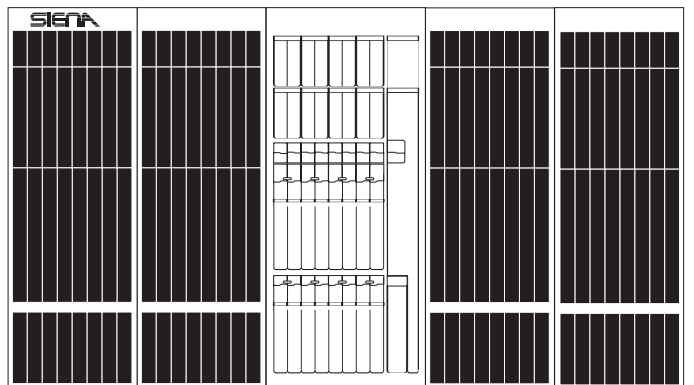




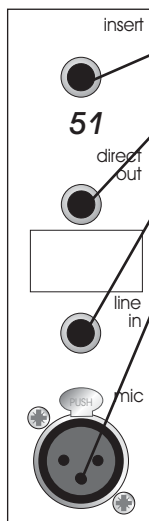
Input Channel



Input Channels

Rear Panel

The Siena channel inputs are located on the rear of the console. Each channel provides:



- one insert point on a single TRS jack socket.
- one direct output on a single impedance balanced quarter-inch jack socket
- one line in quarter-inch TRS balanced jack socket
- one mic balanced XLR female

The channel **insert point** is unbalanced and requires a conventionally wired insert lead where: **Tip** - Channel Signal Send

Ring - Channel Signal Return

Sleeve - Signal Common Ground

The direct out and insert points operate at a nominal level of 0dBu.

Balanced XLR and Jack inputs are conventionally wired:

XLR - 1. Screen - 2. Hot Signal - 3. Cold Signal

TRS - T. Hot Signal - R. Cold Signal - S. Screen

The console's **direct outputs** are set post fader as standard. However, an internal jumper may be set to offer one of four alternatives:

Pre EQ, insert, channel fader and mute.

Pre EQ and channel fader, but post insert and mute.

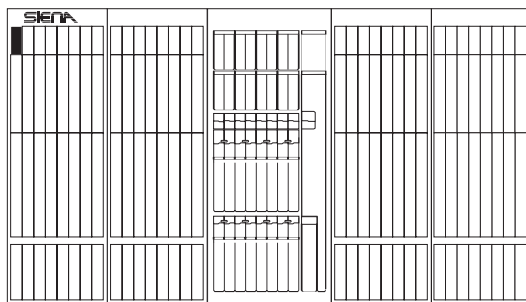
Post EQ and insert, but pre channel fader and mute.

Pre channel fader, but post insert, EQ and mute.

Please refer to the service manual or contact your authorised Midas service agent for more details on setting this option.

Front Panel

All input channels on the Siena console are mono and the actual number available will depend on your choice of frame.



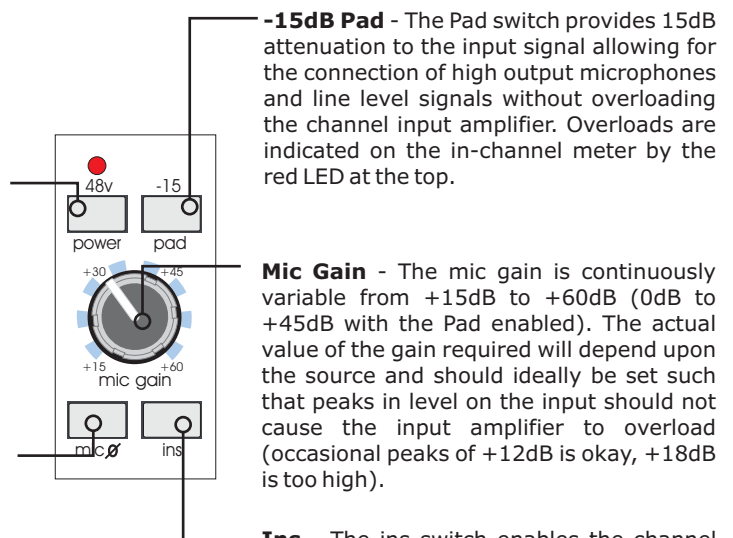
48V Power - When depressed, the Siena will apply 48 volts phantom power to the microphone input. This is used to power condenser microphones, direct inject boxes and other devices that require phantom power.

The red phantom LED will light to indicate that 48V phantom is in operation.

Mic Ø - The mic phase switch, when depressed, causes a 180 degree phase change (with respect to the input signal) to occur in the input amplifier such that the channel signal will have opposite polarity to the input signal.

The mic phase switch is commonly needed where two microphones are used facing each other (for example when using a microphone on both the top and bottom of a snare drum). Ordinarily the two microphones would be out of phase causing cancellation when the console sums the two signals into the output. Reversing the phase of one signal causes the microphones to have the same phase and no cancellation.

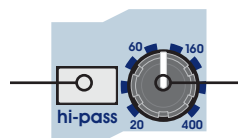
Hi-Pass - The Hi-Pass switch enables the high pass filter in the channel signal path. The filter is located before the insert point and channel equaliser, and is ideal for removing low frequency handling noise, bass rumble or mains hum.



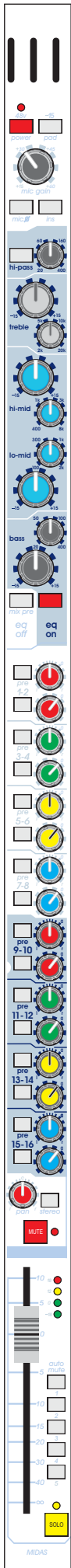
-15dB Pad - The Pad switch provides 15dB attenuation to the input signal allowing for the connection of high output microphones and line level signals without overloading the channel input amplifier. Overloads are indicated on the in-channel meter by the red LED at the top.

Mic Gain - The mic gain is continuously variable from +15dB to +60dB (0dB to +45dB with the Pad enabled). The actual value of the gain required will depend upon the source and should ideally be set such that peaks in level on the input should not cause the input amplifier to overload (occasional peaks of +12dB is okay, +18dB is too high).

Ins - The ins switch enables the channel insert point by connecting the insert return to the channel signal path. The insert is switched into circuit before the EQ section, and may be used to apply external processing such as compression, gating or effects to the channel signal.

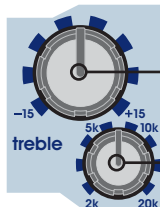
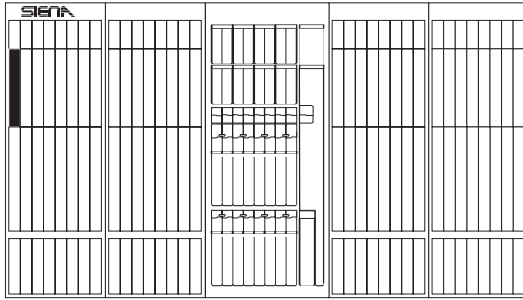


High Pass Frequency - The cutoff frequency of the high pass filter is continuously variable from 20Hz to 400Hz.



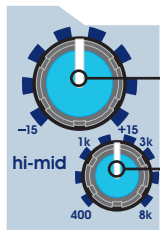
Channel Equalisation

Each input channel of the Siena has a four (4) band sweep EQ allowing tonal control over the input signal.



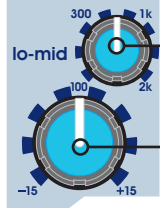
Treble (Gain) - The gain of the treble equaliser is continuously variable from -15dB to +15dB with a centre detent at 0dB.

Treble (frequency) - The centre frequency of the treble equaliser is continuously variable from 2kHz to 20kHz.



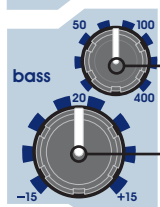
Hi-Mid (Gain) - The gain of the hi-mid equaliser is continuously variable from -15dB to +15dB with a centre detent at 0dB.

Hi-Mid (frequency) - The centre frequency of the hi-mid equaliser is continuously variable from 400Hz to 8kHz.



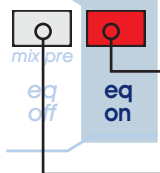
Lo-Mid (frequency) - The centre frequency of the lo-mid equaliser is continuously variable from 100Hz to 2kHz.

Lo-Mid (Gain) - The gain of the lo-mid equaliser is continuously variable from -15dB to +15dB with a centre detent at 0dB.



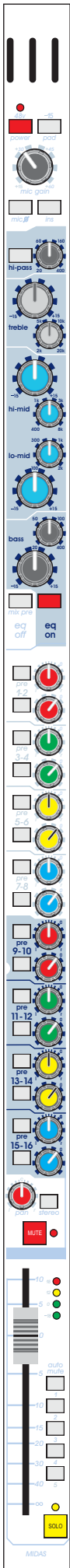
Bass (frequency) - The centre frequency of the bass equaliser is continuously variable from 20Hz to 400Hz.

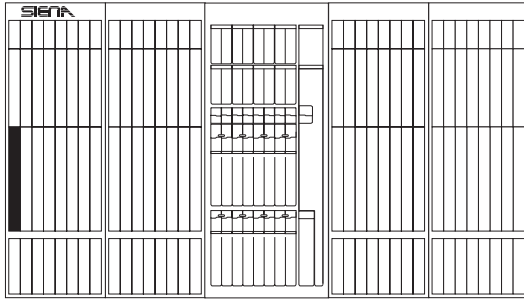
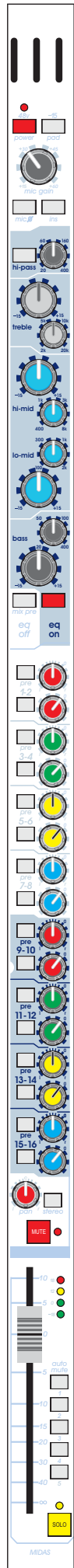
Bass (Gain) - The gain of the bass equaliser is continuously variable from -15dB to +15dB with a centre detent at 0dB.



EQ On - The Equaliser can be enabled by depressing the EQ On switch. Otherwise changes on the Equaliser controls have no effect. This can be used to compare the sound with and without EQ during sound check.

EQ Off (mix pre) - Depressing the EQ Off (mix pre) switch causes pre fader sends onto mix buses 1-16 to be sourced before the channel equaliser. For example, you may wish to EQ the channel signal feeding the master stereo bus while deriving mix sends pre EQ. Note: post fader sends are always post EQ.





Mix Sends (Auxiliary Sends and Groups)

For maximum flexibility, the Siena has 16 mix busses for use as auxiliary sends or groups. In addition, any pair of busses may be configured for mono or stereo operation.

For example, today you may be using the console purely as a monitor desk, in which case you probably want to generate as many auxiliary sends as possible. In addition, you may require both mono and stereo mixes to feed a mixture of floor monitors and wireless in-ear monitoring. By configuring any odd/even pair of the Siena's mix busses for stereo operation, you have complete flexibility over the console layout.

Alternatively, in a hybrid FOH/monitor application, you may wish to create both auxiliary sends and group masters. Note that the controls for mix outputs 9-16 vary slightly from those for mix outputs 1-8. This is due to the fact that mix bus outputs 9-16 may be routed, and panned, onto the stereo master bus. Therefore, mix busses 9-16 are ideal for use as group outputs as they may be output separately from the console and/or summed onto the stereo master for a FOH mix. For these reasons, use mix busses 1-8 for auxiliary sends and 9-16 to create audio sub groups when working in a hybrid FOH/Monitor application.

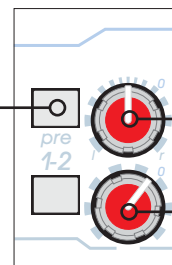
Pre Fade mix sends are sourced after the channel insert, mute and EQ but before the channel fader. They will also be fed pre EQ if the **mix pre** (EQ Off) switch is depressed. As a result, the actual level sent to the aux bus is proportional to the mix send control only.

Post Fade mix sends are sourced after the channel insert, mute, EQ and channel fader. As a result, the actual level sent to the mix bus is proportional to the aux send control AND the channel fader.

Please note that, for illustration purposes, mix sends 1 and 2, only, are shown below. However, all 16 mix sends work in the same manner. In addition, to help locate the correct send more easily, sends 9 to 16 are highlighted by a lighter background panel colour.

Mix Send Pre/Post Switching Any mix send may be sourced pre fader by depressing the **pre** button. In this mode, the channel fader has no effect upon the level of the signal sent to the mix bus.

Note: both pre and post fade sends are muted when the channel mute is enabled.



Mix Send Level - The mix send level is continuously variable from off (-inf) to +6dB.

Stereo Send Operation

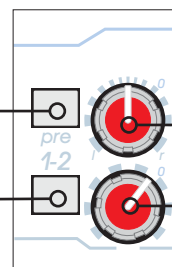
Stereo sends are configured globally for each odd/even pair of mix busses by the recessed **stereo** switches located beside each pair of master faders in the Master section. Please refer to Page 17 for more details.

If mix busses are configured for stereo operation, the two rotary controls and **pre** switches behave slightly differently from mono mix sends to provide stereo pan, send level and pre/post fader control:

When configured for stereo operation, the upper **pre** switch is inactive.

Mix Send Pre/Post Switching Use the lower of the two **pre** switches to switch the stereo send pre fader. In this mode, the channel fader has no effect upon the level of the signal sent to the mix bus.

Note: both pre and post fade sends are muted when the channel mute is enabled.



Mix Send Pan The mono signal from the channel may be positioned within the stereo field using the left/right pan control. Turn the control fully anticlockwise to pan signal to the left (mix bus 1) or clockwise to pan to the right (mix bus 2). Adjustment between hard left and hard right is continuous.

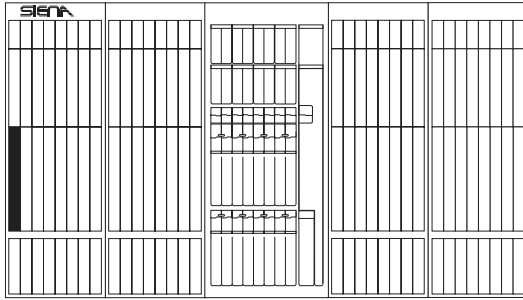
Note: the pan control obeys a constant power law (i.e. -3db at the centre.)

Mix Send Level - The mix send level is continuously variable from off (-inf) to +6dB.

Routing to the Stereo Master Output

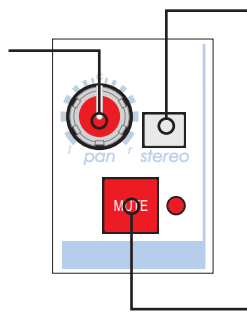
In addition to the 16 mix bus sends, Siena features a stereo master output.

Typically, this would be used to generate the Front of House (FOH) mix for hybrid FOH/monitor applications. In stand alone monitor applications, the master output may remain unused or provide an additional stereo output bus.



Pan The mono signal from the channel may be positioned within the stereo field using the channel pan control. Turn the control fully anticlockwise to pan signal to the left or clockwise to pan to the right. Adjustment between hard left and hard right is continuous, with a centre detent.

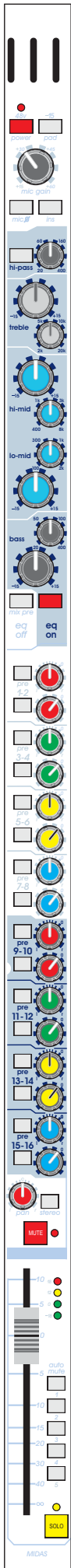
Note: the pan control obeys a constant power law (i.e. -3db at the centre.)

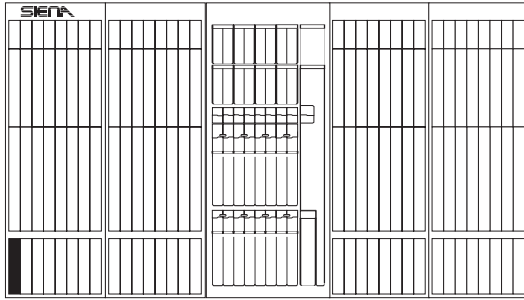
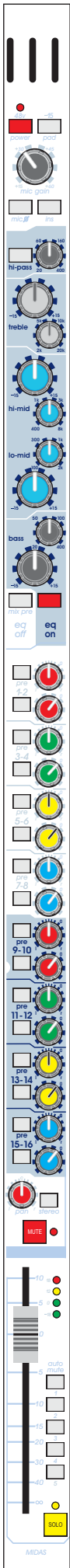


Stereo Depressing the **stereo** switch routes the channel signal onto the stereo (master left and right) bus. The signal is sourced post EQ, pan, mute and fader.

Mute - The **MUTE** switch mutes the channel signal feeding all 16 mix bus (pre or post fader) and stereo master bus outputs. However, signal will still be sent to the insert send. The mute status of the channel is indicated by the corresponding mute LED.

Note: the mute switch may be controlled from any of the five Auto Mute masters, see Page 22 for details.





Channel Fader - The channel fader allows for continuous adjustment of the channel level from off (-inf) to +10dB. At 0dB, the output of the channel to the stereo master and 16 Mix busses will be at unity gain (i.e. no boost or cut in level from the input).

Solo - When selected, the channel SOLO switch routes signal onto the After Fade Listen (AFL) and Pre Fade Listen (PFL) outputs. The solo LED indicator illuminates to show that the channel solo is active.

Depending on the AFL and PFL selector in the master section, you may now be listening to the channel signal after the fader (AFL) or pre fader (PFL) on either the main monitor or headphone outputs.

Note: the AFL bus is a stereo bus; the PFL bus is mono. For more details on AFL and PFL monitoring, please refer to the 'The Solo System' on page 24.

4 LED Meter - The 4 LED meter indicates the channel's peak signal level, measured after the insert point and EQ, but before the channel fader and mute. This provides a confidence meter, allowing the user to monitor the input signal prior to opening the fader, or deselecting the channel mute.

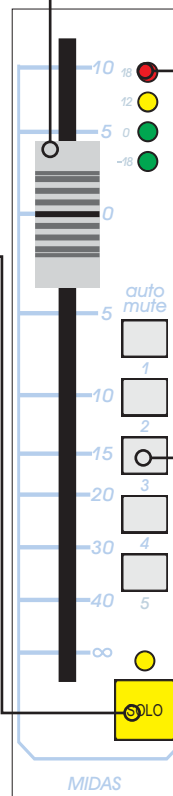
With the insert and EQ disabled, the meter shows the peak signal level in four stages:

- +18dB - Overload (Peak)
- +12dB - High Level
- 0dB - Normal Level
- 18dB - Signal Present

The in-channel meter is especially useful when setting the microphone gain of a channel. Also, as the meter is post EQ, it is possible to see the effect that the channel equalisation has upon the level.

For optimal performance, the level for input channels should be around +6db. Therefore, ideally, the in-line meters should show the 0dB LED illuminated consistently when signal is present, with occasional illumination of the +12dB LED.

Note: it may be necessary to turn the input gain down when excessive EQ is used to prevent the channel from overloading.



Auto Mute 1, 2, 3, 4 & 5 The Siena has five auto mute groups that can be controlled from the master section of the console. To assign an input channel to an auto mute group, switch in the desired auto mute switch.

Note: auto mute 5 is also available on the 16 mix and stereo output masters and, therefore, you may wish to reserve this group for dealing with output mute functions.

Commonly, the auto mute groups are used to provide easy muting of similar channels. For example:

Channels

- Drum Mics
- Choir Overheads
- Orchestra Parts

Reason

- Allows the engineer to mute the whole drum kit at once.
- Allows the engineer to quickly remove all choir mics at once
- Allows the engineer to zone mics together (e.g. Brass, Strings, etc.) and mute sections together if they were not playing.

Note: the auto mute groups and the individual channel mutes work like a logical OR where any single or combination of mutes will mute the channel output. This means, for example, that if channel 1 is assigned to auto mute group 4, and both the auto mute master and channel mute are active, the output of the channel will remain muted until *both* the auto mute master and individual channel mute are deactivated.