



AEON

I N S P I R A T I O N R E D E F I N E D



AEON

M E L O D I C

HEAVYOCITY
SAMPLE YOUR FUTURE

INSTRUCTION MANUAL

Table of Contents

| | | |
|-------|------------------------------------|----|
| 1 | Welcome to AEON! | 2 |
| 2 | About AEON Melodic | 3 |
| 3 | The AEON Melodic Interface | 4 |
| 3.1 | Main Page | 5 |
| 3.1.1 | Master Effects | 5 |
| 3.1.2 | Central Section | 7 |
| 3.1.3 | Volume Envelopes | 8 |
| 3.1.4 | Performance | 9 |
| 3.2 | Advanced Performance Options | 10 |
| 3.2.1 | Performance Options | 10 |
| 3.2.2 | Arpeggiator | 11 |
| 3.2.3 | Amp Sequencer | 14 |
| 3.3 | Trigger FX | 15 |
| 3.3.1 | Main Controls | 15 |
| 3.3.2 | Advanced Controls | 16 |
| 3.4 | EQ & Filter | 19 |
| 3.4.1 | Equalizer | 19 |
| 3.4.2 | Filter | 21 |
| 3.4.3 | Output | 23 |
| 4 | Credits | 24 |

1 Welcome to AEON!

Thank you for choosing AEON, a unique virtual instrument collection that combines orchestral, traditional, and ethnic instruments with searing synths and edgy samples, all created with Heavyocity's signature sound. Construct lush melodies, dark lyrical phrases and devastating synth and bass lines directly within a deeply customized user interface. Building on the success of the critically acclaimed DAMAGE, EVOLVE, and EVOLVE MUTATIONS series, the team at Heavyocity has taken more than 12 months to capture hundreds of instruments, synths, and ensembles.

AEON's Melodic component provides 300+ presets and 9800+ samples in a deeply customizable interface. This vast collection is comprised of traditional instruments, unique ensembles, aggressive analog synths, hybrid presets, and signature "AEON HITS". Quickly create motifs or build intricate rhythmic patterns with your own melodies in the custom Arpeggiator. Further redefine your sound with AEON's Advanced Trigger FX and deep modulation controls.

2 About AEON Melodic

AEON Melodic provides you with 5 instrument types. Each instrument type contains 3 edit pages with various functions. These are accessed by simply clicking on the tabs on the top right of the program window. When you load any instrument preset, the main edit window will be displayed.

AEON Melodic is arranged in 4 main category types: AEON Hits, Hybrid Instruments, Synth and Organic Instruments, and Arpeggiator Instruments. The categories are split into 6 folders:

- 1 **Aeon Hits:** These presets are comprised of single-shot impacts and tails. These hybrid hits are suitable for trailer-like stings and transitions, or emphasis on specific points in a composition.
- 2 **Hybrid Instruments:** These presets combine organic and synth sources to create unique and evolving textures and instruments.
- 3 **Organic Instruments:** These presets contain deeply sampled, multi-velocity, round-robin instruments. There are 8 subcategories, named by the type of instrument (Bass, Bells, Eclectic Ensembles, Ethnic, Guitars and Combos, Harp and Combos, Keys - Piano, Organ, Wurlli, Strings and Combos). Here you'll find individual instruments, multi-layered instruments, and unique ensembles.
- 4 **Synth Instruments:** These presets contain an array of sampled analog modular and digital synths. We captured true analog fatness from a variety of modular analog synth rigs. These synths range from clean and pristine to insanely aggressive, and can be quickly customized with AEON's highly tweakable interface.
- 5 **Organic (Arp):** We've customized over 60 presets utilizing the all new Arpeggiator. With these presets, you can quickly perform and edit melodic grooves and phrases; control the length, velocity, pitch, rate, and subdivision of a 128 step sequencer.
- 6 **Synth (Arp):** Similar to the Organic (Arp) category, these presets all utilize the new Arpeggiator in AEON. With these presets, you can quickly perform and edit melodic grooves and phrases. Add a touch of distortion, or use the LFO and filters to create intricate synth arps.

With the exception of the Aeon Hits Menu, each of the 3 sounds per preset is routed to separate channels in the mixer allowing you to have full control over each sound.

3 The AEON Melodic Interface

Every instrument in AEON Melodic shares the same interface, from which you can alter the sound or change how you play the instrument.



1 The AEON Melodic Interface

The controls are spread across 4 pages, each dealing with different aspects of the instrument. The four pages are:

- 1 **MAIN** - contains the main controls for the most commonly used parts of the instrument, like the volume envelopes, master effects and mixer.
- 2 **T-FX** - gives you access to the parameters of the Trigger Effects.
- 3 **EQ/FILTER** - contains a collection of equalizer and filter options for the instrument.
- 4 **ADV. PERF** - the Advanced Performance Options page contains controls for an advanced arpeggiator, mono/poly controls, and the Amp Sequencer.

► You can navigate through the pages by clicking on their respective tabs.

The main 3 tabs are located to the top right of the interface and are always present. The 4th tab can be found to the lower right, and opens the Advanced Performance Options page.

3.1 Main Page

The main page is the page that you will first see when you load an instrument. This page contains 4 main areas:

- **Master Effects** - here you have access to 4 master effects that are applied to the whole instrument.
- **Central Section** - this contains 3 subpages, accessed by tabs:
 - **Twist** - an animated, tone-altering effect.
 - **Mix** - a 3 channel mixer for blending the different available sounds.
 - **Punish** - for damaging your audio.
- **Amplitude Envelopes** - you have access to volume envelopes for the 3 channels.
- **Performance** - pitch bend, velocity and arpeggiator controls can be found here.

3.1.1 Master Effects



2 The Master Effects Section

Every instrument has 4 master effects, each with 4 parameter controls and an on/off switch.

- ▶ The controls for each effect are displayed when you click on the effect name, or when the effect is activated.

The on/off button is located to the right of the effect name. The effect is active when the button is glowing.

The following is a list of the available effects and their parameters:

Delay

A delay effect produces a version of the signal that is delayed in time. When mixed with the original signal, this can produce an echo effect. Additional echoes can be created by feeding the delay output back into the effect input.

The delay effect is accessed by clicking on the **DEL.** tab. The available controls are:

- **Time** - the time between the original signal and the delayed signal (i.e. the time between echoes).
- **Feedbk** (feedback) - controls how much of the delayed signal is fed back into the effect's input. In other words, this controls the strength of the repeating echoes.
- **Width** - controls the stereo width of the echoes.
- **Amt** (amount) - controls the output level of the delayed signal.

Modulation

The modulation effect is a mix of chorus and phaser effects. It can be used to thicken the sound and give a sense of movement to the instrument timbre.

The modulation effect is accessed by clicking on the **MOD.** tab. The available controls are:

- **Rate** - controls the rate of modulation (or movement) in the effect.
- **Depth** - controls the intensity of the modulation.
- **Morph** - blends between the phaser and chorus effects - with the knob set all the way to the left, you will hear the phaser only; and with the knob set to the right you will hear only the chorus; any setting in between will be a combination of the two effects.
- **Amt** (amount) - controls the output level of the modulated signal.

Reverb

A reverb effect is an artificial space simulator. The reverb effect used in AEON is based on a technique called convolution, in which an impulse response of a real (or not) space is used to produce a faithful emulation. An impulse response can be thought of as an acoustic fingerprint, and are capable of producing the most realistic reverb effects, or crazy sounds.

The reverb effect is accessed by clicking on the **REV.** tab. The available controls are:

- **Impulse Response Menu** - you can use the drop down menu to select one of the 20 provided impulse responses.
- **Pre Del** (Pre-Delay) - controls the amount of delay before the reverb signal, adding time between the input signal and the reverb signal.
- **Size** - sets the pitch shift amount of the impulse response, this changes the perceived size of the space.
- **Mix** - controls the dry/wet mix of the clean (dry) signal and the reverb (wet) signal.

Distortion

The distortion effect emulates the sound of an overdriven analogue circuit. This makes the sound "heavier" by adding overtones and compressing the dynamics.

The distortion effect is accessed by clicking on the **DIST.** tab. The available controls are:

- **Drive** - controls the amount the signal is overdriven, i.e. the distortion amount.
- **Tone** - controls the tone of the output. Lowering the value of this control will lower the amount of high frequencies present in the output signal.
- **Bass** - controls the level of the bass frequencies.
- **Treb** (treble) - controls the level of the high (treble) frequencies.

3.1.2 Central Section

As mentioned before, this section contains 3 subsections. We will now take a detailed look at these subsections and their controls.

Twist



3 The Twist Controls

The twist effect is an animated, tone-altering effect that "twists" the audio. You can use it as a stationary effect to quickly alter the tone of the instrument, or you can use the animation controls to give the tone movement. The controls available are:

- **Twist** - this is the large knob in the center. It is used to control the amount of animation that is applied to the tone.
- **Tone** - sets the central tone.
- **Rate** - controls the rate of the tone animation.
- **On** - toggles the effect on or off.

Mix



4 The Mix Controls

The Mix tab opens a 3 channel mixer for the sounds available in the instrument. These sounds will vary from instrument to instrument, but the controls will remain the same.

For each channel you have access to:

- **Pan** - controls the position of the channel in the stereo field.
- **Tune** - controls the tuning of the channel (+/- 24 semi-tones).
- **Level** - controls the volume level of the channel.
- **Solo** - mutes the other channels (with the exception of channels that also have their solo buttons turned on) so only the soloed channel can be heard.
- **Mute** - mutes the output of the channel so it can no longer be heard.
- **Purge** - when this button is turned on, the samples used for the channel will be removed from memory. Use this control only if you plan to not use a channel for a given project. If you just want to deactivate the channel temporarily, use the **Mute** button.

Punish



5 The Punish Knob

The Punish effect is a combination of compression and saturation controlled from a single knob. Turn the knob to punish the sound.

The effect can be toggled on or off using the **On** button.

3.1.3 Volume Envelopes



6 The Volume Envelope Section

Each of the 3 channels has its own volume envelope. The controls for a channel's volume envelope are accessed by clicking on the respective tab.

- ▶ You can control a parameter for all of the envelopes at once by holding the **alt** key while you control the knob.

You can also link the 3 volume envelopes by using the **LINK** button. This will copy the currently selected channel's envelope settings to the other 2 channels and allow you to control them all at once without using the **alt** key.

There are 4 knobs available for each volume envelope:

- **Attack** - controls the attack (fade in) time.
- **Decay** - controls the time it take for the volume to fade from the maximum value to the sustain value.
- **Sustain** - controls the level at which the envelope will sustain while the key is held.
- **Release** - controls the release (fade out) time of the envelope after the key is released.

Increasing the release time will add to the amount of voices holding over as other notes are playing, this can increase Kontakt's CPU load.

3.1.4 Performance



7 The Performance Section

The Performance section of the Main Page is located at the bottom of the interface. It contains the following controls:

- **ARP** - toggles the arpeggiator on or off. More advanced settings for the arpeggiator can be found on the Advanced Performance Options page.
- **Pitch Bend Up** - controls the range of the pitch bend MIDI control when the value is positive.
- **Pitch Bend Down** - controls the range of the pitch bend MIDI control when the value is negative.
- **Velocity Min** - controls the minimum velocity. Any MIDI notes played with a velocity lower than this will have their velocity set to this value.
- **Velocity Max** - controls the maximum velocity. Any MIDI notes played with a velocity higher than this will have their velocity set to this value.

The arrows to the right of the Velocity and Pitch Bend controls can be used to increase or decrease these values one step at a time.

3.2 Advanced Performance Options

This page can be accessed by clicking on the **ADV. PERF** button, located to the bottom right of the interface.



8 The Advanced Performance Options Page

The page is split into three sections; we will look at each section individually.

3.2.1 Performance Options



9 The Performance Options Controls

These controls are located to the top of the page. They are:

- **PERFORM** - this switches the playing mode between **Mono**(phonic) or **Poly**(phonic). When set to **Mono**, only one voice will play at a time. When set to **Poly**, multiple voices can play at once, allowing you to play chords.
- **GLIDE** - toggles the glide function on or off. When active, notes will ease into each other by gliding from the previously played note to the most recently played note. This is sometimes also called **portamento**.
- **Time** - controls the glide time, i.e. the time it takes for the note to transition.
- **UNISON** - toggles the unison effect on or off. This adds 2 additional voices with slightly different tuning to create a thicker sound.
This can increase Kontakt's CPU load as it increases the number of voices per note played.
- **Detune** - controls the tuning difference of the additional voices added with the unison effect.

3.2.2 Arpeggiator

Most of the Advanced Performance page is dedicated to AEON's arpeggiator.

An arpeggiator takes the notes you are holding on the MIDI keyboard and re-arranges them to play patterns. Most arpeggiators run through the held notes in order, from highest to lowest, or vice versa, but more recent arpeggiators have extended options for more complex playback.

This arpeggiator is more advanced than most, with many unique features that will enable you to create intricate and complex patterns and sequences.

Patterns



10 The Pattern Controls

The arpeggiator is based around patterns. A pattern stores most of the main arpeggiator data, including the rate, pattern length, and the parameter slider values. A preset contains 8 patterns, which can be used in two different ways:

- 1 If the pattern mode is set to **Single**, the selected pattern will be the currently active pattern, i.e. the pattern you are viewing is also the one that is being played back.
 - 2 If the pattern mode is set to **Chain**, then the arpeggiator will cycle through the patterns sequentially according to the number of patterns that are included in the chain.
- ▶ The pattern playback mode is selected using the switch below the pattern selection buttons.
 - ▶ The length of the pattern chain can be controlled by clicking and dragging on the arrow between the pattern selection buttons and the pattern playback mode switch.

Mode Controls



11 The Mode Controls

Apart from the pattern selection buttons and chain controls, there are three controls that are not altered by pattern selection. These are:

- **Playback Mode** - this is the menu to the top right of the arpeggiator area. From this you can select the order and mode in which the arpeggiator organizes the played keys. The modes available to you are:
 - **Chord** - all held notes are played at once, as a chord.
 - **Pairs** - the held notes will be cycled through as pairs, creating a "broken chord" effect.
 - **Up** - the arpeggiator will cycle through the notes from the lowest to the highest.
 - **Down** - the arpeggiator will cycle through the notes from the highest to the lowest.
 - **Circle** - the arpeggiator will alternate between the **Up** and **Down** modes.
 - **Circle++** - similar to **Circle**, but the highest and lowest notes are played twice when they are reached.

- **Single** - a monophonic mode. Only the last played note is used, all other notes are ignored.
- **Retrigger** - with this button active, the arpeggiator pattern will return to the start of the pattern every time a new note is played.
- **+8va** - duplicates all held notes, but transposed an octave higher. So, if you hold a single C key, the arpeggiator will play a pattern as if you were holding that C key and the C key an octave above it.

If you are using Chord mode, the +8va could increase Kontakt's CPU as it increases the number of voices.

The other mode controls are stored and recalled with the patterns:

- **Seq Steps** - sets the number of steps in the pattern, from 1 to 16.
- **Rate** - sets the rate of playback for the pattern.

Parameter Controls



12 Arpeggiator Parameter Controls

The body of the arpeggiator section is a bank of sliders. These sliders work like a step sequencer, altering the parameter at each step according to the settings of the sliders. There are three parameters available, which are selected by using the tabs to the left:

- **Velocity** - the note velocity, i.e. how hard the note is played.
 - **Length** - the note length. This also controls the step mode: if the slider is all the way down, the step is deactivated and the arpeggiator will not play a note at that step; if the slider is all the way up, the step will tie over to the next step, merging the lengths of the two steps.
Length is effected by each channel's release duration found on the main page, the shorter the release, the more dramatic the Length parameter's effect.
 - **Pitch** - controls the pitch transposition of the step.
- ▶ Clicking on a tab will display the relative sliders for that parameter.

The slider values are stored and recalled inside the patterns automatically.

Holding the Alt (Option) key while moving a slider will move all the other sliders for that parameter by the same amount. This will work in conjunction with Kontakt's default key modifiers (Ctrl for control reset and Shift for fine tuning).

There is also a menu available for editing the parameter controls quickly. This menu is located below the sliders and to the right. When you click on it you will notice the menu entries are divided into two sections.



13 The Edit Menu Options

- **Single Parameter** - selecting an edit function in this section will only affect the parameter that is currently selected and on display.
- **All Parameters** - selecting an edit function from this section will affect all parameters.

Note that, regardless of setting, the edit function is only applied to the parameters in the currently selected pattern.

The edit functions available to you are:

- **Copy** - stores the settings of the current pattern into temporary memory.
- **Paste** - recalls the settings of the copied pattern into the current pattern.
- **Reset** - sets the parameter(s) in the current pattern to their default value.
- **Random** - sets the parameter(s) in the current pattern to a random value.
- **Random (Major)** - this function constrains the values of the randomization so that the pitch parameter only contains values that are part of a major scale.
- **Random (Minor)** - this function constrains the values of the randomization so that the pitch parameter only contains values that are part of a minor scale.

Pattern Presets



14 The Pattern Presets with the Preset Select Menu open

Since the arpeggiator included with AEON is a lot more advanced than most arpeggiators, presets are provided for you to quickly get started. You can also save up to 25 of your own presets to recall later in other AEON instruments.

The preset controls are located to the top of the arpeggiator section. They are:

- **Preset Select Menu** - click on the arrow to select and load a preset from the menu.
- **Navigation Arrows** - you can use the arrows beside the Preset Select Menu to browse through the presets sequentially.
- **Save** - stores the current arpeggiator settings as a preset (see the section below for more details on how this works)
- **Delete** - deletes the currently selected preset.

Note: it is not possible to delete the factory presets.

Saving and deleting presets

When you have created an arpeggiator setting you like, you can name it and save it for use in other instruments. If you do not save your arp preset, the NKI or the preset in a multi, the Arp changes will be lost if you navigate to a new preset.

1. To name the preset, click on the text area of the Preset Select Menu.
 2. This will select the text for editing, so you can begin typing.
 3. Once the name is entered, press the return or enter key on your keyboard.
 4. Click on the **Save** button.
- The settings will now be saved in a preset and appended to the Preset Select Menu.

To delete a preset from the menu...

1. Select it from the Preset Select Menu.
2. Click on the **Delete** button.

There are 25 available slots to save patterns. If you have reached the maximum number of slots, a warning will show in the bottom left corner of the Kontakt window. If this occurs, you will need to delete an existing preset in order to save a new one.

3.2.3 Amp Sequencer

The Amp Sequencer is a quick and easy way of applying amplitude modulation to your sound. The effect can be used like a step sequencer, a rhythmic gate, or a stutter effect.

Triggering the Amp Sequencer

The Amp Sequencer can be triggered from your MIDI keyboard on keys Bb6-C7, with the notes setting different Sequencer rates:

- **Bb6** - the sequencer plays back at the rate defined by the **Rate** knob.
- **B6** - the sequencer plays back at double speed.
- **C7** - the sequencer plays back at quadruple speed.

Amp Sequencer Controls



15 The Amp Sequencer Controls

The controls for the Amp Sequencer are located at the bottom of the Advanced Performance Options Page.

In the center is the Amp Sequencer Pattern.

- ▶ You can draw in a pattern by clicking and dragging on this area with your mouse.

To the right is the Amp Sequencer **Rate** knob. This sets the main playback rate of the Amp Sequencer.

To the left are the playback buttons. These buttons mimic the MIDI Keytriggers:

- Activating one of the buttons will start the amp sequencer.
- The Amp Sequencer will play back at a rate dependent on which button is pressed. The playback rate is equal to the value on the button multiplied by the rate set by the **Rate** knob.

3.3 Trigger FX

The Trigger FX are effects that are triggered with MIDI Keys F6-A6. They allow you to temporarily alter or completely mangle a sound quickly and with ease.

The Trigger FX in AEON are much more advanced than the Trigger FX offered in previous HEAVYOCITY instruments, with envelopes, and step sequencers added to the mix.

There are five Trigger FX available:

- 1 **Distortion** (F6) - similar to the distortion in the Master Effects section.
- 2 **LoFi** (F#6) - a digital quality reduction effect. The results can range from retro and gritty, to extreme decimation.
- 3 **Filter** (G6) - a choice of low pass or high pass filters to alter the timbre of the instrument.
- 4 **Panner** (G#6) - modulates the stereo field to move the sound between speakers.
- 5 **Pitch Mod** (A6) - an LFO routed to the pitch of the instrument.

3.3.1 Main Controls



16 The Trigger FX Page

To access the Trigger FX page, click on the **T-FX** tab at the top of the interface.

With the Trigger FX page now open, you will see five columns (one for each of the effects) with a similar arrangement of controls. The following controls have the same function, regardless of the effect:

- **On/Off Switch** - this is located to the right of the effect's name. It can be used to toggle the effect on or off, if you do not wish to use MIDI keys to trigger the effect.
- **Seq.** - toggles the modulation sequences on or off.
- **Advanced** - opens the advanced controls for the effect.

As well as these controls, all of the effects have two parameters that you can edit. These alter the sound of the effect in some way:

- **Distortion**
 - **Drive** - controls the overdrive amount.
 - **Damp** - controls a lowpass filter that can be used to soften the harsh overtones produced by the distortion.
- **LoFi**
 - **Bits** - controls the bit-depth of the output. A lower bit-depth means more digital distortion.
 - **S. Rate** - controls the sample rate of the output. Lowering the sample rate will produce aliasing - a digital artefact that is usually undesired, but can also be used creatively.
- **Filter**
 - **Cutoff** - controls the cutoff frequency of the filter.
 - **Reso.** - controls the resonant peak at the cutoff frequency.
- **Panner**
 - **Width** - controls the stereo width (how far a sound can be positioned in the panoramic field).
 - **Pan** - controls the stereo position of the sound.
- **Pitch Mod**
 - **Amount** - controls the amount of modulation applied from the LFO to the instrument pitch.
 - **Freq.** - controls the frequency (rate) of the LFO.

3.3.2 Advanced Controls

Every effect in the Trigger FX has the same advanced control layout.

- ▶ The advanced page for a specific effect is accessed by clicking on the **ADVANCED** button at the bottom of the effect's column.



17 The Advanced Controls for the Distortion Trigger FX

With the advanced page now open, you will see the effect control column has moved to the far left position, with the advanced controls filling the rest of the page.

You can navigate between effects by using the arrow buttons to the bottom left of the page.

- ▶ To return to the main Trigger FX page, click on the **BACK** button between the navigation arrows to the bottom left.

Step Sequencers

Each of the main parameter controls is linked to a step sequencer.

- ▶ You can draw in a sequence by simply clicking and dragging with the mouse.



18 Drawing in a pattern

The master rate for both of the sequences is controlled by the **Seq. Rate** knob located between the two step sequencers.

The additional controls are the same for each of the sequences, but control them individually.



19 The sequencer controls

- **Range** - sets the modulation amount applied from the sequence to the parameter, i.e. the intensity of the modulation.
- **Smooth** - sets the smoothing amount between steps. When set all the way to the left, no smoothing will occur, and when set all the way to the right, smoothing will happen constantly so no stepping will be heard.
- **STEPS** - sets the number of steps for the sequence. You can select 16 or 32 steps.
- **PATTERN** - loads a preset pattern into the sequence. These are:
 - 1 - Sine wave
 - 2 - Ramp down
 - 3 - Ramp up
 - 4 - Square

Trigger FX that utilize the Step Sequencers work best when the input key is quantized to a beat.

Envelope



20 The Trigger FX Envelope

Between the step sequences you will also find the effect envelope. This is a simple Attack/Decay envelope that sets the fade in and fade out times for the effect when it is triggered. The controls are:

- **Attack** - sets the fade in time for the effect, i.e. the amount of time it takes for the effect to go from neutral to full effect after the effect is triggered.
- **Decay** - sets the fade out time for the effect, i.e. the amount of time it takes for the effect to go from full to neutral after the effect is deactivated.

Effect Specific Controls

The **Filter** and **Pitch Mod** effects both have specific controls that are accessed on their Advanced Pages. They are both switches that are located at the bottom of the main parameter control column.

- **Filter: FILTER TYPE** - this switches the filter between lowpass (**LO**) and Highpass (**HI**) filter types.
- **Pitch Mod: LFO SHAPE** - switches the LFO between a downward ramp shape, and a square shape.

3.4 EQ & Filter



21 The EQ & Filter Page

The EQ & Filter page is where you will find controls that alter the timbre of the instrument. Each instrument contains:

- A per-channel 3-band parametric EQ
- A master EQ based on the analogue modeled SOLID EQ
- A per-channel filter with five different filter types and a variety of modulation options.

3.4.1 Equalizer

An Equalizer (commonly known as an EQ) is an effect designed to control the levels of different parts of a signal's spectrum. The effect can be used in a subtle manner to compensate for imperfections in recordings, or help fit sounds in a mix; or it can be used in an extreme way to creatively alter the timbre of an instrument.

The EQ controls are all located on the left side of the EQ & Filter page under the **EQUALIZER** label.

At the top you will see 4 tabs. These are for switching between the 3 per-channel EQs and the Master EQ. By default, the Master EQ is selected and on display.

- ▶ To change view, click on the relative tab.

Master EQ



22 The Master EQ Controls

The Master EQ is accessed by clicking on the **MASTER** tab.

It is a 4 band EQ with high shelf (**HF**) and low shelf (**LF**) bands, as well as two mid frequency bell-shaped bands (**LMF** and **HMF**).

All four of the bands contain the following controls:

- **Level** - the gain level of the band.
- **Freq** - for the high and low shelves, this controls this starting frequency of the shelf. For the mid-frequency bands this controls the central frequency of the band.

The mid-frequency bands also contain an additional control:

- **Q** - controls the Quality (Q) of the band. This alters the width of the band. A higher Q setting gives a narrower band-width.

Channel EQ



23 The Channel EQ Controls

Each channel has its own 3-band parametric EQ. To access the EQ for a channel, click on the tab with the corresponding channel number.

Unlike the Master EQ, all of the bands in the channel EQ are bell-shaped. As such, all three bands have the same controls:

- **Level** - the gain level of the band.
- **Freq** - controls the central frequency of the band.
- **Q** - controls the Quality (Q) of the band. This alters the width of the band. A higher Q setting gives a narrower band-width.

3.4.2 Filter

A filter is also used to alter the timbre of a sound, but in more extreme ways than an equalizer. As such, modulation options are offered to increase the sonic possibilities.

AEON Melodic gives you access to a filter per channel, and for each filter you can select one of five different modes.

The filter controls are located to the right of the EQ & Filter page, under the **FILTER** label.



24 The Filter Controls

- ▶ The controls for the different channels are accessed by clicking on the relative tabs at the top of the filter section.

To the right of the channel tabs is a button called **LINK**. When this is activated, the filter settings of the current channel are copied to the other two channels and all changes to the filter parameters are applied to all three channels. With link active, the channel tab functionality is deactivated.

Turning off the **LINK** button will leave all settings as they are, but allow you to alter the channel individually again.

Main Controls

You can select one of five filter modes using the buttons below the channel tab:

- **LP** - a 4-pole Lowpass. This removes all of the frequencies above the cutoff frequency.
- **HP** - a 4-pole Highpass. This removes all of the frequencies below the cutoff frequency.
- **BP** - a 4-pole Bandpass. This removes all of the frequencies except for those in a narrow band around the cutoff frequency.
- **Vowel** - the vowel filter uses a simple double-peak system to mimic an unspecific vowel sound.
- **Form.** - a formant filter. This is a more advanced alternative to the vowel filter and more accurately models the frequency response of the human vocal tract as it forms different vowels.

- ▶ If all of the selector buttons are inactive, the filter for the channel is deactivated.

Below the selector buttons are the filter parameter controls:

- **Freq** - controls the cutoff frequency of the filter. This means different things to the different filter modes.
- **Reso** - For the LP, HP, and BP filter modes, this controls the resonant peak at the cutoff frequency. For the Vowel and Formant filters, this controls the intensity (or sharpness) of the filter.

Modulation Controls

The first section of the modulation controls are for the filter envelope:

- **A** - controls the attack time (or fade in time) of the envelope.
- **D** - controls the decay time of the envelope - the time it takes for the envelope value to reach the sustain level after the attack phase is finished.
- **S** - controls the sustain level of the envelope - the level at which the envelope will sustain after the decay phase, and while the MIDI note is held.
- **R** - controls the release time of the envelope - the time it takes for the envelope value to return to zero after the MIDI note is released.

The lower section controls the modulation amounts:

- **Env.Amt.** - sets the amount of modulation applied from the envelope to the filter cutoff.
- **Key-Track** - sets the MIDI key tracking of the filter cutoff, i.e. how much the cutoff frequency will follow the notes played.
- **Velocity** - sets the amount of modulation applied from the MIDI keyboard velocity to the filter cutoff.

Filter LFO



25 The Filter LFO

The central area of the EQ & Filter page is the **FILTER LFO** section. An LFO is a Low Frequency Oscillator, used to modulate parameters. In AEON, the Filter LFO is connected to the cutoff parameter of all of the filters.

The top two controls affect the rate of the LFO:

- **Rate** - is the main LFO rate control.
- **Sync** - when this button is active, the LFO rate will sync to the host tempo in 32nd note subdivisions; when it is inactive, the LFO rate is set freely in hertz.

Below the rate controls is the global LFO **Amount** knob. This controls how much the LFO modulates the cutoff frequencies of the filters.

Below the **Amount** knob are the LFO shape selectors. There are four shapes to choose from:

- Square
- Triangle
- Ramp Down (Sawtooth)
- Random

If none of the LFO shape selectors are active, then the Filter LFO is deactivated entirely.

3.4.3 Output

Below the Filter LFO is one final control: the **OUTPUT** knob. This knob controls the final output level of the instrument, and can be used to compensate for volume peaks created by all of the different effects included in AEON.

4 Credits

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