

The Big Mixer

Overview

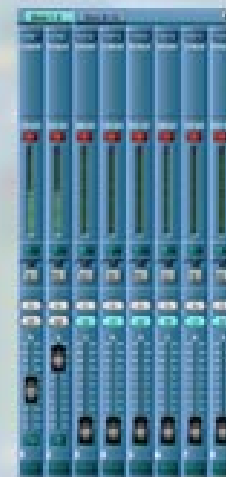
Input/Mix Channels

Bus Channels

Aux Section

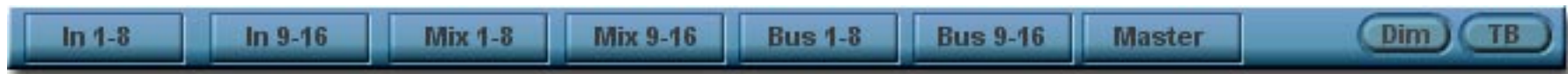
Master Section

Connections



[Return To Main Table Of Contents](#)

Overview



The BigMixer has **32 channel strips**. Sixteen of these are designated as mix channels and sixteen as input channels. There are also **sixteen busses**, **six auxiliary sends** with stereo returns and a **stereo monitor bus**.

The BigMixer is a full-featured recording mixer which **requires a large amount of computing power**. When you wish to use several Pulsar synths at the same time, and don't need all of the recording-oriented features of the BigMixer the smaller **Dynamixer**, a relatively simple 8-channel line mixer, can be a better choice.

The button strip pictured above lets you **switch the display** among the various channel groups, the bus groups and the master section.

The **Dim switch** produces an adjustable level change in the master outputs.

The **Talkback** button is likewise activated from here. In the master section, the talkback signal can be routed to a particular hardware output.

Each input or mix channel as well as the master section) has **four effect insertion slots**. There are no restrictions on their use – you can use them all at once, on all channels. Nevertheless, care should be taken to **deactivate any unused insert slots, aux sends or EQs**, in order to keep the maximum possible amount of DSP power available for other Pulsar synths, etc.

The distinction between input channels and mix channels in the BigMixer is somewhat artificial. It serves mainly to provide a measure of convenience and "comfort with the familiar".

Classically, input channels are used for recording. The channel output is sent to a recording device and is not routed through the master section or assigned to the main mix. When recording is complete, all 32 channels can be used as mixdown inputs.

Functionally, however, there is **no difference between mix channels and input channels in the BigMixer** – both types have the same features.

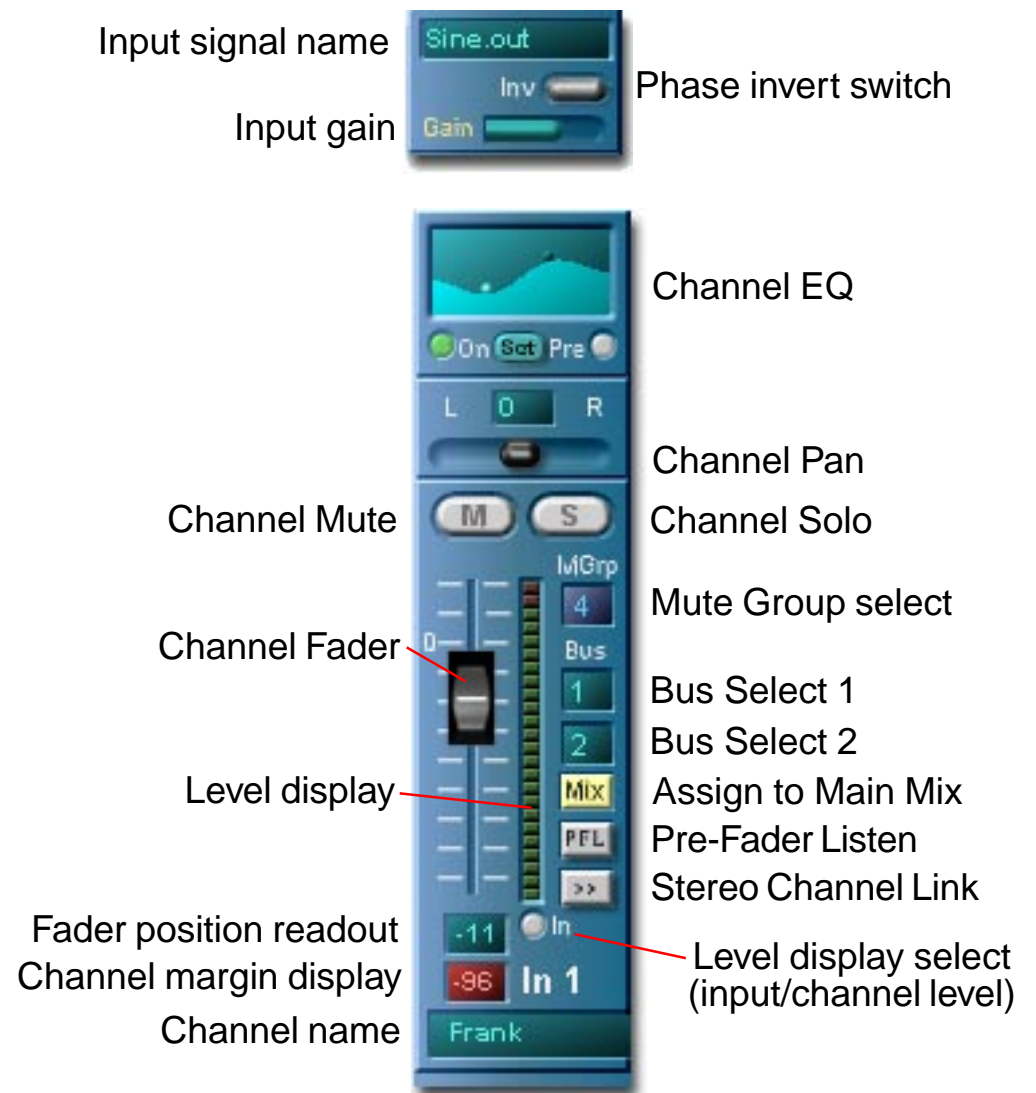
Input/Mix Channels

A portion of a channel strip is shown at right. At the top is the **input unit**, where the channel input can be assigned. The **input gain** can also be adjusted here, and the **phase** of the input signal can be inverted if desired. **Gain** is adjusted by left-clicking and holding on the end of the Gain fader and moving the mouse right or left.

The **Pan** control has an associated numerical readout to allow pan settings to be precisely set. The control itself has a center-detent to allow channels to be centered easily in the mix using the mouse (this can also be done by double-clicking on the Pan fader).

Each channel can be **individually muted** via the Mute (**M**) button. It is also possible to assign several channels to a **Mute Group (MGrp)**, so that all channels in the group are simultaneously muted or unmuted via the Mute button of any channel in the group. Mute groups, and likewise bus assignments, are adjusted by left-clicking and holding on the corresponding numeric display box next to a fader and moving the mouse up and down.

If a channel is routed only to one bus, then the **Pan** control must be set full left for an odd-numbered bus or full right for an even-numbered bus in order for the full channel signal level to be delivered to that bus. If two busses are selected for a channel, then the channel signal divides itself between them according to the Pan control setting.



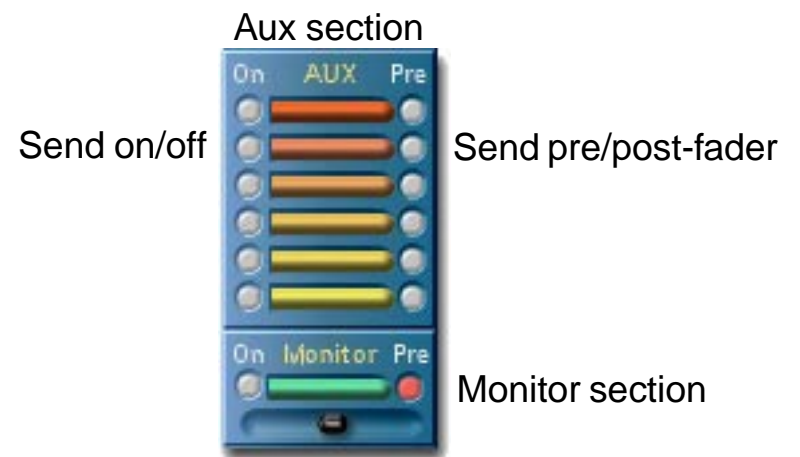
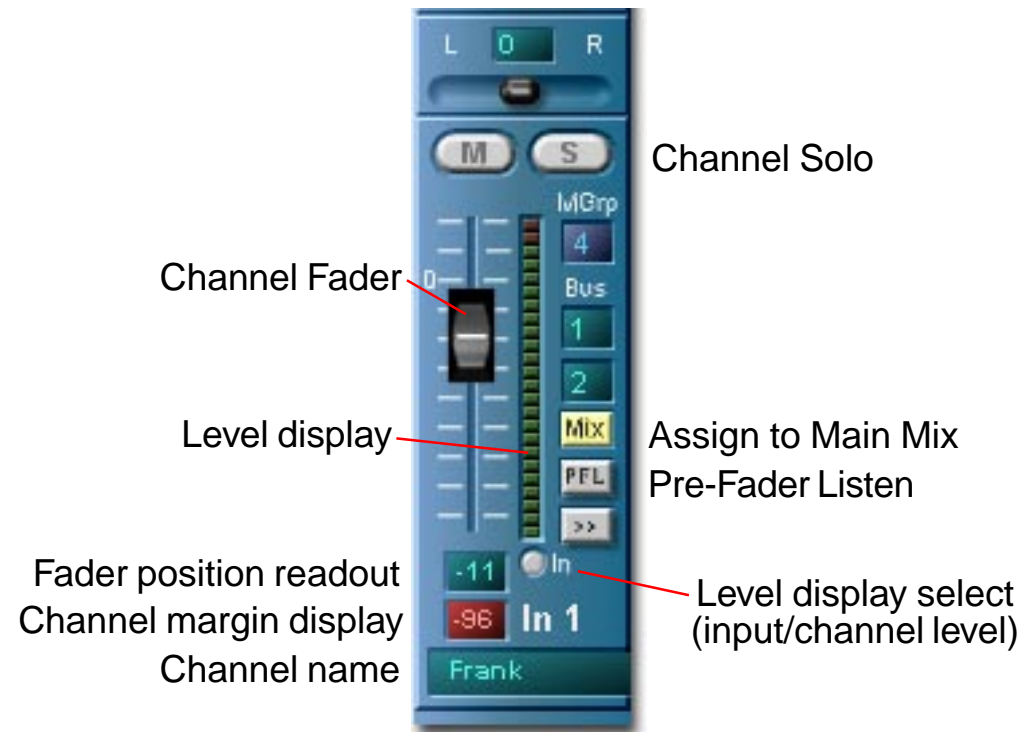
Any channel can be routed to the solo bus using the **Solo (S)** button. **The solo bus is a stereo bus** which receives channel signals **post-pan**, allowing a channel's pan positioning to be checked while soloing it (**solo in place**).

Pre-Fader Listen (PFL) allows monitoring of the channel signal before the channel fader but after the input gain control. The **level display** shows either the **post-fader channel output level**, or – if the **In** button directly below it is pressed – the level of the **unmodified channel input signal**. The **fader position readout** indicates the channel fader setting numerically and allows it to be set by entering numeric values directly.

The **Margin** display captures instantaneous channel peak signal levels and shows them as dB headroom (0 = overload). It can be cleared via mouse-click.

Channel auxiliary send levels are individually adjustable in the **Aux section**. All Aux sends in the BigMixer can be individually switched for **pre-fader or post-fader send**.

The **Monitor section** is essentially an additional aux routing, with features similar to those of Aux section routings. However, **the monitor bus is a stereo bus** and the channel send to the monitor bus includes a separate pan control.



The **Stereo Channel Link** buttons permit individual odd/even-numbered channel pairs (1-2, 3-4, etc.) to be linked together to function as stereo channel strips.

The following channel controls are then locked together and can be adjusted for both channels from either strip: Channel Fader, Assign To Main Mix button, Mute (M), Solo (S), Pan, Channel EQ, Input Gain and all Monitor Send controls. As can be seen in the illustration at right, the **Pan controls in linked channels automatically "mirror" one another**.

All other channel controls – including effect inserts – retain their separate functions, as do the level and margin displays.

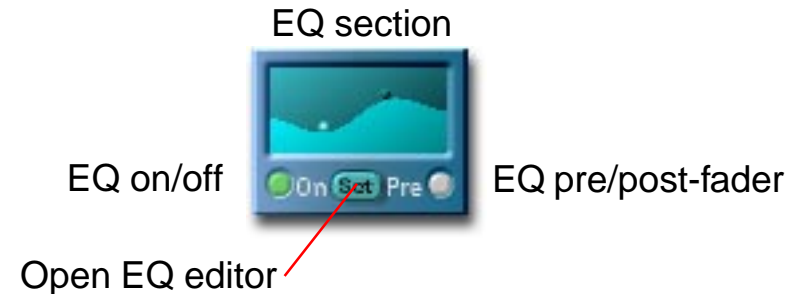


Below the aux sends and the effect insert slots is the **full-parametric EQ**. The EQ can be switched on or off here and switched to operate either **pre-fader** or **post-fader**.

Channel EQ is fully editable directly within a channel strip. **Double-clicking in the EQ field creates a new full-parametric filter** (up to a maximum of four per channel) which is represented by a point in the field. The **center frequency** of this filter can be adjusted by left-clicking on the point and dragging it left or right. Dragging it up or down adjusts the **passband gain** of the filter. Dragging it up or down with a right-click adjusts the **filter Q**.

Switching a channel's EQ off (by clicking on the On button) causes not only the channel signal but also the Pulsar card itself to bypass the EQ. This **reduces the DSP workload of the Pulsar card** and should be done for any channel in which the EQ is not being used.

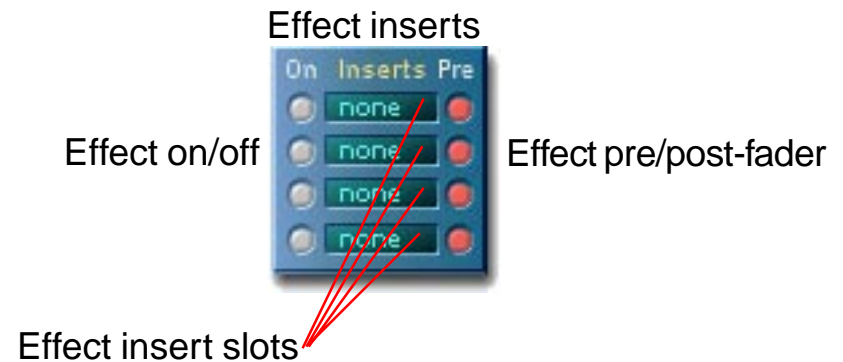
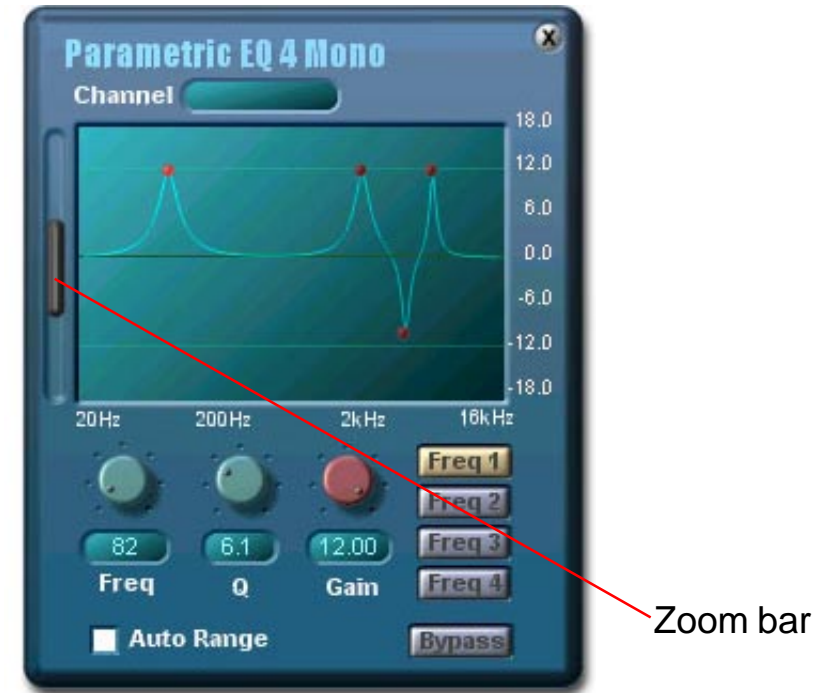
The **Set** button opens a special **EQ editor** which allows more detailed and precise graphical EQ editing by virtue of its larger display area. It also has a set of controls, each with a numeric display, for **direct adjustment** of frequency, gain and Q values for a selected filter point (select a specific point by left-clicking on it).



The EQ editor's **zoom bar** allow vertical rescaling of the display for **optimal viewing or increased precision** during graphical editing. Clicking and dragging on the ends of the zoom bar resizes it and causes the display to rescale itself accordingly, letting you zoom the view in to **allow finer adjustments to be made** with the mouse. The resized zoom bar can also be moved by clicking and dragging on its middle, letting you scroll the display to find the specific point of interest. Double-clicking on the zoom bar results in an **instant full zoom-out**.

Each channel strip has four **effect insert slots**, each of which can operate **pre-fader or post-fader**. Each one can also be independently switched on or off. Effect insert slots which are not being used should be switched off to conserve DSP capacity.

Connect an insert effect by simply **dragging its name** from the File Browser and **dropping it on an insert slot**. You can use either existing software effects (from the folder **..\Inserts\Mono**) or your own self-defined (external) effects modules as insert effects. **To remove an insert effect**, select it and hit the Delete key on your computer's keyboard, or delete via the menu which pops up when you right-click on the insert slot.



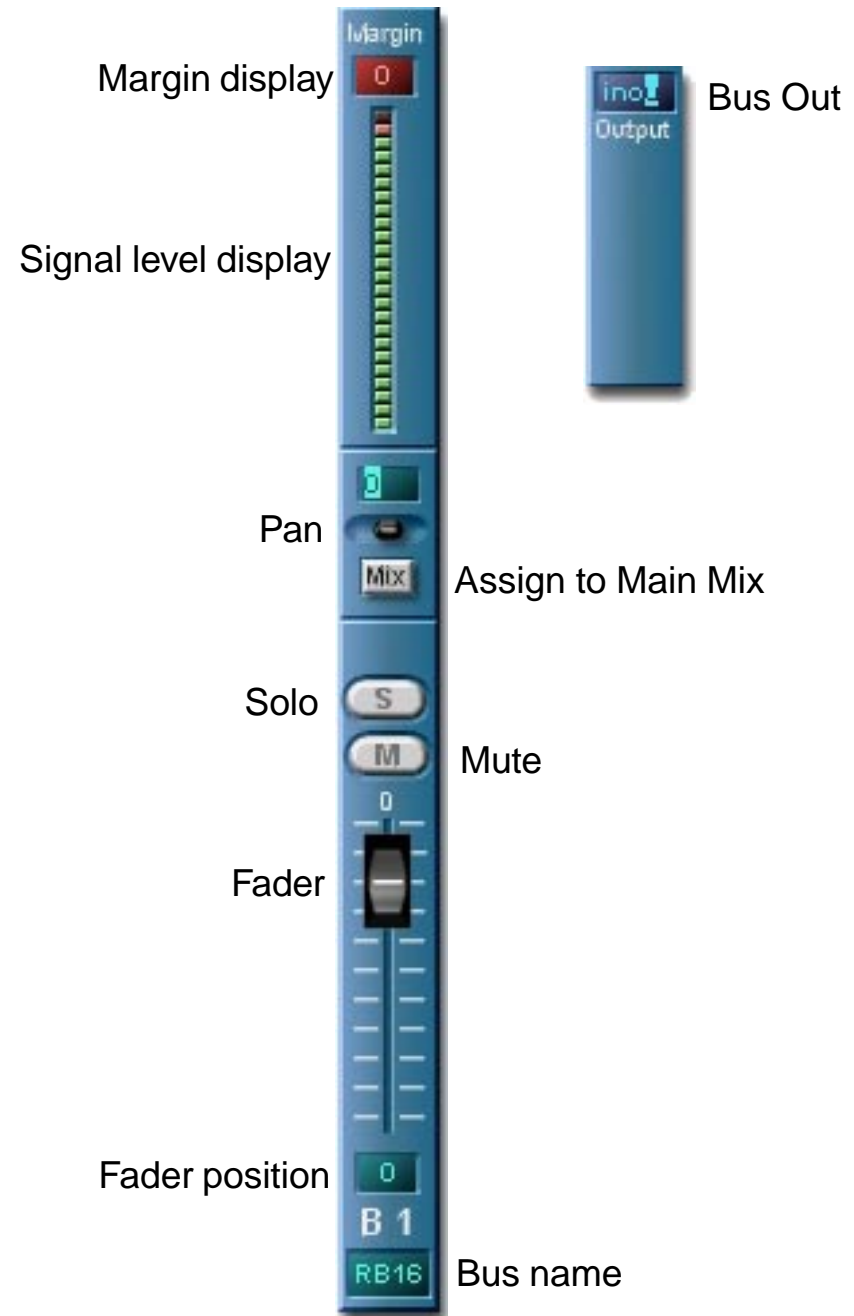
Bus Channels

Bus channels are essentially **simplified input/mix channels** which are intended for use either **as recording busses or as subgroups**. They include a selected subset of the features found in input/mix channels.

For recording use, input/mix channels which are handling signals to be recorded are assigned to one or two bus channels. The outputs of each bus channel which is being used as a record bus is connected to one of the inputs of the recording device – for example, an ADAT. (Refer to the Pulsar Applications chapter for more information about using Pulsar with external devices).

Once all recording is complete and recording busses are no longer needed, **bus channels can be used for the mixdown as subgroups**. For this use, bus channel outputs are assigned to the main mix, while input/mix channels which are carrying signals for mixdown are assigned to bus channels according to the needs of the particular situation. For example, all background vocals or all drum tracks could be grouped together on one bus or bus pair to allow them to be easily controlled as a unit.

To speed up the process of switching between recording and mixdown setups and save yourself some repetitive button pushing, you can save each setup as a recallable mixer preset.

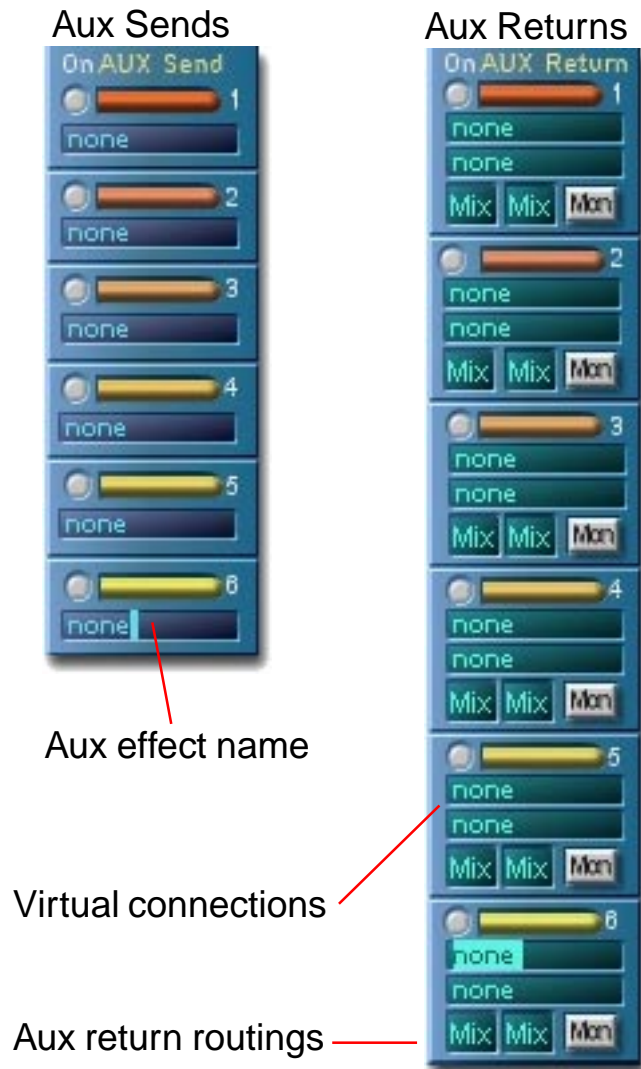


Aux Section

The Aux section provides for **global control of aux send and aux return levels**. In addition, both the **send and the return** for a particular aux path can be **switched on or off** in this section.

Aux paths can be used both **with internal software effects** and with **external effects devices connected via the Pulsar card's hardware I/O**, since the Pulsar mixer introduces practically no signal delay. Aux path routings can be set up most conveniently via the Rack Window. Aux path setup in the Project Window is also possible.

While the aux sends are mono sends, the aux returns are stereo. Aux returns can be routed to the main mix or to any one or two of the 32 mixer channels (allowing, for example, processing of an effect signal through a channel EQ) as well as to a virtual connection. In addition, any aux return can be routed to the monitor mix, allowing **effects to be added to the monitor mix**.



Master Section

The Master section controls the **stereo main mix**. All signals which are routed to **Mix** show up in this mix, which has its own EQ as well as its own set of effect insert slots. The Master section also includes controls for the **Monitor mix**, the Pulsar hardware inputs (**Analog In and Digital In**), **Pre-Fader Listen (PFL)** and the Mixer outputs.

There are three freely-assignable stereo outputs: the **Control Room (CR)** output, the **Monitor (Mon)** output and the **Main Mix**. To use the **Talkback** function, a hardware input must be assigned to the Talkback Input.

Mon Out always carries the monitor mix and **Mix Out** the main stereo mix. **CR (Control Room) Out** can be switched among the main mix, the monitor mix, the Pulsar card digital input and the Pulsar card analog input. In addition, Solo and Pre-Fader Listen functions operate via CR Out. Activation of the **Solo function** on any signal delivers this signal **directly to CR Out**. All signals for which **PFL is active** are delivered simultaneously to **CR Out** when the PFL function is activated in the Master section.

Link causes the left and right master faders to be connected so that both move together when one is adjusted, allowing the stereo balance of the mix to be maintained at all times while making adjustments to the master mix output level using the mouse.

CR Out select:

	Ctrl Room	CR Out
Main mix	Mix	Pulsar analog
Monitor mix	Mon	Pulsar analog
Digital In	D In	Mon Out
Analog In	A In	no out
Pre-Fader Listen	PFL	no out

CR Out assign

Mon Out assign

CR Out level

Monitor level

Solo level

Dim level

Talkback level

Talkback In source

Mix Out assign

Mute L

Mute R

Mono

Signal level display

Link

Fader position

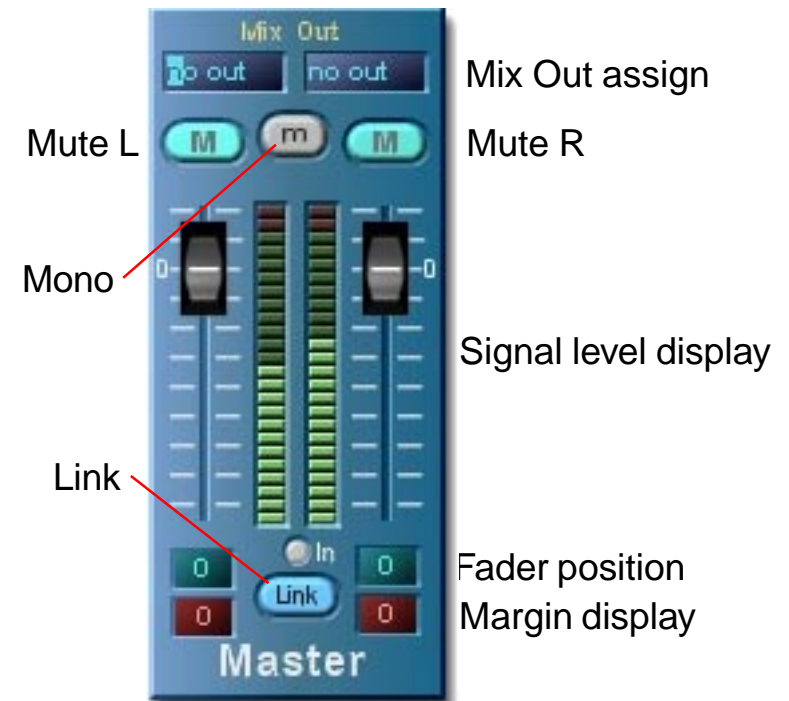
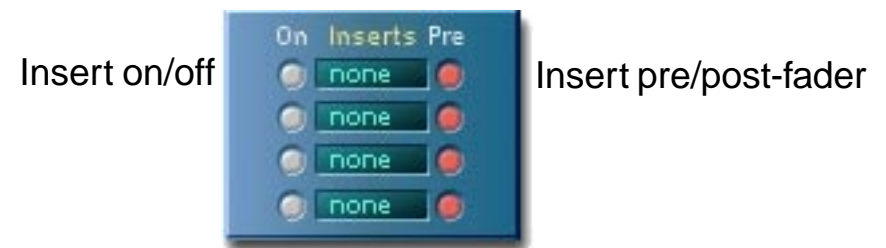
Margin display

Master

The Master section offers its own set of **four effect insert slots** for processing of the complete main mix. In contrast to the Mix channels, **effects used in the Master section must be full-stereo effects** (i.e., they must have stereo inputs as well as stereo outputs – for example, the effects found in the folder **..\Inserts\Stereo**).

The **Master section EQ** is functionally equivalent to those of the Mix channels, but is a stereo EQ. The single set of controls for this EQ affects both sides of the main mix in common.

Each side of the main mix can be independently **muted**. The **Mono (m)** button switches the main mix into mono to allow its compatibility with monaural playback to be checked. Each side of the mix has its own **independent signal level display**, each with its own signal peak display which can be reset via mouse double-click.



Connections



Minimized (icon) representation

