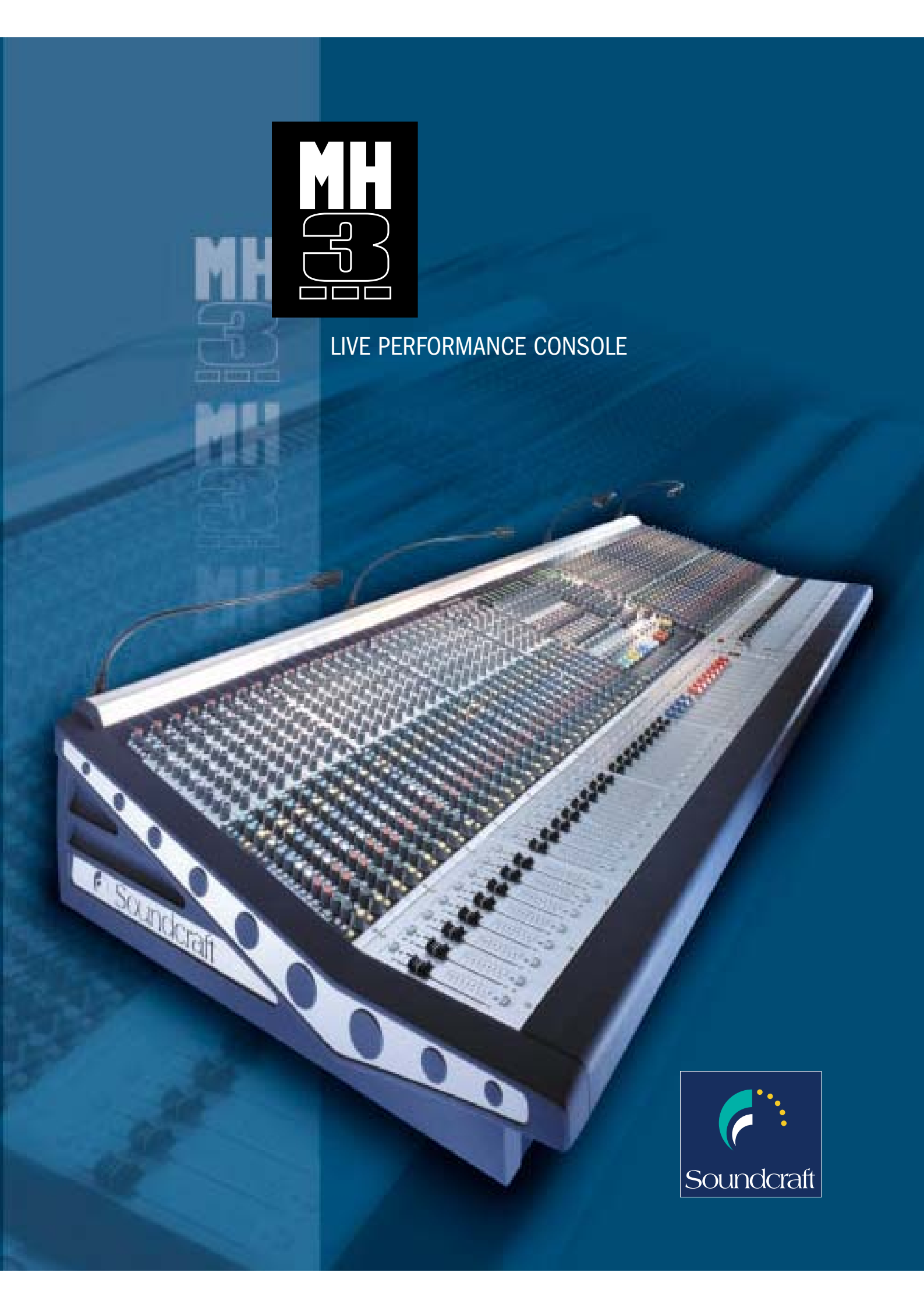
MH3

LIVE PERFORMANCE CONSOLE



Soundcraft

UNRIVALLED FLEXIBILITY. UNBEATABLE VALUE.

Don't be fooled by its modest price tag. Ideally suited for both Front-of-house and Monitor use, the new Soundcraft MH3 provides sound contractors and venues with the critical commercial advantage of complete console flexibility. All it takes is the touch of a button to place either Groups or Aux Masters onto faders, delivering intuitive and uncompromised operation in either application.

The MH3 is available in five frame sizes with legendary Soundcraft sound quality delivered via a new high-headroom mic amp, classic British EQ and rigorous circuit design.

What's more, the MH3 is a true modular console. Channels can be quickly removed and replaced in blocks of eight, making it easy to configure the MH3 to meet the user's precise requirements and ensuring the robust reliability a life on the road necessitates.

A professional, modular, dual-purpose live sound console at a truly affordable price? Welcome to the Soundcraft MH3.

KEY FEATURES

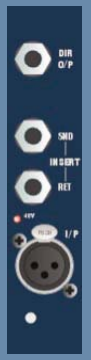
- Versatile design, allowing FOH, Monitors, or Monitors from FOH configurations
- Semi-modular in blocks of 8 for flexible layouts and easy serviceability
- Frame sizes 24 mono/4 stereo, 32 mono/4 stereo, 40 mono/4 stereo, 48 mono/4 stereo, 56 mono/4 stereo
- Flexible Auxiliary Bus structure with 2 stereo sends for in-ear monitoring
- 8 group busses and 12 aux busses in FOH mode
- 12 monitor busses (12 mono, or 8 mono + 2 stereo) in Monitor mode
- Swap mode allows fader control of Aux outputs in Monitor mode
- Integral 12x4 matrix, can be expanded to 12x8 with optional matrix module
- 3-band EQ on FX Returns 1-8, switchable to Group or Aux outputs
- New Mic Amp design with high headroom and outstanding CMRR
- New EQ design with focused response
- LCR panning on inputs
- 8 VCA groups and 8 Mute groups with snapshot automation and MIDI control
- Integrated control of BSS Audio Varicurve™ and dbx DriveRack™
- Integral LED bargraph metering for all inputs and outputs
- Optional VU output meterbridge

MONO INPUT MODULE

MONO INPUTS ARE MODULAR IN BLOCKS OF 8 CHANNELS, AND FEATURE AN INTEGRAL REAR-CONNECTOR PANEL. THE SMALLEST FRAME SIZE PROVIDES 24 MONO INPUT CHANNELS - 2 MODULES (16 CHANNELS) TO THE LEFT OF THE CENTRAL CONTROL SECTION AND 1 MODULE (8 CHANNELS) TO THE RIGHT.

New High Performance Input Preamp

The MH3 uses the mic preamp which was designed for the MH4. This features a high headroom, outstanding CMRR performance and well-behaved overload characteristics. The XLR input can handle signals up to +26dBu, with a gain range of +15dBu to +60dBu and a 20dB gain change switch. A Peak LED indicates internal signal levels in excess of +18dBu.



Polarity reverse and phantom power switching is provided, with both front and rear panel indication of phantom power status.

Balanced Insert Point

Separate jacks provide a pre-EQ balanced send and return, at a nominal level of 0dBu.

EQ and HI-PASS Filter

This new design retains the traditional Soundcraft response, but sounds better, with steeper slopes on the HF stage focusing the control where you want it, and some carefully tailored overshoot on the LF band, which automatically controls the muddy lower-mid frequencies when boosting lows. The all-important high-pass filter is variable from 30Hz - 400Hz with bypass if required.

The EQ section is four band, with shelving sweep high and low frequency sections, and fully parametric high-mid and low-mid bands. The frequency ranges are 30Hz-500Hz (LF), 75Hz-1.3kHz (Low Mid), 750Hz-13kHz (High Mid), and 1.2kHz-20kHz (HF), with ±15dB of cut or boost available at any frequency. The Q is variable on the two mid bands from 0.5 to 3.

Aux Sends

There are 12 aux sends, which can be used either as FX sends in FOH use, or monitor mixes for monitoring. Aux 1&2 and 3&4 can be switched to stereo pairs, with separate level and pan for in-ear sends, using the adjacent colour-coded STE switches. Each send has a maximum gain of +6dB. The auxes can be switched pre- or post-fader by the adjacent PRE switches, which are in pairs for the first 8 sends, and as one group for aux 9-12. The default pre-fade signal for all auxes is pre-EQ but can be changed to post-EQ via internal links (both feeds follow the channel mute).

Subgroup Routing

In addition to the 12 aux sends, 8 busses are provided for conventional subgrouping. Routing to these is via 8 individual routing switches. The PAN to Groups switch allows any odd/even pair of group busses to follow the channel pan pot as a stereo pair.

Direct Output

A direct output on balanced 1/4" jack is available from the channel. The source is controlled by the DIR switch, which switches the direct output from pre-EQ to post-fade when the switch is pressed in. In addition, there are internal solder links to alter the signal feeds in both of the switch positions, as follows:

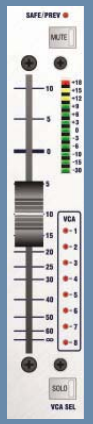
	Solder links	
DIR switch pressed	post-fade (default)	post-EQ
DIR switch not pressed	pre-EQ (default)	pre-filter

Mix Bus Routing and Pan controls

The signal is sent to the stereo mix bus and the mono (C) bus using the MIX and C switches. The PAN control, which gives 3dB centre drop, operates on the stereo mix bus signal, unless LCR panning is engaged. The mono bus (C) is always fed directly with the post-fader signal, unless LCR panning is engaged.

LCR Panning

The LCR switch changes the mode of the pan pot from normal left-right panning with a 3dB centre drop, to 3-way LCR panning, requiring both the C bus and LR stereo mix bus to be routed, and the pan pot panning from left to C, and C to right. When the pot is physically centred, there is no output from the left and right mix bus outputs.



Fader

A high-quality long-throw 100mm fader controls the level to all busses, and has 10dB of gain when fully up as well as an expanded scale around the critical unity gain area for maximum resolution.

MUTE

The MUTE switch mutes the signal to all busses, including pre-fade aux sends. The mute circuit can also be activated by the mute group system, a SIP mute signal, a VCA mute signal, or internal snapshot control from the scene computer. A Preview mode allows editing and checking of mute groups and snapshots without disturbing the audio passing through the console, and mutes can be set 'Safe'.

LED Input Metering

Every channel is fitted with a 12-segment LED bargraph meter, positioned next to each fader for maximum visibility and giving immediate graphic indication of incoming signals at the insert return.

VCA Assignment

Each channel can be assigned to any combination of 8 VCA subgroups, using the SOLO button on each channel, in conjunction with the VCA master SOLO switches in VCA assign mode. Once assigned to a VCA group, the channel's fader level, mute and solo button come under the control of the VCA master controls, but can still be operated locally.

SOLO

The SOLO button provides a PFL feed to the engineer's headphones or monitors, or triggers a destructive solo in place, depending on the mode selection at the master section. The SOLO button can also be activated remotely from a VCA solo when assigned to a VCA group, giving stereo AFL. Intercancel or additive soloing is possible, with or without input priority, and solos can be cleared with a single button press at the master section. The SOLO button also features automatic momentary operation, by pressing and holding for more than 0.5 seconds.

STEREO INPUT MODULE

A MODULE OF 4 STEREO INPUT CHANNELS IS FITTED AS STANDARD TO ALL FRAME SIZES, ALWAYS TO THE LEFT OF THE MASTER SECTION. MORE STEREO INPUTS CAN BE ADDED BY REPLACING 8 MONO INPUT MODULES ANYWHERE IN THE FRAME. TWO OPTIONAL MODULES ARE AVAILABLE WHICH WILL INCREASE THE NUMBER OF STEREO INPUTS: AN 8 STEREO INPUT MODULE OR A 4 MONO + 4 STEREO INPUT MODULE. MORE DETAIL IS GIVEN ON THESE IN THE CONFIGURATIONS SECTION.

Input Stage

A stereo version of the mono input's high performance preamp offers the same gain range of +15dBu to +60dBu with phantom power switching and polarity reverse on the left channel. The peak LED indicates signals in excess of +18dBu, while two MONO switches cut either left or right channel, feeding the alternate channel to both module paths, or if both are pressed, a mono sum of L and R to the module paths.

Balanced Insert Points

Separate jacks provide a pre-EQ balanced send and return, for left and right channels, at a nominal level of 0dBu.

EQ and HI-PASS Filter

The EQ section is stereo four band, with sweepable frequencies on all bands. The frequency ranges are 35Hz-400Hz (LF), 250Hz-2.5kHz (Low Mid), 500Hz-5kHz (High Mid), and 1.8kHz-16kHz (HF), with ±15dB of cut or boost available at any frequency. The Q is fixed on all bands at 1.1. The stereo high-pass filter is fixed at 80Hz, with bypass if required.

Aux Sends

As on the mono input there are 12 sends, for FX or monitor use. Aux 1&2 and 3&4 can be switched to stereo pairs, with separate level and pan for in-ear sends, using the adjacent STE switches, colour-coded to match the relevant send knob. Each send has a maximum gain of +6dB, and is always fed from a mono sum of the left and right signals. The auxes can be switched pre- or post-fader by the adjacent PRE switches, which are in pairs for the first 8 sends, and as one group for aux 9-12. The default pre-fade signal for all auxes is pre-EQ but can be changed to post-EQ via internal links (both feeds follow the channel mute).

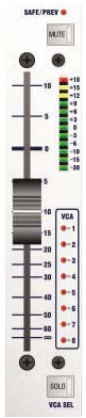
Subgroup Routing

In addition to the 12 aux sends, 8 busses are provided for conventional subgrouping. Routing to these is via 8 individual routing switches. Normally the group switches are fed by a mono sum of left and right signals, but the STE switch allows any odd/even pair of group busses to be used as a stereo pair, following the channel's balance control.

Mix Bus Routing and Balance Controls

The signal is sent to the stereo mix bus and the mono bus using the MIX and C switches.

The BAL control allows the left signal to be faded down to zero level when turned fully clockwise, and vice-versa for the right signal. In the centre position, both channels are fed at unity gain to the mix bus. The balance control also affects the L-R balance within the mono sum sent to the aux sends or group busses. The mono (C) bus is always fed directly with a mono sum of the stereo post-fader signal.



Fader

A high-quality long-throw 100mm fader controls the level to all busses, and has 10dB of gain when fully up as well as an expanded scale around the critical unity gain area for maximum resolution.

MUTE

The MUTE switch mutes the signal to all busses, including pre-fade aux sends. The mute circuit can also be activated by the mute group system, an SIP mute signal, a VCA mute signal, or internal snapshot control from the scene computer. A preview mode allows editing and checking of mute groups and snapshots without disturbing the audio passing through the desk, and mutes can be set 'Safe'.

LED Input Metering

Every channel is fitted with a 12-segment LED bargraph meter, positioned next to each fader for maximum visibility and giving immediate graphic indication of incoming signals at the insert return.

VCA Assignment

Each channel can be assigned to any combination of 8 VCA subgroups, using the SOLO button on each channel, in conjunction with the VCA master SOLO switches in VCA assign mode. Once assigned to a VCA group, the channel's fader level, mute and solo button come under the control of the VCA master controls, but can still be operated locally.

SOLO

The SOLO button provides a stereo PFL feed to the engineer's headphones or monitors, or triggers a destructive solo in place, depending on mode selection at the master section. The SOLO button can also be activated remotely from a VCA solo when assigned to a VCA group, giving Stereo AFL. Intercancel or additive soloing is possible, with or without input priority, and solos can be cleared with a single button press at the master section.

GROUP/RETURN & MASTER/MATRIX MODULES

THE OUTPUT SECTION IS SPLIT INTO TWO REMOVABLE MODULES, FOR EASE OF SERVICING. THE FADER PANEL BELOW THESE OUTPUT MODULES CONTAINS THE 8 VCA MASTER FADERS. THE LAYOUT OF THE OUTPUT SECTION IS CLEAR AND OFFERS EXCELLENT FLEXIBILITY AS WELL AS NUMEROUS FACILITIES.

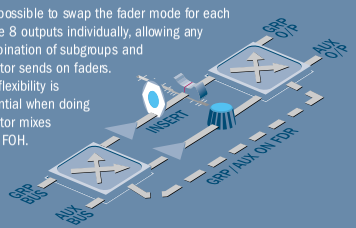
THE GROUP/RETURN MODULE CONTROLS THE FIRST 8 AUX OUTPUTS, THE 8 GROUP OUTPUTS, PLUS 8 STEREO FX RETURN INPUTS. THE 8 FADERS ON THIS MODULE CAN CONTROL EITHER GROUP OR AUX OUTPUTS, DEPENDING ON RECESSED SWITCH SETTINGS – THIS IS THE KEY TO THE DUAL PURPOSE CAPABILITY OF THE MH3. AT THE TOP OF THIS MODULE, 12-SEGMENT LED BARGRAPH METERS MONITOR THE OUTPUT LEVELS.

Group and Aux Outputs with Swap Facility

The key to the dual-purpose capability of the MH3 is the reversible signal path which allows either the group or the aux output signal to be controlled by a linear fader, and have access to an insert point. For FOH applications, the groups are required on faders for subgrouping duties, and the insert point allows external EQ or dynamics to be used on the group. The aux sends in this application will be used for FX sends, so rotary master controls are appropriate.

By pressing the recessed GRP/AUX ON FDR button, thereby changing it to AUX mode, the console is set up for stage monitor use, where the aux output is controlled by the fader, and has use of the insert point for EQ insertion. Meanwhile the group output is swapped to the rotary fader.

It is possible to swap the fader mode for each of the 8 outputs individually, allowing any combination of subgroups and monitor sends on faders. This flexibility is essential when doing monitor mixes from FOH.



Fader Output Section

Each of the 8 fader master sections comprises a 60mm fader which feeds either the group or aux signals to their respective balanced XLRs on the rear panel. A pre-fade balanced insert point, via separate 1/4" jacks, allows insertion of EQ and/or dynamics. Each fader knob is colour co-ordinated with its aux bus send control for easy identification when controlling monitor mixes, and the 12-segment bargraph meter at the top of the module provides line-of-sight metering of any fader-controlled output. The TB (osc) button routes talkback, tone or pink noise from the central talkback/oscillator section to whichever output is being controlled by the fader.

Illuminated MUTE and AFL SOLO buttons are provided for each fader. If stereo subgroups or in-ear sends are in use, the AFLs can be linked as a stereo pair by pressing both adjacent buttons at the same time; when linked, the AFL appears as a stereo AFL in the stereo wedge & phones outputs.

Rotary Output Section

Each of the 8 rotary master sections is equipped with a colour-coded rotary fader, and AFL SOLO and MUTE controls.

Group to Mix Section

The group signal path, regardless of whether it is controlled by the fader or not, can always be routed to the main mix busses using the MIX and C switches and the PAN control.

Stereo FX Return with flippable EQ

Located above each group/aux output section is a stereo FX return section. A line input from balanced rear panel jacks is fed via a 0-10dB gain switch, via a stereo 3-band EQ section (see below) to a rotary level fader. Illuminated PFL and MUTE switches are provided. The stereo return signal can be routed to the main MIX and C busses, or directly to the nearest pair of output faders directly below the return. This gives a number of possible uses for the return in addition to that of a standard FX return to the main mix:

In monitor applications when a pair of output faders will be controlling a stereo in-ear feed, the return can provide an individual reverb return for that mix only.

Alternatively, if all 8 subgroups are not being used in a FOH application, the return can be routed to the output faders and then to mix, allowing control of the return level by linear faders.

EQ

The 3-band EQ section is normally part of the FX return signal path, in which case it operates as a stereo EQ. Alternatively, the EQ can be flipped into the output fader signal path directly below it, using the EQ TO O/P FDR switch, where it can be used to provide additional sweetening on in-ear feeds or subgroups. In this case, each EQ stage functions as a mono EQ, associated with the corresponding output fader directly below it.

The EQ section comprises fixed shelving HF and LF bands, at 12kHz and 60Hz respectively, with a swept mid band 350Hz to 3.5kHz. The mid band Q is fixed at 1.1. 15dB of cut or boost is available on all bands.

THE MASTER/MATRIX MODULE HOUSES THE REMAINING 4 AUX OUTPUTS, WHICH ARE ALWAYS CONTROLLED BY FADERS, PLUS THE 4 MATRIX OUTPUTS, AND ALL THE MASTER FACILITIES INCLUDING LCR MASTER FADERS, MONITORING, TALKBACK AND SOLO CONTROLS. AT THE TOP OF THIS MODULE, 12-SEGMENT LED BARGRAPH METERS MONITOR THE OUTPUT LEVELS.

Aux 9-12 Outputs Section

Aux outputs from 9-12 have their own dedicated output section and are always controlled by linear faders. Each fader feeds the aux signal to balanced rear-panel XLR outputs. There is a pre-fade insert point with separate jacks, and TB (osc), MUTE and AFL buttons are provided. The 12-segment LED bargraph meters at the top of the section normally meter the aux 9-12 outputs, but can be switched to meter the matrix outputs 1-4 by pressing the MTX buttons below the meters.

Matrix 1-4 Outputs Section

A 12x4 matrix section is located immediately above aux 9-12 outputs. Each of the 4 outputs has a rotary master fader, with TB (osc), MUTE, and AFL buttons, and 12 receive knobs control the mix levels fed to that matrix output from each of the 8 groups, the L,R and C main outputs, and an external line input from a rear panel 1/4" balanced jack. The matrix output signal itself appears on a balanced XLR on the rear panel.

The matrix capability can be expanded to 8 outputs if required, by fitting the optional 4 MTX + 4 input module, in place of an 8 channel input module.

Master Section

The master section contains the main L, R and C output faders, alternate stereo mix output, a noise or sine wave test oscillator, and internal/external talkback functions. This section also contains the monitor and headphone outputs, 2-track return and monitor source controls.

Main Output Faders

Three 100mm high quality faders control the stereo mix L, R and mono (C) mix output levels. These are fed to balanced XLRs on the rear panel. The C fader can be used to control the monitors level for feeding wedges in a stage monitor application by using the USE C FADER button.

Alternate Stereo Mix Output

The ALT output is an additional stereo output, switchable pre or post the MIX master faders and controlled by the ALT STE rotary fader. The outputs appear on balanced XLRs on the rear panel. Both L and R outputs can be fed by a mono sum of the MIX L and R signals using the MNO switch, effectively giving two fader controlled mono-sum mix outputs.

Insert Points

Pre-fade MIX L, R and mono (C) insert points use balanced sends and returns on separate 1/4" jacks on the rear panel.

Talkback and Oscillator Section

The talkback and oscillator sections share a common set of TB (osc) routing buttons, allowing them to access any of the fader-controlled outputs and the matrix outputs. The talkback section has a front panel XLR for mic input, with adjustable gain from 20-50dB (48V phantom power is available via an internal jumper). The mic signal can be routed either to selected internal busses, by pressing the INT button, or sent to a proprietary intercom output (compatible with Soundcraft MH4, Series FIVE and SM-Series consoles) using the EXT button. The oscillator generates either tone from 55Hz to 11kHz or pink noise, and has its own independent balanced XLR output on the rear panel. It is routed to internal console busses by pressing both the OSC TO BUSSES switch and the local TB (osc) switches on the desired output.

PSU Status Indicators

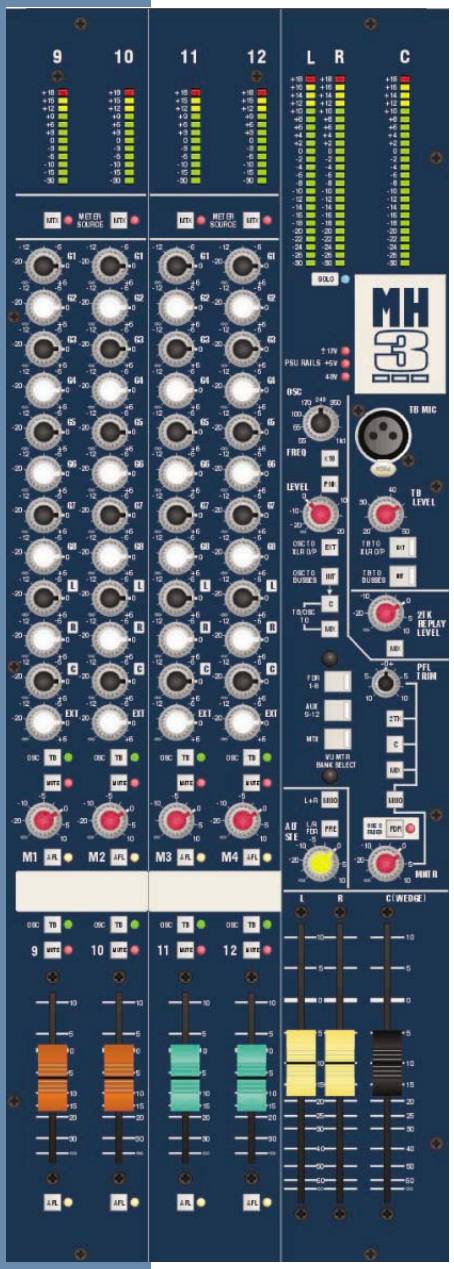
Three red PSU Status LEDs indicate normal PSU rail operation.

Monitor and Headphones Outputs

Separate level controls are provided for engineer's monitor speakers and headphones. The signal source for these outputs is common and can be selected from the post-fade MIX signal, the mono (C) MIX signal (to both L and R outputs), or the 2TK replay inputs, and may be summed by simultaneous selection if required. These sources are automatically overridden by an input or output solo signal. The level of the PFL or AFL signal can be adjusted by ±10dB using the PFL/AFL TRIM control. The monitor level rotary control can be swapped with the centre output master fader, by pressing the USE C FADER button adjacent to the rotary control. The stereo monitor/phones signal can be summed to mono if required by pressing the MNO button. The headphones output socket is a stereo 1/4" jack, discretely mounted in a recessed socket in the fader panel fascia; the phones Volume control is located adjacent to the socket. Three 24-segment LED bargraph meters read the stereo and mono mix output levels. In the presence of a solo, the 'C' meter is muted and the LR meters show the solo signal. A clearly visible blue LED indicates the solo condition.

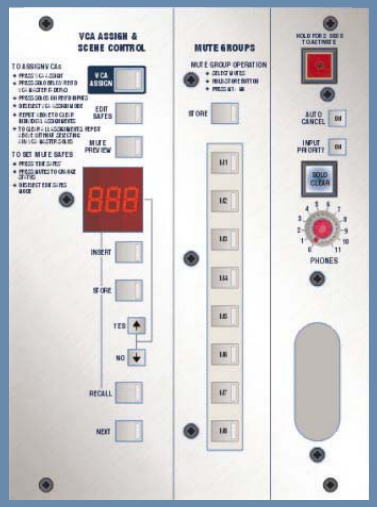
2-track Replay Input

For replay of stereo tape, CD or minidisc sources, a rotary level control adjusts the signal level from the balanced 1/4" jack stereo inputs. These can either be routed to the MIX bus with the MIX switch, or monitored on the monitor/phones outputs as described above.



LOGIC, AUTOMATION & PSU

SOLO CONTROLS, VCA SYSTEM & AUTOMATION



Solo Controls

The MH3 incorporates the most advanced version yet of Soundcraft's acclaimed solo system.

The blue-illuminated SOLO CLEAR button not only gives unmistakable indication that a solo has been selected, but also allows any solo(s) on the console to be cancelled at the touch of a button. The Autocancel mode allows any solo button selected to cancel the previous solo, otherwise solos can be selected additively. Alternatively, pressing and holding any solo button for more than 0.5 seconds will result in automatic momentary operation of the switch.

Inputs normally solo as PFL, (with stereo inputs giving a stereo PFL) and outputs as stereo AFL, but inputs can alternatively be soloed as stereo AFL (if assigned to a VCA group) using the VCA master SOLO buttons. The PFL/AFL trim control gives ±10dB of gain adjustment to the PFL or AFL signals fed to the monitor/phones outputs.

The INPUT PRIORITY button, when selected, allows an input solo to temporarily override any output solo which may be present. When the input solo is released, the original output solo will reappear on the monitors. The solo-In-place (SIP) enable button (which needs to be held for at least 2 seconds to activate it, for safety) selects 'destructive' in-place solo rather than mono PFL or stereo AFL. Group, aux and matrix output AFLs always remain in AFL mode, regardless of this switch setting.

A VCA solo will perform a solo operation on all channels assigned to that VCA group, and give a stereo AFL solo. If SIP mode is engaged, the VCA solo will trigger a solo-in-place solo as if all member channels' SIP switches had been pressed.

VCA System & Automation

The MH3 incorporates an automation system which can store and recall 128 snapshot settings of input and FX return mute status and VCA assignments, with the ability to send a MIDI program change message upon recall of a scene, or to recall a scene in response to an incoming program change message. These mute settings and VCA group assignments can be recalled manually from the control panel as well as via MIDI, with an LED display indicating the scene number recalled. There is also the facility to insert new scenes between two existing ones. Scene memory can be backed-up using standard Sys-Ex dumps to an appropriate archiving device. Channels may be assigned to any of 8 VCA groups using the VCA ASSIGN switch and the channel SOLO switches. Any VCA master then controls all the associated channel levels and their mutes and solos (although they can still be operated locally). Similarly, channel mutes may be assigned to any of 8 mute groups (which can be freely layered) by setting the channel mutes required and pressing STORE and the MUTE master button required. These groups may be recalled by the MUTE master buttons. The MUTE master buttons can also be changed to recall any 8 of the scenes in a cue list. To prevent inputs or FX Returns being muted by a mute group, VCA mute or a SIP solo, a SAFE mode can be activated for each channel using the EDIT SAFES function. This is indicated locally on each channel by a SAFE LED. A PREVIEW mode allows mute group and scene mute settings to be checked without actually muting any signal paths.

INTEGRATED CONTROL OF BSS AUDIO VARICURVE™/DBX DRIVERACK™

The MH3 continues the Soundcraft innovation of providing remote MIDI control of external system EQ from the output AFL switches - owners of BSS Audio Varicurve™ or dbx DriveRack™ systems can automatically select the correct EQ page on the remote controller, corresponding to the soloed output channel. For Monitor applications, this allows slicker operation and less chance of adjusting the wrong output EQ.

OPTIONAL VU OUTPUT METERBRIDGE

The console is fitted as standard with LED bargraph metering on every output, but for customers who prefer mechanical metering, an optional VU meterbridge is also available. This can be specified at the time of order or can be easily retrofitted after purchase. The meterbridge contains eleven VU meters with integral peak LEDs. Three large VU meters monitor the MIX L, R and C outputs, while eight smaller meters can be switched to monitor one of 3 banks of signals: The 8 fader-controlled outputs, Aux 9-12 outputs, or the matrix outputs. The VU meter backlighting uses high-reliability LEDs rather than fragile filament bulbs. Note, the bank select switches for the meterbridge are located on the master module, but are covered with a blanking plate when the meterbridge is not fitted.

OPTIONAL CONSOLE LINKING

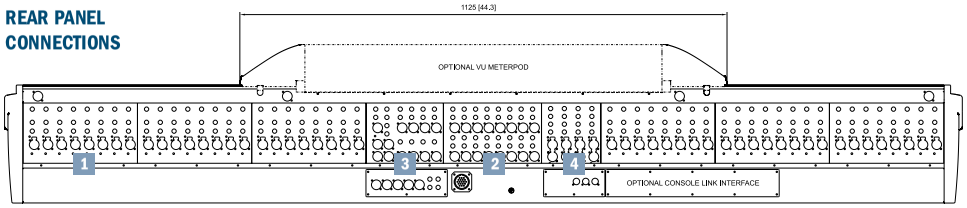
The optional Link Rear Con module allows two MH3 consoles to be linked so that they behave as one large console. The module is fitted to an option slot on the rear panel of both consoles to be linked, and provides audio bus inputs and logic linking connectors. The main outputs of the designated slave console are connected to these bus inputs on the master console via a standard XLR-jack balanced snake, with a D-type data cable linking VCA grouping and automation functions.

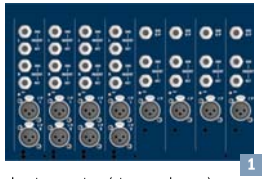
PSU

MH3 is supplied (32-56ch sizes) with the road-proven 3U CPS800 linear power supply. This features full redundancy by linking to an additional CPS800. As an extra-cost option, the cable-compatible 4U CPS2000, as used on Series FIVE, may be ordered if required. 24ch versions of MH3 are supplied with the 2U CPS275. Again, this may be upgraded to a CPS2000 at extra cost.

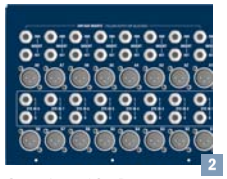
CONFIGURATIONS & CONNECTIONS

REAR PANEL CONNECTIONS

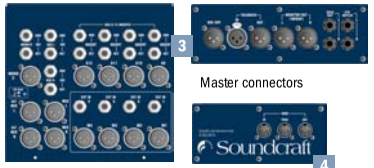




Input connectors (stereo and mono)



Group, Aux and Ste Return connectors



Master connectors

MIDI connectors

STANDARD FRAMES

Regardless of frame size, every MH3 is fitted with a static central section. Looking at the desk from left to right, this central section provides 4 stereo inputs, group/auxiliary 1-8 outputs, dedicated auxiliary 9-12 outputs, matrix 1-4 outputs and the master section. With increasing frame size, mono input modules are placed either to the left or right of the central section. The configurations for each standard frame size are shown in the adjacent table:

FRAME SIZE	MONO INPUTS LEFT OF CENTRAL SECTION	MONO INPUTS RIGHT OF CENTRAL SECTION
24+4	16	8
32+4	24	8
40+4	24	16
48+4	24	24
56+4	32	24

OPTIONAL MODULES

Three variations of 8 channel module are available in addition to those fitted as standard, allowing unsurpassed flexibility of configuration at this price level. Each optional module must be fitted in place of standard mono input modules. The diagram below illustrates the configurations possible with these extra modules.

4 Mono + 4 Stereo Input Module

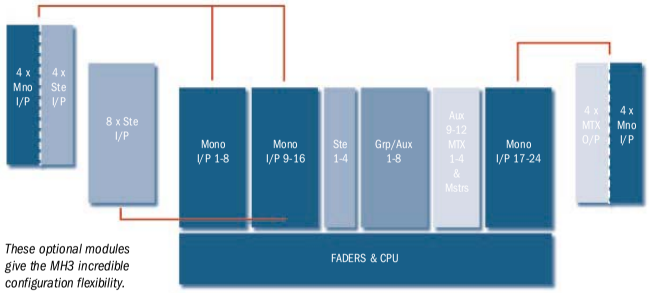
By fitting in place of the mono input module immediately to the left of the central section, this module is designed to provide an additional 4 stereo input channels, giving a total of 8. It can also be used in combination with the 8 channel stereo input module to give totals of 16 or 24 stereo inputs. The features of the mono and stereo inputs on this module are identical to those on the standard modules.

8 Channel Stereo Input Module

This module allows a block of 8 mono inputs to be replaced by 8 stereo inputs. Adding one of these modules gives a total of 12 stereo inputs.

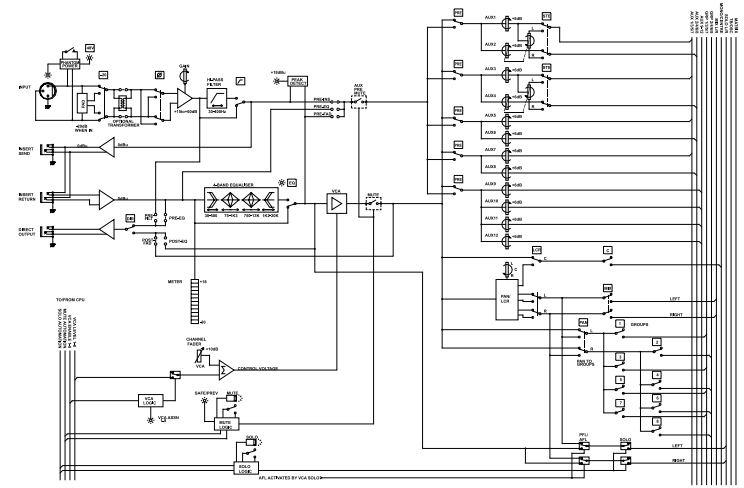
4 Matrix + 4 Mono Input Module

This module expands the matrix output capability from 4 to 8 outputs. The facilities of the additional matrix outputs are identical to those on the standard module, including integral output metering. The module incorporates 4 reduced-function mono input channels which make use of the input faders in the fader section which would otherwise become redundant. These 4 inputs can either be used as mono FX returns or can be used as a way of providing a direct mic input into the corresponding matrix output. Only one of these modules can be fitted, and it must be placed immediately to the right of the master section.

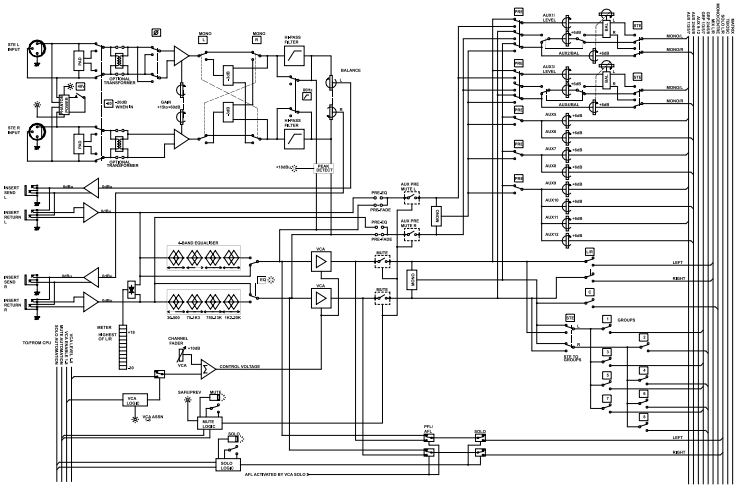


These optional modules give the MH3 incredible configuration flexibility.

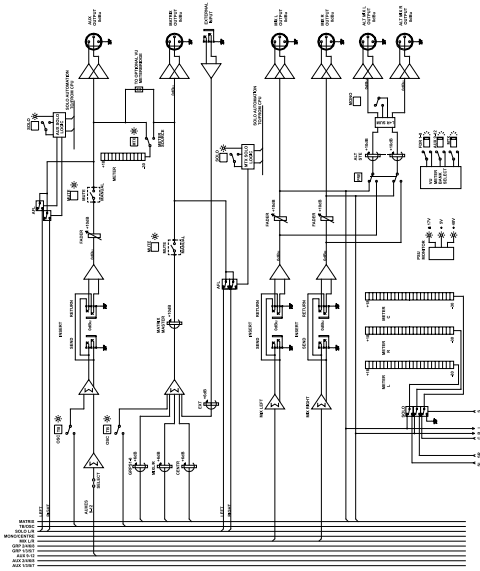
SYSTEM BLOCK DIAGRAMS



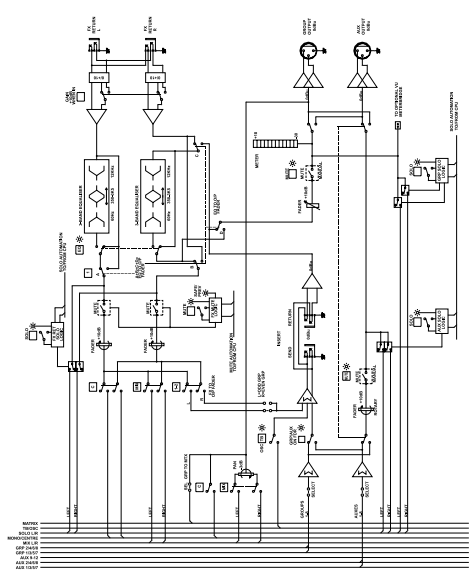
MONO INPUT MODULE



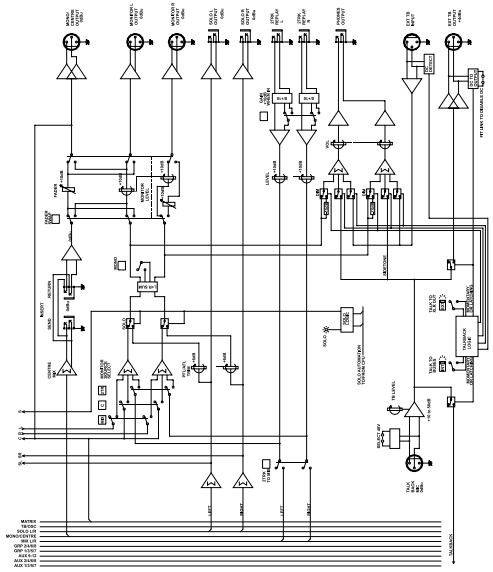
STEREO INPUT MODULE



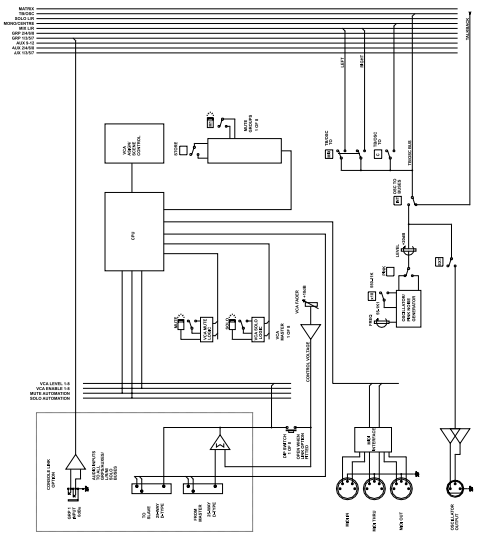
AUX, MATRIX AND LR MASTERS



GROUP/AUX RETURN MODULE



MONITORS, TB AND 'C' OUTPUT

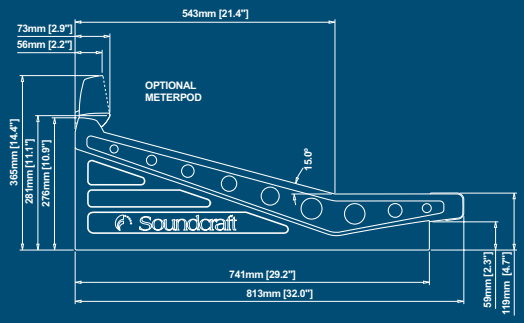


AUTOMATION, VCA SYSTEM AND OSCILLATOR

DIMENSIONS & WEIGHT

Height	All frame sizes	276mm (10.9")*
Width	24 Ch	1419mm (55.8")
	32 Ch	1683mm (66.2")
	40 Ch	1947mm (76.6")
	48 Ch	2211mm (87.0")
	56 Ch	2475mm (97.4")
Depth	All frame sizes	813mm (32.0")
Weight	24 Ch	68 kg (150 lbs)
	32 Ch	80 kg (176 lbs)
	40 Ch	92 kg (202 lbs)
	48 Ch	103 kg (227 lbs)
	56 Ch	115 kg (253 lbs)

* Excluding optional meterpod



Soundcraft Registered Community Trade Mark/RTM No. 000557827

SOUNDCRAFT
HARMAN INTERNATIONAL INDUSTRIES LTD.,
CRANBORNE HOUSE, CRANBORNE ROAD
POTTERS BAR, HERTS, EN6 3JN, UK
T: +44 (0)1707 665000
F: +44 (0)1707 660742
E: info@soundcraft.com

SOUNDCRAFT USA
1449 DONELSON PIKE
NASHVILLE, TN 37217, USA
T: +1-615-360-0471
F: +1-615-360-0273
E: soundcraft-usa@harman.com

www.soundcraft.com

Soundcraft reserves the right to improve or otherwise alter any information supplied in this document or any other documentation supplied hereafter. E&OE 01/03
This equipment complies with the EMC Directive 89/336/EEC

Part No: ZL0606

CE

A Harman International Company

TYPICAL SPECIFICATIONS

Frequency Response	XLR Input to any Output ..... +0/-1dB, 20Hz – 20kHz
T.H.D. and Noise (All measurements at +10dBu)	XLR In to Direct Out ..... <0.015% @ 1kHz ..... <0.02% @ 10kHz XLR In to Mix Out ..... <0.015% @ 1kHz ..... <0.02% @ 10kHz
Mic Input E.I.N.	22Hz-22kHz bandwidth, unweighted ..... <-128dBu (150Ω source)
Residual Noise	Mix Output; no inputs routed, Mix fader @ 0dB ..... -95dBu
Bus Noise	Mix Output; 48 channels routed, input faders @ -∞, Mix fader 0dB ..... <-85dBu Grp Output; 48 channels routed, input faders @ -∞, Grp fader 0dB ..... <-85dBu Aux Output; 48 channels routed, input sends @ -∞, Grp fader 0dB ..... <-86dBu
Crosstalk	1kHz, +20dBu input signals Input Channel muting ..... >95dB Input fader cutoff ..... >88dB Input pan pot isolation ..... >72dB Mix routing isolation ..... >100dB Group routing isolation ..... >99dB Group-group crosstalk ..... <-92dB Group-Mix crosstalk ..... <-100dB Mix-group crosstalk ..... <-100dB Aux send off ..... <-80dB
CMRR	Mono input ..... 85dB @ 1kHz
Input & Output Levels	Mic Input ..... +26dBu max. Balanced Inputs ..... +21dBu max. Balanced Outputs ..... +21dBu max. Nominal Operating Level 0dBu
Input & Output Impedances	Mic Input ..... 2kΩ All other Inputs ..... >10kΩ Headphone Output ..... 0.33Ω Recommended Headphone Impedance ..... 4-600Ω All other Outputs ..... <75Ω
Oscillator	55Hz to 11kHz/Pink Noise, variable level
HP Filter (Mono Input)	30-400Hz, 12dB/octave
EQ (Mono Input)	HF ..... 1kHz - 20kHz, ±15dB, shelving Hi-Mid ..... 750Hz - 13kHz, ±15dB, Q=0.5 - 3.0 Lo-Mid ..... 75Hz - 1.3kHz, ±15dB, Q=0.5 - 3.0 LF ..... 30Hz - 500Hz, ±15dB, shelving
Metering	Internal 12-segment LED bargraphs for all inputs and outputs (24-segment for L/R/C outputs). Optional VU Meterpod: 8 VU meters monitoring O/P Faders 1-8/Aux 9-12/Matrix 1-4 via bank selection, and L/R/C
Power Consumption	**Mains Power: 56 Ch - 600VA max., 24 Ch - 300VA** 48 Ch Console, each 17V rail takes 8.5A (nominal, measured with 4 Littlites connected) The 8V rail takes 0.2A (nominal)
Operating conditions	Temperature Range ..... -10°C to +30°C Relative Humidity ..... 0% to 80%

Note: These figures are typical of performance in a normal electromagnetic environment. Performance may be degraded in severe conditions. All measurements refer to electronically balanced inputs and outputs with VCAs enabled. Input and output transformers may affect these specifications.