DIMENSION-D plug-in as an Audio Unit, AAX, VST2 or VST3 plug-in (64-bit only).



### 2.1. Activate the Arturia Chorus DIMENSION-D license

Once the software has been installed, the next step should be to activate your license, so that you can use it without limitations.

This is a simple process that involves a different software program: the Arturia Software Center.

#### 2.1.1. The Arturia Software Center (ASC)

If you have not already installed the ASC, go to this web page:

<https://www.arturia.com/support/updates&manuals>

Look for the Arturia Software Center at the top of the page, and then download the version of the installer that you need for your system (macOS or Windows).

Follow the installation instructions and then:

- Launch the Arturia Software Center (ASC)
- Log into your Arturia account
- Scroll down to the My Products section of the ASC
- Click the Activate button

That's all there is to it!

### 2.2. Working with plug-ins

Chorus DIMENSION-D can be used in all major digital audio workstations (DAWs), including Live, Logic, Cubase, Pro Tools and others, as it comes in all the main plug-in formats. Unlike what happens with hardware, you can load as many instances of the effect as you find useful. Chorus DIMENSION-D has two other big advantages over hardware:

- You can automate numerous parameters using your DAW's automation system;
- Your settings and current plug-in state will become recorded in your project, and you can pick up exactly where you left off the next time you open it.

## 3. CHORUS DIMENSION-D OVERVIEW

### 3.1. Arturia's Chorus DIMENSION-D plug-in

Our goal was to give the users the experience of a great tool from the past. But although we have worked to be faithful to the unit sound, appearance and workflow, it wouldn't be an Arturia plug-in without the addition of some extra features to enrich the user experience.



We kept the user interface simplicity. As is usual with the effect plug-ins produced by Arturia, the Graphical User Interface (GUI) has two panels, the Main panel and the Advanced panel.

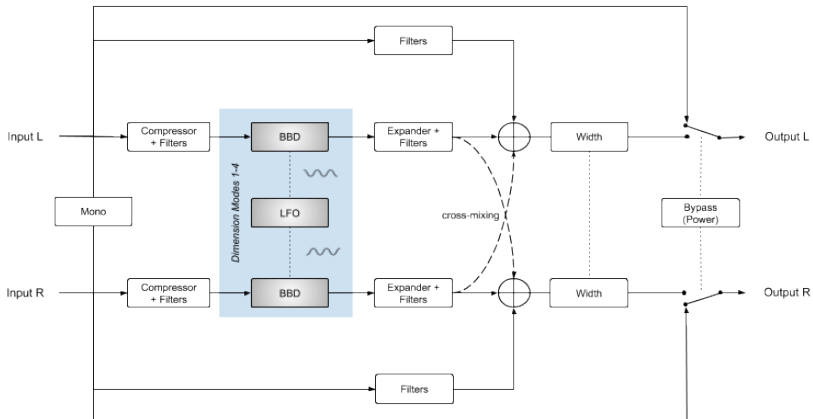
The Main panel has the original controls, which are just a few buttons. This unit is preset based, with a row of five buttons that allow to select the kind of chorus effect we get. We kept this row of buttons, with the four chorus mode selection buttons and a fifth button labeled "Mode O". The panel also includes a Mono/Stereo button, and the "Power" button (which activates bypass mode).

But we also included a few other tools, like alternative LFO shapes, a "dynamic color" selector, and stereo width control, for example. These, as usual, go to the Advanced control panel.

We will take a detailed look at all of these things in the [Control Panel chapter \[p.11\]](#). Now, it's time to check out how it works and how it sounds. Let's go!

### 3.2. Understanding the Chorus DIMENSION-D Signal Flow

The Chorus DIMENSION-D plug-in is an effect plug-in with a very simple control panel interface (just a few controls). Nevertheless, the control panel simplicity hides a very effective chorus engine that may offer a lot to the user, like the original units did countless times during all these years.



When the plug-in is bypassed, the signal is routed directly to the output, untouched. This is the signal heard when we press the Power button or the Bypass button in the Lower Toolbar.

As the signal enters the plug-in, it is immediately subjected to some processing. Right from the beginning, left and right channels may be summed and treated as a single mono channel (when we select Mono in the Mode button). Otherwise, both channels follow as a regular stereo signal path.

After this step, the signal is split between a Dry and a Wet path. The Wet path goes into the processing circuit. The Dry path (the part of the signal that's not going to be processed by the chorus engine) is routed to a special Filters section (a kind of light low-shelf boost) and will later be summed back to the modulated signal.

The part of the signal that is routed to the main processing is then routed through the emulated Compressor + Filters circuits. These circuits pre-process the audio to get a better result from the bucket-brigade delay circuit, and are fundamental to get the vibe of the original unit.

The Compressor + Filters circuit has a soft filter which resembles a shelf-like two band EQ set to give emphasis to the lows region while attenuating the highs region. This is followed by a compressor which narrows the dynamics of the audio.

The reason for this circuit is because the BBD chips were very noisy, and passing the audio through this circuit before the BBD stage would allow to take the best advantage of the delay while keeping the noise within a controllable level.

The audio then proceeds to the Dimension section, where it will be processed by the BBD circuit. When any of the three buttons is selected (with or without button 4), the signal will be processed accordingly.

If any of the four Dimension buttons (1, 2 and 3, with or without 4) are pressed, then the signal will be modulated. After the delay (modulation processing), the signal is further processed through an Expander + Filters circuit block.

This circuit block may be seen as symmetrical to the previous Compressor + Filters circuit. Here, the audio is passed through an Expander circuit which is set to compensate for the dynamic loss of the previous Compressor stage, this way restoring the original audio dynamics. After this stage, the audio will then pass through a soft filter which also resembles a shelf-like two band EQ, this time set to give emphasis to the highs region while attenuating the lows region.

The two channels signal will then be mixed together with the filtered part of the signal coming from the split at the beginning. We also have a cross-mix of the processed signal, which contributes to add an extra degree of density, thus enriching it even more. This is a very special feature that greatly contributes to the charm and fame of this unit. The delayed signal is cross-mixed to the other channel with opposite polarity. Normally this would result in a loss of lower frequencies, but the filtering circuit applies a kind of low-shelf EQ to the entire signal. This filtering circuit also slightly boosts the bass of the direct signal, this way avoiding the loss in the bass region.

After this stage, the composite signal advances to the last step, where the two channels (stereo signal) will be processed by the Stereo Width, which may expand or shrink the stereo image. It will then be routed to the plug-in Output.

This is the complete signal flow of the Chorus DIMENSION-D. Study the circuit, spend some time with the controls, and we're sure you'll gain a deep understanding of how this chorus processor works. The following section will definitely give you some help.

There is also an extra routing feature, connected to the "Mode O" button. This is an extra feature added by Arturia. For more details, please refer to the [Dimension Mode section \[p.13\]](#).

## 3.3. Getting hands-on with Chorus DIMENSION-D

### 3.3.1. Chorus Basics

To get an idea of the Chorus DIMENSION-D's capabilities, we suggest you try the following:

- Load a stereo clip into an audio track in your DAW (vocal tracks, a solo guitar track or some keyboard licks are ideal for this);
- Load an instance of Chorus DIMENSION-D as an insert in that track. Open the Chorus DIMENSION-D window;
- Ensure the Default preset is loaded. This will mean that all settings are positioned in their initial values;
- Begin playback. The clip will already have some processing. This is because button 1 is pressed in the DIMENSION MODE section;
- Press button 2 or 3 while the music is playing. You'll notice that the chorus sound changes. These are the three single chorus modes. DIMENSION-D is preset based, which means you don't have chorus parameters to adjust;
- Now press button 4. Notice that the button that was pressed before (no matter if it was 1, 2 or 3) remains pressed. Button 4 increases the chorus presence by boosting the wet (delayed) signal that is going to the final output of the unit. It works in conjunction with any of the other three buttons;
- You may also try what we called "Mode O". In the original unit, this would simply bypass the unit circuit, but we chose to add it another function - it will send the audio through the Compressor/Expander circuit, but not the BBD (Bucket Brigade Delay) circuit. This means that although no delay is added to the sound, it will get some coloration due to the shelving filters and compressor/expander stages it will pass through. For more information about this, please read the [Dimension Mode section \[p.13\]](#) in the Control Panel chapter of this manual;
- If you are dealing with a stereo audio file, you will have another control - a Mono/Stereo switch. This will monoize the chorus output (but not the dry sound). Which leads to a somehow different sound. Press it to check the difference.
- And that's pretty much it in what concerns standard controls. This is a very simple unit (just like the original). But there's more we can do. Please read below;



### 3.3.2. Advanced methods of using the chorus

Now that you have a feeling for the Chorus DIMENSION-D basics, let's go a little deeper:

- Click the double downward facing arrows to open the "Advanced" panel;
- This panel has some extra options - the Oscillator Shape, the Dynamic Color, the Width and the Mix;
- For now let's focus on the Oscillator Shape. This is a row of buttons in the left part of this panel. Each buttons allows to select a different waveform for the Low-Frequency Oscillator. The Default button selects the original (default) triangle waveform. But, like it happens in synthesizers, for example, we may use other waveforms, leading to different results;
- Another control that you absolutely need to try is the Dynamic Color. This changes the behavior of the Compressor/Expander sections of the unit, this way also changing the final sound. Although this has a very subtle effect in the audio, you may like what it does. Please try it, and tell us what you think;
- Finally, there is a switch that changes the behavior of the unit. Normally, the dry audio will be mixed to the wet (chorused) output. However, in a modern DAW, where we may have lots of auxiliary channels, we may want to get just the wet signal, if we are going to use the unit in an FX auxiliary channel that's to be mixed with the unprocessed channels. This is exactly what's this control allows. With it, we can control the mix between Dry and Wet signal, ranging from just Dry to fully Wet (desirable if we are going to use DIMENSION-D in an Auxiliary channel);
- Just one last suggestion: If you find that the chorus effect you get from a single instance is not enough, you may add a second instance (or even a third, if you really want to get adventurous). Chorus DIMENSION-D is very light on the CPU and adds very little latency, so piling several instances is safe.

These are just some very simple examples of what you can do with Chorus DIMENSION-D. Despite looking deceptively simple, it offers more than you could imagine by just the looks. As always, use your imagination, and try to find other creative and interesting ways of using it.

## 4. CHORUS DIMENSION-D CONTROL PANEL

The Chorus DIMENSION-D plug-in can be used in Mono, Stereo or Mono-to-Stereo configurations, independently of the source material.

The Mono configuration is automatically loaded when we use the plug-in with mono tracks. When inserted in stereo tracks, the Stereo configuration is automatically loaded as well. When the plug-in is instantiated as Mono-to-Stereo, as in Pro Tools for example, there is also a different configuration.

Nevertheless, when instantiated in stereo tracks, you can change the desired configuration by pressing the Mode button, located in the upper left side of the Main Control Panel. By default, this button is selecting the Stereo Mode, but we can "monoize" the source signal by selecting the "Mono" mode.

**i**: Not all DAWs are able to work with mono tracks, in which case you will not be able to use the mono configuration. The same applies to the mono-to-stereo configuration.

### 4.1. Channel Configuration (Mono/Stereo/Mono-to-Stereo)

The difference between the different configurations consists in the following:

When instantiated in stereo channels, the plug-in loads in full mode, featuring the Mode (Mono/Stereo) button in the Main panel and the Width control in the Advanced panel.

When instantiated in mono channels, the plug-in doesn't have these two controls, since they only act in stereo signals.



When instantiated as mono-to-stereo, we have the Width control, but the Mode button (Mono/Stereo) is not present, since the source signal is mono. Bear in mind that, when used with mono sources in the mono-to-stereo configuration, the source signal remains mono, but the processed signal will have some stereo definition and depth, hence the presence of the Width control.

## 4.2. Main Control Panel

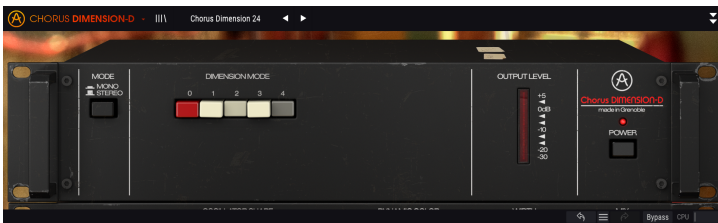
The Chorus DIMENSION-D Graphical User Interface is very simple, as it follows the original unit control panel, which was also very simple. The Main control panel is where the main chorus controls are located, and is the one that opens by default when we launch the plug-in.

But Arturia included some extra modulation features. These are located in a second panel, the Advanced control panel, that opens when we click the double arrow button (the Advanced Mode button) in the Upper Toolbar.

As is the case with the previous effects bundles, as well as with all current Arturia plug-ins, this GUI also has an Upper Toolbar and a Lower Toolbar. The Lower Toolbar is very important for the use of the Arturia plug-ins, as it allows the Undo and Redo functions, lists the editing history, allows you to put the plug-in in Bypass (which doubles the Power button in the Main control panel), and measures CPU consumption.

Of course, the Upper Toolbar is very important as well, since it is where we access the main menus, perform important tasks like loading and saving presets and banks of presets, and where we can select a preset and see the name of the current preset in use. The toolbars and their features are covered in detail in the [User Interface chapter \[p.18\]](#).

We will now have a look at all the controls available, explaining what they do, what are their ranges, and how to interpret the numbers.




Notice that each time we click a control (knob or button), or simply hover the mouse over it, the Lower Toolbar displays the parameter name at the lower left. Also, a small pop-up box appears at the right side of the control displaying the current parameter value. This changes every time we move that control, updating the parameter value in real time. These values aren't always of the same type.

Now, let's take a look at each control in Main Control Panel.

### 4.2.1. Mode

This switch has two positions: Stereo and Mono. When in Stereo, we have full stereo processing. When in Mono, the source signal is "monoized" (Left and Right inputs are summed before processing).

 The Mode switch is absent when the plug-in is instantiated in mono channels, either as mono or mono-to-stereo, since there is no stereo signal to start with.

By default, the switch is in the Stereo position.

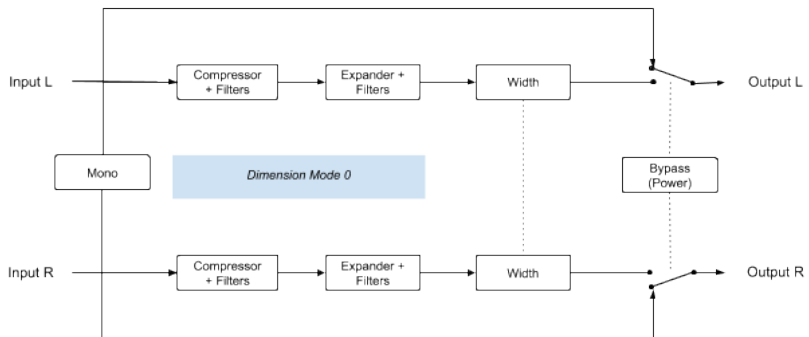


## 4.2.2. Dimension Mode

This is the main control for the chorus effect. Like in the original unit, it consists in a row of five buttons.

The first button is red, and labeled "O". When this button is selected, we will have no chorus effect added to the signal. However, although in the original unit this is essentially a bypass button, we added an extra feature to this button, and transformed it in a "Mode O" button, with the audio routed through an emulation of the electronics of the original and thus receiving some color and filtering from the compressor, expander, and filter circuits. The "Mode O" signal-flow is as follows:

When the "O" button is pressed, the signal follows a special signal-flow path, that processes the sound through some of the circuits of DIMENSION-D, but **not** the main BBD circuit. This feature didn't exist in the original unit.



So, when Mode O button is activated, the audio signal follows this path. The first stage is a Compressor + Filters. The filters act like a soft shelf-like double band EQ, which gives emphasis to the lows region and attenuates the highs region. This is followed by a compressor which considerably narrows the dynamics of the audio.

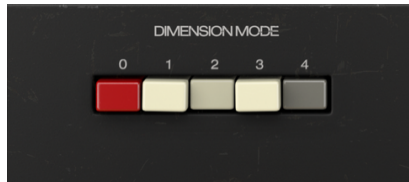
This is then followed by another stage (Expander + Filters) where a symmetrical kind of filter (soft shelf-like double band EQ) will give emphasis to the highs region while attenuating the lows region. This is followed by an expander which compensates for the loss of dynamics caused by the previous stage.

This whole process may not be very audible, but it will add some color to the audio signal. The audio will then follow to the Width control stage.

Besides this "O" button, we have four other buttons. These work exactly like in the original.

The first three select a different chorus intensity, with different delay and LFO settings. Basically, Mode 1 has the softest chorus effect, while Mode 2 has more chorus intensity (the delay times are about half those of Mode 1). Mode 3 has a delay time more or less between the first two modes, but a modulation intensity by the LFO that is two times that of modes 1 and 2, which gives it a more pronounced effect. Therefore, it's the one to press when we want a really deep chorus effect.

Mode 4 is a special button. It doesn't work alone, but in combination with each of the first three. It injects more wet signal in the output. Therefore, it is basically a gain button applied to the wet signal. That's why it can't be used alone (despite many different descriptions that can be found online for the Mode 4 button, this is what we actually measured on original units).



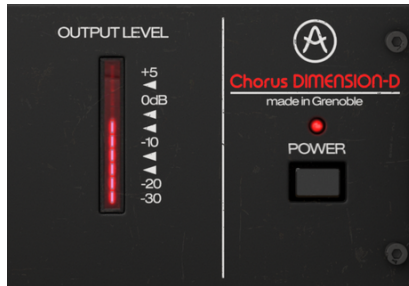
So, to sum it up: We have three chorus intensity buttons, where  $3 > 2 > 1$ , and when we activate the fourth button, we add more wet signal to the mixed output, which means a more chorused signal (more Wet and less Dry signal). Plain and simple.

By default, button one will be pressed alone, which will give the softest chorus effect.

**i** Although in the original units it is possible to press more than one button, or even all buttons, this doesn't give the user any extra advantage. In fact, when we press more than one of the first three buttons, the button with highest order is the one that gains control, which means that, if we press  $1 + 2 + 3$ , the effect obtained is the same we get when pressing just button 3. The only button that adds something to the effect is button 4, both in the original units as well as in the emulation.

### 4.2.3. Output Level

This is a LED VUmeter display, and it's there to help monitoring the output signal level, preventing distortion. The VUmeter is calibrated so 0 dB VU is equivalent to -12 dBFS.



### 4.2.4. Power

Power button turns off the plug-in. In practice, it works as a bypass button, and has the exact same effect as clicking Bypass in the Lower Toolbar.

### 4.3. Advanced Mode Control Panel

The Advanced Mode Control Panel is accessed by clicking the Advanced Mode (double arrow) button in the Upper Toolbar. These are very important additions that bring a lot of extra power and flexibility to the processor.

In the case of Chorus DIMENSION-D, this panel features a row of buttons that select alternative LFO waveforms, a Dynamic Color control, a Width control, and a Mix button.



#### 4.3.1. Oscillator Shape

This section presents a row of buttons that allows to select alternative waveforms for the modulation LFO. The original unit's LFO only allows a triangle waveform.

Here, we have the possibility to select that very same triangle waveform (the Default button), but also a Sine, a Ramp (ascending saw wave), and two kinds of random waveforms. One is a sample & glide, while the other is the more traditional sample & hold many of you are used to in synthesizers.



**i** Random waveforms in a chorus unit may seem counterintuitive at first sight, but they can produce interesting results, although somehow 'out of the box'. Anyway, we are moving here in the experimental territory.

### 4.3.2. Dynamic Color

This control changes the original behavior of the compressor/expander stages of the unit, basically changing their time constants. We have four positions. The highest position has lower attack and release values, whereas the lowest position has smoother attack and release values, when compared to the original position (which is the default: position 3).

Here is the list of the four possible settings with the differences between them:

- Positions labeled LF Sat 1 & 2 have shorter time constants, resulting in slightly more saturation, especially noticeable at lower frequency.;
- Position labeled DEFAULT has the hardware default settings (it is also the plug-in DEFAULT value);
- Position labeled SMOOTH has smoother attack and release values.




This control may sometimes not have a very audible effect on the output, depending on the input material. Although this is a very subtle parameter, it is at the core of the original vintage and "warm" sound.

### 4.3.3. Width (Stereo Width)

Width controls the wideness of the stereo field of the processed signal. Fully to the right, the processed signal stereo field is wider than the original, while fully to the left the stereo image becomes "monoized".

There is a position labeled "Stereo" which corresponds to the original unit width balance. It is important to keep in mind that, because of the cross mixing included in the original design, the resulting stereo image is different from the input signal stereo image.

By default, this control is positioned at Stereo, which corresponds to the original hardware unit.

**i**  The Width control appears only in stereo channels, or when the plug-in is instantiated as Mono-to-Stereo. When the plug-in is instantiated in mono channels, this control will not be present.



### 4.3.4. Mix

Mix is another control added by Arturia to give extra flexibility to the user.

The original chorus unit always outputs a mix of the dry signal and the wet signal. Some dry signal is mixed with the wet signal, as well as a LR cross-mixing of the wet signal (for a better explanation of the audio circuit, please follow the signal flow diagram and the explanation that follows, in the [Chorus DIMENSION-D Signal Flow section \[p.7\]](#)).

There is no user option to control that on the original unit.

When the Mix control is at the default position (knob is at 0.500), it works like the original unit, with a mix of dry, wet and cross-mixed wet signal.

But with this control you can change the mix between Dry only and Wet only. When in the Wet position, the plug-in only outputs the wet (modulated) signal, together with the cross-mixing. This allows to use the Chorus DIMENSION-D as a regular effects processor in a bus, as within the usual Aux Send/Return configuration.

Value range goes from 0.00 (Dry) up to 1.00 (Wet).



## 5. USER INTERFACE

The Chorus DIMENSION-D User Interface has a Main Control Panel, an Advanced Mode Control Panel, and toolbars in the top and bottom of the window.

It is still a very simple User Interface. That will always be the main focus of every Arturia product: to unleash your creativity while remaining easy to use.

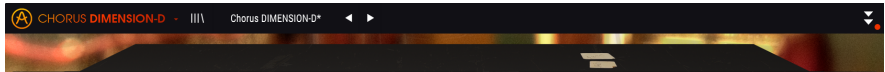
We already looked at the control panels. Now it's time to look at the toolbars.

### 5.1. The Upper Toolbar

The plug-in GUI (Graphical User Interface) has the usual Arturia toolbar that runs across the top edge, with the Arturia logo / plug-in name on the left (the colored part), followed by the Library button and the Preset name, with arrows to navigate through the different presets stored in the library.

After this, we have the button that gives access to the Advanced Mode control panel (a double arrow).

A dot is added next to this double arrow button whenever the Advanced Mode is active (i.e., when there are parameters set to non-default values) if that panel is not visible.



This upper toolbar, which is common to all current Arturia plug-ins, gives access to many important functions.

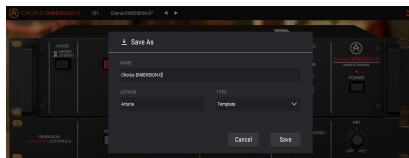
These can be found by clicking on the Arturia Chorus DIMENSION-D button at the top left-hand corner of the plug-in window. Since these options are also common to all current Arturia plug-ins, they may be already familiar to you:

#### 5.1.1. Save Preset

This option will overwrite the active preset with any changes you have made, so if you want to keep the source preset also, use the Save As option instead. See the next section for information about this.

#### 5.1.2. Save Preset As...

If you select this option, you are presented with a window where you can enter information about the preset. In addition to naming it, you can enter the Author name, and select a Type. You can even create your own Type by entering custom names in the Type field. This information can be read by the preset browser and is useful when searching for the preset later.



### 5.1.3. Import...

This command lets you import a preset file, which can be either a single preset or an entire bank of presets. Both types are stored in **.dimx** format.

After selecting this option the default path to these files will appear in the window, but you can navigate to whichever folder you are using to store presets.

### 5.1.4. Export Menu

You can export presets in two ways: as a single preset, and as a bank.

- **Export Preset:** Exporting a single preset is handy when you want to share a preset with someone else. The default path to these files will appear in the "Save" window, but you can create a folder at another location if you like. The saved preset can be reloaded with the import preset menu option.
- **Export Bank:** This option can be used to export an entire bank of presets from the plug-in, which is useful for backing up or sharing presets.

### 5.1.5. Resize Window options

The Chorus DIMENSION-D window can be resized from 50% to 200% of its original size without any visual artifacts. On a smaller screen such as a laptop, you might want to reduce the interface size so it doesn't dominate the display. On a larger screen or a second monitor, you can increase the size to get a better view of the controls. The controls work the same at any zoom level, but they can be harder to see at the smaller magnification values, or when using high resolution monitors (like HD monitors or higher). The higher the resolution, the bigger the size that should be used.

### 5.1.6. Help

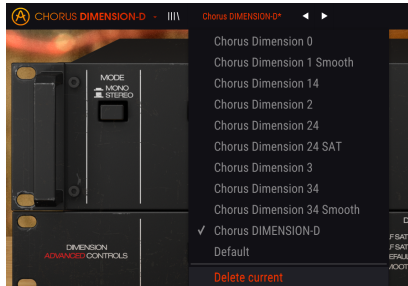
The Help section in this menu allows direct access to the User Manual (the document you are reading), as well as to the FAQ (Frequently Asked Questions).

## 5.1.7. Preset Selection

The [Preset browser \[p.22\]](#) can be opened by clicking the library symbol on the toolbar. The filter, name field and left / right arrows in the toolbar all assist with preset selection.

Selecting a preset is performed by clicking the preset name field in the Upper Toolbar. That action will open a list with all the presets available. The currently selected preset is marked with a ✓. Then simply place the mouse over the name of the preset you want to select (the preset name will be highlighted), and click it.

Alternatively, you may use the Preset Forward and Backward arrows (the arrows at the right of the preset name field) to navigate through all the presets.



## 5.2. Advanced Mode (Double Arrow) Button

This button opens the Advanced Mode control panel. This is where the controls are located for the extra features Arturia added to expand the possibilities regularly found on these units.

When the Advanced Mode panel is opened, the arrows point up. When the panel is closed, the arrows point down.

When there are parameters active in the Advanced Mode panel (edited or set to values different than the defaults), and that panel is not visible (i.e., closed), the double arrow button (pointing down) has a dot next to it to call your attention to those parameters. To check them, click the button to open the Advanced Mode control panel.

There's a detailed explanation of all the features in this Advanced Mode in the [Control Panel chapter \[p.11\]](#).



## 5.3. The Lower Toolbar

When you hover the mouse over a parameter control, you will see a readout showing that parameter name and a brief description of it in the left part of the lower toolbar.

Also, you will notice that a small popup window will show up at the side of the parameter control, displaying the current value of the parameter. This will also show the value changes when you move the control (edit the parameter). This is handy, because you don't need to touch the parameter control to read the current value, and also you may keep looking at the parameter while you read the value changes.



At the right-hand side of the lower toolbar are several small windows and buttons. These are very important features, so let's take a closer look.

### 5.3.1. Panic

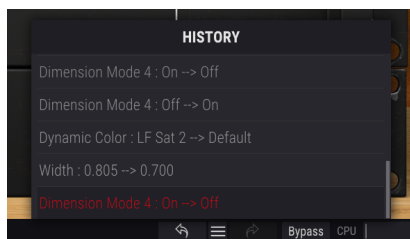
The Panic button, when pressed, turns off the audio to stop any stuck sound, this way preventing damage for your ears or speakers.

### 5.3.2. Undo

The Undo button is a curved arrow pointing to the left. This button reverts the last edit you performed. If it is clicked repeatedly it will revert the parameter changes in the order they were performed in the session, from the latest ones to the earliest ones.

### 5.3.3. History

This button lists all the parameter changes performed in the current session.



### 5.3.4. Redo

The Redo button is a curved arrow pointing to the right. This button works exactly the opposite way of the Undo button. It will reinstate the last undone edit. If it is clicked repeatedly it will reinstate the parameter changes in the order they were undone (the latest undone ones first).

### 5.3.5. Bypass

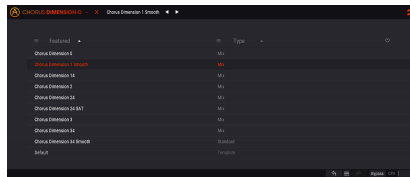
This one is obvious. Activating the bypass option will completely disable the Chorus DIMENSION-D plug-in. This action may also be performed by the Power switch.

### 5.3.6. CPU meter

The CPU meter is used to monitor how much of your computer's CPU is being used by the plug-in. If you stress your computer too much, the global performance of your system and the audio may suffer.

## 5.4. The Preset browser

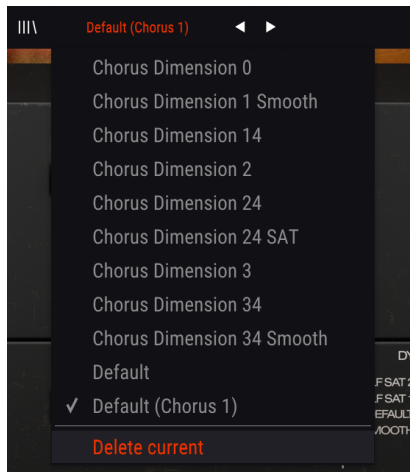
The preset browser enables you to search, load and manage preset configurations in Chorus DIMENSION-D. Although this looks and is based on the usual Arturia Preset Browser, it is simpler, and even easier to work with. You access the preset browser by clicking on the library symbol next to the Arturia logo/plug-in name on the left.



When you click on the library symbol, you will see a screen with all the Presets you have saved. You can sort the list by several different criteria to make it easier to find the right preset. There are two columns: The first one can list the Presets by Name or by "Featured". The Featured presets were selected as important by Arturia. The second one lists the Presets by Type or by Designer.

There is only one attribute visible, which is the one you select by clicking the column title. By default, Type is the attribute selected. When you select the Designer attribute the list changes, and that attribute replaces the Type field in the second column.

If you want to delete a preset, first select it in the browser list. Next, click in the name field at the top to open the list of presets. Then choose the option "Delete current" at the bottom of the list, and confirm the action in the pop-up window.



## 5.5. Fine-tuning parameters

Usually, to change values in the plug-in controls, just click on the corresponding control and drag the mouse up or down. If the controls are switches, simply click them to toggle On or Off.

If you want finer editing values, you can use Ctrl+Drag (Cmd+Drag for macOS). Alternatively, you can Right-Click and Drag. With this technique the values change more slowly, which enables you to edit the values with greater precision.

## 5.6. Resetting your controls

Double-clicking a control changes it automatically to the default value.

And that's it. We just finished describing all the controls you have at your disposal to process sound in your DAW using the Chorus DIMENSION-D plug-in. We hope you'll enjoy your new plug-in (and the results you get with it!) as much as we enjoyed making it.

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