Elly Minator VST. User's Manual.

v. 1.1.0

General

Elly Minator is an anti-feedback VST-plugin, perfect for use in live sound reinforcement and live software mixing environments. The Plugin is designed to increase the gain before feedback of the target microphone, by using high precision algorithms to kill the howl without negatively affecting the quality of your sound. Essentially, leaving it pure.

Elly Minator will give you the ability to make your live Monitor and Front of House mixes louder, cleaner and feedback free, without the negative effects associated with making drastic cuts with a graphic EQ. It will also allow you to use more aggressive compression and dynamic processing without negative side effects, by keeping up to 21 simultaneous bands of feedback safely in check, protecting your hearing and your equipment. In general it is not unusual to see a 5 - 7 dB increase in microphone gain before feedback when Elly Minator is configured and used properly.

Elly Minator contains two anti-feedback modules, which work fully automatically or in manually controlled mode. The first module includes a feedback detector and a bank of high precision filters. The function of this module is to detect the presence of feedback, define the howl frequency and set the notch-filter to suppress the detected feedback. The second module works as a feedback preventer who's goal is to increase the gate when a feedback howl appears.

What Elly Minator will not do is eliminate feedback in situations of extremely high amplification or gained-up compression. These situations will display symptoms of constantly shifting feedback frequencies, and are a firm indication that maximum gain before feedback has been exceeded for your sound system.

Even when using Elly Minator, basic anti-feedback guidelines should still be followed to improve overall system performance:

- ➢ Microphones with directional characteristics offer the best feedback rejection
- ➢ Try to avoid placing microphones directly in front of main or monitor speakers
- ➢ Use in-ear instead of floor monitors if possible
- ➢ Set the latency of your system (ASIO-latency) as low as possible
- ➢ Avoid over-use of dynamic processing, the reduced dynamic range is prone to cause feedback

Advantages:

- ➢ High precision filters: the sound of your voice or instrument will not be compromised
- ➢ No need for racks full of hardware feedback destroyers
- ➢ Cheaper than hardware feedback destroyers
- ➢ Ability to store feedback settings for different projects as presets

Operating Instructions

Installation

Elly Minator requires no special installation, simply unzip the entire Bitscrew folder to your system's VST folder (by default for Windows XP c:\Program Files\Steinberg\VstPlugins\ for Windows 7 c:\Program Files (x86)\Steinberg\VstPlugins\). The Bitscrew folder contains the plugin and the user's manual. Start your host-application, Elly Minator will be automatically added to your VST-plugin list.

Loading

Elly Minator should be loaded as the first inserted plugin, before all other VSTs. Feedback detection will not function properly if modulation effects (such as chorus or flanger) are used on the same channel as they can constantly shift or multiply feedback frequencies.

Note: While it is not necessary or recommended to run several copies of the plugin on one channel, it is possible. If you choose to, you may experiment with multiple copies in order to increase the quantity of active filters. To achieve this, deactivate the Preaction function of the first plugin, wait until all filters are active and then lock them, then activate the last copy of the plugin and activate the Preaction function there.
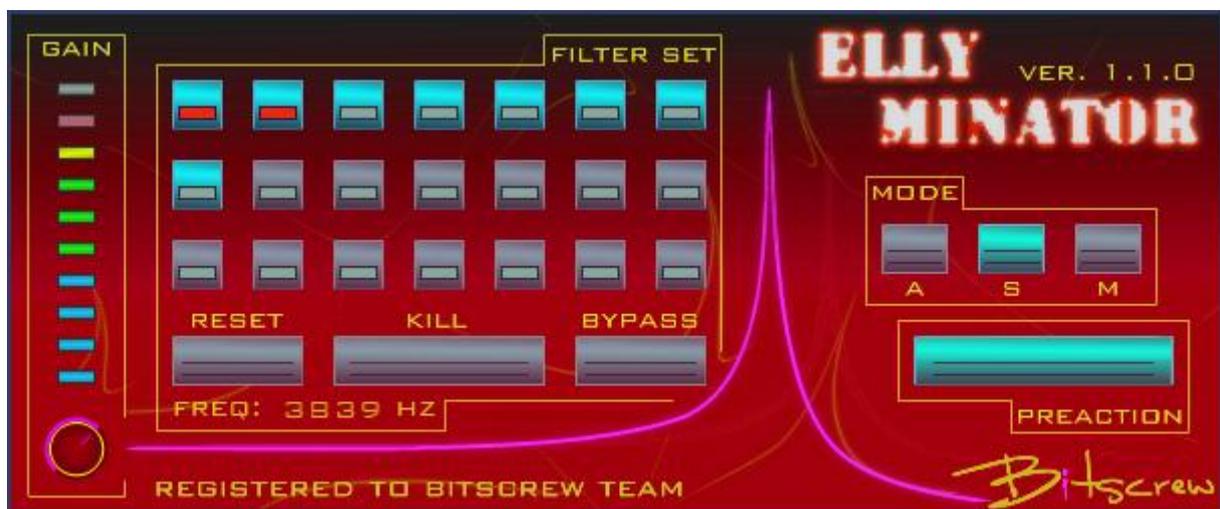
Controls

Gain section controls and adjusts the level of input signal. For the best performance keep the input level in the green-yellow range. If the input signal is too loud, a purple frame will appear around the top LEDs.

Filter Set section has a set of 21 filters which are activated when feedback is detected. Each filter can be toggled between an active and inactive state with a left mouse-click. The filters activate in sequence, each time a new howl is detected the next filter in line is activated.

When all 21 filters have been activated, the sequence cycles back to the first unlocked filter, which is then set to the new frequency.

To lock a filter's frequency and block it from further overwriting, use a right mouse-click. A Red LED shows that the filter's frequency is locked, and in the event of feedback detection the next unlocked filter will be (re)-activated.

When the mouse cursor is over the active filter, it's frequency is shown in the bottom area of the *filter set* area.

Reset button resets all filters, including filters with locked frequencies.

Kill button is used to manually set a filter when a feedback howl is heard. It is used for manual feedback suppression, or to "help" the plugin to detect howl.

Bypass button is a general bypass for the filter set and feedback detector. The Preaction function is not affected.

Preaction button activates feedback prevention mode.

Mode section has 3 modes: *A* – automatic, *S* – semi-automatic, *M* – manual. Only one mode is active at a time.

Basic usage

The main idea of feedback elimination is to increase the volume gradually until several howls occur, are detected and suppressed (it should be possible to achieve >5dB volume increase when compared to bypass mode). Active filters should then be locked and the Preaction function should then be engaged. The remaining free filters will be used in sequence if new feedback frequencies appear.

The Remaining filters should not be locked, they will be cyclically set to new frequencies should they be needed.

Key message: suppress several main howls and then activate the *Preaction function*.

Operating modes

In any mode be sure that the input level is in green-yellow zone. If not, adjust the *gain-control* accordingly.

During operation you can switch between automatic, semi-automatic and manual modes. In each mode you have an ability to lock (right-click) or deactivate (left-click) filters manually and to use the *kill-button.*

Operating in auto mode

Feedback frequencies are detected and suppressed automatically. After 7 feedback frequencies are eliminated, the activated filters turn to the locked mode and the Preaction function is activated. The remaining 14 filters will be cyclically used to eliminate any further feedback which might appear.

Operating in semi-auto mode

Feedback frequencies are detected and suppressed automatically. When all the main feedback frequencies are suppressed Preaction mode should be activated manually. Semi-automatic mode gives you more control over the situation, and gives you the ability to choose how many filters should be locked, excluding occasionally-activated filters.

Operating in manual mode

In this mode the automatic feedback detection filter is not active. Each feedback frequency is suppressed only by pressing the kill-button when feedback is heard (this is also possible in previous modes). Preaction function also needs to be activated manually. Further filter activation is also done manually.

Registration

Unregistered, Elly Minator will run in demo mode. In demo mode the output is muted periodically for 5 seconds.

To register Elly Minator follow the procedure detailed on our website: www.bitscrew.com

Thank you,
Bitscrew team