OPERATORS MANUAL

KLARK TEKNIK GROUP

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KLARKTEKNIK   **DDA** **MiDAS**

S I G N A L P R O C E S S I N G B Y D E F I N I T I O N   BETTER BY DESIGN   DESIGNED FOR A PURE PERFORMANCE

DECLARATION OF CONFORMITY

The Directive Covered by this Declaration

89/336/EEC Electromagnetic Compatibility Directive, amended by 92/31/EEC & 93/68/EEC

Equipment TypeProduct Name

Audio Mixing Console Heritage 3000

The Basis on which Conformity is being Declared

The Products named above comply with the requirements of the listed EU directives by meeting
the following standards:

EN 55013: 1990
EN 50082: 1992
EN50081/1 and /2 Generic Standard Using En55022 Limits and Methods
EN55022 Class B Conduct Emissions
EN55022 Class B Radiated Emissions
EN61000-4-4 Fast Transient Burst Level 4
EN61000-4-2 Static Discharge Level 4
EN60204 Earth Continuity, Insulation at 500V

Signed:.......................Alex Cooper
Authority:Project Leader
Date:1st April, 1999

Attention!

The attention of the specifier, purchaser, installer or user is drawn to special limitations of use which
must be observed when these products are taken into service to maintain compliance with the above directives.
Details of these special measures and limitations to use are available on request and are also contained in
product manuals.

ATTENTION!

The following special limitations apply to the console and must be observed in order to maintain safety and electromagnetic compatibility performance:

POWER CONNECTION
The console should only be operated with the power supply connected to ground via its mains supply connector.

CONTROL CONNECTIONS
The console should only be operated with high quality screened control cables. All connector shells should be of metal construction so that they provide a screen when they are plugged into the console. All DEE connector shells should be connected to the cable screen. All XLR and DIN connectors should have pin 1 connected to the cable screen.

AUDIO CONNECTIONS
The console should only be operated with high quality screened twisted pair audio cables. All connector shells should be of metal construction so that they provide a screen when they are plugged into the console. All JACK connector shells should be connected to the cable screen. All XLR connectors should have pin 1 connected to the cable screen.

ELECTRIC FIELDS
If the console is operated in an electromagnetic field that is amplitude modulated by an audio frequency signal, the signal to noise ratio may be degraded. Degradation of up to 60dB may be experienced under extreme conditions (3V/m, 90% modulation).

INSTALLATION

There are a number of points to consider when installing a mixing console. Many of these points will have been addressed before the console is even unpacked but it is worth repeating them.

POSITION
The console should be located in a convenient space commensurate with the use to which the console is being put. Ideally a cool area is preferred not in close proximity to power distribution equipment or other potential sources of interference. Provision should be made for some flat surface surrounding the console to prevent people using it as a table top.
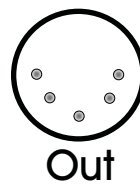
POWER
The power supply should be located as far from the console as the connecting cable will allow. It should be set for the appropriate line voltage and plugged into the mains outlet using the supplied cable.
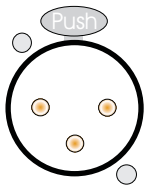
Input / Output XLR
Pin 1: Ground
Pin 2: Hot
Pin 3: Cold

MIDI

In   Thru   Out
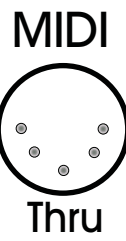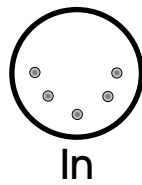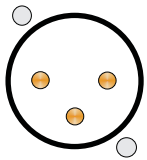
MIDI In
Pin 2: Ground
Pin 4: In+
Pin 5: In-

MIDI Thru
Pin 2: Ground
Pin 4: In+
Pin 5: In-

MIDI Out
Pin 2: Ground
Pin 4: In+
Pin 5: In-

RS-232

MIDAS CAN BUS

Contents

MIDAS HS0001 Mono Input Module

The 48V switch connects 48 volt phantom power to the input connector which is suitable for a condenser microphone or DI box.

The PAD switch gives 25dB of attenuation to the input signal which will allow the connection of high output microphones or line level signals. If the input amplifier is transformer coupled (option) the pad greatly reduces the risk of saturation at very low frequencies.
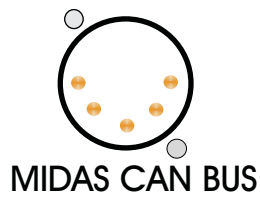
The PHASE switch activates a 180 degrees phase change within the input amplifier.

The PRE switch re configures the direct output to derive signal from the input channel pre insert and equaliser. It is important to note that pre insert direct outputs are also pre mute.

The treble FREQ control gives continuous adjustment of the frequency range that the treble equaliser acts on from 1k to 20k.

The treble BELL switch converts the treble equaliser from traditional MIDAS shelving response to full parametric operation.

The hi mid FREQ control gives continuous adjustment of the frequency range that the hi mid equaliser acts on from 400Hz to 8k.

The INS switch connects the input insert return signal to the input channel signal path.

The EQ switch connects the equaliser into the input channel signal path.

The GAIN control gives continuous adjustment of the input amplifier gain from + 15dB to + 60dB.

The DIRECT output control gives continuous adjustment of the direct output level from + 10dB to off. The output is derived from the input channel post equaliser pre fader signal.

The TREBLE (dual concentric top) control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The treble WIDTH (dual concentric bottom) control gives continuous adjustment of bandwidth from 0.1 to 2 octaves with a 0.5 octave centre detent. This only operates when the BELL switch is activated.

The HI MID (dual concentric top) control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The hi mid WIDTH (dual concentric bottom) control gives continuous adjustment of bandwidth from 0.1 to 2 octaves with a 0.5 octave centre detent.

The insert PRE switch arranges the input channel signal to pass through the insert point before the equaliser when activated and after the insert point when not activated.
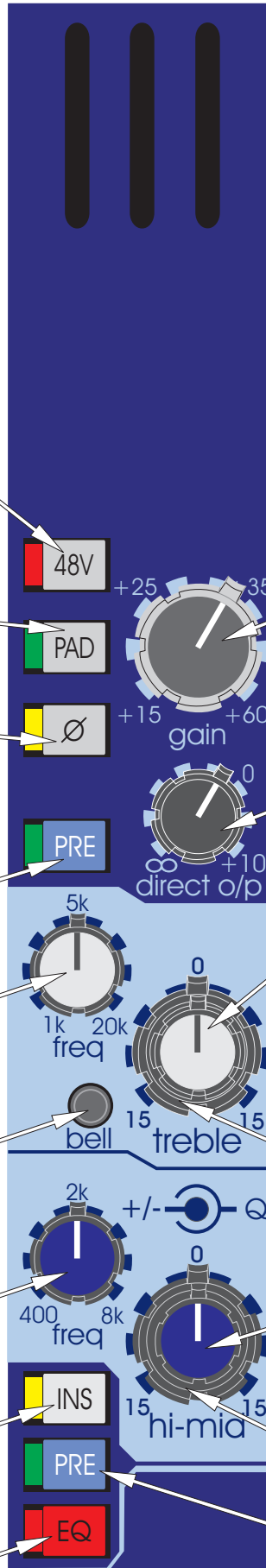
The lo mid FREQ control gives continuous adjustment of the frequency range that the lo mid equaliser acts on from 100Hz to 2k.

The bass BELL switch converts the bass equaliser from traditional MIDAS shelving response to full parametric operation.

The bass FREQ control gives continuous adjustment of the frequency range that the bass equaliser acts on from 20Hz to 400Hz.

The HI PASS switch connects the filter in the input channel signal path before the insert point and equaliser.

The LO MID (dual concentric top) control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The lo mid WIDTH (dual concentric bottom) control gives continuous adjustment of bandwidth from 0.1 to 2 octaves with a 0.5 octave centre detent.

The BASS (dual concentric top) control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

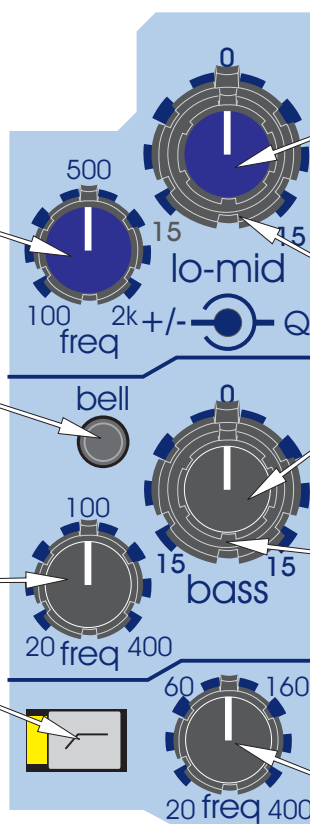The bass WIDTH (dual concentric bottom) control gives continuous adjustment of bandwidth from 0.1 to 2 octaves with a 0.5 octave centre detent. This only operates when the BELL switch is activated.

The HI PASS filter control is continuously adjustable from 20Hz to 400Hz.
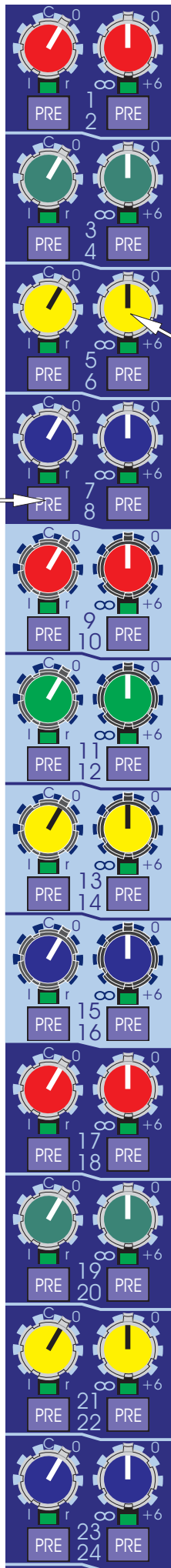
The aux PRE switches only operate when in one of the AUX bus modes; they change the signals sent to the group busses from post fader to pre fader. When configured as stereo auxes only the right switches are active.

The configurable group MIX controls (1 to 24) have two functions:-

i. They operate as bus assign ON/OFF switches by way of a non latching push/push action with LED status indication.

ii. They adjust the levels sent from the input channel to the group busses when in one of the AUX bus modes.

The group mix busses can be configured in three modes:- MONO AUX, STEREO AUX or POST PAN GROUP. This is controlled on a bus by bus basis by the global BUS MODE switches on the GROUP modules. When configured as mono auxes the left and right controls give independent level adjustments from + 6dB to off. When configured as stereo auxes the left controls perform a pan function with a constant power (- 3dB) law while the right controls give continuous level adjustment from + 6dB to off. When configured as stereo groups the level control functions are disabled such that any assigned busses are sent at unity gain from the channel post fader, post pan signals.

The PAN defaults to control the channel placement within a group or master stereo mix and has a constant power law i.e. - 3dB at the centre position.

The SIS switch enables the spacial imaging system which operates in conjunction with the pan and image controls. It also acts as a left, centre, right master bus enable overriding any stereo and mono master bus assignments.

When the spacial imaging system is active the IMAGE control can modify the action of the pan control so as to place the channel within a three speaker system. When the image control is fully clockwise the pan control will operate in full left, centre, right such that a centre panned signal will route to the centre speaker only and will not appear in either of the left or right outputs. When the image control is fully anti-clockwise the pan control reverts to stereo such that a centre panned signal will route at equal power to the left and right speakers. All other Image control positions generate a composite blend of the stereo and LCR panning systems so that the optimum degree of center image focus and speaker power can be obtained. When the image control and pan control are both set central the channel will be routed with equal power to all three speakers. Constant power is maintained at all times so that the image can be adjusted during the show without any perceived level change.

The ST switch connects the post fader channel signal to the master stereo bus via the pan control.
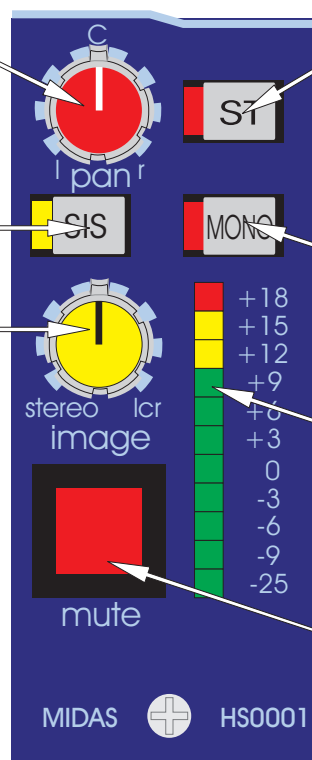
The MONO switch connects the post fader channel signal to the mono master bus.

The METER monitors the peak signal level of the pre fader input channel.
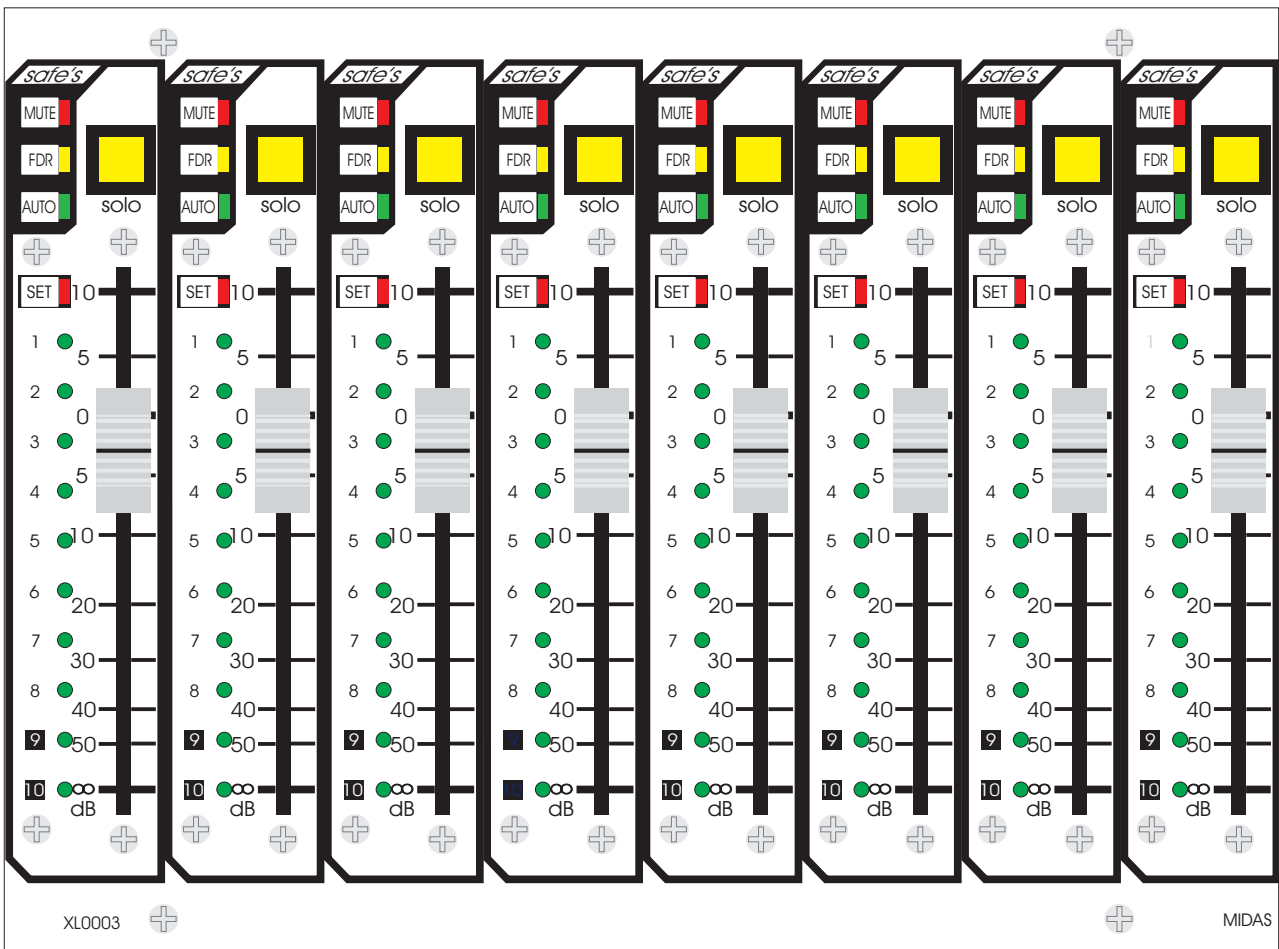
The MUTE switch mutes the input channel at all points after the insert send. The switch can be controlled from snapshot automation and by automute scenes.
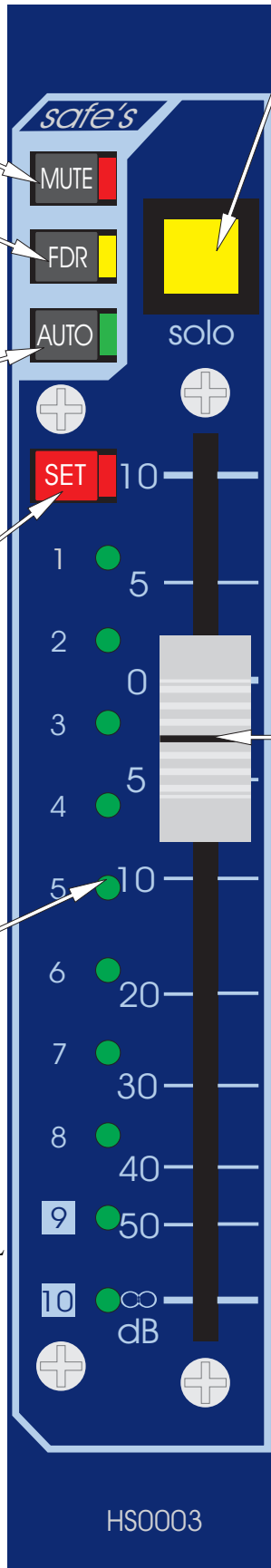
MIDAS HS0003
Input Fader

XL0003

MIDAS

The SAFE switches disable remote control of the channels as follows:-

i. The MUTE SAFE removes the channel mute from the snapshot automation and automute scenes.

ii. The FADER SAFE removes the channel fader from the virtual fader automation and VCA master fader control including vca mutes.

iii. The AUTO SAFE removes the channel from the snapshot automation system only; leaving the automutes, VCA masters and assignment systems active.

The SET switch is used to programme the channel automute and VCA master assignment. The central controller MODE and ASSIGN keys select the desired automute or VCA group and the SET switch will toggle the channel on and off with each alternate press.

The STATUS leds are used to show fader positions and the status of VCA and MUTE group assignments. The central controller MODE switches toggle through the four available states:- VCA group assignment, MUTE group assignment, FADER position manual recall and null, and full automated VIRTUAL FADER RECALL.

FADER MANUAL RECALL AND NULL
In this mode, the STATUS LEDs are used to prompt the operator where to move the fader. If the fader is not at the position stored in the current recalled snap shot, one/two LEDs will flash to indicate where the fader should be. A single flashing LED indicates that the fader should positioned next to that LED, if two LEDs are flashing the fader should be between the two LEDs. As the fader is moved closer to the required position the LED(s) will stop flashing and will be replaced by a single continuously lit LED. Once the fader is at the correct position all LEDs will extinguish.

The SOLO switch sends the input channel signal to the PFL mono and AFL stereo busses. If the switch is pressed for a short time it will latch on or off, but if it is held on for more than 1 second the latching is disabled and when the switch is released the channel solo will turn off. As a default the solo system is auto cancelling so each new solo cancels the last. This function is time dependant which allows several solos to be active as long as they are switched on at approximately the same time. The SOLO ADD MODE switch on the MONITOR module defeats the auto cancelling and allows multiple channel monitoring. In this mode input solos have priority over outputs and will temporarily override any active output solos. The input solos also override any active VCA solos.

The FADER gives continuous adjustment of the input channel level from + 10dB to off.

FADER POSITION CHECK
When a scene's contents are being "checked" (see automation operation) the STATUS LEDs will indicate the fader position stored in the scene by continuously illuminating one or two LEDs as appropriate.

VIRTUAL FADER RECALL
When in VIRTUAL FADER mode (see automation operation) the automation system will generate a "virtual" fader, set to the level of the input fader at the time the snap shot was stored. The level of the virtual fader is added to the level of the physical input fader. In this mode the STATUS LEDs indicate the "position" of the virtual fader by illuminating a bar of LEDs starting at - ∞.

MIDAS HS0004 Stereo Input Module
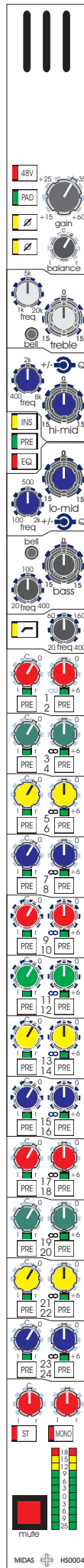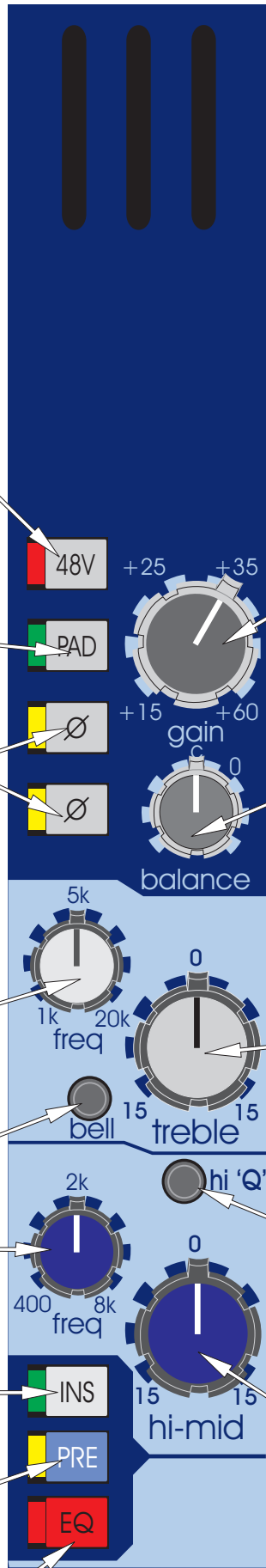
The 48V switch connects 48 volt phantom power to both input connectors and is suitable for condenser microphones or DI boxes.

The PAD switch gives 25dB of attenuation in both input signals to allow the connection of high output microphones or line level signals. If the input amplifiers are transformer coupled (option) the pad greatly reduces the risk of saturation at very low frequencies.

The PHASE switches activate a 180 degree phase change within the input amplifiers. The upper switch acts on the left channel and the lower switch acts on right channel.

The treble FREQ control gives continuous adjustment of the frequency range that the treble equalisers act on from 1k to 20k.

The treble BELL switch converts the treble equalisers from traditional MIDAS shelving response to bell filters with a 1.5 octave bandwidth.

The hi mid FREQ control gives continuous adjustment of the frequency range that the hi mid equalisers act on from 400Hz to 8k.

The INS switch connects the left and right input insert return signals to the input channel.

The insert PRE switch arranges the input channel signals to pass through the insert points before the equalisers when activated and after the insert points when not activated.

The EQ switch connects the left and right equalisers into the input channel signal paths.

The GAIN control gives continuous adjustment of the input amplifier gains from + 15dB to + 60dB.

The BALANCE control gives continuous and reciprocal adjustment of the stereo left and right signal levels by +10dB to -10dB. This allows fine adjustment of the left and right signal levels and imaging.

The TREBLE control gives continuous adjustment of left and right boost and cut from +15dB to -15dB with a 0dB centre detent.

The hi mid HI Q control changes the bandwidth of the hi mid equalisers from 1.5 octave to 0.5 octave.

The HI MID control gives continuous adjustment of left and right boost and cut from +15dB to -15dB with a 0dB centre detent.

48V

+25   +35

PAD

Ø

+15   +60
gain

Ø

c   0

balance

5k

1k   20k
freq

0

bell   treble
15   15   15

hi 'Q'

2k

0

400   8k
freq

INS
15   15

PRE
hi-mid

EQ

The LO MID control gives continuous adjustment of left and right boost and cut from +15dB to -15dB with a 0dB centre detent.

The lo mid FREQ control gives continuous adjustment of the frequency range that the lo mid equalisers act on from 100Hz to 2k.

The lo mid HI Q control changes the bandwidth of the lo mid equalisers from 1.5 octave to 0.5 octave.

The bass BELL switch converts the bass equalisers from traditional MIDAS shelving response to bell filters with a 1.5 octave bandwidth.

The BASS control gives continuous adjustment of the left and right shelving filters boost and cut from +15dB to -15dB with a 0dB centre detent.

The bass FREQ control gives continuous adjustment of the frequency range that the bass equalisers act on from 20Hz to 400Hz.

The HI PASS switch connects the filters in the input channel signal path before the insert points.

The HI PASS filter control is continuously adjustable from 20Hz to 400Hz.
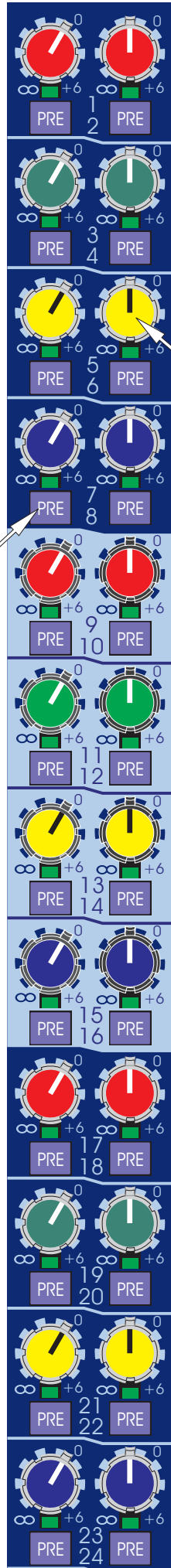
The aux PRE switches only operate when in one of the AUX bus modes; they change the signals sent to the group busses from post fader to pre fader.

The configurable group MIX controls (1 to 24) have two functions:-

i. They operate as bus assign ON/OFF switches by way of a non latching push/push action with LED status indication.

ii. They adjust the levels sent from the input channel to the group busses when in one of the AUX bus modes.

The group mix busses can be configured in three modes:- MONO AUX, STEREO AUX or POST PAN GROUP. This is controlled on a bus by bus basis by the global BUS MODE switches on the GROUP modules. When configured as mono auxes the left and right controls give independent level adjustments of the levels sent from a mono sum of the channels left and right sides. The adjustment is from + 6dB to off . When configured as stereo auxes the left controls give level adjustment of the left channel signal levels and the right controls give level adjustment of the right channel signal levels. When configured as stereo groups the level control functions are disabled such that any assigned busses are sent at unity gain from the channel post fader, post pan signals.

The left and right PAN controls are used to place the input channel signals within a stereo group or stereo master mix. As well as image placement, the controls can also adjust the image width from stereo through mono to reverse stereo (left and right crossed over). The controls have a constant power law i.e. -3dB at the centre position.

The ST switch connects the post fader channel signals to the stereo master bus via the pan controls.

The MUTE switch mutes the input channel at all points after the insert send. The switch can be controlled from snapshot automation and by automute scenes.
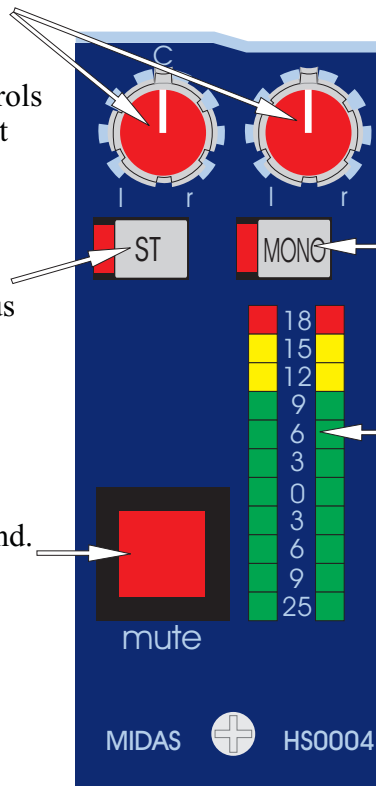
The MONO switch connects the post fader channel signals to the mono master bus.

The METERS monitor the pre fader peak signal levels of input channel.

C

l   r   l   r

ST   MONO

18
15
12
9
6
3
0
3
6
9
25

mute

MIDAS   HS0004

MIDAS HS0003
Input Fader

The SAFE switches disable remote control of the channels as follows:-

i. The MUTE SAFE removes the channel mute from the snapshot automation and automute scenes.

ii. The FADER SAFE removes the channel fader from the virtual fader automation and VCA master fader control including vca mutes.

iii. The AUTO SAFE removes the channel from the snapshot automation system only; leaving the automutes, VCA masters and assignment systems active.

The SET switch is used to programme the channel automute and VCA master assignment. The central controller MODE and ASSIGN keys select the desired automute or VCA group and the SET switch will toggle the channel on and off with each alternate press.

The STATUS leds are used to show fader positions and the status of VCA and MUTE group assignments. The central controller MODE switches toggle through the four available states:- VCA group assignment, MUTE group assignment, FADER position manual recall and null, and full automated VIRTUAL FADER RECALL.
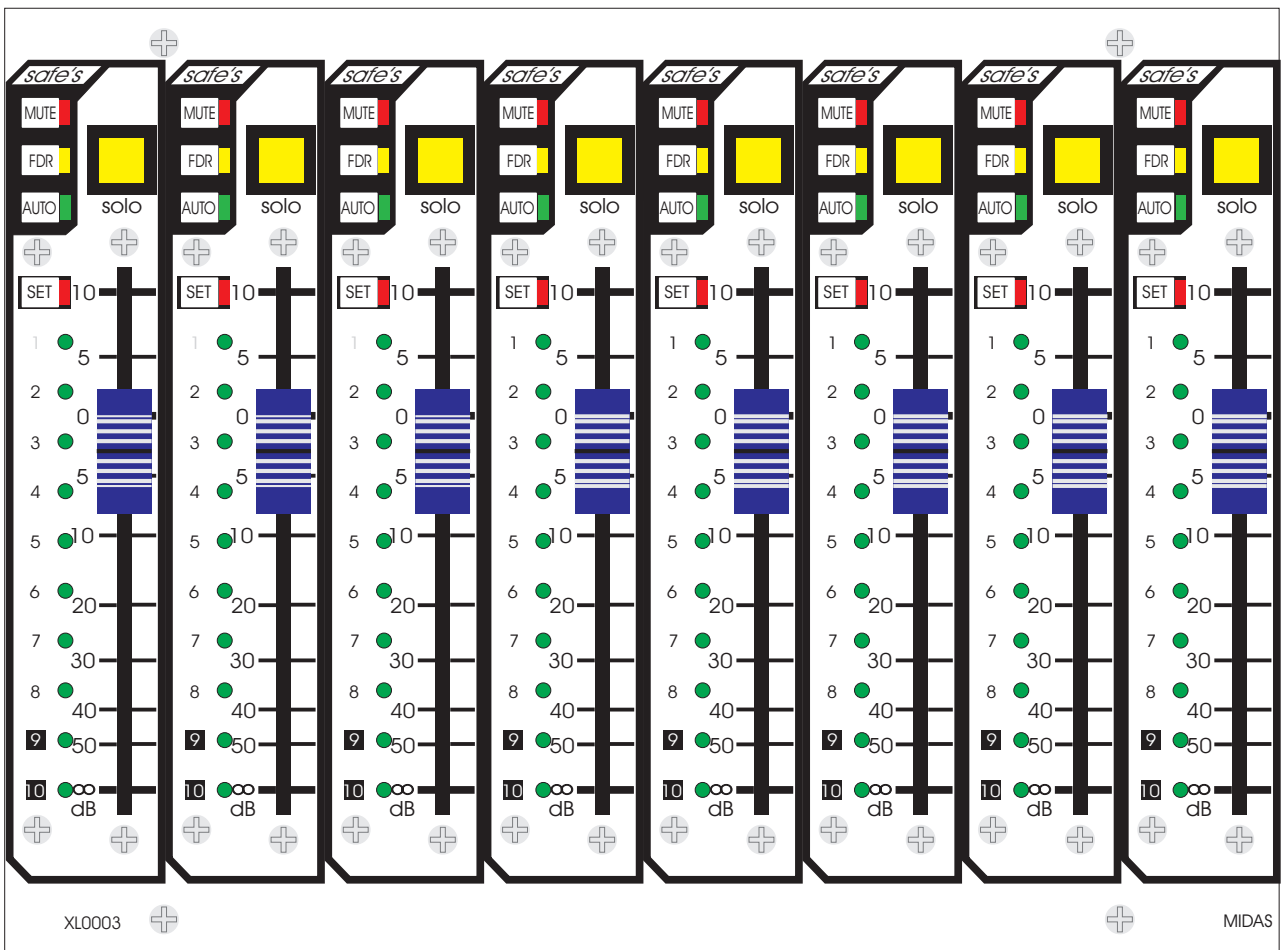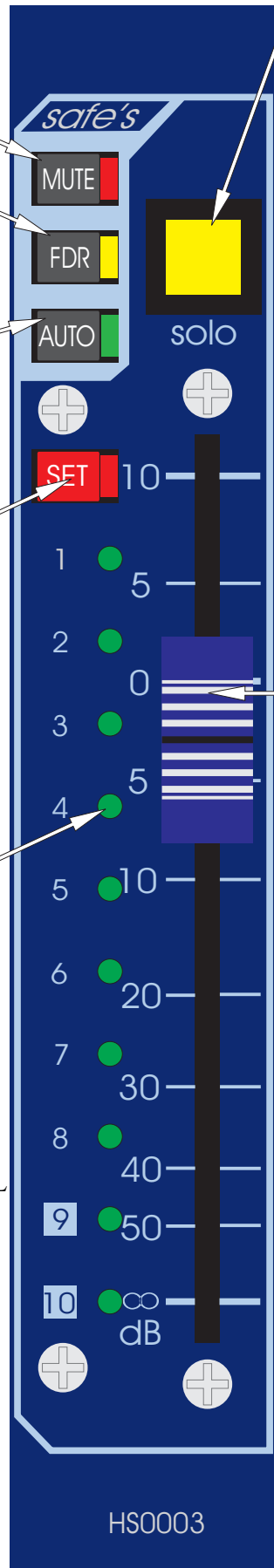
FADER MANUAL RECALL AND NULL
In this mode, the STATUS LEDs are used to prompt the operator where to move the fader. If the fader is not at the position stored in the current recalled snap shot, one/two LEDs will flash to indicate where the fader should be. A single flashing LED indicates that the fader should positioned next to that LED, if two LEDs are flashing the fader should be between the two LEDs. As the fader is moved closer to the required position the LED(s) will stop flashing and will be replaced by a single continuously lit LED. Once the fader is at the correct position all LEDs will extinguish.

The SOLO switch sends the input channel signal to the PFL mono and AFL stereo busses. If the switch is pressed for a short time it will latch on or off, but if it is held on for more than 1 second the latching is disabled and when the switch is released the channel solo will turn off. As a default the solo system is auto cancelling so each new solo cancels the last. This function is time dependant which allows several solos to be active as long as they are switched on at approximately the same time. The SOLO ADD MODE switch on the MONITOR module defeats the auto cancelling and allows multiple channel monitoring. In this mode input solos have priority over outputs and will temporarily override any active output solos. The input solos also override any active VCA solos.

The FADER gives continuous adjustment of the input channel level from + 10dB to off.

FADER POSITION CHECK
When a scene's contents are being "checked" (see automation operation) the STATUS LEDs will indicate the fader position stored in the scene by continuously illuminating one or two LEDs as appropriate.

VIRTUAL FADER RECALL
When in VIRTUAL FADER mode (see automation operation) the automation system will generate a "virtual" fader, set to the level of the input fader at the time the snap shot was stored. The level of the virtual fader is added to the level of the physical input fader. In this mode the STATUS LEDs indicate the "position" of the virtual fader by illuminating a bar of LEDs starting at -∞.

MIDAS HS0011 Group Module

l r

+21+
+18+
+15+
+12+
+9+
+6+
+3+
0
-3-
-6-
-9-
-12-
-15-
-18-
-21-
-24-
-27-
-30-
-33-
-36-

green = stereo aux

red = mono aux

direct inputs

0 0

∞ +10   ∞ +10

level   level

PRE   PRE

insert   insert

MUTE   MUTE

SOLO   SOLO

1 0   1 0
∞ +6   ∞ +6

2 0   2 0
∞ +6   ∞ +6

3 0   3 0
∞ +6   ∞ +6

4 0   4 0
∞ +6   ∞ +6

5 0   5 0
∞ +6   ∞ +6

6 0   6 0
∞ +6   ∞ +6

7 0   7 0
∞ +6   ∞ +6

8 0   8 0
∞ +6   ∞ +6

matrix

PRE   PRE
fader   fader

PRE   PRE
insert   insert

9   9
vca
10   10

to masters

ST   ST

MONO   MONO

c   c

pan r   l pan

TALK   TALK

INS   INS

mute   mute

SAFE   SAFE

SOLO split

solo   solo

10
5
0
5
10
20
30
40
∞

dB

group

MIDAS   HS0011

15

The METERS monitor the peak signal levels of the sub group outputs (post fader).

l   r

+21+
+18+
+15+
+12+
+9+
+6+
+3+
0
-3-
-6-
-9-
-12-
-15-
-18-
-21-
-24-
-27-
-30-
-33-
-36-

green = stereo aux

red = mono aux

direct inputs

0   0

+10   +10

level   level

PRE   PRE

insert   insert

MUTE   MUTE

SOLO   SOLO

The global BUS MODE switches configure input module MIX controls to act as either mono aux (level and level), stereo aux (level and pan) or as audio sub groups (post fader and main pan). This makes the console extremely flexible and quick to reconfigure.

The DIRECT input controls give continuous adjustment of the direct input levels from + 10dB to off. The direct signals are summed into the sub group signals and can be used as effects returns etc. or for console bus linking.

The direct PRE switches move the point at which the direct signals are summed into the sub groups. The default is post insert but when the PRE switches are active the signals are summed at the sub group mix busses.

The direct MUTE switches mute the sub group direct inputs at all points.

The direct SOLO switches send direct input to the PFL mono and AFL stereo busses (AFL is selected as stereo or mono depending on the group SPLIT switch settings). If a SOLO switch is pressed for a short time it will latch on or off, but, if it is held on for more than 1 second the latching is disabled and when the switch is released the solo will turn off. As a default the solo system is auto cancelling so each new solo cancels the last. This function is time dependant which allows several solos to be active as long as they are switched on at approximately the same time, i.e. to solo both sides of a stereo mix press both solo switches at the same time. Alternatively the SOLO ADD MODE switch on the MONITOR module can be used to defeat the auto cancelling and allow multiple channel monitoring. In this mode input channel solos have priority over all other solos and will temporarily override them.

The matrix MIX controls (1 to 8) give continuous adjustment of the sub group levels sent to the matrix mixes from + 6dB to off.

The PRE fader switches change the signals sent to the matrix mixes from post group fader to pre group fader.

The PRE insert switches change the signals sent to the matrix mixes from post group insert to pre group insert and override the pre fader switches. It is important to note that pre insert matrix sends are also pre the group mutes.

The VCA switches assign the audio sub groups to VCA control from VCA masters 9 and 10.

The ST switches connect the post fader sub group signals to the stereo master stereo busses via the pan controls.
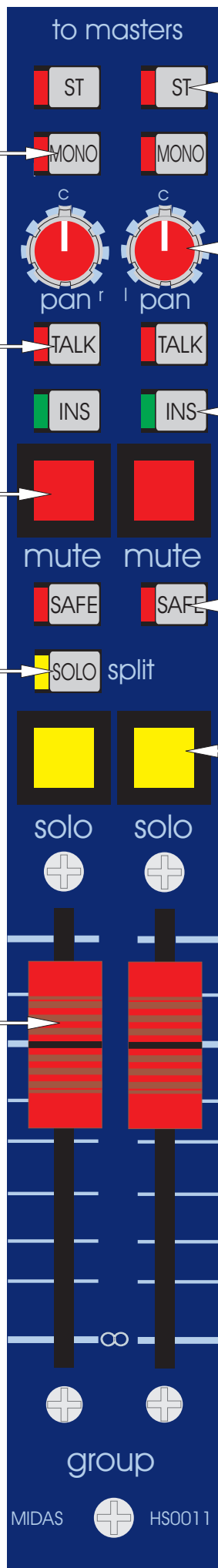
The MONO switches connect the post fader sub group signals to the mono master bus.

The group PAN controls place the sub groups within the stereo master mix and have a constant power law i.e. -3dB at the centre position.

The TALK switches connect the sub groups to the MONITOR module. When the TALK INTERNAL or GENERATOR INTERNAL are active on the MONITOR module the oscillator, pink noise and talk mic can be routed to the sub groups.

The INS switches connect the group insert return signals to the sub group signals.

The MUTE switches mute the sub group signals at all points after the insert send. The switches can be controlled from snapshot automation.

The mute SAFE removes the channel mute from snapshot automation.

The SPLIT switch changes the sub group AFL solos from mono to stereo.

The SOLO switches send sub group signals to the PFL mono and AFL stereo busses. If a SOLO switch is pressed for a short time it will latch on or off, but, if it is held on for more than 1 second the latching is disabled and when the switch is released the channel solo will turn off. As a default the solo system is auto cancelling so each new solo cancels the last. This function is time dependant which allows several solos to be active as long as they are switched on at approximately the same time, i.e. to solo both sides of a stereo mix press both solo switches at the same time. Alternatively the SOLO ADD MODE switch on the MONITOR module can be used to defeat the auto cancelling and allow multiple channel monitoring. In this mode input channel solos have priority over the sub group solos and will temporarily override them. When the input solos are cancelled the mix group solos will be active again. Sub group solos can also be temporarily overridden by activating the corresponding direct input solos.

The GROUP FADERS give continuous adjustment of the sub group output levels from + 10dB to off.

MIDAS   HS0011

MIDAS HS0013
VCA Master Fader
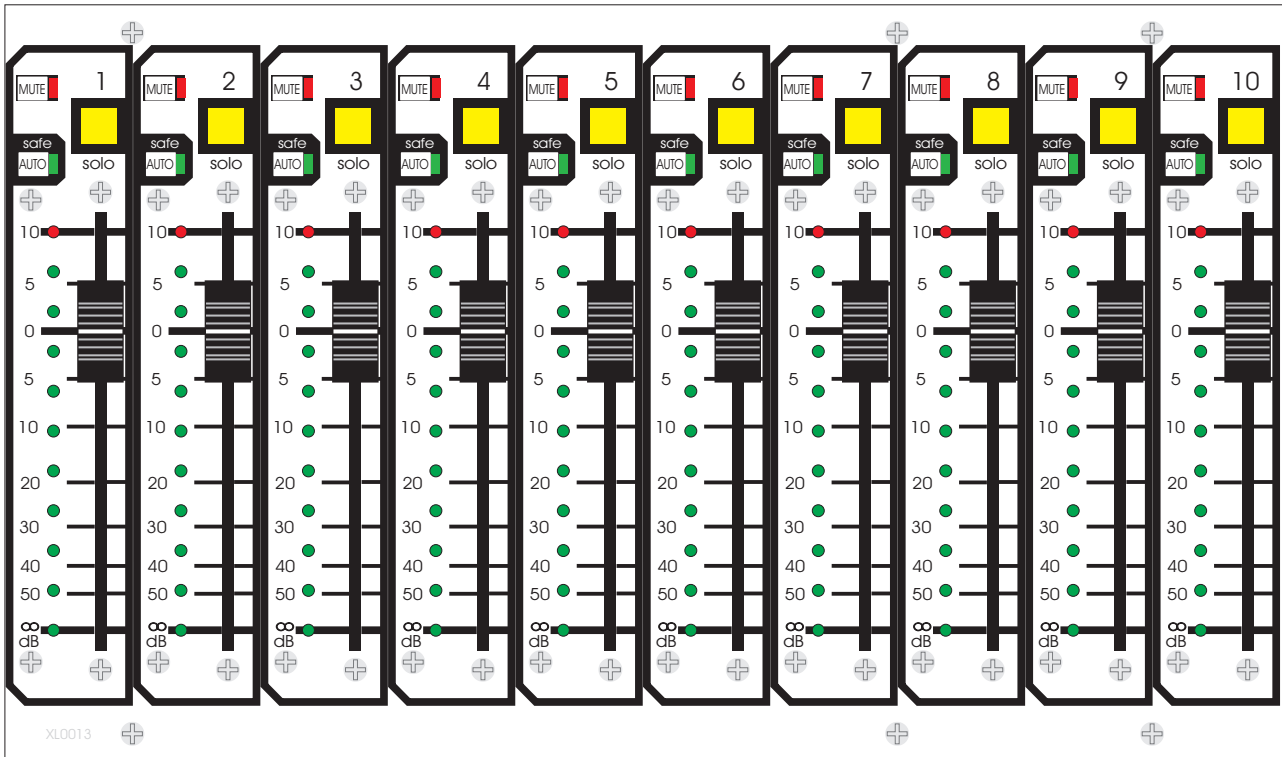
The vca MUTE switches act on any post fader input channels or audio sub groups which are assigned to be controlled from the corresponding VCA masters. The switches can be controlled from snapshot automation.

The AUTO SAFE switches disable snapshot automation control of the VCA master faders and VCA mutes.

The STATUS LEDs are off when the console is in VCA or mute assignment modes (see assignment operation). When the console is in FADER mode indication the STATUS LED's can indicate one of three states: -

FADER MANUAL RECALL AND NULL
In this mode, the STATUS LEDs are used to prompt the operator where to move the fader. If the fader is not at the position stored in the current recalled snap shot, one/two LEDs will flash to indicate where the fader should be. A single flashing LED indicates that the fader should positioned next to that LED, if two LEDs are flashing the fader should be between the two LEDs. As the fader is moved closer to the required position the LED(s) will stop flashing and will be replaced by a single continuously lit LED. Once the fader is at the correct position all LEDs will extinguish.

FADER POSITION CHECK
When a scene's contents are being "checked" (see automation operation) the STATUS LEDs will indicate the fader position stored in the scene by continuously illuminating one or two LEDs as appropriate.
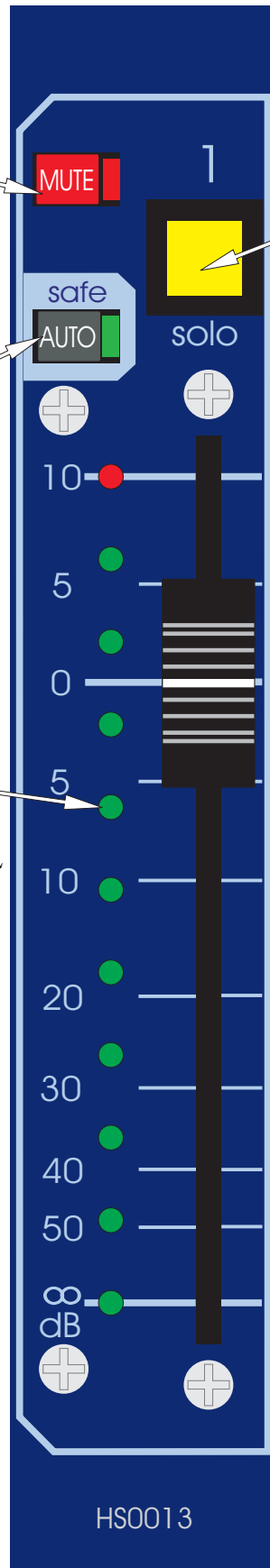
The vca SOLO switches are used to monitor the VCA master faders by creating a mix on the solo busses which consists of all input channels and audio sub groups which are assigned to control from the corresponding VCA masters. If a VCA solo switch is pressed for a short time it will latch on or off, but if it is held on for more than 1 second the latching is disabled and when the switch is released the solo will turn off. When the console is operating in SOLO ADD MODE input channels have priority over VCA solos and will temporarily override them.

VIRTUAL FADER RECALL
When in VIRTUAL FADER mode (see automation operation) the automation system will generate a "virtual" fader, set to the level of the input fader at the time the snap shot was stored. The level of the virtual fader is added to the level of the physical input fader. In this mode the STATUS LEDs indicate the "position" of the virtual fader by illuminating a bar of LEDs starting at - ∞.

MIDAS HS0021 Masters Module
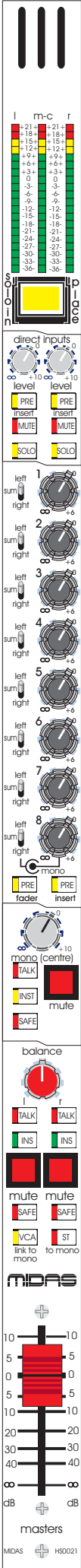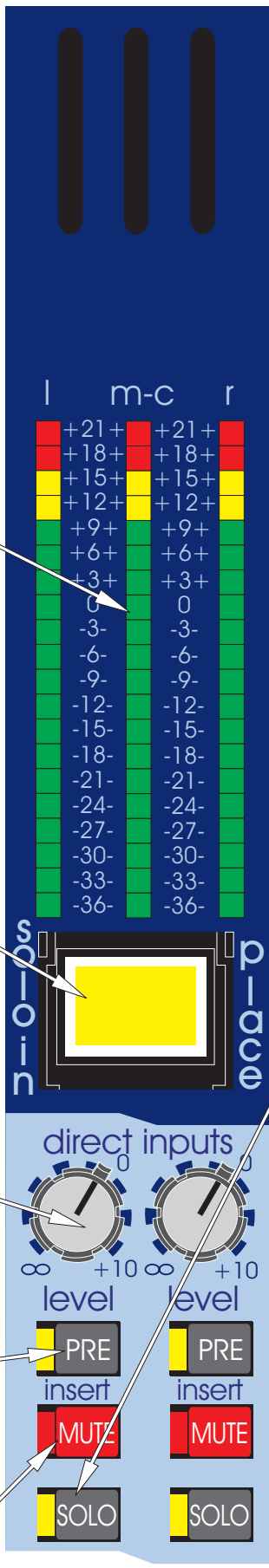
The METERS monitor the peak signal levels of the three master outputs (post fader).

The SOLO IN PLACE switch sets the console to solo in place mode. In this mode any input solo that is pressed activates a mute of all the other channels. The mute safe switches on the input channels can be used to protect channels from this function if desired.

The DIRECT input controls give continuous adjustment of the direct input levels from + 10dB to off. The direct signals are summed into the master left and right signals and can be used as effects returns etc. or for console bus linking. The master mono also has a direct input XLR on the rear of the console for which is intended for console linking only.

The direct PRE switches move the point at which the direct signals are summed into the masters. The default is post insert but when the PRE switches are active the signals are summed at the master mix busses.

The direct MUTE switches mute the master direct inputs at all points.

l   m-c   r

+21+   +21+
+18+   +18+
+15+   +15+
+12+   +12+
+9+   +9+
+6+   +6+
+3+   +3+
0   0
-3-   -3-
-6-   -6-
-9-   -9-
-12-   -12-
-15-   -15-
-18-   -18-
-21-   -21-
-24-   -24-
-27-   -27-
-30-   -30-
-33-   -33-
-36-   -36-

solo in   place

direct inputs

0   0

∞   +10   ∞   +10
level   level

PRE   PRE
insert   insert
MUTE   MUTE
SOLO   SOLO

The direct SOLO switches send direct input to the PFL mono and AFL stereo busses. If a SOLO switch is pressed for a short time it will latch on or off, but, if it is held on for more than 1 second the latching is disabled and when the switch is released the solo will turn off. As a default the solo system is auto cancelling so each new solo cancels the last. This function is time dependant which allows several solos to be active as long as they are switched on at approximately the same time, i.e. to solo both sides of a stereo mix press both solo switches at the same time. Alternatively the SOLO ADD MODE switch on the MONITOR module can be used to defeat the auto cancelling and allow multiple channel monitoring. In this mode input channel solos have priority over all other solos and will temporarily override them.

The matrix STEREO switches select the source for the lower matrix mix controls as either left channel, right channel or a sum of both.

left
sum
right

left
sum
right

left
sum
right

left
sum
right

left
sum
right

left
sum
right

left
sum
right

left
sum
right

1

2

3

4

5

6

7

8

∞   +6

∞   +6

∞   +6

∞   +6

∞   +6

∞   +6

∞   +6

∞   +6
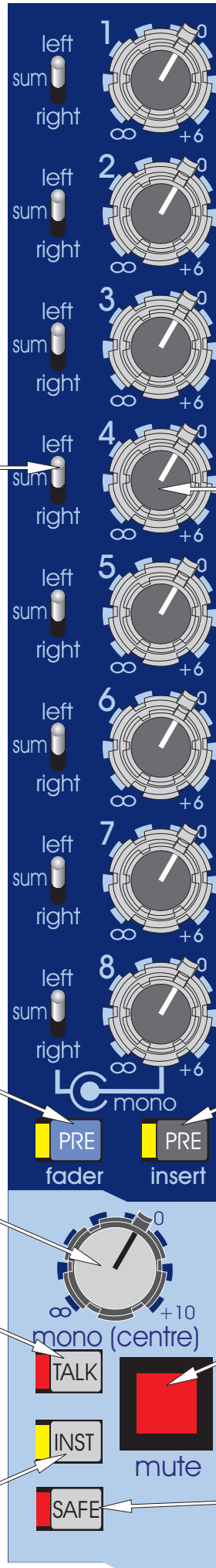
The matrix MIX controls (1 to 8) give continuous adjustment of the master levels sent to the matrix mixes from + 6dB to off. The top control adjusts the feed from the mono master and the lower control adjusts the feed from the stereo masters.

LC

mono

The PRE fader switches change the signals sent to the matrix mixes from post group fader to pre group fader.

The MONO level control gives continuous adjustment of the mono master output level from +10dB to off.

The mono TALK switch connect the mono master to the MONITOR module. When the TALK INTERNAL or GENERATOR INTERNAL are active on the MONITOR module the oscillator, pink noise and talk mic can be routed to the mono master outputs.

The mono INST switch connects the mono insert return signals to the mono master signals.

PRE
fader

PRE
insert

The PRE insert switches change the signals sent to the matrix mixes from post group insert to pre group insert and override the pre fader switches. It is important to note that pre insert matrix sends are also pre the master mutes.

0

∞   +10

mono (centre)

TALK

INST

SAFE

mute

The MUTE switch mutes the mono master signals at all points after the insert send. The switch can be controlled from snapshot automation.

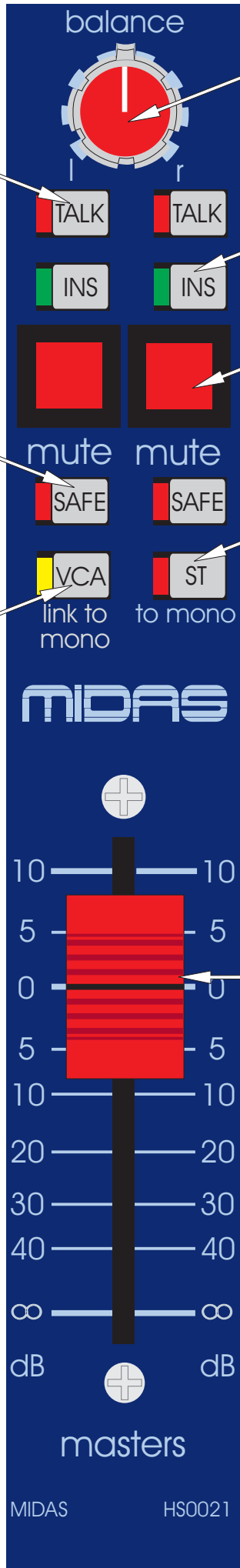The mono mute SAFE removes the mono mute from snapshot automation.

The TALK switches connect the stereo masters to the MONITOR module. When the TALK INTERNAL or GENERATOR INTERNAL are active on the MONITOR module the oscillator, pink noise and talk mic can be routed to the stereo masters.

The mute SAFE switches remove the stereo master mutes from snapshot automation.

The VCA link to mono switch connects the mono master level control to the stereo master fader so that the mono output tracks any change of the stereo master fader.

balance

l   r

TALK   TALK

INS   INS

mute   mute

SAFE   SAFE

VCA   ST
link to   to mono
mono

MIDAS

10 —   — 10
5 —   — 5
0 —   — 0
5 —   — 5
10 —   — 10
20 —   — 20
30 —   — 30
40 —   — 40

∞ —   — ∞

dB   dB

masters

MIDAS   HS0021

The BALANCE (pan) control gives continuous and reciprocal adjustment of the stereo left and right signal levels by + 3dB to off. This allows fine adjustment of the left, right power levels and imaging.

The INS switches connect the master insert return signals to the stereo master signals.

The MUTE switches mute the stereo master signals at all points after the insert send. The switches can be controlled from snapshot automation.

The STEREO to mono switch connects a mono sum of the pre insert stereo master signals to the mono master bus.

The MASTER FADER gives continuous adjustment of the stereo master output levels from + 10dB to off.

MIDAS HS0031 Monitor Module

+21+
+18+
+15+
+12+
+9+
+6+
+3+
0
-3-
-6-
-9-
-12-
-15-
-18-
-21-
-24-
-27-
-30-
-33-
-36-

1kHz
300 — 1k
100   10k
freq

signal generator

PINK
0
∞ +10
level

generator internal   generator external

TALK   to all internal

talk mic

+40
+20 +60
mic gain

0
∞ +10
level

talk internal   talk external

PRE   meter change over

TALK input
0
∞ +10
level

MONO masters
0
∞ +10
level

SOLO
mono source

mono output
C/O   output 'b'
mute

0
∞ +10

MUTE   phones

ST   EXT
MONO   SOLO
stereo source

stereo output
C/O   output 'b'

left only   MONO sum
ON   PAD
l-r reverse   -20dB
L   R

mute   mute

SOLO   add mode

SOLO   pre fade (pfl)

solo clear

10   10
5   5
0   0
5   5
10   10
20   20
30   30
40   40
∞   ∞
dB   dB

monitor

MIDAS   HS0031

The METERS monitor the peak signal levels of the stereo left and right monitor paths.

```
+21+
+18+
+15+
+12+
+9+
+6+
+3+
0
-3-
-6-
-9-
-12-
-15-
-18-
-21-
-24-
-27-
-30-
-33-
-36-
```
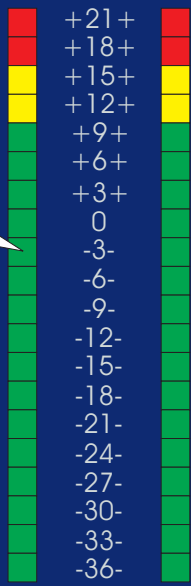
The 1kHz switch overrides the swept frequency control giving a fixed 1k tone.

1 kHz

300

1k

100   10k

freq
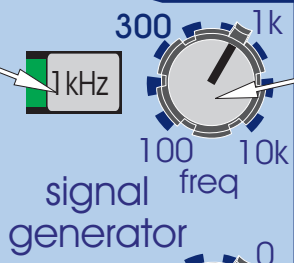
signal
generator

The FREQ. control gives continuous adjustment of the oscillator frequency from 100Hz to 10k.

0

∞   +10

level

The PINK switch overrides the oscillator by giving a pink noise output.

PINK

The generator LEVEL control gives continuous adjustment of the signal generator peak output signals from +10dBu to off.

The GENERATOR TO INTERNAL switch connects the signal generator output to the console's internal talk all and talk select busses.

generator generator
internal   external
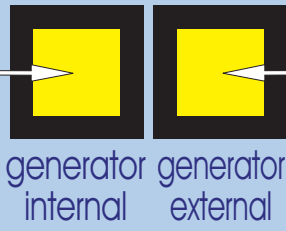
The GENERATOR TO EXTERNAL switch connects the signal generator output to the talk external output XLR.

The TALK TO ALL switch overrides all output talk switches so that the generator or talk mic can be routed to ALL OUPUTS

TALK

to all
internal

26

talk mic

The TALK XLR socket accepts balanced 150Ω microphone signals.

The MIC GAIN preset gives continuous adjustment of the microphone amplifier gain from +20dB to +60dB and operates in conjunction with a peak limiter which is factory set to +10dBu.

+40

0

+20   +60   ∞   +10

mic gain   level

The talk LEVEL gives continuous adjustment of the post limiter signals from +10dB to off.

The TALK TO INTERNAL switch connects the talk mic output to the console's internal talk system and at the same time dims all the local outputs by 20dB to prevent howl round.

**talk   talk
internal   external**

The TALK TO EXTERNAL switch connects the talk mic output to the talk external output XLR.

PRE   **meter change over**

The PRE meter change over switch changes the operation of every meter on the console (except the monitor meters). The "normal" meter operation is to monitor pre fader on input channels and post fader on all other signals. When the pre meter change over is active the meters change to monitor input amplifiers or bus amplifiers (as appropriate) on all signals.

The TALK input routes the talk external input to the mono local monitor output.

TALK
input

0

∞   +10

level

The talk LEVEL gives continuous adjustment of the external talk input from +10dB to off.

The MONO masters switch routes the post fader mono master mix to the mono local monitor output.
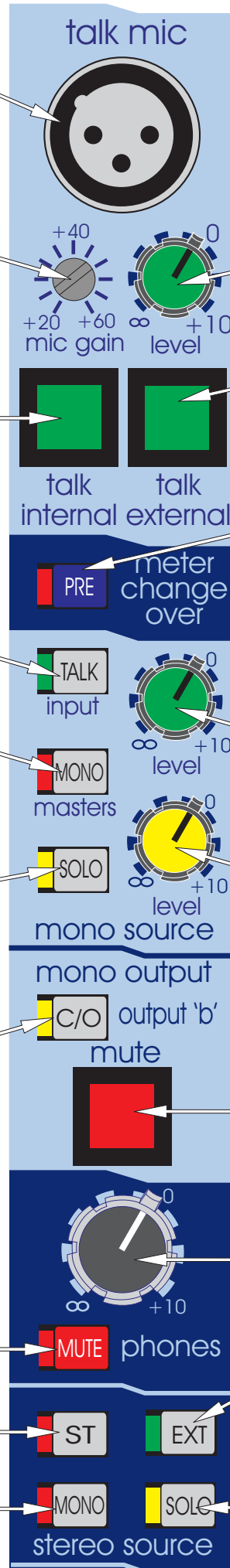
MONO
masters

The SOLO switch routes solo signals to the mono local monitor output when ever a solo is active on the console. This overrides any signals sent from the mono master but does not override talk inputs.

SOLO

0

∞   +10

**level
mono source**

The talk LEVEL gives continuous adjustment of the external talk input from +10dB to off.

mono output

The mono output "b" C/O switch disconnects the mono local monitor output from the main "a" output and re-routes it to the secondary "b" output.

C/O   **output 'b'
mute**

The mono output MUTE switch mutes the mono local monitor output.

0

∞   +10

The PHONES level control gives continuous adjustment of the headphone level from + 10dB to off.

The phones MUTE switch mutes the headphone outputs.

MUTE   **phones**

The ST master switch routes the post fader stereo master mix to the stereo local monitor outputs.

ST   EXT

The EXT switch routes the stereo external input (2 track return etc.) to the stereo local monitor outputs.

The MONO master switch routes the post fader mono master mix to the stereo local monitor outputs.

MONO   SOLO

stereo source

The SOLO switch routes solo signals to the stereo local monitor outputs when ever a solo is active on the console. This overrides any signals sent from the stereo master, mono master or external input.

The stereo output "b" C/O switch disconnects the stereo local monitor outputs from the main "a" outputs and re-routes them to the secondary "b" outputs.

The PHASE switch reverses the phase of the left hand monitor signal.

When the left/right reverse is ON the left hand monitor signals are routed onto the right channel output speakers and the right hand monitor signal are routed onto the left channel output speakers.
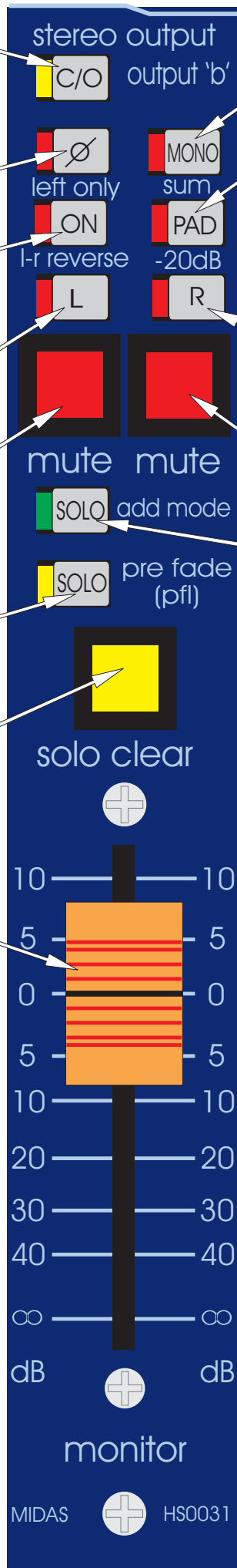
The LEFT switch routes left hand monitor signal to both the left and right local monitor speaker outputs.

The left MUTE switch controls the mute function on the left hand side of the stereo local monitor speaker outputs.

The SOLO PFL switch sends the mono PFL solo bus signals to the headphones and local monitor outputs in place of the stereo AFL solo bus signals.

The SOLO ON / CLEAR switch and indicator has two functions; it illuminates when any solo switch is active and when pressed it clears any active solo switches.

The MONITOR fader gives continuous adjustment of all three local monitor output levels from + 10dB to off.

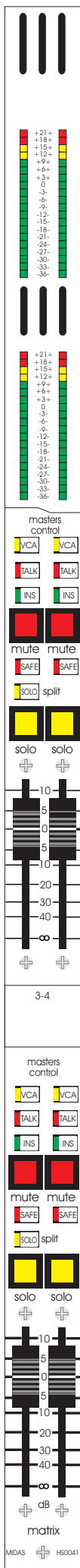The MONO sum switch adds the left and right monitor signals with a 4.5dB summing loss.

The -20 PAD switch acts on all three local monitor outputs causing them to dim by 20dB. This function is also activated whenever the talk system is in use to prevent howl round.
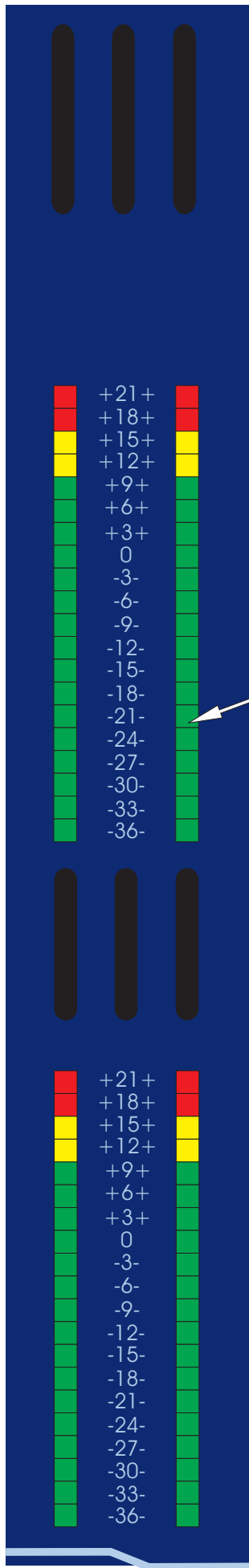
The RIGHT switch routes right hand monitor signal to both the left and right local monitor speaker outputs.

The right MUTE switch controls the mute function on the right hand side of the stereo local monitor speaker outputs.

The SOLO ADD MODE switch allows multiple channel access to the solo busses. When the solo add mode is off the action of pressing a solo switch will cancel any previously active solo. Multiple solos such as stereo left and right signals can be monitored in this mode of operation as long as the solo switches are pressed at approximately the same time. When the solo add mode is on the auto cancelling is defeated which allows multiple channel or output soloing. In this mode input solos have priority over output solos and VCA solos and will temporarily override them. When the input solo is cancelled the output solos or VCA solos will return.

stereo output

C/O output 'b'

MONO sum

left only

ON PAD

l-r reverse -20dB

L R

mute mute

SOLO add mode

SOLO pre fade (pfl)

solo clear

10 — 10
5 — 5
0 — 0
5 — 5
10 — 10
20 — 20
30 — 30
40 — 40
∞ — ∞
dB dB

monitor

MIDAS HS0031

MIDAS HS0041 Matrix Module

+21+
+18+
+15+
+12+
+9+
+6+
+3+
0
-3-
-6-
-9-
-12-
-15-
-18-
-21-
-24-
-27-
-30-
-33-
-36-

+21+
+18+
+15+
+12+
+9+
+6+
+3+
0
-3-
-6-
-9-
-12-
-15-
-18-
-21-
-24-
-27-
-30-
-33-
-36-

masters
control

VCA   VCA

TALK   TALK

INS   INS

mute   mute

SAFE   SAFE

SOLO split

solo   solo

10
5
0
5
10
20
30
40
∞

3-4

masters
control

VCA   VCA

TALK   TALK

INS   INS

mute   mute

SAFE   SAFE

SOLO split

solo   solo

10
5
0
5
10
20
30
40
∞

dB

matrix

MIDAS   HS0041

+21+		+21+
+18+		+18+
+15+		+15+
+12+		+12+
+9+		+9+
+6+		+6+
+3+		+3+
0		0
-3-		-3-
-6-		-6-
-9-		-9-
-12-		-12-
-15-		-15-
-18-		-18-
-21-		-21-
-24-		-24-
-27-		-27-
-30-		-30-
-33-		-33-
-36-		-36-

The METERS monitor the peak signal
levels of the matrix outputs (post fader).

+21+   +21+
+18+   +18+
+15+   +15+
+12+   +12+
+9+   +9+
+6+   +6+
+3+   +3+
0   0
-3-   -3-
-6-   -6-
-9-   -9-
-12-   -12-
-15-   -15-
-18-   -18-
-21-   -21-
-24-   -24-
-27-   -27-
-30-   -30-
-33-   -33-
-36-   -36-

masters
control
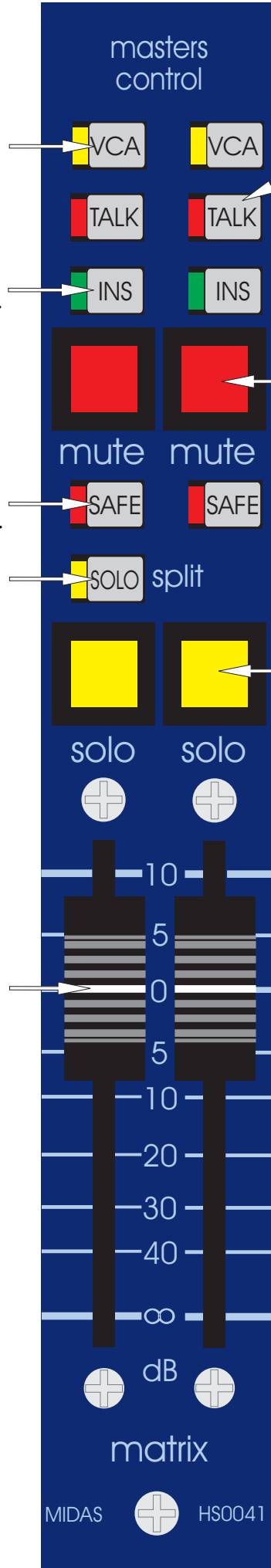
The VCA switches assign the matrix outputs to VCA control from the MASTER module fader.

The TALK switches connect the matrix mixes to the MONITOR module. When the TALK INTERNAL or GENERATOR INTERNAL are active on the MONITOR module the oscillator, pink noise and talk mic can be routed into the matrix mixes.

The INS switches connect the matrix insert return signals to the matrix mixes.

The matrix MUTE switches mute the matrix signals at all points after the insert send. The switches can be controlled from snapshot automation.

mute mute

The mute SAFE switches remove the matrix mutes from snapshot automation.

The SPLIT switch changes the matrix AFL solos from mono to stereo.

split

The SOLO switches send matrix signals to the PFL mono and AFL stereo busses. If a SOLO switch is pressed for a short time it will latch on or off, but, if it is held on for more than 1 second the latching is disabled and when the switch is released the channel solo will turn off. As a default the solo system is auto cancelling so each new solo cancels the last. This function is time dependant which allows several solos to be active as long as they are switched on at approximately the same time, i.e. to solo both sides of a stereo mix press both solo switches at the same time. Alternatively the SOLO ADD MODE switch on the MONITOR module can be used to defeat the auto cancelling and allow multiple channel monitoring. In this mode input channel solos have priority over the matrix solos and will temporarily override them. When the input solos are cancelled the matrix solos will be active again.

solo solo

10

5

0

5

10

20

30

40

∞

dB

The MATRIX faders give continuous adjustment of the matrix output levels from + 10dB to off.

matrix

MIDAS   HS0041

Automation

Assignment control

When the LOCK switch is illuminated, all assignment changes are disabled. The LOCK switch will toggle state on each press. The console will automatically go into a locked state if no assignment controls are operated within 90 seconds.

The AUTOMUTE GROUP MASTER keys activate the mute circuits on any assigned input channel.

The VCA, MUTE and FADER switches set the current assignment/display mode.

If the console is in VCA or MUTE mode, the ASSIGN KEYS set the changes for input VCA/automute assignment when its SET switch is operated. These can be selected in the following ways:-

To enter ASSIGNMENT mode

Depressing any single assign key that is OFF will set that assign key on.

In this mode, the assign keys define which groups an input VCA/automute is assigned to when its SET switch is operated. i.e. if VCA mode is active and assign keys one and two are on. Pressing an input SET switch will cause that channel to toggle the VCA 1 and 2 assignments of that input from on to off or visa versa.

To enter CLEAR mode set all assign keys to off.

To switch the assign keys off simply press the ones lit to off. Once in clear mode all the assign keys and the input channel sets switches will flash.

In this mode operating an input SET switch will clear all inputs VCA and /or automute assignments to off.
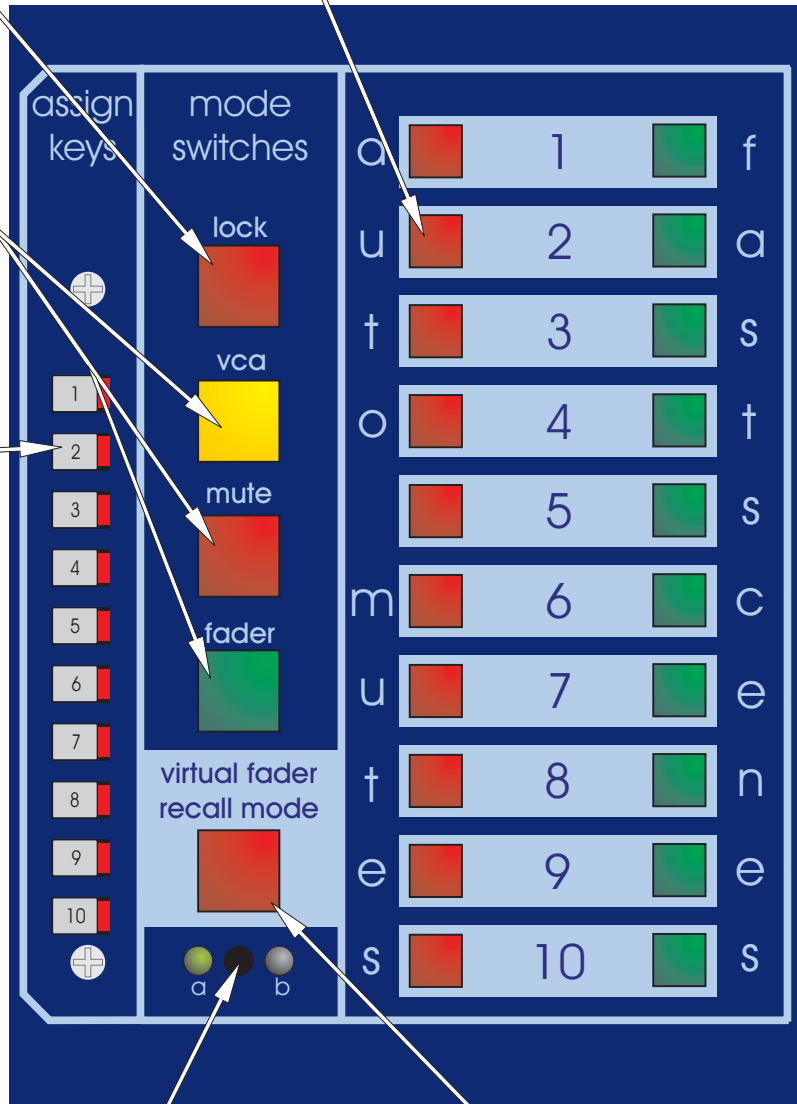
The VIRTUAL FADER key en/disables the operation of the virtual faders. It is only active if the console is unlocked to recall level.

The A/B switch selects which system is controlling the console.

For reliability the assignment/automation systems are 100% duplicated. The console can operate on either of the systems. All snap shots are stored on BOTH of the systems. The LEDs indicate the status of each system in the following manner.

LED green indicates which system is active
LED off indicates which system is inactive
LED red indicates that a system is damaged or not responding and that a service engineer must be called as soon as possible.

Automation control

The snap shots stored in the automation system are numbered in ACTs and SCENEs.
There is no difference between an ACT and a SCENE apart from its numbering.
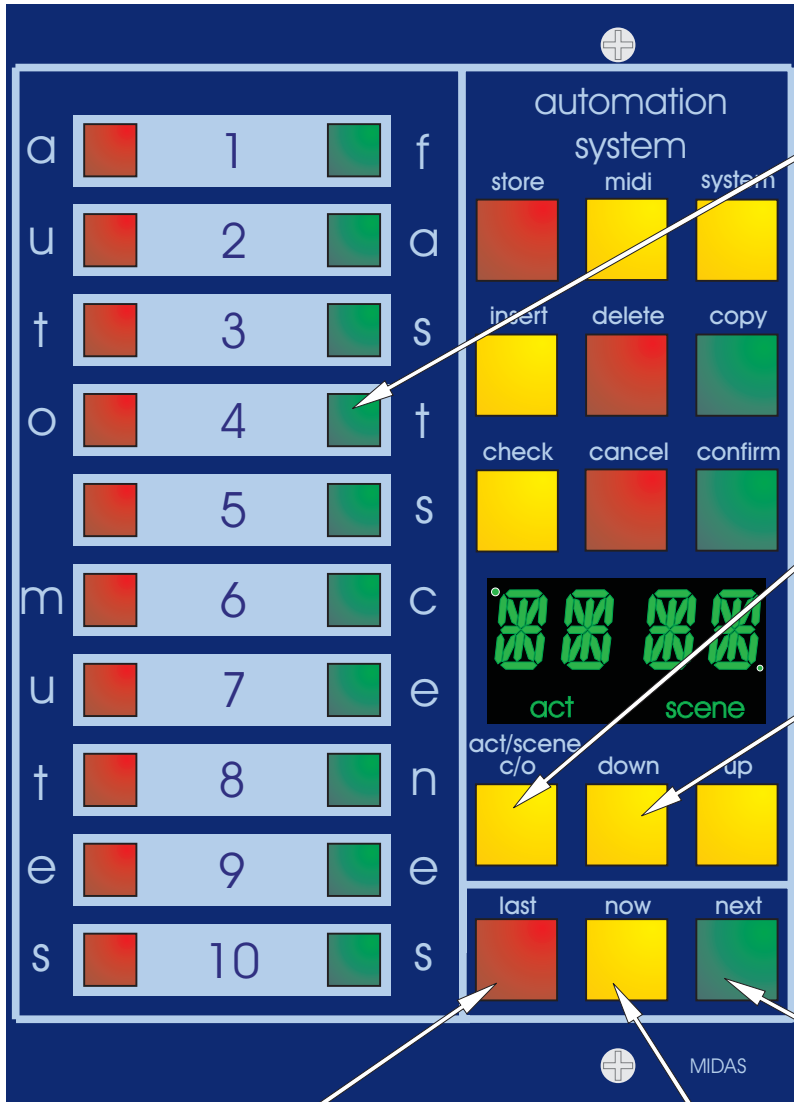
The FAST SCENE keys provide the operator with ten quick entry points into the ACT/SCENE sequence. I.e. if FAST SCENE key one is associated with ACT.SCENE 10.02, pressing it will recall ACT.SCENE 10.02.

When a menu function or midi editor is not selected, the ACT/SCENE C/O key selects the act or scene number. The appropriate indication, ACT or SCENE, will be illuminated to indicate this status.

The UP/DOWN keys allow the operator to enter act/scene numbers and navigate through menus.

The LAST, NOW and NEXT keys recall snap shots to the console surface.

NEXT recalls the snap shot numerically proceeding the snap shot that was currently recalled/stored.

LAST recalls the snap shot numerically preceding the snap shot that was currently recalled/stored.

NOW recalls the snap shot that is currently indicated on the numeric display.

The SYSTEM switch gives the operator access to the system menu.
Navigation of the menu is achieved by using the UP/DOWN keys
to select an entry, CONFIRM to execute a function, enter a sub menu
and CANCEL to exit a menu/sub menu.
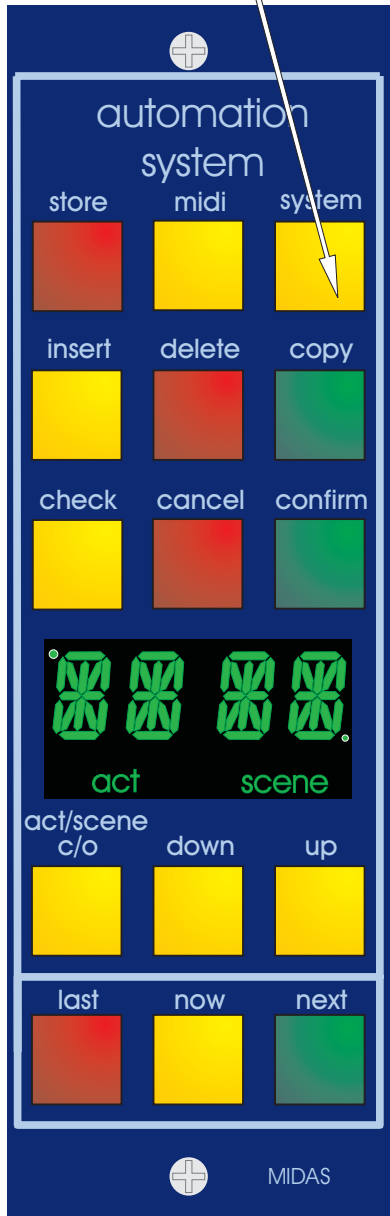
The system menu comprises: -

LOCK defines the level of console operation.
These are: -

TOTL All automation and assignment functions are disabled
RCAL Only recall and assignment functions are available.
STOR Scene storage/editing, recall and assignment are operational
SYST All functions are available.

All following levels of the menu are only available when the
console is unlocked to system level.

MIDI accesses the following MIDI functions

CHIN Sets the MIDI channel for console snap shot triggering.
     i.e. on receipt of a note on message on this channel number
     the console will recall the ACT.SCENE contained in the
     note velocity part of the message.
SOUT Allow all snap shot data to be exported
     as a MIDI SYSEX dump.
SIN Allow all snap shot data to be imported
     from a MIDI SYSEX dump

CONS allows several consoles to operate as a single system

NONE The console will operate independently
MAST The console will be the master of the system.
SLAV The console will be a slave of the system

CLER Clears all the console snap shot data.

Operating the STORE key will store the current console assignments and settings to the snap shot being displayed on the numeric display.

The MIDI key allows the operator to edit the snap shot MIDI information. On entering this mode the operator will be presented with a menu of the four MIDI messages that are stored within each snap shot, its operation is similar to the system menu.
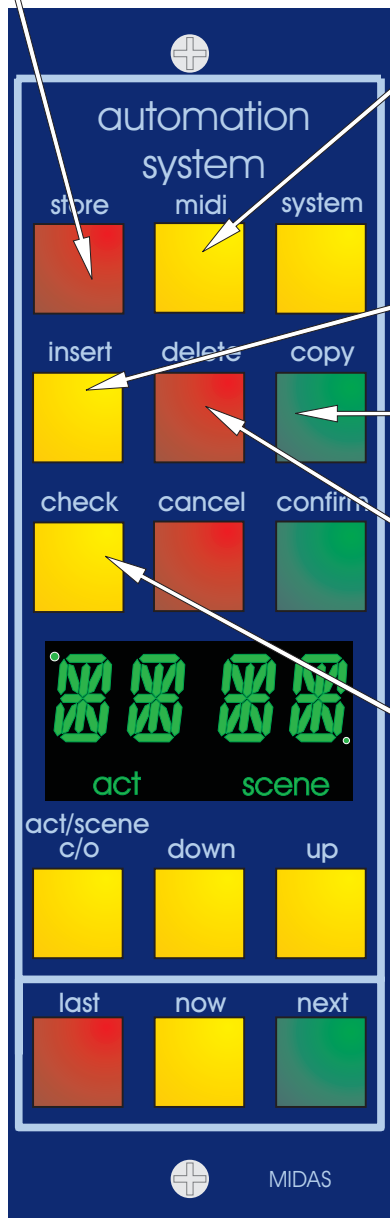
The COPY, DELETE and INSERT keys allow the operator to edit the snap shot sequence in the following manner.

INSERT operating this key will allow the operator to insert a snap shot at the number on the numeric display. The scene that was originally at the number and all con-current scenes will be renumbered by adding one to their scene numbers.

COPY will copy the snap shot currently displayed on the numeric display to a temporary store. This can then be stored/inserted to/at a new number in the normal fashion. If whilst in COPY mode the operator depresses a FAST SCENE keys the number of the snap shot will be associated with that FAST SCENE key.

DELETE allows the operator to delete the snap shot that is currently being displayed on the numeric display.

The CHECK key allows to operator to preview snap shot on the console surface WITHOUT recalling the setting to the console surface. Whist in check mode the C/O, UP and DOWN keys can be used to step through the snap shots.

Heritage Menu Overview Ver 1.00

(Key ▮ this symbol denotes a CONFIRM button press)

Menu Button	*Menu 1st Level*	*Menu 2nd Level*	

SYSTEM MENU ▮ →

LOCK ▮ →
- TOTL ▮ — All automation and assignment functions are disabled.
- RCAL ▮ — Only recall and assignment functions are available.
- STOR ▮ — Scene storage, editing, recall and assignment operation available.
- SYST ▮ — All Functions are available.

CLR ▮ — This clears all scene information on the console to give a clean starting point for programming

CONS ▮ →
- NONE ▮ — No consoles connected
- SLAVE ▮ — Console configured as a slave console
- MAST ▮ — Console configured as a Master Console

AUTO ▮ →
- ENAB ▮ — YES / NO
- SET_P ▮ Chnn ▮ — NOFF / SWGF / C_CH / N_ON

DATA ▮ →
- LOAD ▮ — SERIAL / MIDI
- SAVE ▮ — SERIAL / MIDI

MIDI ▮ →
- OUT1 ▮ → Midi Out Message 1
- OUT2 ▮ → Midi Out Message 2
- OUT3 ▮ → Midi Out Message 3
- OUT4 ▮ → Midi Out Message 4

MIDI Out Sub Menus:
(Ø denotes a number)

OUTØ ▮ →
- →CLR
- →N_ON ▮ →ChØØ (Midi Channel) ▮ →ØØØ (Note) ▮ →VØØØØ (Note Velocity)
- →N_OFF ▮ →ChØØ (Midi Channel) ▮ → ØØØ (Note) ▮ →VØØØØ (Note Velocity)
- →PROG ▮ →ChØØ (Midi Channel) ▮ → PØØØ (Program Change Number)
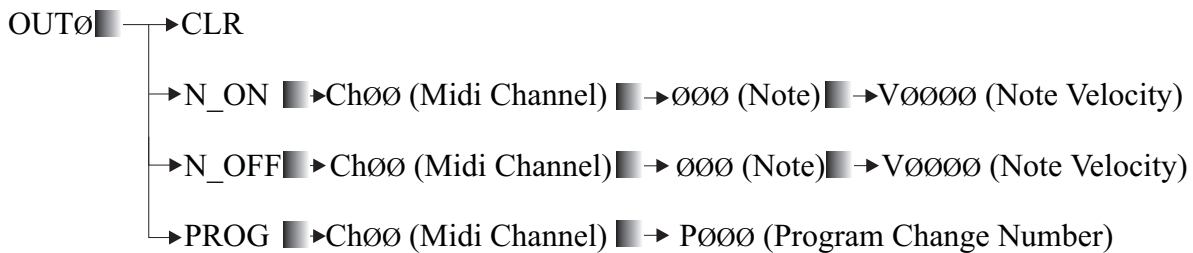
Unlocking the Console:
To unlock the mixing console press the SYSTEM menu button. Using the up/down keys scroll through the menu until LOCK is displayed, press CONFIRM. Using the up/down keys scroll through the menu until the desired level of unlock is displayed on the screen, then press the confirm button.

Locking the Console:
To lock the mixing console press the SYSTEM menu button. Using the up/down keys scroll through the menu until LOCK is displayed, press CONFIRM. Using the up/down keys scroll through the menu until TOTL is displayed on the screen, then press the CONFIRM button

The LOCK button located on the MODE SWITCHES disables the Assign keys, Mode switches and Set switches on the Centre section and input faders.

Storing a Scene:
Setting up a scene, Assigning VCA, Mutes, Faders etc.

Assigning VCA's:
a/ Ensure that the lock button is not illuminated on the mode switches (if it is just press the button to extinguish the LED).
b/ Press the VCA mode button so that it is illuminated. This has now selected the VCA mode on the input modules.
c/ Using the ASSIGN KEY select which master VCA you wish to assign to a particular input module (1-10). Quickly enabling a button will clear all other buttons enabled so only the one selected is illuminated, push and holding the button down for 0.25seconds will not disable other buttons previously enabled.
d/On the input channels you wish to assign to the master VCA(s) selected press the SET Button, the relevant LED(s) on the input channel will illuminate. If the SET button is pressed quickly the VCA's selected on the assign keys will be added to those already selected on the channel. If the SET button is pressed and held for a short time then any VCA's already selected on that channel will be cleared and replaced with those selected on the assign key.

Assigning Mutes:
a/ Ensure that the lock button is not illuminated on the mode switches if it is just press the button to extinguish the LED.
b/ Press the MUTE mode button so that it is illuminated. This has now selected the mute mode on the input modules.
c/ Using the ASSIGN KEY select which Automutes you wish to assign to a particular input module (1-10). Quickly enabling a button will clear all other buttons enabled so only the one selected is illuminated, push and holding the button down for 0.25seconds will not disable other buttons previously enabled.
d/ On the input channels you wish to assign to the Automutes selected press the SET Button, the relevant LED(s) on the input channel will illuminate. If the SET button is pressed quickly the Automutes selected on the assign keys will be added to those already selected on the channel. If the SET button is pressed and held for a short time then any Automutes already selected on that channel will be cleared and replaced with those selected on the assign key.

Fader Position:
a/ Ensure the Virtual Fader recall mode button is not illuminated and the faders are in normal mode, if this is enabled the new fader position will not be stored.
b/ Move the faders to the desired position.
The only other automated buttons on the console to be set are the Input Mutes, Master VCA Mutes, Group Mutes, Matrix Mutes and Master Mutes.

Storing a Scene Cont.

Selecting a memory number and storing the memory:
a/ The numbers in the display can be altered as follows. Select either Act or Scene using the ACT/SCENE C/O switch. You will see either act or scene illuminate below the display.

b/ The digits can then be altered between 00-99 using the UP and DOWN keys. This function is looping so if you are on 00 you can go directly to 99 by scrolling down.

c/ To store a scene press STORE in the scene is new then it will just be stored and the screen will display done. If the scene already exists then the display will read over_str and you will need to press the confirm button. The screen will then read done.

Editing Midi (Program Change):

a/ Pressing the MIDI button places you in the midi menu.

b/ Using the UP and DOWN buttons scroll through OUT01 to 04 until the required message is reached. (On the Heritage there are a maximum of 4 midi out messages that can be sent per recalled scene). Press CONFIRM.

c/ Using the UP and DOWN buttons scroll through the menu until the screen reads PROG. Press the CONFIRM button

d/ The window will read CH00, using the UP and DOWN keys a channel between 01 to 16 can be selected. Press CONFIRM.

e/ The window P000, using the UP and DOWN keys a program, change between 00 and 127 can be selected. Press confirm and you will be dropped back to the first level of the menu. When the desired messages have been edited press the MIDI button again to drop out of the menu.

f/ To then store the midi information with the scene the STORE button must be pressed followed by CONFIRM.

Inserting Scenes:

a/ Once you have created the scene you wish to insert edit the act/scene number display using the ACT/SCENE, UP and DOWN buttons until the desired position is displayed.

b/ Press the INSERT switch. The screen will then display *done*. The original scene and any scene preceding it will then be incremented by one position.

NB The INSERT button will only be illuminated if a scene exists where you wish to place the scene, otherwise STORE may be used as normal.

Copying Scenes:

a/ Recall the scene you wish to copy by selecting the scene number and pressing the NOW button.

b/ Press the COPY button the act/scene numbers can now be scrolled through using the ACT/SCENE,UP and DOWN buttons. Once the desired position is reached the scene is copied to that position when the CONFIRM button is pressed.

NB There is a BUG in the software so that once the COPY button has been pressed the screen is not updated. You can't see were the scene will be placed unless you mentally count the number of up or down button presses, apart from this the information copied is correct.

A WORD ABOUT THE VIRTUAL FADER MODE:

There are four modes in which the automated faders can operate:

a/ DEFAULT MODE with the VIRTUAL FADER RECALL MODE switch extinguished. In this mode the faders act like any normal console fader. When a scene is recalled and the Mode switch is selected to FADER the LED's along side the input fader wil indicate where the fader should be. The fader should always be moved towards the LED(s). Two LED's illuminated together either mean the fader is very far away from them as it gets closer one should illuminate. If you over shoot then a lower LED will illuminate showing overshoot. When the fader is in position all LED's on that channel should be off.

b/ Virtual Fader Mode with the VIRTUAL FADER RECALL MODE switch flashing. In this mode the faders have no function and will not effect the channel post fader level. The position of the virtual fader will be indicated by the LED's by the side of the fader.

c/ Virtual Fader Mode + Trim with the VIRTUAL FADER RECALL MODE switch illuminated. In this mode the faders will have no function until they are set to 0dB, at this point the SET LED for that channel will flash. This indicates that the Fader will now sum together with the virtual fader to give a trim of +10dB to minus infinity. By pressing the VIRTUAL FADER RECALL MODE switch the mode is changed back to virtual mode. Once you have trimmed the channel fader level for however many scenes you wish and the level alteration is no longer required you can switch back to virtual mode. The fader may be returned infinity without effecting the level of the output. The channel will go to the stored Virtual fader level when the next scene is recalled.

d/ FADER SAFE MODE, When this button is enabled on the input channel the fader is taken from automation control and behaves as a normal fader.

The Cross fade is set to ¼ second and cannot be altered.

NB fader positions CAN NOT be stored when the Virtual Fader Mode is enabled.

Previewing a Scene:
To preview a scene without effecting your mix select the scene number on the display using the ACT/SCENE, UP and DOWN buttons. Once the desired number is displayed using the CHECK button the automated switch configuration and fader positions stored for that scene can be viewed without changing the actual settings. Pressing the CHECK button will drop you back into normal mode.

The screen will also display Heritage configuration and Midi data. On 1st issue software the messages scrolled will also read ERR before the Midi data. This is not indicating any error with the scene but is concerned with Heritage external communications, which will be solved shortly. This does not effect any part of the operation of the console.

Recalling Scenes:
There are 3 methods by which scenes can be recalled:

a/ Stepping through existing scenes using the LAST and NEXT buttons. This steps through the scenes in numerical order.

b/ Select the act/scene number using the ACT/SCENE, UP and DOWN buttons, when the correct scene number is displayed in the screen press the NOW button and the scene will be recalled.

c/ A scene can be assigned to a fast scene key (1-10). In this instance the scene is recalled by just pushing the fast scene key.

Assigning A Scene To A Fast Scene Key:

a/ Recall the scene you wish to assign to a FAST SCENE KEY.

b/ Press the COPY button, followed by the FAST SCENE KEY button you wish to assign that ACT/SCENE to. The screen will then display *done*.

Deleting a Scene From A Fast Key:

a/ Press and hold down the FAST KEY you want to delete.

b/ When the YES and NO button start to flash you can now select either YES or NO to delete or cancel deletion of the FAST KEY.

Deleting A Scene:

Recall the scene you wish to delete, Or display the scene number on the screen using the ACT/SCENE, UP and DOWN buttons. When this is done press the DELETE button. You will be asked to confirm this. Press the CONFIRM button the screen will then say *done* when the scene is deleted.
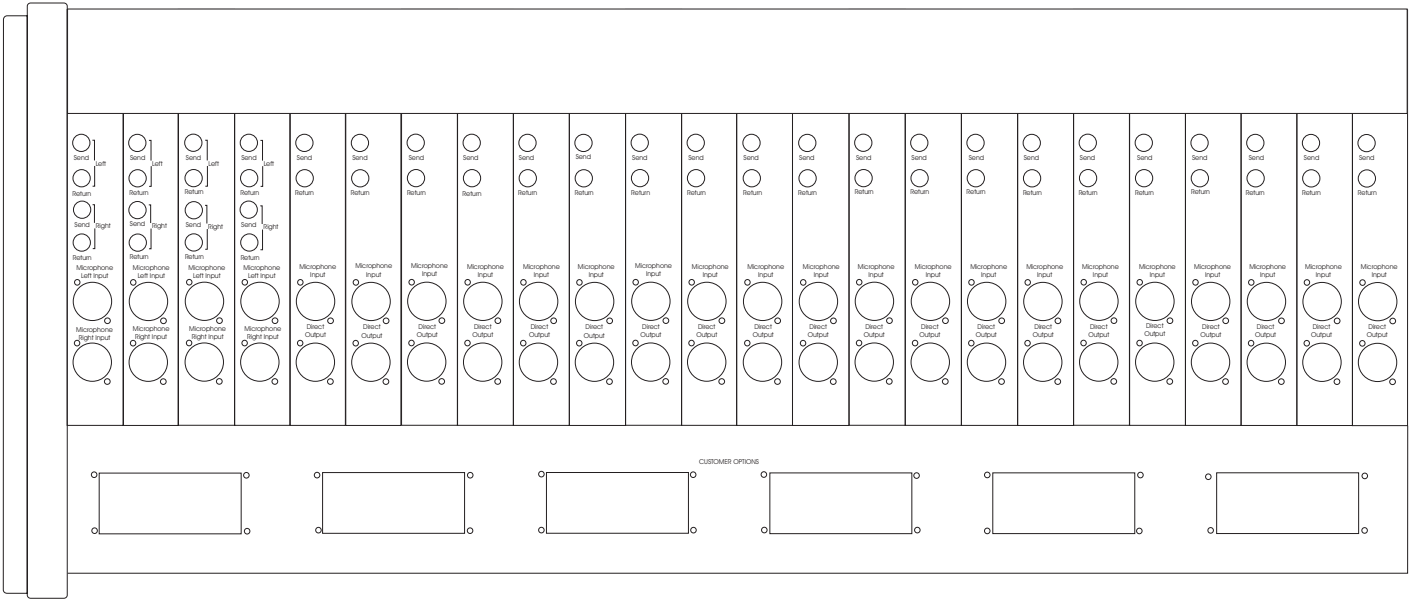
Midi In Assignment:

In the version 1 software this function is not yet enabled.
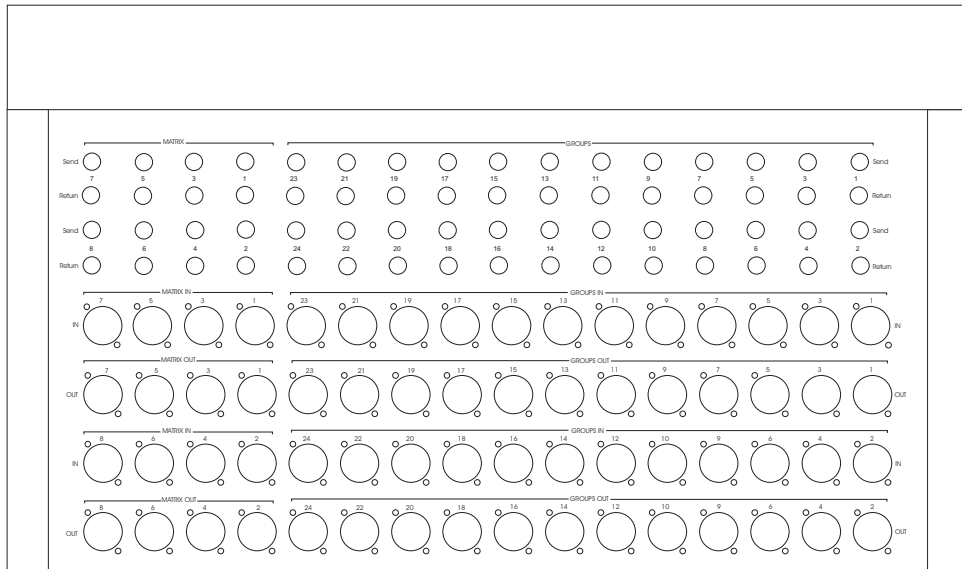
Midi Sysex Dumps:

To store the recall a memory between the console and a midi device (such as an MDF3 midi Filer) select the SYSTEM menu, using the UP and DOWN keys select DATA and press CONFIRM. Using the UP and DOWN keys select either SAVE or LOAD and press CONFIRM. There are 2 of communication either MIDI (through the midi port rear of the console or via RS232 (NB software will shortly be available to support this). Select either MIDI or SERIAL using the UP and DOWN buttons and press CONFIRM. The screen will then indicate the function being carried out and notify the user when finished.
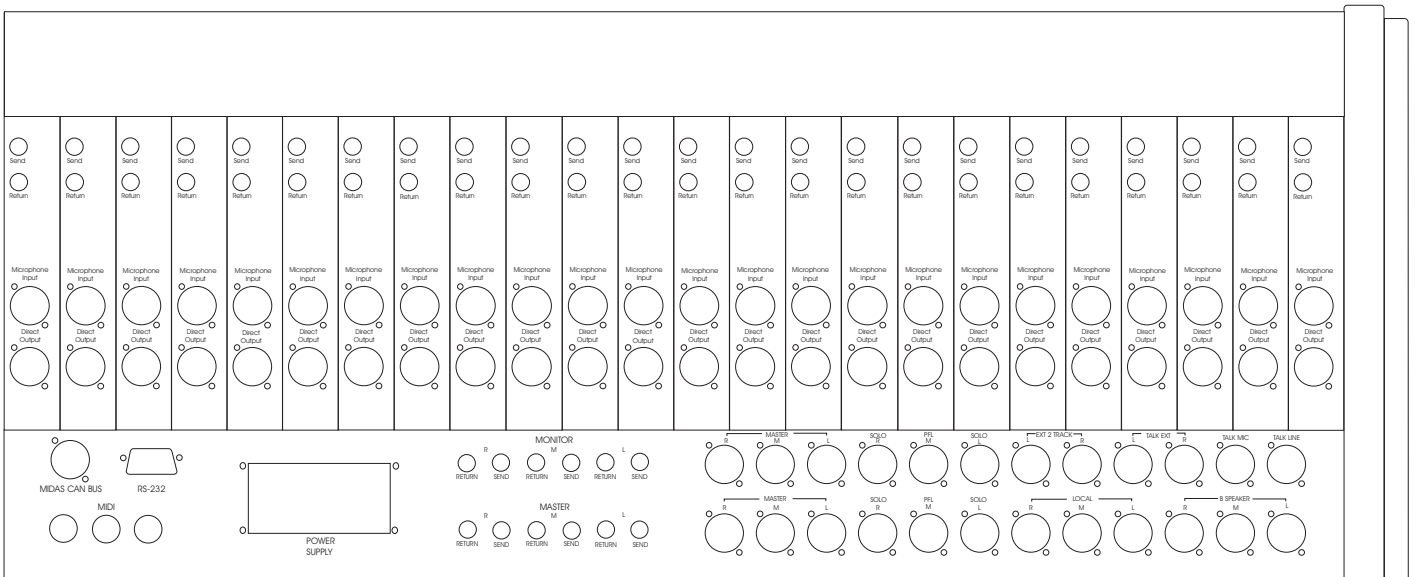
HERITAGE 3000
Back panel
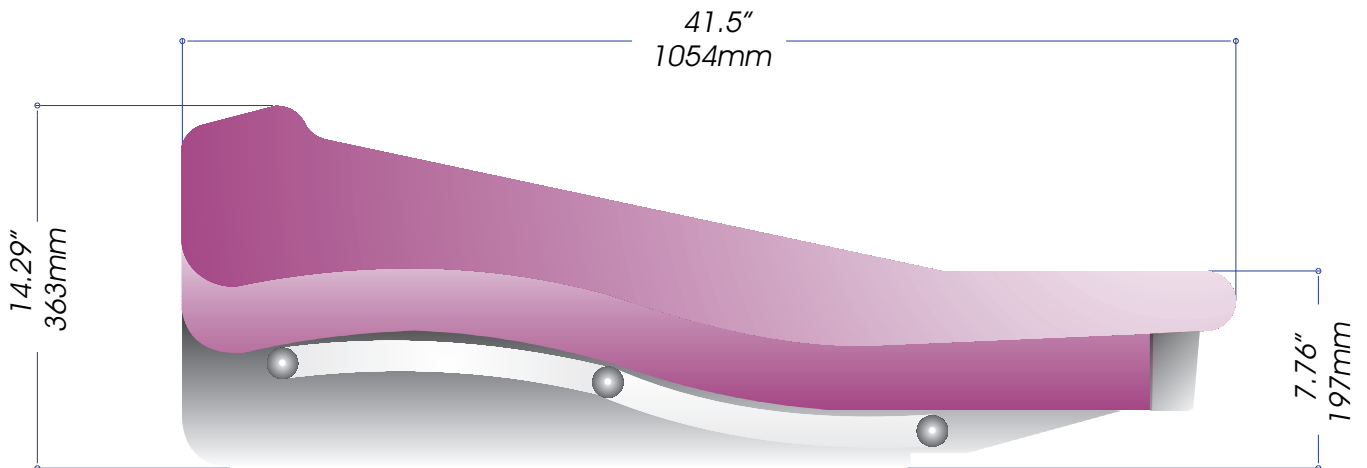
Rear Panel Left View

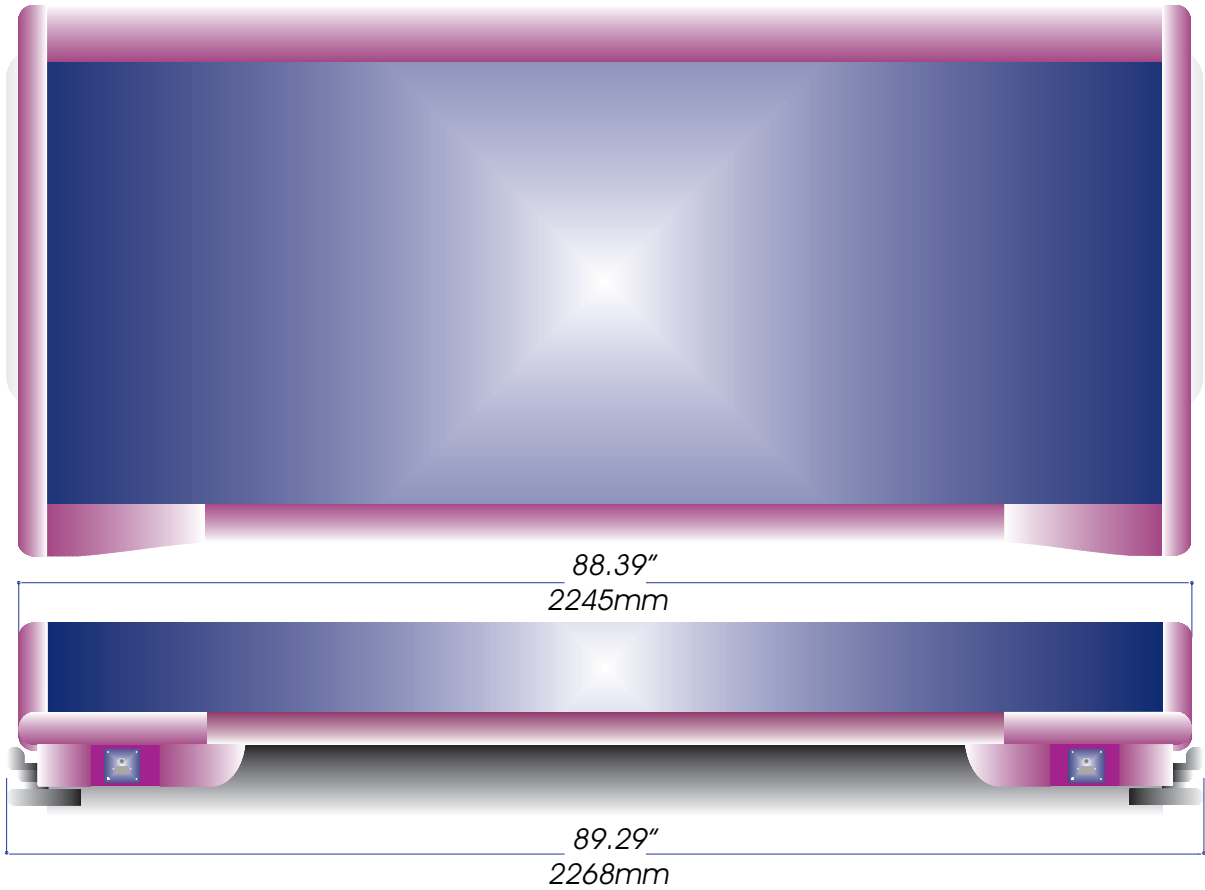CUSTOMER OPTIONS

Rear Panel Centre View

Rear Panel Right View

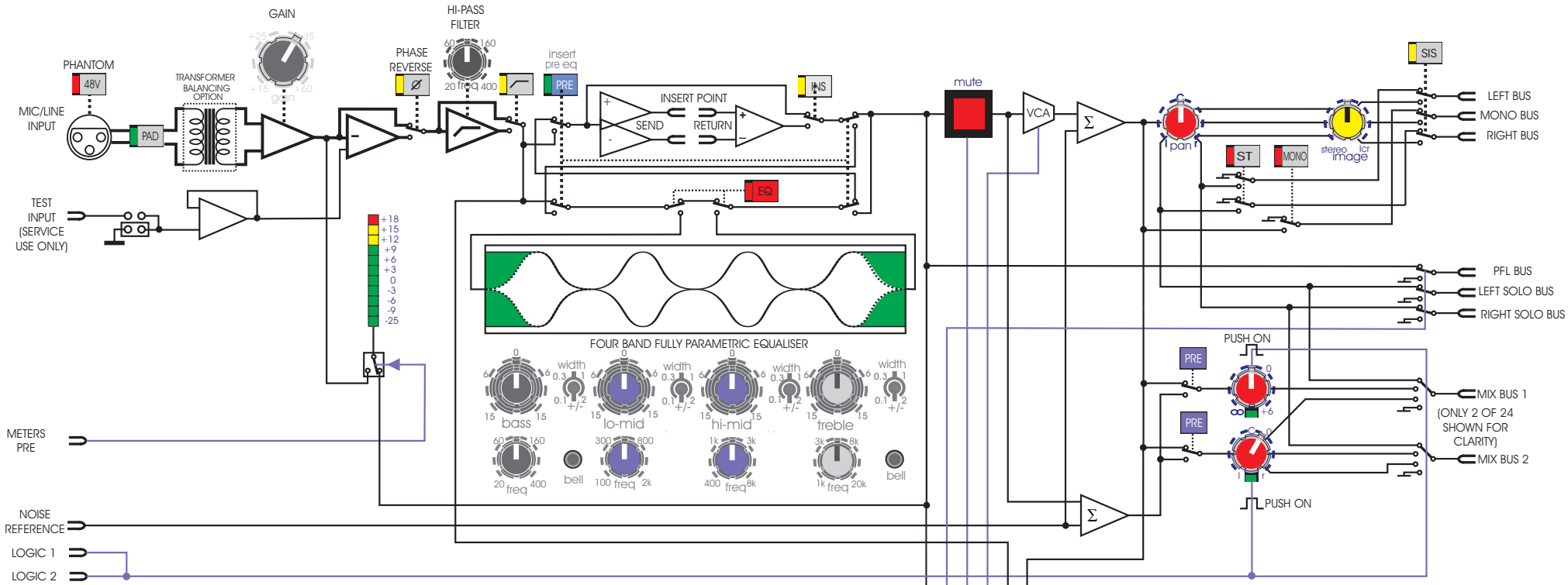# Heritage 3000 Frame Measurements

88.39"
2245mm

89.29"
2268mm

41.5"
1054mm

14.29"
363mm

7.76"
197mm

Weight
(out of flight case)

200 Kg / 440.9lb

GAIN
+25 +35
+15 +60 gain

HI-PASS FILTER
60 160
20 freq 400

PHANTOM
48V

MIC/LINE INPUT

TRANSFORMER BALANCING OPTION

PAD

PHASE REVERSE
Ø

insert pre eq
PRE

INSERT POINT
SEND   RETURN

INS

mute

VCA

Σ

SIS

pan
ST   MONO
stereo   lcr
image

LEFT BUS
MONO BUS
RIGHT BUS

EQ

TEST INPUT (SERVICE USE ONLY)

+18
+15
+12
+9
+6
+3
0
-3
-6
-9
-25

FOUR BAND FULLY PARAMETRIC EQUALISER

PFL BUS
LEFT SOLO BUS
RIGHT SOLO BUS

width
0.3 1
0.1 +/-2
6   15
bass
60   160
20 freq 400

width
0.3 1
0.1 +/-2
15   15
lo-mid
bell
300   800
100 freq 2k

width
0.3 1
0.1 +/-2
15   15
hi-mid
1k   3k
400 freq 8k

width
0.3 1
0.1 +/-2
15   15
treble
bell
3k   8k
1k freq 20k

PUSH ON
PRE
∞   +6
MIX BUS 1
(ONLY 2 OF 24 SHOWN FOR CLARITY)

PRE
MIX BUS 2

PUSH ON

METERS PRE

NOISE REFERENCE

Σ

LOGIC 1
LOGIC 2

set
1
2
3
4
5
6
7
8
9
10

SET LEDS MAY FUNCTION IN ANY ONE OF THREE WAYS AS SHOWN. FUNCTION IS DEPENDANT ON ASSIGN MASTER SWITCHES.

set
1
2
3
4
5
6
7
8
9
10
MUTE GROUP

set
1
2
3
4
5
6
7
8
9
10
VCA GROUP

set
1
2
3
4
5
6
7
8
9
10
FADER POSITION INDICATION

0

Σ

safe vca   safe mute

solo

VCA VOLTAGE

MUTE SAFE

SOLO CONTROL

SCENE PREVIEW

safe automation

INTERNAL PRE/POST OPTIONS

PRE

direct o/p

TRANSFORMER BALANCING OPTION

DIRECT

SIGNAL PATH KEY
——— = ANALOGUE SIGNALS
——— = D.C. SIGNALS
········· = AUTOMATION SIGNALS

MIDAS
HERITAGE 3000 INPUT MODULE
BLOCK DIAGRAM
ISSUE A
DATE 11 - 5 - 98
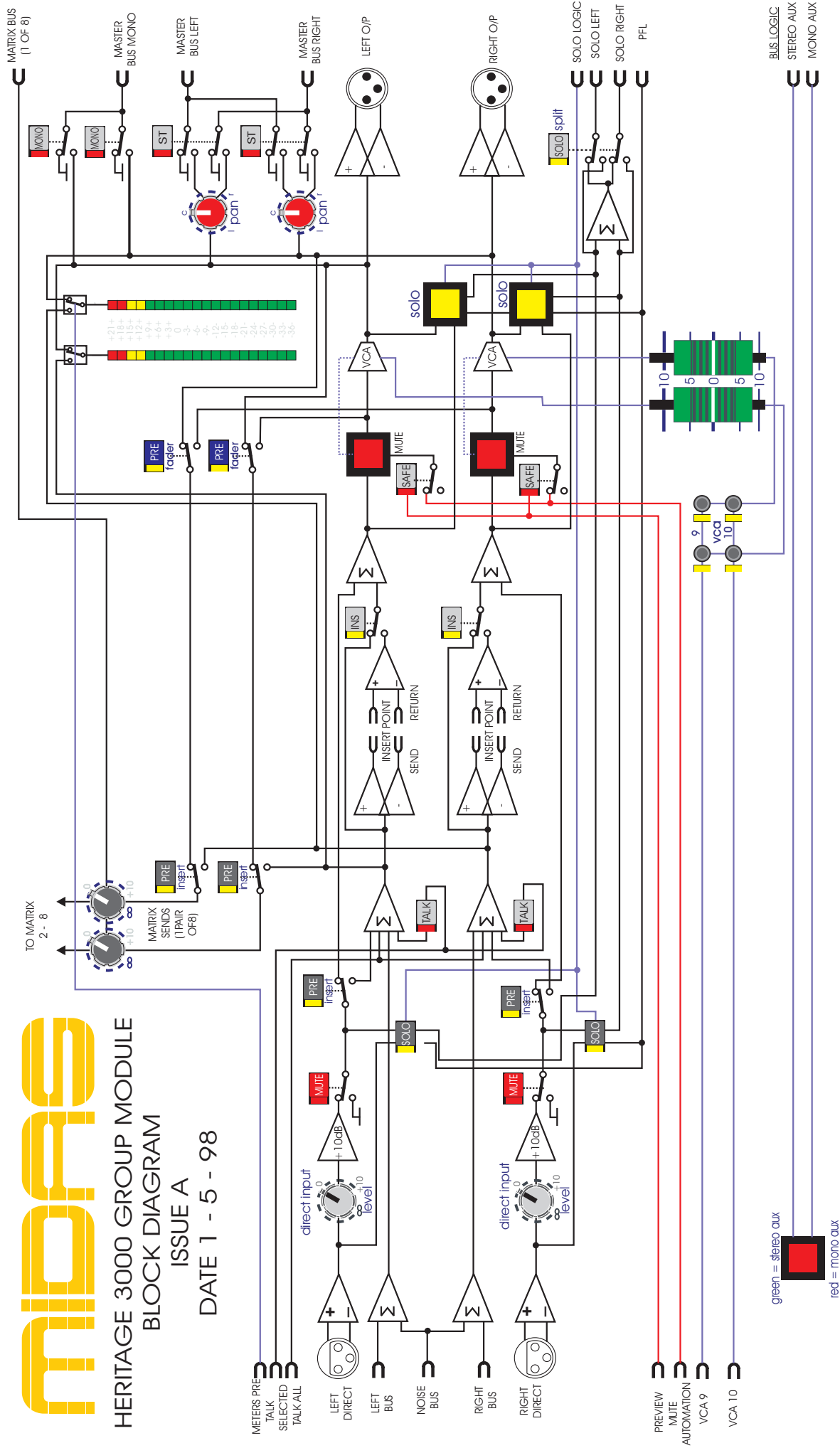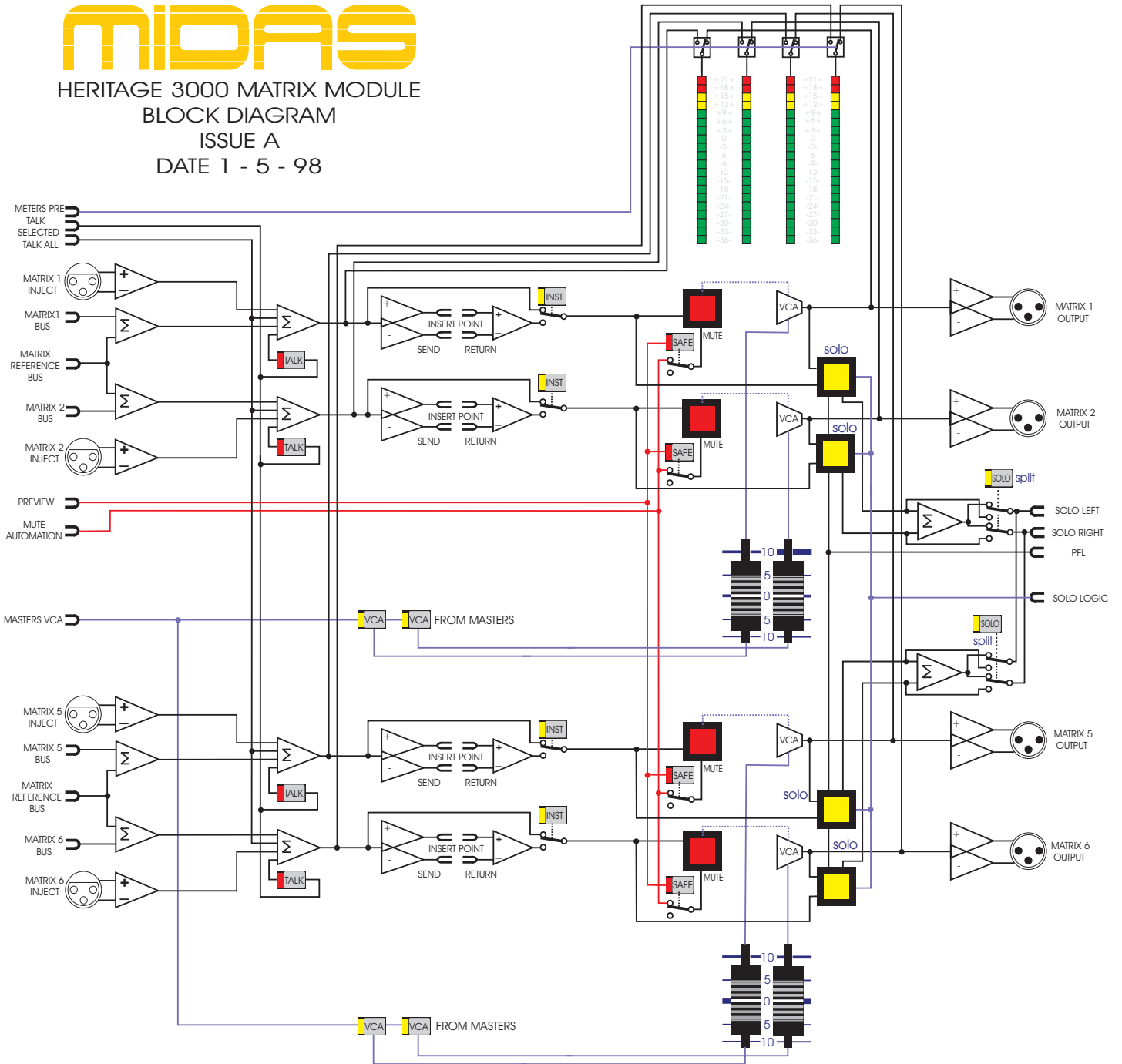
CAN BUS

XL3000 INPUT FADER MODULE BLOCK DIAGRAM

MIDAS

HERITAGE 3000 GROUP MODULE
BLOCK DIAGRAM
ISSUE A
DATE 1 - 5 - 98

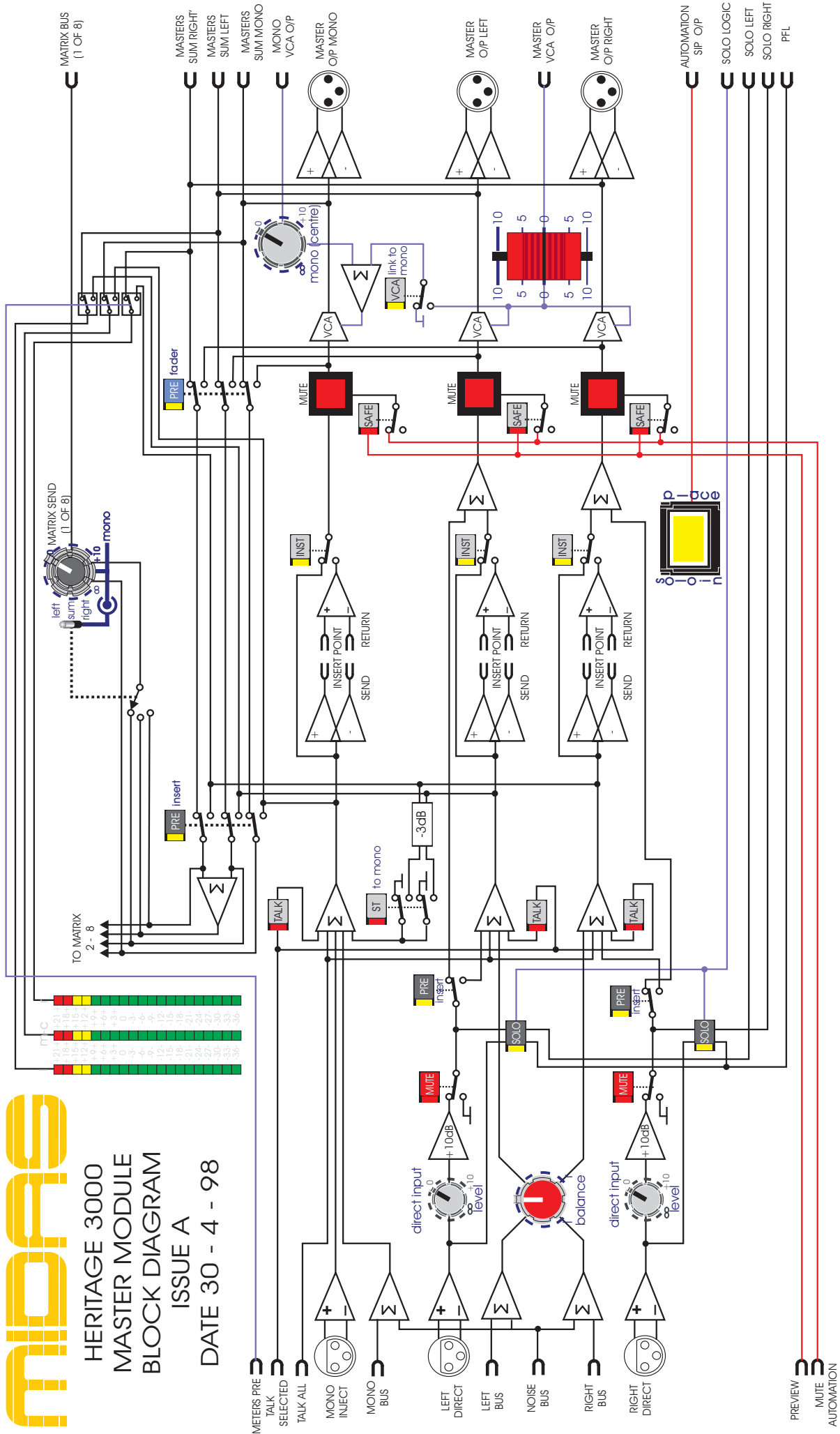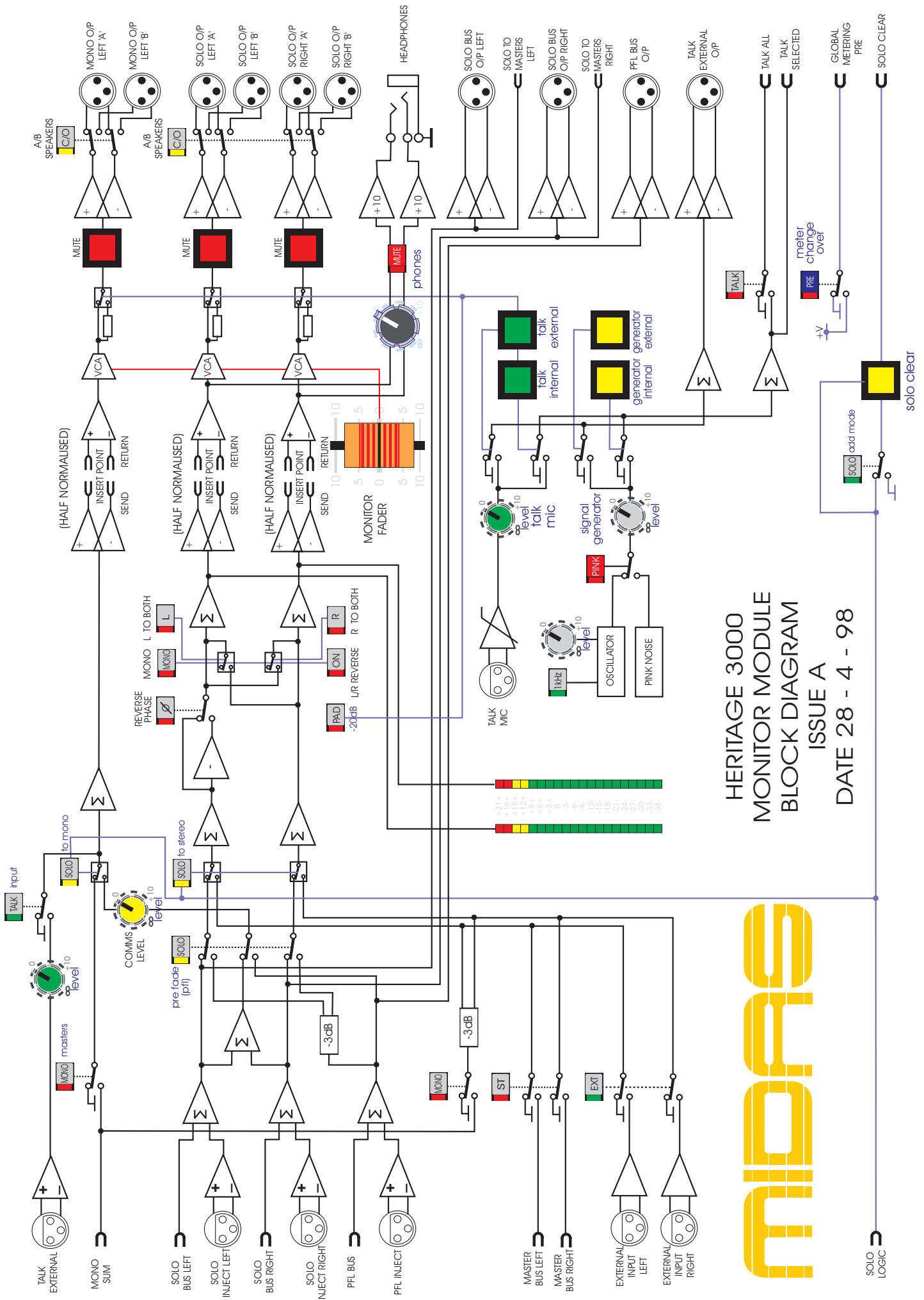HERITAGE 3000 MATRIX MODULE
BLOCK DIAGRAM
ISSUE A
DATE 1 - 5 - 98

METERS PRE
TALK
SELECTED
TALK ALL

MATRIX 1 INJECT
MATRIX1 BUS
MATRIX REFERENCE BUS
MATRIX 2 BUS
MATRIX 2 INJECT

TALK
TALK

INSERT POINT
SEND   RETURN
INST

INSERT POINT
SEND   RETURN
INST

SAFE   MUTE
SAFE   MUTE

VCA
VCA

solo
solo

PREVIEW
MUTE AUTOMATION

MATRIX 1 OUTPUT
MATRIX 2 OUTPUT

SOLO split
SOLO LEFT
SOLO RIGHT
PFL

SOLO LOGIC

MASTERS VCA

VCA   VCA   FROM MASTERS

SOLO split

MATRIX 5 INJECT
MATRIX 5 BUS
MATRIX REFERENCE BUS
MATRIX 6 BUS
MATRIX 6 INJECT

TALK
TALK

INSERT POINT
SEND   RETURN
INST

INSERT POINT
SEND   RETURN
INST

SAFE   MUTE
SAFE   MUTE

VCA
VCA

solo
solo

MATRIX 5 OUTPUT
MATRIX 6 OUTPUT

10
5
0
5
10

10
5
0
5
10

VCA   VCA   FROM MASTERS

47

MIDAS

HERITAGE 3000
MASTER MODULE
BLOCK DIAGRAM
ISSUE A
DATE 30 - 4 - 98

MATRIX BUS (1 OF 8)
MASTERS SUM RIGHT
MASTERS SUM LEFT
MASTERS SUM MONO
MONO VCA O/P
MASTER O/P MONO
MASTER O/P LEFT
MASTER VCA O/P
MASTER O/P RIGHT
AUTOMATION SIP O/P
SOLO LOGIC
SOLO LEFT
SOLO RIGHT
PFL

mono (centre)

link to mono
VCA

VCA
VCA
VCA

PRE fader

MUTE
MUTE
MUTE

SAFE
SAFE
SAFE

MATRIX SEND (1 OF 8)
mono
left
sum
right

INST
INST
INST

INSERT POINT
RETURN
SEND

INSERT POINT
RETURN
SEND

INSERT POINT
RETURN
SEND

PRE insert

-3dB

to mono

TALK
ST
TALK
TALK

TO MATRIX 2 - 8

PRE insert
PRE insert

SOLO
SOLO

MUTE
MUTE

+10dB
+10dB

direct input
level

balance

direct input
level

METERS PRE
TALK SELECTED
TALK ALL
MONO INJECT
MONO BUS
LEFT DIRECT
LEFT BUS
NOISE BUS
RIGHT BUS
RIGHT DIRECT
PREVIEW
MUTE AUTOMATION

48

HERITAGE 3000
MONITOR MODULE
BLOCK DIAGRAM
ISSUE A
DATE 28 - 4 - 98

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Heritage 3000 Specification Overview and Statistics.

1. The Heritage 3000 is a 30 buss console with an additional 27 x 8 output matrix. The busses are as follows:-

24	stereo or mono configurable groups	= 24
1	stereo master	= 2
1	mono master	= 1
1	stereo AFL	= 2
1	mono PFL	= 1
	TOTAL	= 30

2. The 3000 has 10 automute sub groups and 10 VCA sub groups which include VCA sub group muting.

3. The 3000 has 52 input channels plus an additional 26 direct inputs on the group and master modules.

4. The 3000 has a total XLR input count of 96 as follows:-

52	channel mic inputs
24	group direct inputs
8	matrix bus inject inputs
3	solo bus inject inputs
2	master direct inputs
2	external inputs (2 track return)
1	master bus inject
2	talk mic input
1	talk external input
1	talk int line

5. The 3000 has a total XLR output count of 89 as follows:-

44	input channel direct outputs
24	audio group outputs
8	matrix outputs
3	master outputs
3	solo outputs
6	local outputs
1	talk external output

6. The 3000 has a total of 180 balanced 1/4 inch jacks for inserts as follows:-

52	input channel insert sends
52	input channel insert returns
24	audio group insert sends
24	audio group insert returns
8	matrix insert sends
8	matrix insert returns
3	master insert sends
3	master insert returns
3	local insert sends
3	local insert returns

7. The 3000 has 58 long throw faders for mix control with fader position recall and virtual fader functions.

8. The 3000 has a total of 1043 automated switch functions as follows:-

       480   input channel VCA sub group virtual assign switches
       480   input channel mute sub group virtual assign switches
        48   input channel mute switches
        24   audio sub group mute switches
         8   matrix mute switches
         3   master mute switches

9. The 3000 has a total of 89 peak program meters with 20 LED segments on all outputs and 11 LED segments on input channels.

Heritage 3000 Technical Specifications.

Input Impedance	Mic	2k Balanced
	Line	20k Balanced
Input Gain (all faders at 0dB)	Mic	Continuously variable from + 15dB to + 60dB
	Mic + Pad	Continuously variable from - 10dB to + 35dB
	Line Level Inputs	0dB
Maximum Input Level	Mic	+ 6dBu
	Mic + Pad	+ 31dBu
	Line Level Inputs	+ 21dBu
CMR at 100Hz	Mic (gain at +40dB)	Typ 115dB
	Mic + Pad (gain 0dB)	Typ 80dB
CMR at 1kHz	Mic (gain + 40dB)	> 100dB
	Mic + Pad (gain 0dB)	> 60dB
	Line	> 50dB
Frequency Response (20 to 20kHz)	Mic to Mix (gain + 60dB)	+ 0dB to - 1dB
Noise (20 to 20kHz)	Mic EIN ref. 150Ω (gain + 60dB)	- 128dBu
System Noise (20 to 20kHz)	Summing Noise (48 channels routed with faders down)	- 80dB
	Line to Mix Noise (48 channels routed at 0dB, pan centre)	- 75dB
Distortion at 1kHz	Mic to Mix (+ 60dB gain, 0dBu output)	< 0.03%

Crosstalk at 1kHz	Channel to Channel	< - 90dB
	Mix to Mix	< - 90dB
	Channel to Mix	< - 90dB
	Maximum Fader attenuation	> 80dB
Output Impedance	All Line Outputs	50 Ohms Balanced Source to drive > 600Ω
	Headphones	To drive > 8Ω
Maximum Output Level	All Line Outputs	+ 21dBu
	Headphones	+ 21dBu
Nominal Signal Level	Mic	- 60dBu to + 10dBu
	Line	0dBu
	Headphones	+ 10dBu
Equaliser	Hi pass slope	12dB / Oct
	Hi pass frequency	Continuously variable - 3dB point from 20Hz to 400Hz
	Treble Gain	Continuously variable + 15 dB to - 15 dB Centre detent = 0dB
	Treble Shelving Freq.	Continuously variable - 3dB point from 1k to 20k
	Treble Bell Freq.	Continuously variable centre from 1k to 20k
	Treble Bell Bandwidth	Continuously variable 0.1 Oct. to 2 Oct Centre detent = 0.5 Oct
	Hi Mid Gain	Continuously variable + 15 dB to - 15 dB Centre detent = 0dB
	Hi Mid Freq.	Continuously variable centre from 400Hz to 8k
	Hi Mid Bandwidth	Continuously variable 0.1 Oct. to 2 Oct Centre detent = 0.5 Oct

Lo Mid Gain	Continuously variable + 15 dB to - 15 dB Centre detent = 0dB
Lo Mid Freq.	Continuously variable centre from 100Hz to 2k
Lo Mid Bandwidth	Continuously variable 0.1 Oct. to 2 Oct Centre detent = 0.5 Oct
Bass Gain	Continuously variable + 15 dB to - 15 dB Centre detent = 0dB
Bass Shelving Freq.	Continuously variable - 3dB point from 20Hz to 400Hz
Bass Bell Freq.	Continuously variable centre from 20Hz to 400Hz
Bass Bell Bandwidth	Continuously variable 0.1 Oct. to 2 Oct Centre detent = 0.5 Oct