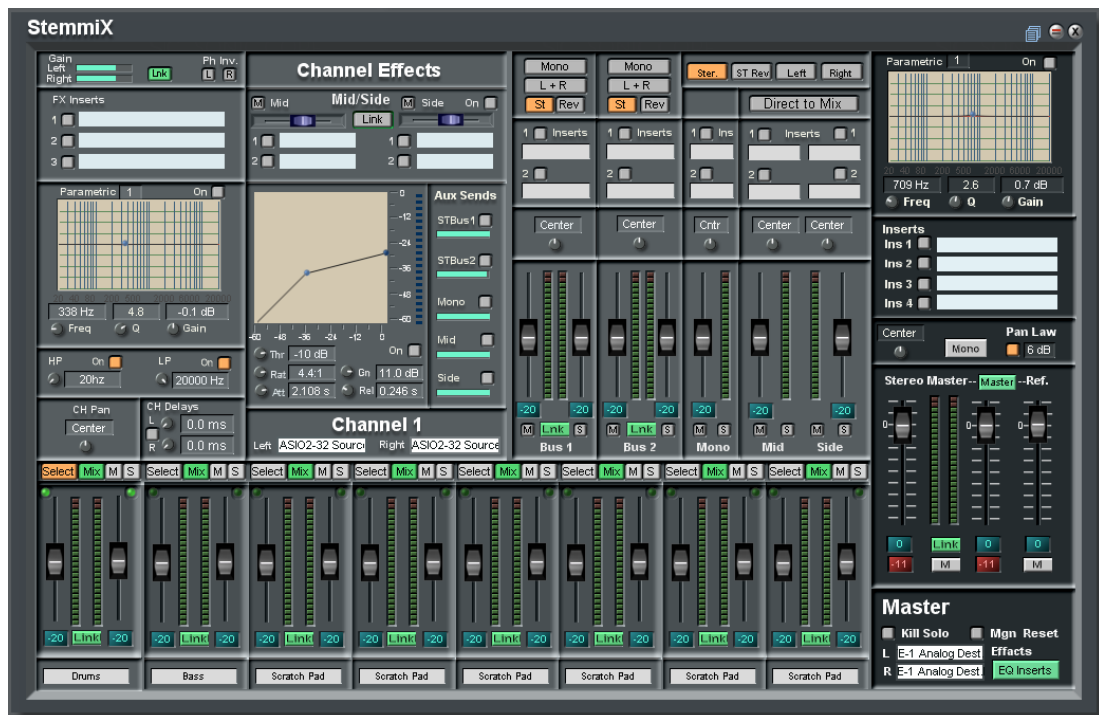


# StemmiX Overview



Stem mixing has become a primary method of final mixing and mastering.

The **StemmiX** provides an 8 Channel stem mixing option for Scope users.

It has built-in features aimed at addressing phase issues, mid-side balance, stereo width, comparison to reference material and other more conventional techniques such as filtering, EQ and compression.

In addition to the 8 stereo stem channels, there are 2 x auxiliary busses, 1 x auxiliary mono buss and 1 x Mid and 1 x Side busses and stereo reference inputs.

The Master Stereo section features a Mono Bass and Stereo Width tool, along with EQ and compression controls.

The Mono Bass and Stereo Width tool is built around 6dB LP/HP filters that divide at the same frequency. The LP section is sent as a mono signal to the outputs. The left and right signals of the HP section are summed with variable amounts of inverse signal from the opposite channel. This is a well-known technique for widening the stereo image. The stereo widening should be used with care as it can lead to comb filtering issues (Check your mix in mono to see if this is becoming a problem). Remember, the ability to adjust Mid and Side within each channel and via the MS busses may also be useful for increasing width within the mix.

The Stereo 'Reference' inputs allow for a reference song to be channelled directly to the outputs without any effects. A switch in the master section

allows for quick switching between the master mix and reference material so comparisons can be made as to how the final mix is progressing towards your final goal.

### **StemmiX Features:**

- 8 Stereo Channels.
  - Channels can be soloed, muted or removed from the mix;
  - 200 sample delay for each L/R channel (Ganged or independent);
  - Phase Switching L/R channel;
  - L/R Input Attenuator (Ganged or independent);
  - LP/HP filters for each Stereo channel;
  - 4 pole parametric EQ;
  - Pan (3 or 6dB pan law);
  - 3 Stereo Inserts;
  - Mid-Side faders, plus 2 x Mid Inserts and 2 x Side Inserts;
  - Stereo Compressor; and
  - Sends:
    - 2 x Stereo.
    - 1 x Mono.
    - 1 x Mid.
    - 1 x Side.
- **Auxiliary Buss Section**
  - 2 x Stereo return channels complete with 2 x Stereo Inserts and pan. Each channel can be sent to the Master section as Stereo, Stereo reverse, Mono or L+R outputs.
  - 1 x Mono return channel complete with 2 x Mono Inserts and pan.
  - 1 x Mid and 1 x Side return channel each complete with 2 x Mono Inserts and pans. The Mid and Side signals feature switching:
    - 'Direct to Mix', allowing mid and/or side signals to added to the final mix; or
    - 'Encoded to Mix', bringing the MS back to stereo before the master mix.

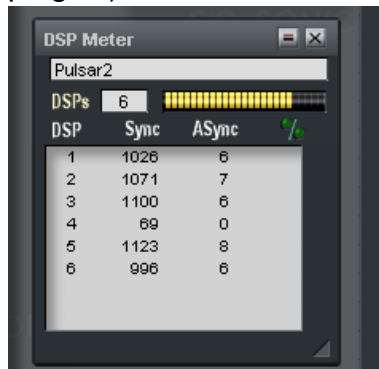
**Note:** Soloing of Buss Returns is possible provided the send channels are also soloed and those channels are switched off from going directly to the 'Mix'.

- **Master Section**
  - Stereo Pan, 3 or 6dB pan law.
  - 4 x Stereo Inserts.
  - Mono Bass and Stereo width controls.
  - 4 Pole Parametric EQ.
  - Stereo Compressor.
  - The Outputs can be switched to:
    - Stereo Out (Default);
    - Stereo reversed;

- Left Channel only; or
- Right Channel only.
- Mono (Independent of other output switching options).
- **Other features**
  - All pan controls are set to either 3dB or 6dB Pan Law based on a global switch in the Master section.
  - All channels can be soloed (individually or in any combination).
  - Returns can be soloed (see note above).
  - A Solo Kill switch is available in the master section.
  - Routing fields are available for all channels inputs and the master outputs.
  - Channel FX's are manually selected via 'Select' buttons above each channel's faders.

**Notes:**

1. Insert FX 'on/off' switch Presets seem to only work on PCI (not XITE-1).
2. The compressor in the master section only compresses the Mono Bass section of the output audio (frequencies below the Xover Frequency)
3. Stemmix is heavy on DSP and may not work (or have limited usage of plugins) on some PCI cards.



The screenshot displays the StemmIX software interface, which is a digital audio workstation (DAW) mixer. The interface is divided into several sections:

- Channel Effects:** Located at the top left, it includes a 'Parametric 1' EQ section with a frequency response graph and a 'Stereo Width' section with a 'Width' slider and 'Xover F' set to 490.6 Hz.
- Channel 1:** The main mixer section, featuring a 'Mid/Side' section with 'Mid' and 'Side' sliders, and a 'Stereo Master' section with 'Stereo' and 'Mono' buttons. It also includes a 'Master' section with 'Kill Solo', 'Mgn Reset', and 'Effects' buttons.
- FX Inserts:** A section on the right side of the interface, containing a 'Parametric 1' EQ section and a 'Stereo Width' section. It also includes a 'Master' section with 'Kill Solo', 'Mgn Reset', and 'Effects' buttons.
- Drums and Bass:** Two channels at the bottom of the interface, each with a 'Select' button and a 'Link' button. The 'Drums' channel has a 'Select' button and a 'Link' button. The 'Bass' channel has a 'Select' button and a 'Link' button.

Red arrows point to the 'FX Inserts' section in the 'Channel 1' mixer, the 'Master Effects' section, and the 'Mono Bass' section. Blue arrows point to the 'Select' buttons for the 'Drums' and 'Bass' channels, and the 'EQ Inserts' button in the 'Master' section.

Select FX Channel

### Switch Master Effects