ANTRESOL

d16 group

User Manual

Overview

Antresol is a flanger type effect based on an authorial emulation of a discrete time delay line (**BBD** – *Bucket Brigade Device*) characterized by an ultra low aliasing level, inspired by a classic stomp box from the *Mistress* series.
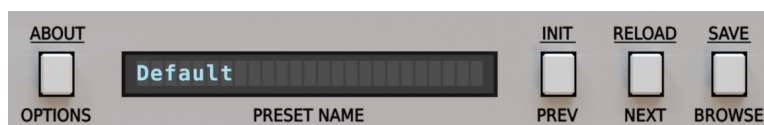
After loading the plug-in to a host application the GUI appears:

Antresol graphical interface

We can distinguish two sections there:

- Configuration and preset management:

Configuration and preset selection section

- Signal processing control section consists of all remaining controls.

Signal flow

This chapter describes the path of the signal's flow through the Antresol plug-in, presents the basic components of this effect unit and its control parameters.

Basic modules

In general, the plug-in structure can be described as a delay feedback loop with an adjustable value and a delay time controlled by a **LFO** *(Low Frequency Oscillator)* generator. In this general structure more detailed and additional functional blocks can be distinguished, which have their equivalents in the graphical interface sections.

### Parameters of modules located before the feedback loop

Initially we have a set of parameters which influence the signal before passing it on the feedback loop:

Pre-Loop parameters

We can distinguish:

- **Preamp** – Preamplification of the signal in the range from **0** to **24 dB**.

- **M/S Mode** – The choice of **stereo** representation of the processing signal. The switch is turned off by default, which results in processing in the **L/R (Left/Right)** domain. However, if we turn it on, the signal is processed in the **M/S (Mid/Side)** domain.

- **Ch. X-Fade** – Signal crosstalk control between stereo channels, depending on the representation. The parameter works as a double crossfader:
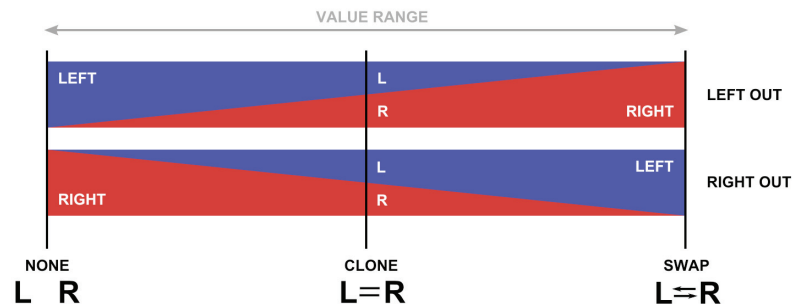
Ch. X-Fade in its full value range

When the value of the parameter is set to minimum **(None)**, the crosstalk between channels does not occur, therefore the stereo signal is passed on to the loop in an unchanged form. Along with increasing the parameter value to the **Clone** position, a bigger portion of the **Left** (or **M**) channel signal is added to the **Right** (or **S**) channel signal or vice versa until reaching the **Clone** position, in which both channels contain the same signal. The input becomes monophonic because both channels have 50% **L** and 50% **R** each. Further increasing the value of the parameter towards the **Swap** position (maximum value) means that a smaller and smaller portion of the original (input) **Left** channel is in the **Left** output channel (valid also for the **Right** channel) up to the point in which we have the **Right** channel signal in the **Left** channel and vice versa. Therefore, the channels are swapped.

This parameter is extremely useful for all types of monophonic signals' spatializations. In particular, while working in the **M/S** domain, in which component **M** can be duplicated in component **S** (in properly applied volume ratio), which on the other hand can be processed independently in subsequent stages of the processor's operation.

## Parameters of feedback loop modules

In this section a set of parameters is described, which are directly connected with controlling the work of the delay line with a feedback loop and external modules interacting with it.

BBD line emulation – True BBD

True BBD Section

The most important block of the entire effect is **True BBD**. It is actually the heart of the plug-in, as well as the code name for our authorial technique of emulating the discrete time delay line known from literature as **BBD** (*Bucket Brigate Device*) operating in the feedback loop. From the **True BBD** section on GUI we control the delay line's main configuration parameters. Before learning the function of each of the parameters let us familiarize with the BBD's operating principles:
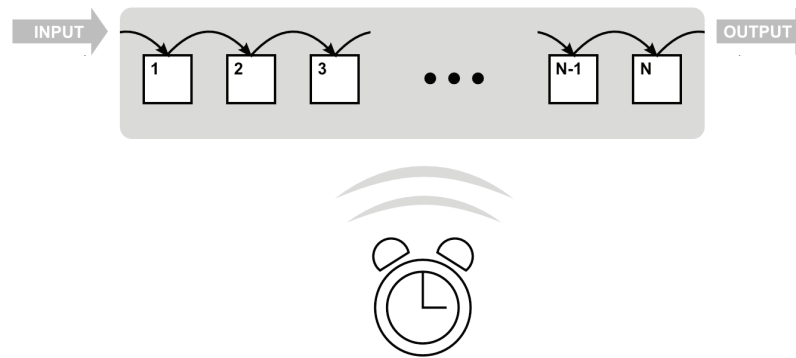
BBD delay line's demonstrative scheme (buffer cells and timing clock)

The BBD delay line works like a buffer (FIFO structure; *first in first out*), to which the signal is passed on the input and after a while it emerges on the output.

BBD is defined as a discrete time delay line because it is composed of a definite series of cells (condensers), each of which stores / samples the current value of the signal. However, we cannot talk about sampling per se, because the signal's value is analogue and only the time is discretized.

The delay between the line's input and output is a result of the BBD's operating principle and not its construction. The entire circuit is pulse-clocked by an external timing signal. One clock tick means transferring the signal from cell **N-1** to cell **N**, from **N-2** to **N-1** and so on, up to the last step, which is transferring the cell state from cell **1** to cell **2**. The signal state from the delay line is saved to cell **1**, meaning a single movement of the cell states by one position in the output direction.

The time intervals between subsequent ticks are finite small values, which is the reason why the delay occurs at all. The signal in the form of states is moving in finite time intervals through subsequent cells, from the first to cell **N** to finally reach the output.

Therefore, if we have, for example, 256 cells, the time needed for the signal to pass through the buffer is 256 clock ticks.

LFO

Basic parameters

The BBD delay line's time is controlled by a **LFO** generator, which output is passed on as a True BBD delay line's clock signal (after the conversion to a series of timing pulses). The LFO is controlled by the following parameters (top row).

LFO section on GUI

- **Offset** – The time offset between the undelayed signal (**Dry**) and the LFO oscillation's minimum.
- **Rate** – The rate of the **LFO** generator's oscillations in **Hz** (from **0.02** to **40 Hz**)
- **Depth** – The depth of the **LFO** generator's oscillations. When the value of this parameter is **0**, the delay is constant and it is defined only by the **Offset** parameter..

For a better understanding, the following picture illustrates the manner in which the LFO influences the delay line's time:
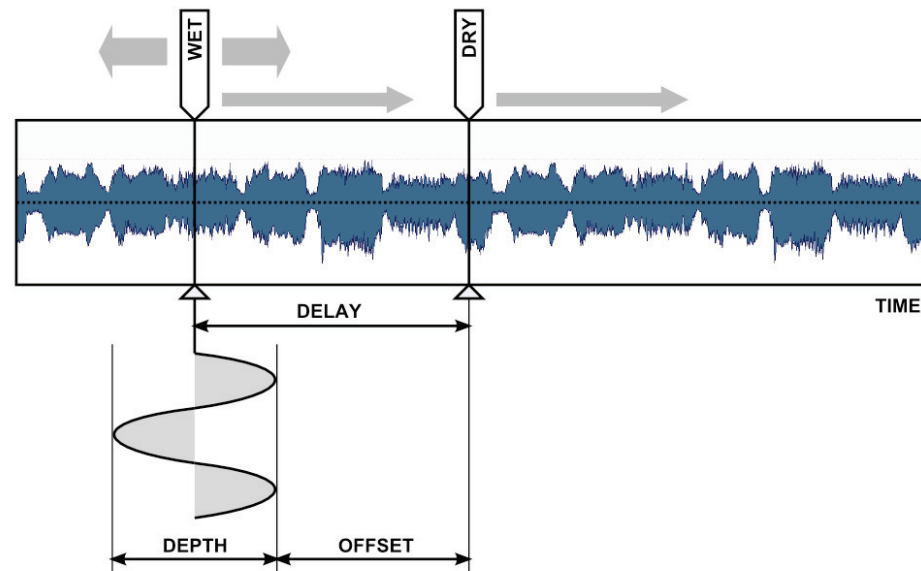
LFO controlling the delay time

If we imagine the delay line controlled by the **LFO** as a read head which moves across the signal as it would across a tape, then the **LFO** controls the acceleration of the head.

Dependence between Rate and Depth

Contrary to most of this type effects in Antresol the **LFO**'s oscillations depth is indirectly dependent on their rate. Along with increasing the rate of oscillations their amplitude is relatively decreasing. This dependence makes the effect more musical and its reaction to changes of those two parameters is more natural (exactly as in the *Mistress* flanger).
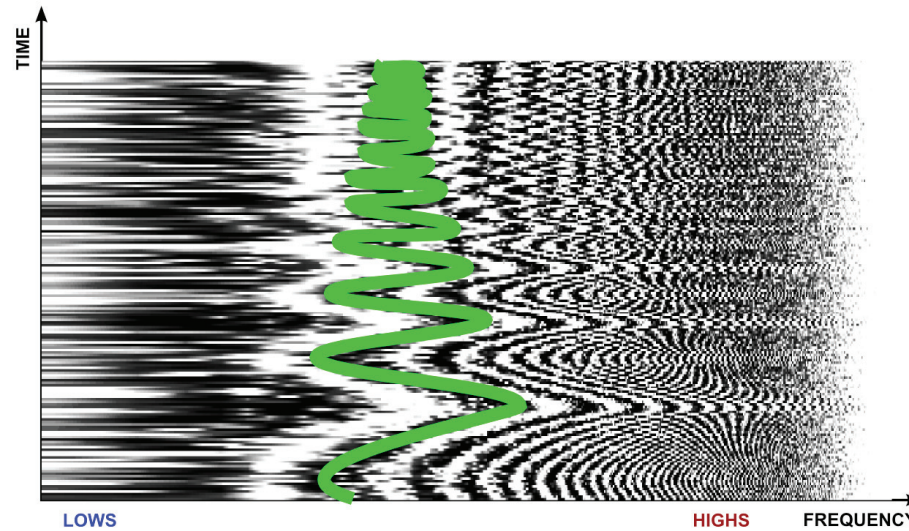
Time-variant frequency response of white noise and LFO modulating the value of the BBD delay line with an increasing rate of oscillation.

Tempo sync

The **LFO** in Antresol can optionally synchronize the frequency and phase of oscillation with the host application's tempo. The **Tempo Sync** parameter is used to activate this function:
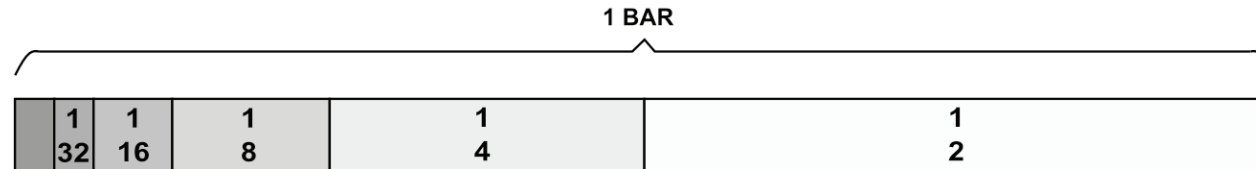

Tempo Sync. parameter
in the LFO section

The parameter can be set to one of the four available values

- **Off** – Synchronization is inactive and the **LFO** speed is controlled by the **Rate** parameter in absolute units; **Hz** ranging from **0.02** to **40**.

- **Full** – Synchronization is active and the rate of **LFO's** oscillations is equal to the rhythmical value of the note set by the **Rate** parameter.

- **Triplet** – Synchronization is active and the rate of **LFO** oscillation is equal to the duration of the triplet note set by the **Rate** parameter.

- **Dotted** – Synchronization is active and the rate of **LFO** oscillation is equal to the rhythmical value of dotted note set by the **Rate** parameter.

When the synchronization is active the **Rate** parameter can be set to one of the following rhythmical values: **1, 2, 4, 8, 16** and **32** bars, half-note (**1/2th**), quarter-note (**1/4th**), quaver (**1/8th**), semiquaver (**1/16th**) and demisemiquaver (**1/32th**):

Bar division into smaller rhythmical values

The **Triplet** and the **Dotted note** are modifiers of the rhythmical value, which can be selected using the **Tempo Sync**. parameter. The **Dotted note** is **3/2** longer than a normal note, while a **Triplet** constitutes only **2/3** of its original rhythmical value.
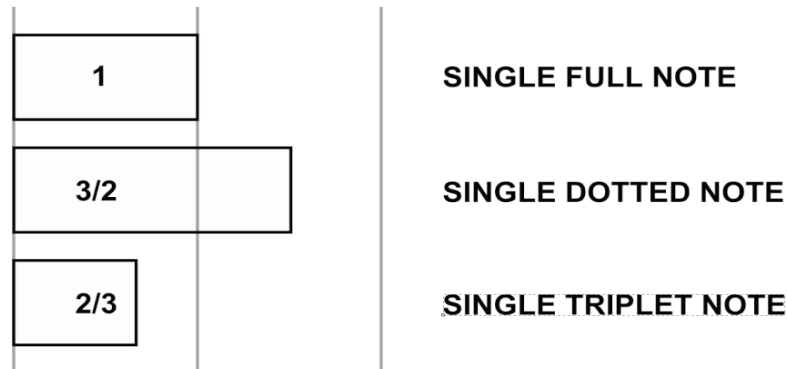

Note length

Stereo Phase Shift

When Antresol is used on a stereophonic track, two independent delay lines operate implicitly controlled by two separate **LFO** generators (one per channel). Each of them independently processing **Left** and **Right** channel (or **Mid** and **Side** depending on the representation).

The **Phase Shift** parameter allows to control the relative phase shift of the **LFO's** oscillations between **stereo** channels:

Phase Shift Parameter

For **0 degrees** value the **LFOs** will have the same phase for the **Left** and **Right** channel (they are going to be in the phase). By increasing the phase shift we achieve a pleasant effect of widening the stereo panorama. The shift can be increased up to the value of **180 degrees**, during which the **LFO** generators operate in counterphase.
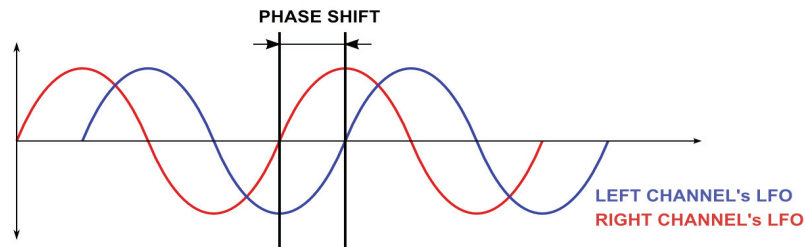
Phase Shift between generators for each stereo channel

Stereo Link

Internally, Antresol processes the **stereo** channels independently. Also the **LFO** generators can operate with different parameter values for each channel. Both generators are **linked** by default, operating with the same parameter values. With this setting it does not matter whether the LFO parameters are controlled by the knobs situated in the top row or in the bottom row (for **Left** or **Right** panel), since the indicator lights are visually paired (as columns).

*Parameters controlling the left channel LFO work
or the work of both chanells in link mode*

Let us look at the Link diodes in the bottom part of the section:
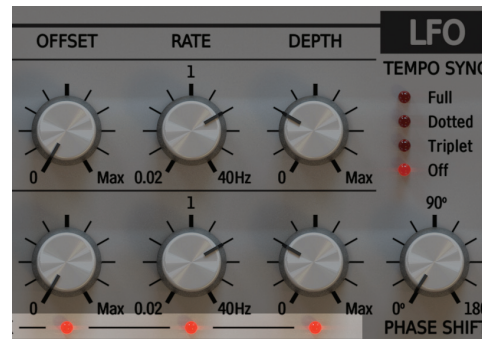
*Diodes controlling LFO parameter linking
for Left and Right channel*

They allow to unlink the chosen **LFO** parameters (**Offset, Rate, Depth**) in order to apply independent values per channel. If a diode under a particular parameter is turned off, we use the knobs in the top row to control the **Left** channel (or **Mid**) **LFO** parameters. From the bottom row we control the **Right** channel (or **Side**) **LFO** parameter.

BBD line configuration

The **True BBD** section controls the operating parameters of the delay line and allows to monitor the pulse frequency of the delay line's timing clock:

True BBD Section

Here we can distinguish:

- **BBD Length** – Delay line's buffer length (number of cells), which can have the following values: **16**, **32**, **64**, **128**, **256** and **512**.

BBD Length parameter

- **LFO to Clock Voltage Curve** – The characteristics of converting the values generated by LFOs to series of impulses for the BBD line oscillator clock, which allow different dynamics of frequency response changes in time.

*LFO to Clock Voltage
Curve parameter*

We have **3** different characteristics to choose from:

- **Mistress** – Characteristic transferred from the classic guitar flanger *Mistress*, which can be described as **Convex**. It results in higher dynamics of delay time changes for smaller values and lower dynamics for bigger delays, creating a characteristic image in spectrum changes:
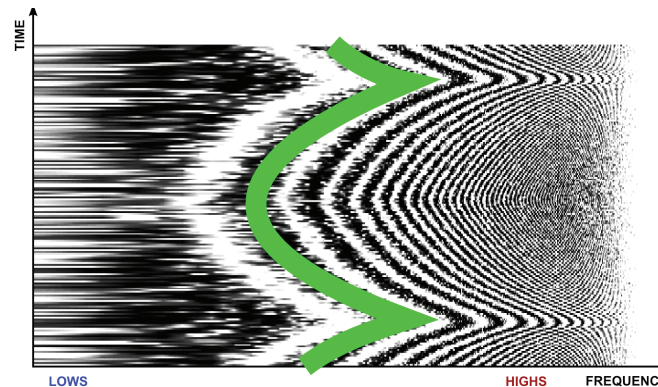
*Time-variant frequency response of white noise and LFO modifying
the BBD line delay value with Mistress characteristic.*

- **Linear** – Linear characteristic – The conversion of the signal's value generated by the **LFO** to the clock's frequency has a linear image in the frequency response dynamics:
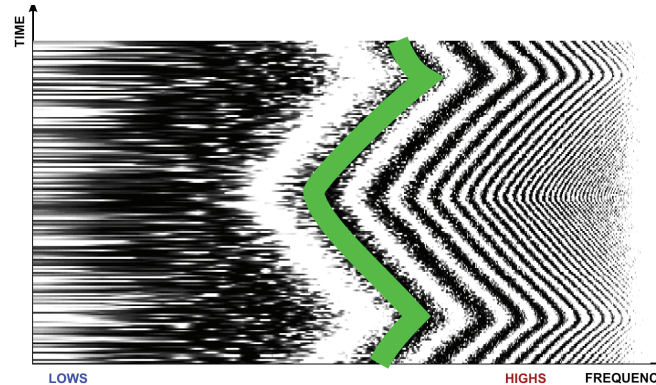
Time-variant frequency response of white noise and LFO modifying the BBD line delay value with linear characteristic

- **Concave** – Concave characteristic – The change dynamics is big for bigger delays and small for smaller values, which can be observed in the frequency response:
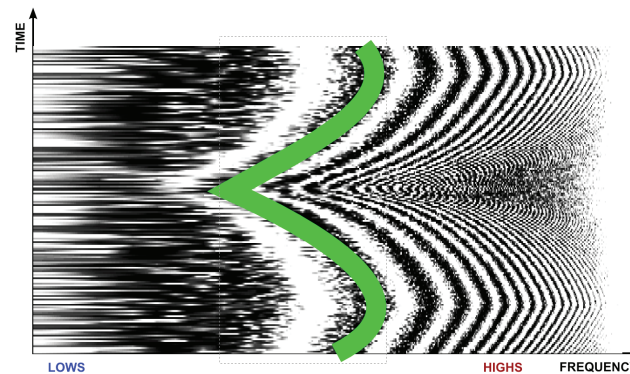
Time-variant frequency response of white noise and LFO modifying BBD line delays with concave characteristic

- **Range** – Parameter which readjusts the oscillator clock's frequency, at the same time modifying the range of delays generated by BBD line:

Range parameter

Knowing which parameters are used to control the **LFO** section and the **True BBD** line, let's see how the sections are connected on the signal flow level. The diagram below illustrates the manner in which the signal generated by **LFO** and the BBD delay line parameters influence each other:
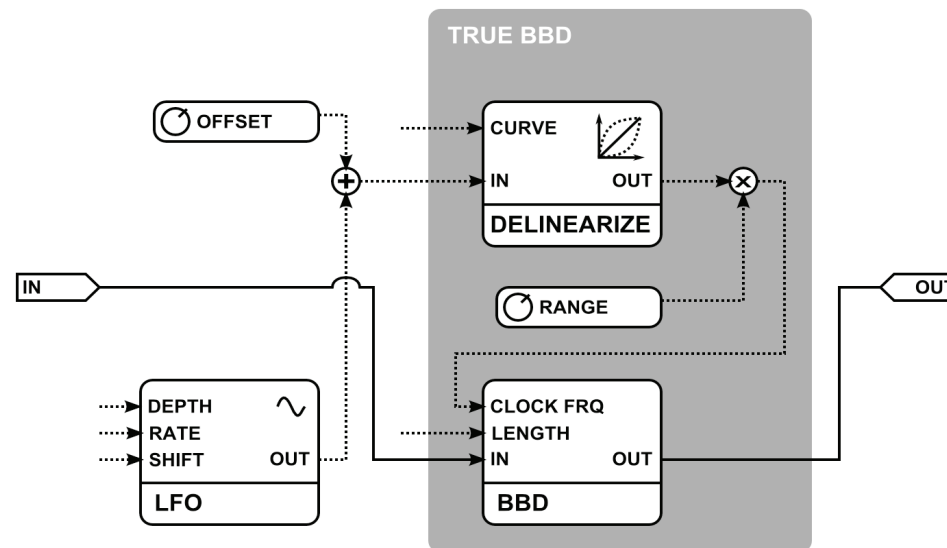

Diagram of True BBD block connected to its controlling LFO

As we can observe, the **LFO** generator's output is connected to the **Delinearize** block, in which a proper transfer characteristic from the **LFO** to the BBD clock's frequency is applied. Subsequently, the output frequency is scaled with the **Range** parameter and passed on to the clock input of the delay line as a series of timing pulses.

While selecting delay line parameters the **Freq** display might be of help in the **True BBD** section:
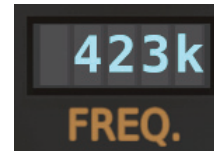
BBD Frequency

It informs about the current frequency of the BBD's timing clock. This frequency is determined by many factors: **Range** parameter, **LFO to Clock Voltage Curve**, **BBD Length** and **LFO** section settings.

It is worth mentioning that for low frequency of timing pulses, below the sampling frequency, we can hear interesting sound effects, resembling a signal's decimation, which of course are not an unexpected side effect. Exactly the same type of sound artifacts would appear in the original, which was an inspiration for Antresol if its internal parameters were properly readjusted in order to achieve a similar operating range of the BBD's timing clock. This is due to the fact that the innovative algorithm applied in Antresol operates on a quasi-analogue signal representation, precisely reflecting all the aspects of electronic circuits' operation and coappearing side effects.

Feedback value

Feedback section

This section's parameters control the feedback value of the delay loop. If the stereo channels are linked (**Link** flag on):

Feedback parameter's stereo link flag

The feedback is controlled for both channels simultaneously by using any of two potentiometers (they are visually linked). If we turn off the **Link** flag, the feedback value can be controlled independently for both stereo channels (**L/R** or **M/S**) by using both potentiometers.

The knob in **0** is the neutral position (no feedback). An inclination to the right increases positive feedback whereas an inclination to the left increases negative feedback.

Parameters of modules located after the feedback loop

This section describes modules which process the feedback loop's output signal.

Low Cut Filter

The **Low Cut** Filter allows to discard the excess amount of energy accumulated in the lower signal's register, which is cumulated during the passing of the signal through the feedback loop.
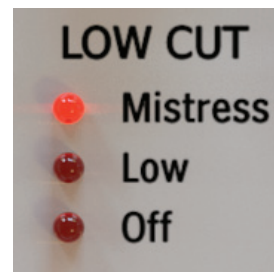
Low Cut filter

The filter can operate in one of three modes:

- **Off** – the filter is inactive delays
- **Low** – a passive filter is activated which cuts frequencies below **50 Hz**
- **Mistress** – a passive filter is activated which cuts frequencies below **100 Hz**

FX section

This is the final block of this processor, in which the unprocessed signal is mixed with the processed one.

FX Section

The **FX** block can generally work in one of two modes:

- Manual
- Automatic

We select the work mode with a bistate button **Mistress Auto Mix Mode**.

*Mistress Auto Mix
Mode parameter*

Dry / Wet manual mixing

In this mode we manually set changes in the ratio between the processed and unprocessed signal using the following parameters:

The filter can operate in one of three modes:

- **Gain L/M** – Volume of the **Left (Mid) Wet** signal channel
- **Gain R/S** – Volume of the **Right (Side) Wet** signal channel
- **FX** – the ratio of mixing **Wet** and **Dry** signals

Dry / Wet automatic mixing – Mistress Mode

In this mode the unprocessed and processed signals are mixed together automatically and the ratio is applied on the basis of feedback loop parameters to achieve the best sound effect.

Setting Antresol to Mistress emulation mode

Antresol is inspired by the classic flanger type guitar effect from the *Mistress* series and the solutions applied in it constituted a strong inspiration for the functioning of our processor.

1 Firstly, the automatic **Dry** and **Wet** signal mixing is activated with the **Mistress Auto Mix Mode** switch.

*Mistress Auto Mix
Mode parameter*

Then, **Dry** and **Wet** signals are mixed together in a ratio arbitrarily set on the basis of the feedback loop parameters in order to achieve the best sound effect. Additionally, activating the automatic mixing mode activates also a special pre-filter (depicted on diagram *Low Cut parameter*) which limits the input signal on bands. The parameters of these filters are not controlled by any GUI parameters and are affixed on the value corresponding to an identical mode which can be found in the *Mistress* guitar pedal.

2 Another element which allows to achieve an original *Mistress* sound is the high-pass filter located after the feedback loop and controlled by the **Low Cut** parameter on GUI.

Low Cut parameter

Set to *Mistress*, apart from removing low tones from the feedback loop's signal, it additionally activates a low tone reconstruction block during the automatic **Dry** and **Wet** signal mixing (**Mistress Auto Mix Mode** must be active).

Setting these values on the two aforementioned parameters causes the plug-in to act as an exact emulation of the classic *Mistress* guitar effect.

Working with the Mono tracks

If we use Antresol on a monophonic track, only the **Left** plug-in channel parameters are used to control the processing track. Additionally, some of the parameters do not work at all. Here is a list of all controllers, which functioning is changed when the plug-in is used on a **mono** track:

- **MS / Mode** switch – does not work. Due to processing of a monophonic signal we are unable to select a type of representation for the **stereo** signal.
- **Link** diodes from the **LFO** and **Feedback** sections do not work.
- **LFO** parameters from **R/S** row (for the **Right** channel) do not work. The **LFO** generator is controlled by the **Left** channel parameters only.
- **Feedback R/S** parameter (for the **Right** channel) does not work. – The control is made by means of the **Left** channel **Feedback** parameter only.
- **Gain R/S** parameter (for the **Right** channel) in the **FX** section does not work. Only **Gain L/M** parameter is responsible for controlling the feedback loop output volume.

Demonstrative schemes

The following diagram [pic. 33] illustrates the general scheme of the effect.
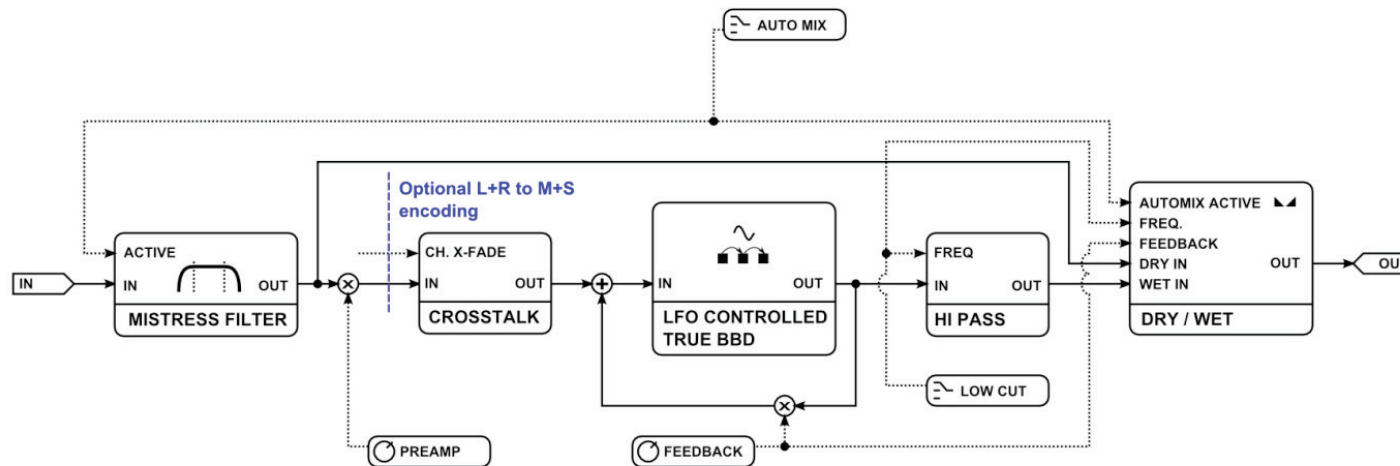
Antresol effect diagram

The input signal is passed on the optionally working (if auto-mix is activated) **Mistress** pre-filter. Next, preamplification and optional representation shift from **L/R** to **M/S** occurs. In the subsequent step the signal is passed on to stereo channels' cross talk addition block. Afterwards it enters the feedback loop.

After leaving the feedback loop the signal goes through the **Low Cut** (**Hi Pass**) filter and subsequently it is passed on the mixing block with the unprocessed signal. This section is illustrated in more detail in picture 33 below.
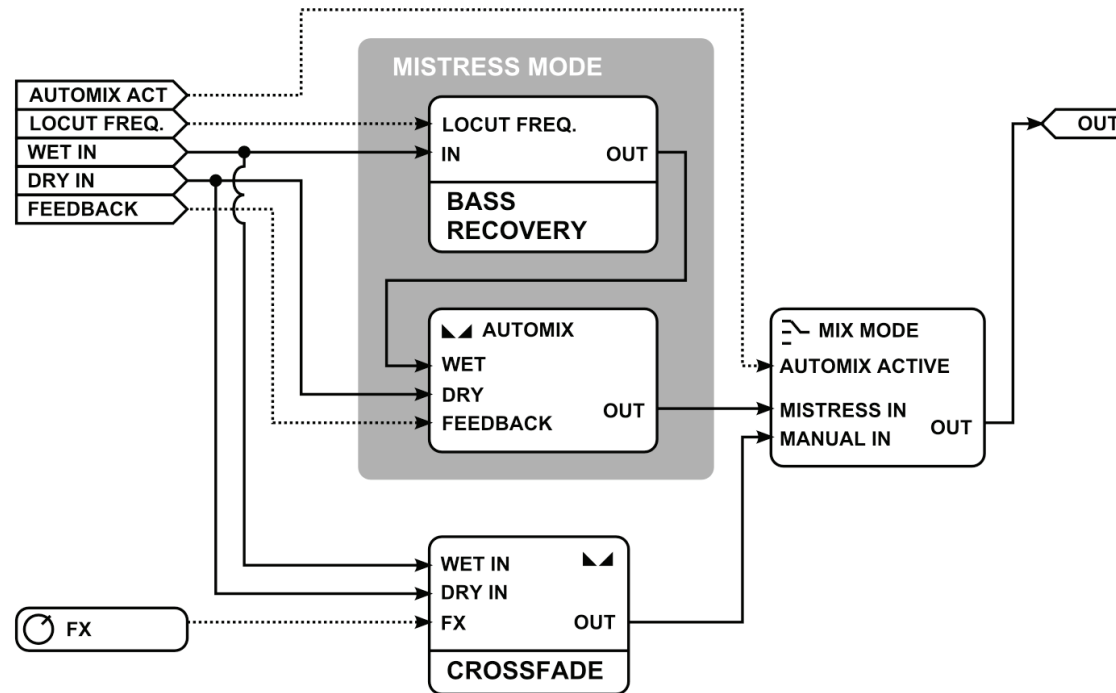
Dry and Wet signals' mixing block in Antresol

The Diagram depicts the **Dry** and **Wet** signals' mixing block in Antresol, which is partially based on the *Mistress* guitar pedal construction. If the **Auto Mix** mode is active the signal goes through the **Mistress Mode** subsection. The **Dry** and **Wet** signal mixing ratio is set automatically on the basis of the **Feedback** parameter. Additionally, if we switch the **Low Cut** filter to **Mistress** position, the reconstruction block of the low signal frequency from the feedback loop is activated (**Bass Recovery**).

Preset Management

Preset Storage

Presets, both those from the **Factory** content, and **User** ones, are stored as files in proper locations on a disc. Each time the plug-in instance is loaded to the project, these locations are scanned and presets found there are consolidated into one linear structure (list) in the **Preset Browser**.

Browsing Presets

Presets Configuration and Management section enables quick navigation and browsing of presets structure:
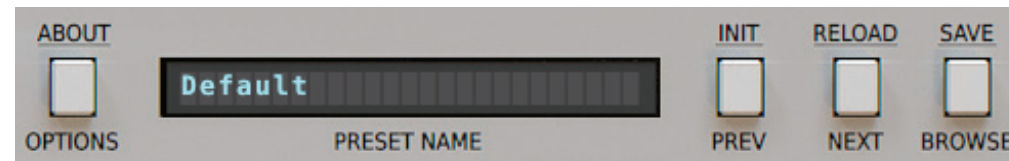
Presets Configuration and Management Section

- **Preset Name** – Displays the name of the currently loaded preset.
- **Prev / Next** – Buttons that allow for linear browsing of presets list (depending on currently set filters – see sections below).
- **Init (Prev + CTRL)** ↺ – Simultaneous use of the **Prev** button and the **CTRL** key restores initial settings of plug-in parameters.
- **Reload (Next + CTRL)** ↺ – Simultaneous use of the **Next** button and the **CTRL** key reloads a current preset.
- **Save (Browse + CTRL)** ↺ – Simultaneous use of the **Browse** button and the **CTRL** key saves current parameters as a new preset or allows for overwriting of the existing one (see sections below).
- **Browse** – Expands the **Preset Browser** panel at the bottom of GUI section.

↺ *CTRL button in Windows system and Apple CMD in Mac OS X system.*

The **Preset Browser** looks as follows:
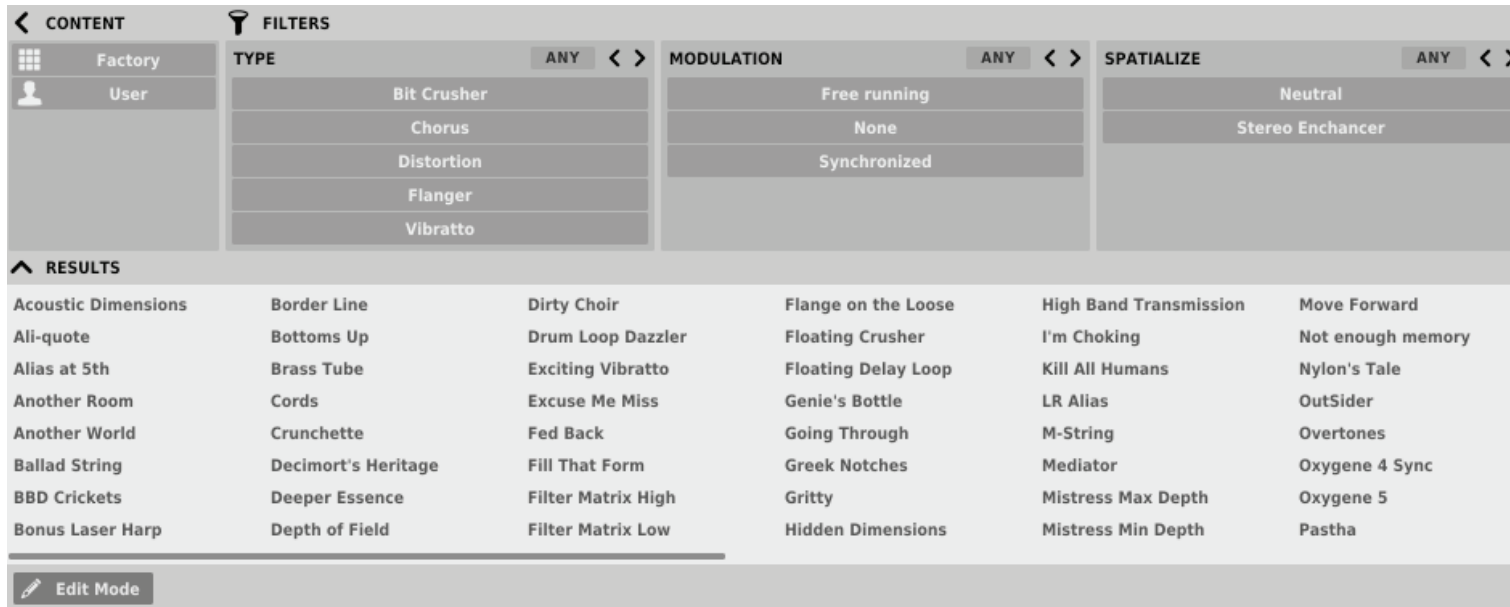
Preset Browser

One can see three main sections:

- **Content** – Sources from which presets can be read.
- **Filters** – Configuration of presets **Filters** (non-active by default).
- **Results** – List of presets from resources that meet criteria set by **Filters**.

Resources

In this section you can choose a resource/resources in which you want to browse presets. There are two resources to choose from:

- **Factory** – Delivered together with the plug-in, cannot be modified (read-only).
- **User** – Created by the user during using the plug-in and can be freely modified, shared with other users etc.

Choosing any of them will cause narrowing the results to the presets from one resource.

Preset Filters

The plug-in enables classification of presets with the use of **Categories** and **Tags** system, whose aim is to facilitate the process of browsing the content by filtering.
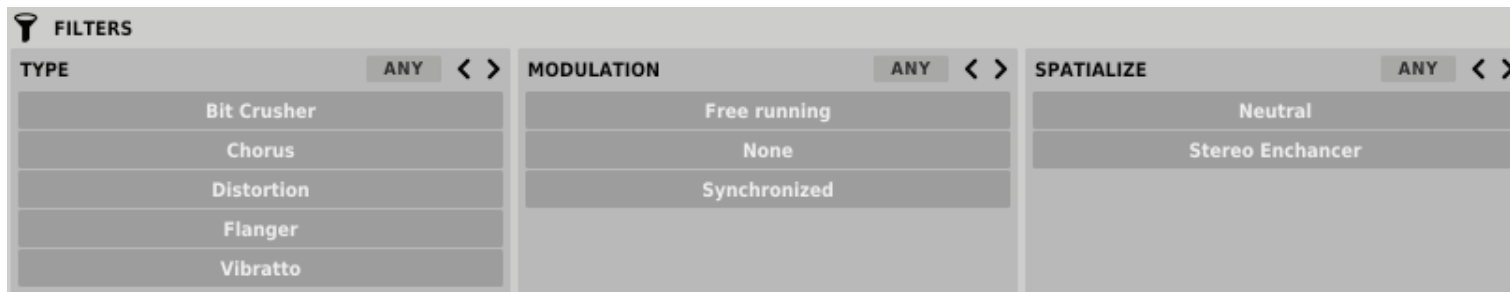
Preset Browser Categories Filters

Categories and Tags

Each preset is described by a few common **Categories**. Within each of them there may be one or more **Tags** from a particular set.
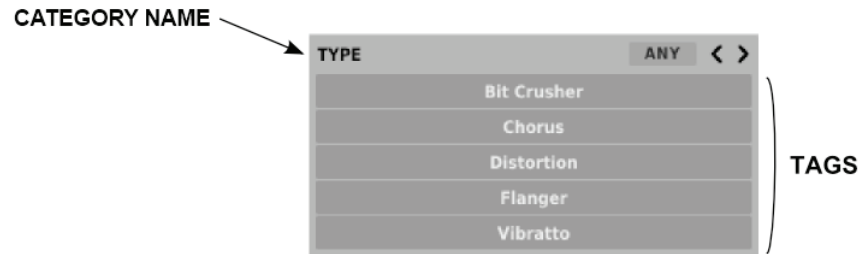
A single category in a filter with a description of its elements

Presets from **Factory** resource were described by **Categories** and **Tags** during the stage of its creation. **Categories** and **Tags** are chosen in such a way so as to describe the content in the best possible way, taking into account the plug-in purpose.

Edition of **Categories** and **Tags** in case of **Factory** content is not possible – it is blocked. **User** presets may be described only with **Categories** and **Tags** from factory content or, alternatively, the users may define their additional **Tags** in order to describe their own presets.

Results

This is a list of presets from chosen resources that meet the filtering criteria. The basic function of this section is browsing and loading presets (in **Browsing Mode** – by default).

Results Section in Preset Browser

Click any name to choose and load the preset.

Double-click the name to enter preset name edit mode. ➲
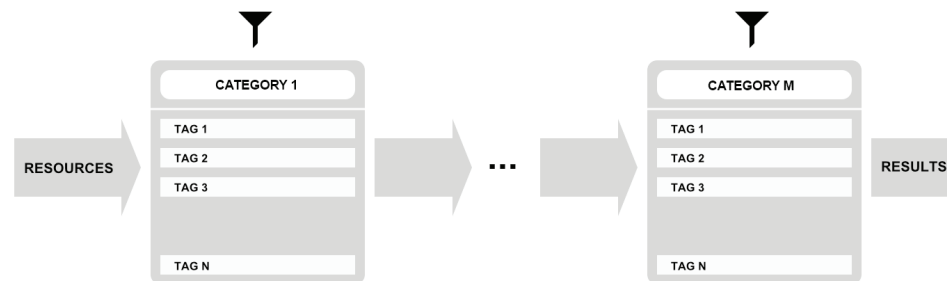
Presets Filtering

Filters section columns represent particular **Categories – Category filters**, while rows in each of these columns represent **Tags** available within each **Category**.
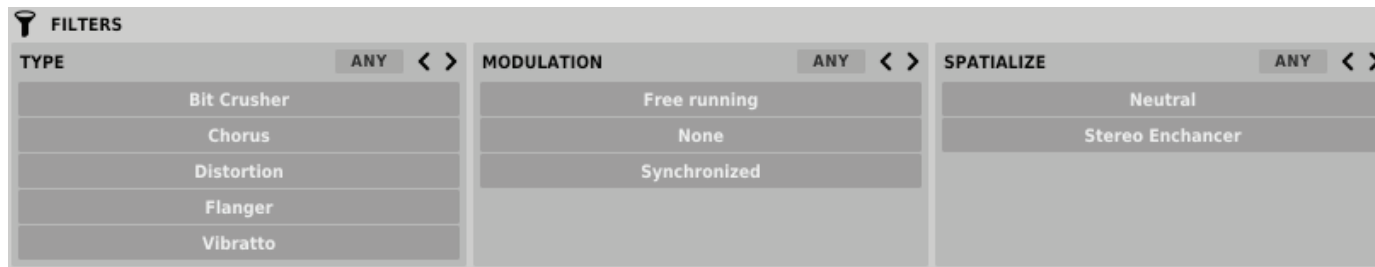
Preset Browser Categories Filters

Filtering results have a form of a cascade (columns), from left to right. This means that all presets available in the selected resources are filtered as to presence of **Tags** from the first **Category** (first column from the left), next a set of presets being a result of filtering by the first **Category** is filtered by the **Category** represented by the second column etc., until it is filtered with the last active **Category Filter**.

Presets Filtering with the use of Categories Tags

The result of a cascade filtering process (presets that meet the criteria of each filter) is listed below, in the **Results** section.

Basic Actions on Filters

Tag buttons in **Filters** work in toggle mode. Click to activate/deactivate **Tag** (Grey color means that the **Tag** in inactive, teal blue means that the **Tag** is active). If at least one **Tag** in a column (**Category**) is active, then the **Filter** also becomes active.

For example, if the first column represents *Type* **Category** with a set of the following **Tags**: {*Bit Crusher*, *Chorus*, *Distortion*, *Flanger*}, clicking the *Chorus* **Tag** will activate the **Category Filter** *Type* and narrow down a list of presets to the items in case of which the *Chorus* **Tag** appeared in the *Type* **Category**.
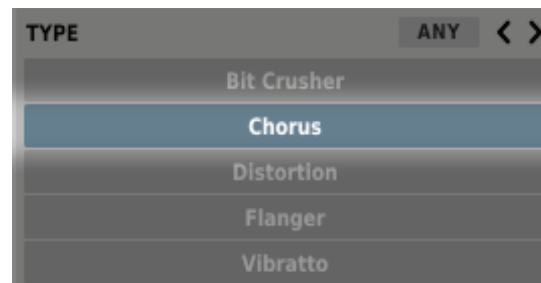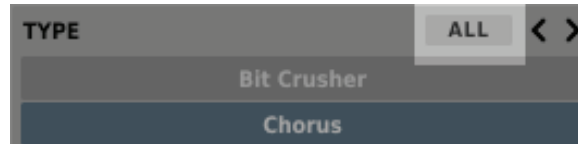

If you click the *Chorus* item again, you will deactivate the **Filter**, so all presets from the content will be displayed again.

All/Any operator

In the **Category Filter** header, to the right of **Category** name, there is an toggle button with a default label **Any**.
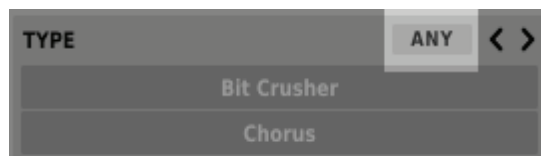
Clicking it will change its status to **All**

and change the work mode of the corresponding **Category Filter** (changes the type of the operator connecting **Tags** in the **Filter**).

- In **Any** mode – Activation of two or more **Tags** in the **Category Filter** extends the results by these presets in which there is at least one active **Tag** in the given **Category**. *This is the default setting.*

  For example, if you activate *Chorus* and *Distortion* **Tags** in the **Category Filter**:
  Type, then only presets with *Chorus* or *Distortion* **Tags** will be displayed.

- In **All** mode – Activation of two or more **Tags** in the **Category Filter** narrows the results to these presets in which there are all existing **Tags** in this **Category** at the same time.

  For example, if you activate *Chorus* and *Distortion* **Tags** in the **Category Filter**:
  Type, then only presets with both *Chorus* and *Distortion* **Tags** in *Type* **Category** will be displayed.
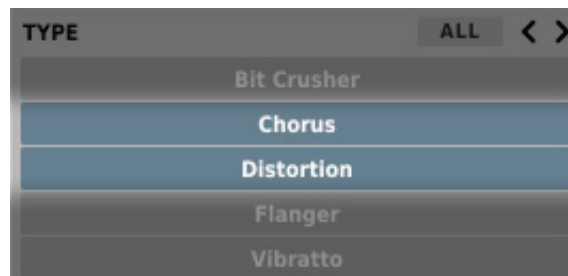
**All**/**Any** operator is set for each **Category Filter** separately.

Reordering Categories

To the right of the **Category Filter** header there are buttons with arrow icons:

Filter reordering

They enable moving the **Category** to the left or right in a cascade. Clicking the right arrow replaces the current **Category** with the **Category** on the right. Clicking the left arrow replaces the current **Category** with the **Category** on the left.
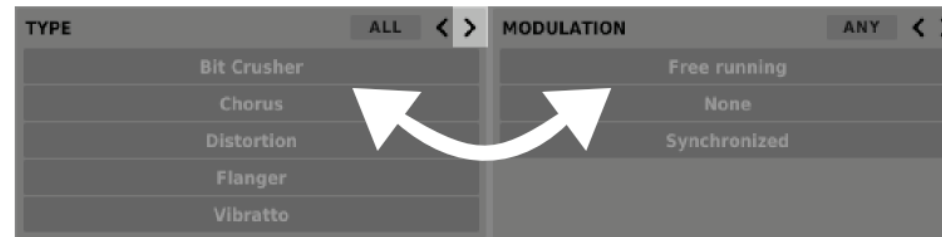

Presets Filtering with the Use of Categories Tags

Clicking the left arrow for the **Category** located on the far left does not change anything. The same is true for the **Category** located far to the right and right arrow (as the column has no predecessor/successor with which it could be replaced).

Presets Editing – Edit Mode

An active **Edit Mode** in **Preset Browser** changes its function (enables the change of presets names, edition of **Categories** or **Tags**, deletion of presets as well as their export or import. One should bear in mind, however, that these operations are not allowed in case of **Factory** presets, but only for the **User** presets.

Edit Mode can be activated with a button located in the bottom left-hand corner (click again to deactivate):
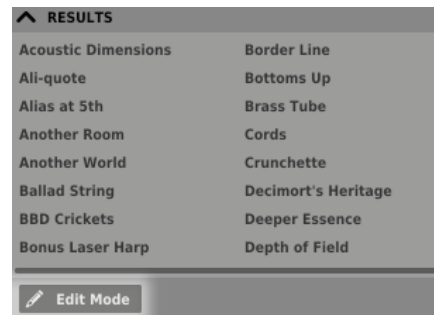
Edit mode button

In this mode **Preset Browser** slightly changes its appearance (not only function):
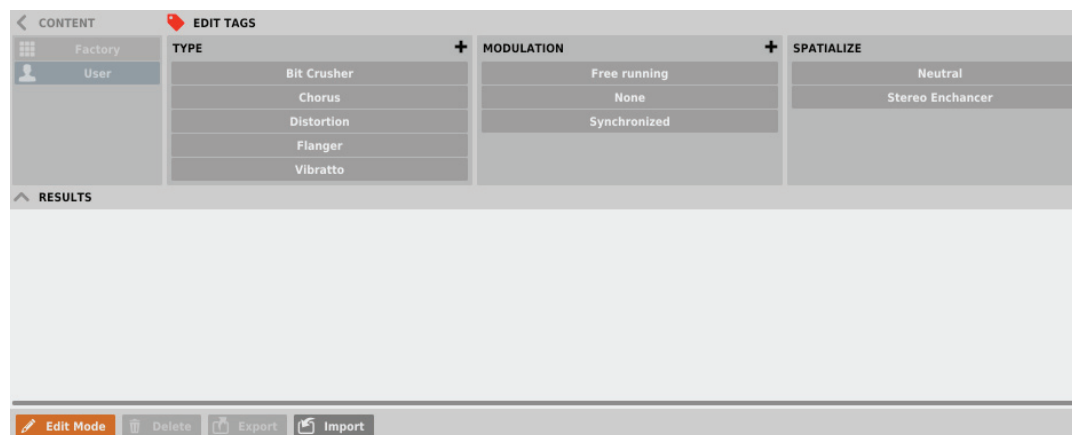
Preset Browser in Edit mode

1 The **Filters** section changes into the **Edit Tags** section, whose appearance is almost identical, but the function is different. The section is used not as a filter, but as an editor of **Categories** and **Tags** of chosen presets.

2 The role of the **Results** section is to choose presets for edition (edition is possible only for user presets).

3 At the bottom of the screen there are **Delete**, **Export** and **Import** buttons used respectively to delete or export selected **User** presets as well as to import a set of presets to the **User** resources.

4 The choice of the resource in the **Content** section does not work, as edition is possible only for user presets.

Selection of Presets for Edition

You can edit both single preset and a set of presets. Using the functionality of the **Results** section, you can choose a preset or a set of presets in the following way:

- **Click the preset** – Choose the preset from the list,
- **Click the preset + press CTRL** – Add another preset to an already chosen preset or a set of presets,
- **Click the preset + press SHIFT** – Select a part of a list of presets from the last chosen preset to the item clicked together with **SHIFT** button.

Tags Edition

Change of Tags status in Presets

Tag buttons work in toggle mode, similarly as in case of filtering. Clicking them you can respectively set **Tag** or erase them from chosen presets.

Bit Crusher	Free running	Neutral
Chorus	None	Stereo Enchancer
Distortion	Synchronized	
Flanger		
Vibratto		

Filters' tags

Choosing a greater number of presets, in which the tags were already defined, enables their re-edition. Consequently; in case when a specific **Tag** appeared in all selected presets, it will be marked with an intensive teal blue color.
When a specific **Tag** is set only in a part of chosen presets, then it is codified with a pale teal blue. The **Tag** that does not appear in any of the presets is marked with grey colour:
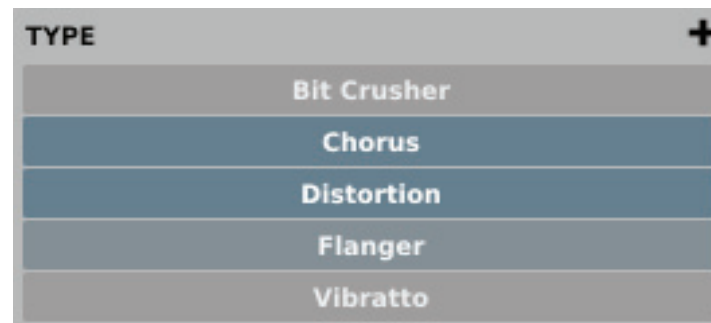
Notification about Tags Status in Chosen Presets

The change of the **Tag** status for one or more chosen presets sets or erases this **Tag** in all these presets. The status change is signalized with an **Asterisk** located to the left of the **Tag** buttons .

Notification about Changes in Tags Status in Chosen Presets

Elements/**Tag** buttons highlighted with pale teal blue colour (meaning different values of a particular **Tag buttons** for the highlighted presets) work in a three-state system; erasing the **Tag** (grey colour), setting of the **Tag** (intensive teal blue colour) or no changes (pale teal blue) for all selected items.

Changes introduced during edition do not have to be confirmed, they are signalized by asterisks located by **Tag** changed for particular presets

Adding New Tags

Using the **Plus** button in the **Category** header, you can add new **Tag** to a particular **Category** (for chosen presets):
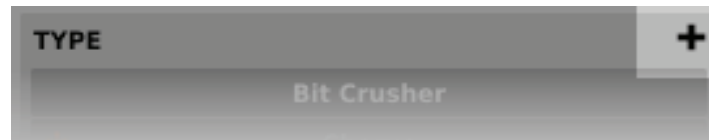
Adding New Tag Button

After clicking you will see a dialogue box with a question about the **Tag** name. After confirmation the **Tag** will be added to a particular **Category** and automatically set to chosen preset(s).

Presets Names Editing

Double-click the name of a preset to enter name editing mode.

Deleting Presets

Selection of one or more presets activates **Delete** button at the bottom left corner. It can be used to delete the selected presets.

Presets Export and Import

⮌ Export and Import are possible only for presets from User resources.

The use of **Import** or **Export** buttons at the bottom part of the **Preset Browser** enables a proper import of presets package (exported before) or export to the presets package ⮌ the presets selected in the **Results** section.

Saving the current settings as Preset

To save plug-in parameters settings as a user preset use the **Browse** button pressed together with **CTRL** button in **Configuration and Presets Browsing** section. This action automatically opens the **Preset Browser** with an active **Edit Mode**.
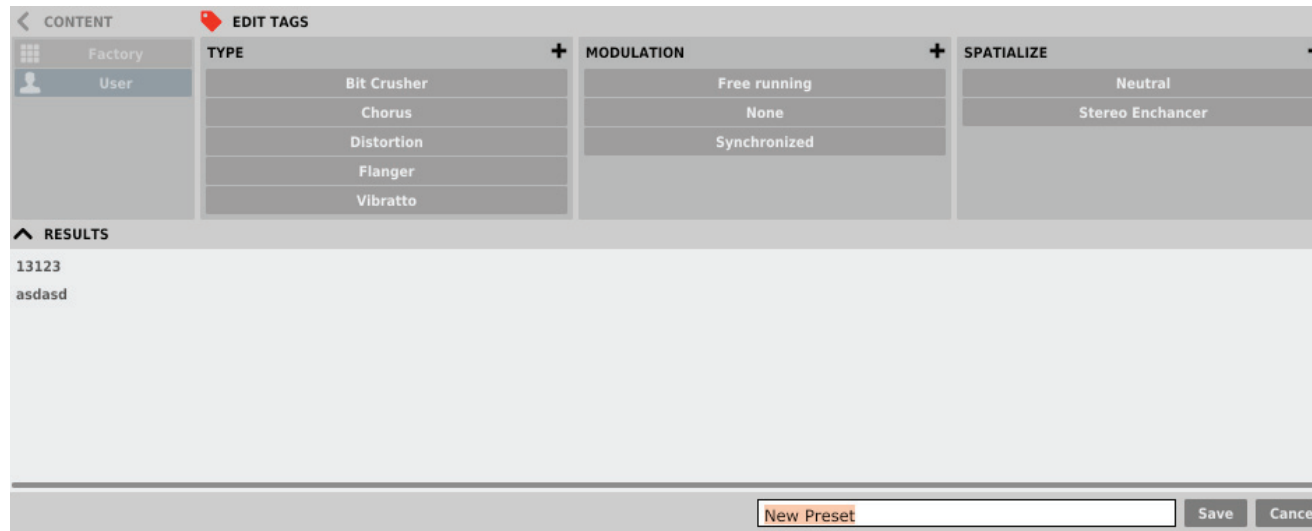
Saving the Settings as Preset

Additionally, at the bottom there will be a textbox into which you should enter a name of a newly created preset, and then confirm it by clicking **Save** or cancel by clicking **Cancel**.

As the **Preset Browser** is in the **Edit Mode** before confirmation of the newly created setting as preset, we can straightaway categorize a particular setting, using functionality of the **Edit tags** section, even just before saving it as **Preset**.

Configuration

Parameter settings

Right-click any plug-in parameter to open the context menu.

Closed Context Menu

It allows for:

- Checking the name and current value of a parameter,
- Checking if the parameter is attributed to MIDI CC controller, and if it is – to which number,
- Linking the parameter to MIDI CC controller.

Clicking the arrow in any area of the menu expands it and displays all available options.

Next right-click on the parameter or left-click outside the menu area closes it automatically.

MIDI Learn

MIDI Learn function enables a quick assignment of physical controllers (from MIDI controller) to plug-in parameters. The assignment can be divided into a few steps:

1 Right-click the parameter which you want to attribute to physical MIDI controller in order to expand the context menu.

2 Click arrow at the bottom in order to expand the context menu.
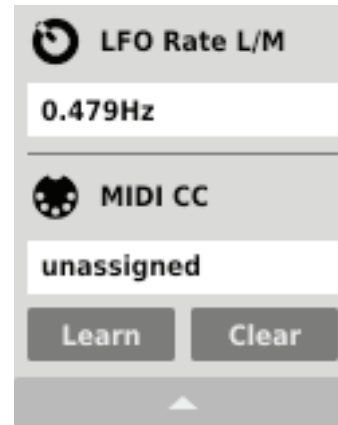
Expanded Context Menu

3 Click the **Learn** button to put the plug-in into a pending state until you move any MIDI CC controller.

4 Click **OK** to save the change or click the **Cancel** button to restore the previous setting.

MIDI Unlink

You can also delete MIDI CC code attributed to plug-in parameter from the context menu:

1 Open the context menu, right-clicking the parameter attributed to a particular MIDI CC

2 Expand the menu, using the arrow at the bottom

3 Click the **Clear** button

4 Confirm with **OK** button

Plug-in's current settings

4

Current settings are relevant to a specific instance of a plug. They are initialized when the plug-in is loaded with the **Default settings** (see the next chapter):

At the bottom of UI there is a status bar that enables the change of **Current settings**.

Current Settings in a Status Bar

From left to right there are:

- The setting of **Current processing path quality** for the **Offline** mode and the **Real-time** mode
- Saving/Loading the **MIDI CC Map**
- The choice of current size of GUI

Processing Path Quality

Clicking the item expands the menu that allows to select the **Current quality** of generated sound for **Real-time** or **Offline** modes.
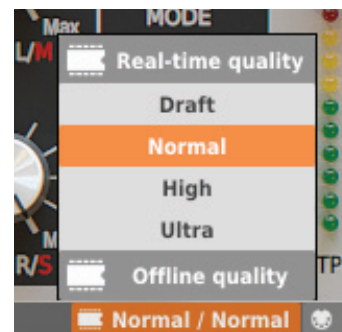
Processing Path Quality Settings

We can choose from four available grades for each mode.

Saving/Loading the MIDI CC Map

This item enables to save current parameters of MIDI CC codes as **MIDI Map** in a file or to load them.

Saving/Loading the MIDI CC Map

Current Size of GUI

This last item allows for a choice of plug-in interface size. There are two sizes to choose from:
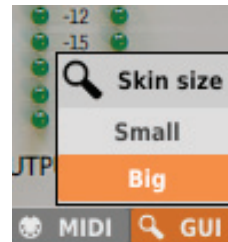
Choosing the plug-in interface size

Plug-in's default settings

The **Options** panel in Antresol allows us to change the **Default settings** of the plug-in. Every time an Antresol is loaded in the host application (new instance is created) a **Default settings** are used for initialization of the **Current settings. Default settings** are stored within a configuration file of the plug-in. This file is updated at the moment of unloading any of active plug-in instances from the host application.

Use the **Options** button on GUI to open the panel:

Options button

The **Options** panel operates as an accordion where you can click a specific section to expand it:

Options Panel

There are three sections:

- Processing Path Quality
- **MIDI Map** Setting
- Interface size settings

Default Processing Path Quality
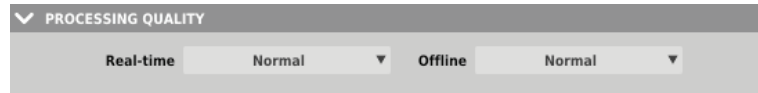
Processing Quality Choice Section

In this section you can configure a default quality of the processing path for the **Real-time** mode and the **Offline** mode.

Default MIDI CC Map

Default MIDI Map Choice Section

This section allows for setting of a path to a file with a default **MIDI Map** that was prepared before. Clicking **MIDI CC** Map check box activates load of **MIDI Map** and the possibility of pointing it (**Browse** button).

Default size of UI
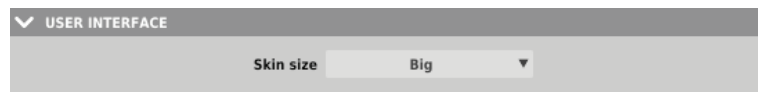
Processing Quality Choice Section

In the **User Interface** you can choose a default size of the UI.

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