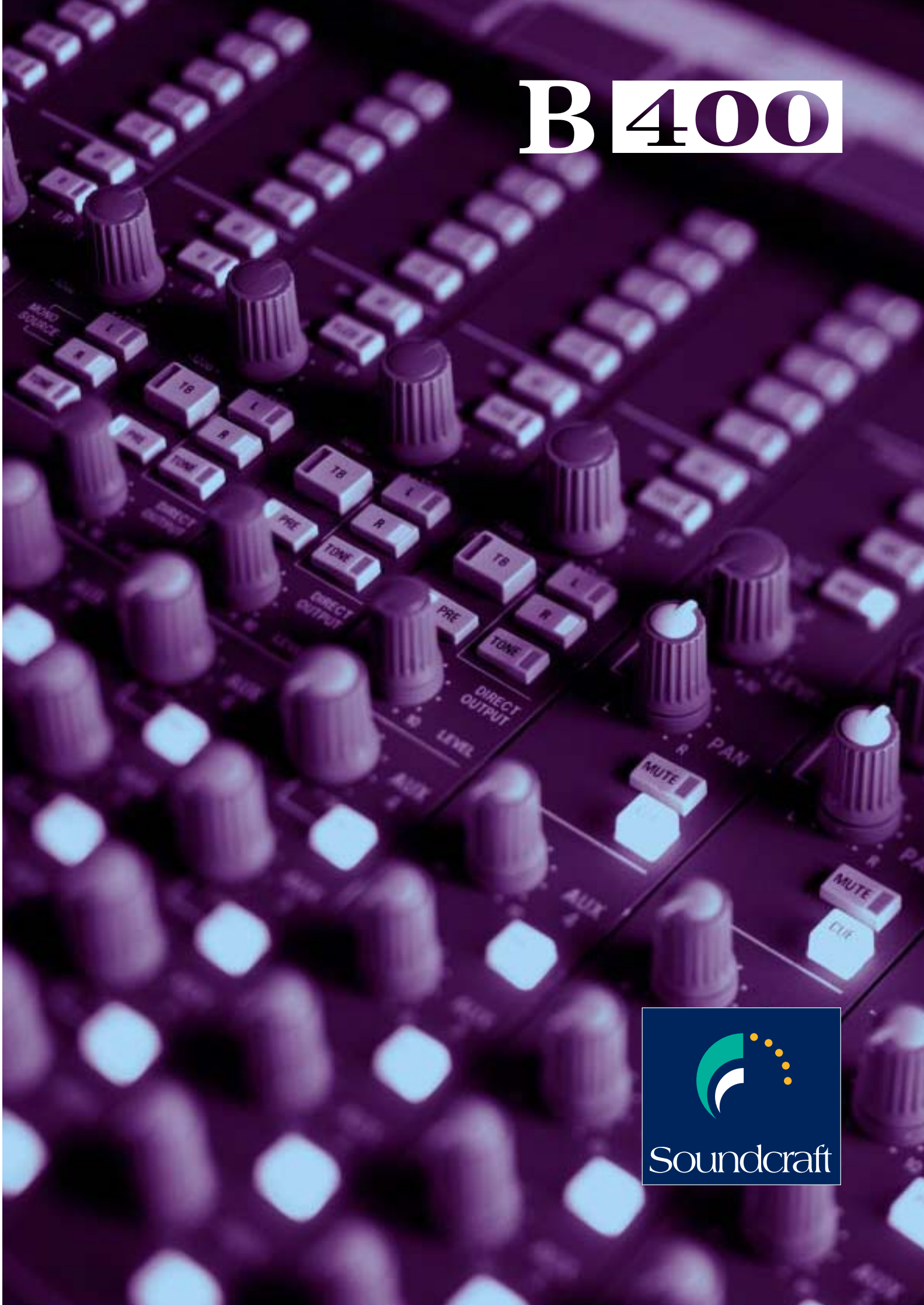
B400



Soundcraft

Production, on-air and OB faciliti

Radio production, live, and outside broadcast each demand specific qualities in a mixing console, and addressing these disciplines in a single desk requires flexibility and uncompromised fidelity. The Soundcraft B400 takes these tasks in its stride while offering the additional benefits of inherent reliability, serviceability and Soundcraft's unique experience in the field of broadcasting. Based on the highly successful B800, the B400 delivers a level of configurability unrivalled in its class. Input frames can comprise any combination of Mono, Stereo and Stereo Telco modules. 8 Mono or 4 Stereo Groups can be specified while the individual Monitor, Communications and Stereo Master Modules, fitted to the B400 as standard, offer a range of facilities to satisfy the most demanding engineer. Yet despite its specification, the B400 provides a budget-friendly solution for facilities of all sizes. And whatever role you ask it to play, the B400 performs with the professionalism Soundcraft customers around the world have come to expect.

- 24, 32, 40, 48, 56-module frames
- 1 stereo and 3 mono auxes
- LED indication on all switches
- Wide variation in module audio and logic / control functions via internal jumpers
- Stereo ISDN cleanfeed facilities via direct outputs on Telco channels
- Versatile and highly configurable monitoring via speakers and studio and guest headphones
- Limiters on master output
- Wide range of meterbridge options
- Balanced audio inputs and outputs throughout, on XLRs and EDACs
- Balanced internal bussing

es from a single, flexible console.

Mono Input Module

The Mono Input Module accepts mic or line signals, selected by the LINE switch, from separate rear panel input XLR sockets. The 48V switch provides for mic phantom powering. All front panel switches incorporate a status indication LED.

The rotary channel GAIN pot provides continuous variation from +10dB to +72dB mic gain, and -10dB to +20dB line gain. The (ø) switch reverses phase of the selected mic or line input, which can be replaced with the desk oscillator by the TONE switch.

The Mono Input has a 3 band EQ with frequency sweepable HF and MF, and fixed frequency LF sections. Each EQ level control provides maximum 15dB cut or boost, the HF being internally selectable bell or shelving response, and covering from 1kHz - 16kHz. The MF has centre frequency sweepable from 250Hz to 4kHz. The shelving LF section is fixed at 100Hz. The entire EQ section is placed in circuit by the EQ switch.

A variable frequency high pass filter (HPF) is controlled by a rotary pot, covering 32Hz to 500Hz, and has an anticlockwise end stop click off position.

There are four auxiliary sends. AUX 1,2, and 3 are mono, while AUX 4 is a stereo send with a dedicated PAN control. All four auxiliaries feature rotary level pots, and are individually switchable PRE/post fade. The AUX 1 pot can be switched into the channel direct output circuit by the DIR switch; in this state there is no output to the AUX 1 bus. The direct output then follows the AUX 1 PRE/post switch, but the signal can also be replaced by desk oscillator and talkback slate from the Communications Module.

The PANorama pot positions the input signal within the main stereo mix. When the PAN switch is lit, the pot also pans between odd numbered groups (left) and even numbered groups (right). The panned signal is routed via the five buttons at the top of the channel strip to any combination of the four pairs of groups (1-2, 3-4, 5-6, 7-8) and to the stereo master bus (ST). The 100mm channel fader offers +10dB maximum gain.

The eight segment LED meter can be selected as pre fade or pre EQ by an internal jumper and follows the direct output when DIR is pressed. The PK LED monitors the signal at three points; pre EQ, post EQ and post fade. An EXT MUTE LED is provided to indicate when the channel has been remotely muted via the rear panel D-sub connector. When the channel is ON and the fader is open, this is used as a cough mute in mic mode. Also in mic mode, when the fader is raised, the relevant monitors will be muted or dimmed depending on the jumper settings. A relay contact output pair for mic levels is also provided on D-sub connector. The Fader Open control signal can be set via a jumper to Rem Com on the Stereo Master fader. Monitor mutes will therefore not be activated until the stereo master fader is open.

The console's cue system has two modes - if the CUE button is depressed for less than half a second it latches electronically, otherwise it will operate in momentary mode. If the channel fader is down when the cue system is active, then the PFL signal will be sent to the cue left and right busses, whatever the AFL/PFL settings on the Monitor Module. When in AFL mode, this signal is fed in stereo. The CUE button is (optionally) reset whenever the channel fader is moved from the down position. If the CUE button is pressed when the fader is raised, the AFL/PFL signal will be selected according to the position of the AFL/PFL MASTER switch on the Monitor Module. When the input is in line level mode and the CUE switch is pressed, this will (optionally) trigger the remote start/stop facility which has two sets of relay contacts, available via the rear panel D-Sub connector. These relays can be set to either latching or pulsed operation via internal jumpers, enabling most types of machines to be remotely started and stopped. When both CUE and ON are selected, the cue will (optionally) automatically be cancelled and the signal will be live, provided that the fader is already raised. If the fader is down, the cue will only be cancelled when raised from its end position.

If the module input is switched to TONE the monitor mutes and remotes (start/stop) are disabled.

Stereo and Telco Input Modules

The Stereo Line Input Module accepts two stereo pairs via 4 input XLRs selected by the B input switch (TLCO on the Telco Module). A phase reverse (ø) switch affects the right channel only.

The status of the L and R buttons determines whether the left and right input signals are treated as a stereo pair, are switched to mono, or whether either signal is routed to both sides of the stereo channel bus. The TONE switch operates as on the Mono Module.

The channel GAIN pot provides continuous control covering -12dB to +12dB on both line inputs. The B switch on the Stereo Input selects the second line, whereas this is labelled TLCO on the Telco Module which accepts a telephone input from an external hybrid.

The EQ is 3 band with a sweepable MF section and a separately switched high pass filter (12dB/Octave at 80Hz). The HF and LF shelving sections both offer ±15dB of cut and boost at 10kHz and 100Hz respectively. The MF band features a ±15dB bell response filter and sweepable centre frequencies from 500Hz to 8kHz. An EQ in/out switch is provided.

There are four auxiliary sends. AUX 1, 2 and 3 carry a mono summed signal whereas AUX 4 is fed in stereo. All four sends are controlled by individual pots, and each is selectable pre or post fade. A stereo channel direct output is on XLRs on the rear panel, and is sent at unity gain from the Stereo Input. The Stereo Telco Input has a separate level control for the direct output, and can be switched pre or post fade. A TB switch allows talkback from the overbridge microphone XLR input to be routed to the direct output. When in telco mode, and the channel is routed to the stereo master, the direct output sends a stereo clean feed signal consisting of the stereo mix, minus the channel's input signal. If not routed to the stereo master, the signal at the direct output will be the stereo mix. When switched to telco, the function of the PRE button is disabled.

The dual-function BAL/PAN pot is used to trim the stereo balance of the channel signal. The balance control automatically becomes a pan control if either or both the L or R switches are selected, and at this point the PAN LED will illuminate.

The panned or balanced signal can be routed via the five buttons at the top of the module, to any combination of the four pairs of groups and the stereo master bus. When the signal is routed to the groups, the left side is routed to the odd numbered groups, and the right side to the even numbered groups.

The 100mm fader offers +10dB maximum gain. The 8-segment LED meter can be set to pre fade or post fade by an internal jumper. The PEAK LED monitors the signal at three points: pre EQ, post EQ, and post fade.

The Stereo Input Module logic functions operate as on the Mono Input Module in line mode, except that the feed to the CUE bus is always in stereo. The Stereo Telco Module operates the same in Line A mode, however when the Telco Input is selected the (pulsed or latching) start B relay is used as a “divert” or “hybrid latch”. This is initially activated from the CUE function to set up a call or remote line with a clean feed return. Switching the channel ON will maintain this relay closure, ensuring that the line is held while the fader is opened. Closing the fader will drop the line from the hybrid.

Mono and Stereo Group Modules

The Mono and Stereo Group Modules are almost identical in operation, providing both Stereo Return and Group Master facilities. The Stereo Group offers greater packing density, and is more suited to applications where groups are treated as a stereo left-right pair.

Stereo Return

Stereo Return inputs via rear panel XLR sockets. Alternatively, by depressing the BUS switch the stereo return section will pick up signals from the 8 group output busses. (Feedback is avoided as no group can route to itself.) PAN, LEVEL and MUTE controls are provided.

The post mute stereo signal can be routed to the stereo mix and / or the group. The GROUP and BUS switches are interlocked such that the GROUP switch is over-ridden if both are depressed at the same time.

The Stereo Return cue facility operates in the same manner as the cue facility on the input channels.

Group Master

The group insert can be switched in and out of the signal path, and an internal switch sets pre or post-fade operation. Whether the insert is switched in or not, the group signal always appears at the insert send XLR.

The group mute section, placed immediately before the fader, can be manually or remotely switched. An LED is provided to indicate remote mute activation.

A remote control facility for machine start is available, via relay contacts which are closed when the fader is raised.

The signal is sent to the group outputs (XLR on the mono, EDAC or stereo group). The signal is also passed to the PAN pot and then routed to the stereo bus. The stereo group is fitted with a BALance control, switchable to PAN, and an IMAGE WIDTH control.

Feeds from the group to AUXes 1-4 are controlled by four pots. Each is switchable to pre or post fade operation.

The group cue system operates as on the Mono and Stereo Input Modules.

Two level indicator LEDs are provided: the SP LED illuminates when a signal is present on the group mix bus, and the PEAK LED illuminates whenever the output of the group mix amplifier or the post-fader signal comes within 6dB of clipping.

Stereo Master Module

A fully featured Stereo Master Module is provided. Individual PSU status LEDs offer constant visual confirmation for the phantom, audio and logic voltage rails. The ON-AIR switch, operated manually or via an opto-isolator circuit, is used to close a set of relay contacts, for external signalisation; it also disables oscillator and some talkback facilities on the Communications Module.

The aux master controls are located on this module. Each master has a rotary level pot and an AFL button to monitor the after-fade listen signal via the cue system.

The Stereo Master insert can be switched in and out of the signal path, though the signals are always available on the insert send XLRs.

The limiter in the Master Module signal path offers a 4-position switch for threshold, 0.5ms or 10ms attack, and release continuously variable from 200ms to 10 secs. An auto release facility is also available, giving 1 sec release time with a 2-stage release action.

The stereo output from the module is controlled via a stereo master fader. A mute circuit, operated remotely, is positioned after the fader. The PEAK LED monitors both L & R signals, pre-fader, and illuminates if either comes within 6dB of clipping.

A mono output is also available, jumper selectable pre or post the limiter. This output has a rotary level control, offering up to 0dB of gain, a mute circuit, and PFL. The signal is a mix of the stereo master left and right signals, and is taken pre or post fader, as determined by the PRE switch.

Communications Module

The Communications Module provides all the talkback facilities required for working in the studio environment.

The talkback input is derived from the meterbridge talkback mic XLR. Gain is adjusted on the Communications Module.

Talkback can be routed at any time to the external talkback output and to all groups, to any combination of aux busses 1-4 or, optionally, to selected group outputs. The signal can also, apart from when the ON-AIR LOCK OUT LED is lit, be routed to the stereo master output, and to the studio speakers and studio headphones.

There are two sets of studio headphones outputs – studio phones and guest phones – plus a studio speaker output, each with their own level control. The input to these three can be CRM (ie. whatever the control monitor is receiving), stereo master, aux 4, or an external input (via the Communications Module EDAC). If the TALK TO STUDIO switch is active, the stereo master signal will be routed in mono to the left side of the headphones, with talkback routed to the right. A producer-to-studio input is also available to the phones, with audio input and control via the Communications Module EDAC and external logic D-Sub connector. Similarly, this signal is routed left, with talkback right, whenever it is present.

The studio speaker outputs can be manually or externally muted; an LED is provided to indicate if external muting is in operation. A speaker dim facility, linked to an internal preset pot for dim level, is also provided.

The Communications Module's oscillator, switched in and out via a clear illuminated switch, is routed to the internal tone bus, and also to two sets of balanced outputs on the rear panel EDAC (OSCL & OSCR). A calibration pot controls overall tone level, and a level control attenuates the balanced outputs. The internal tone bus is disabled when the Stereo Master Module's ON AIR switch is active. The oscillator can be switched to 100, 400, 1k and 10k Hertz, and an EBU TONE facility is provided to switch the OSCL output such that it is muted for 100ms every 3s. A slate facility is also provided - the oscillator signal can be routed to the direct output of every input module, the talkback signal can be similarly routed, or the two can be routed simultaneously (though the oscillator frequency will be automatically set to 30Hz).

Two OPTION switches are provided, controlling relays available via the Communications Module external logic D-Sub connector, for remote control of external devices, lamps etc. The switches also drive talkback contacts for external use via an EDAC connector together with Call LEDs accessed via the Logic D-sub connector. The option switches talk separately to the left / right cleanfeed mixes for the Telco outputs.

Monitor Module

The Monitor Module provides facilities for mono and stereo monitoring of many internal and external sources.

Any one of eight external or six internal sources can be selected for monitoring. External sources are taken from a rear-panel 90-way EDAC connector, whilst internal jumpers allow combinations of the following to be assigned as the six internal sources:

- Groups 1 to 8 (mono)
- The main stereo master mix
- The mono mix of the stereo master
- AUX 1 to AUX 3 (mono)
- AUX 4 (stereo)

Stereo sources are normally sent in stereo to the monitor bus. With the MONO SOURCE L & R switches, however, either or both the left and right sides of a stereo monitor source can be sent in mono to both sides of the monitor bus. Monitor outputs are via two sets of monitor speaker outputs, and to a headphones output.

Both cue and monitor signals can be simultaneously heard in the headphones by depressing the H/P SPLIT button. The monitor signal is sent (in mono, summed if it is a stereo source) to the left side, and the cue to the right side.

The ALT switch is used to switch between the two sets of monitor speaker outputs. Whichever set is selected are affected by the right channel phase reverse, balance and level controls. The L & R outputs can be summed to mono, and independently muted. Mutes can be executed under manual or external control. A DIM facility is also available, cutting monitor output level by a preset level (-20dB is the default, but this can be changed by a preset on the Monitor Module PCB).

Master cue facilities are provided on the Monitor Module. The overbridge cue speaker is fed with overpress cue signals (if the overpress option is fitted), the return talkback signal, and (if the correct jumpers are fitted) a mono sum of the cue L & R signals. A stereo pair of cue speaker outputs is also provided. Return talkback and cue monitor have their own level controls.

The cue speaker outputs carry PFL and AFL signals via the cue L & R busses. These signals are muted with the overpress facility (if fitted), if the appropriate jumpers are present.

The cue L & R busses can be switched from the cue speaker output to the monitor outputs, and a master switch is provided to select PFL or AFL operation from the various CUE switches on the console. All CUE switches can be reset from the monitor module.

Module Jumper/Link Options

Mono Input Module

Audio			Logic	
Links 1-4	Pre-fade insert point	Pre/(default) post EQ	SW21-A Closure disables dual action of SW20	Open
SW19	Internal switch insert point	Pre/(default) post fade	SW21-B Closure enables Cue Cancel from fader open	Closed
J1, 2	HF EQ	Bell (default)/shelf	SW21-C Open enables Rem Com in mic mode	Closed
J3	Meter input	Pre EQ/(default) pre fade	SW21-D Closure enables latching start in line mode	Open
J4	Stereo AUX 4 pre fade source	Pre mute (default)/post mute	SW21-E Closure enables momentary start in line mode	Closed
J5	Mono AUX 1-3 pre fade source	Pre mute/(default) post mute	SW21-F Closure enables start/stop function from PFL	Closed
J6	Dir O/P via AUX 1 level pot (meter follows)	Dir O/P (default)/J3 setting	SW21-G Closure for mic live studio mute	Closed
			SW21-H Closure for mic live control room mute	Open

Stereo Input Module

Audio			Logic	
J1, 2	Dir output source L/R	Post fade (default)/pre mute*	SW21-A Closure disables dual action of SW1	Open
(removed on Telco version)			SW21-B Closure enables Cue Cancel from fader open	Closed
J3, 4	Meter source L/R	Post fade/(default) pre EQ	SW21-C Closure enables latching start line 1	Open
J5, 6	AUX 4 pre fade source L/R	Post-mute/(default) pre mute	SW21-D Closure enables momentary start in line 1	Closed
J7, 8	AUX 1-3 pre fade source L+R	Post mute (default)/pre mute	SW21-E Closure enables latching start in line 2	
*Telco version			from fader/ON and PFL	Open
J9, 10	Dir O/P pre fade source L/R	Post mute (default)/pre mute	SW21-F Closure enables momentary start in line 2	Closed
J11	Input 'B' mode	Telco 'CLNFD' (default)/Dir O/P	SW21-G Closure enables line 1 momentary start/stop	Closed
(this allows for more comprehensive Dir O/P controls,			from PFL (active only when SW3-D is closed)	
using A or B Stereo Inputs without Telco mode)			SW21-H Closure enables line 2 momentary start/stop	Closed
			from PFL (active only when SW3-E is closed)	

Mono Group Module

J1	Remote common	Allows signalisation interlock with Master and Input modules, ie. operates autonomously (default), or only when all 'remote' modules in signal path have faders raised
J2	Talkback to group	Talkback replaces (default) or mixes with program in Group Output
J3	Slate (Osc to groups)	Replaces (default) or mixes with program
J4	Effect of ON-AIR switch on talkback	No effect (default) or kills talkback to group output
J7	AUX 1-3 pre fade source	Pre/(default) post mute
J8	Stereo AUX 4 pre fade source	Pre/(default) post mute
S30	Insert point	Pre (default)/post fade

Stereo Master Module

J1	Remote common	Allows signalisation interlock with Group and Input modules, ie. operates autonomously (default), or only when all 'remote' modules in signal path have faders raised
J2, 3	Mono output	Post fade, pre limiter or (default) post limiter
J4	Talkback	Talkback replaces (default) or mixes with program
J5, 6	Limiter pre-emphasis	Pre-emphasis or (default) no pre-emphasis on limiter

Monitor Module

J1	Ext. 8 input	Set for +4dB or -10dBV
J2, 3, 4	Monitoring	Cue to monitor/talk to studio (2 monitor modules)
J5, 6, 7, 8, 9	Talkback	Selections for control room or studio
J10, 11	Cue speaker outputs	Cue signal output routing. Internal/external feed & overpress
J12	Cue to headphones	Allows cue to mix (default) or replace program
J13	Monitor dim bus	Enables monitor dim (default) or monitor mute
J14	Studio dim bus	Enables studio mute (default) or studio dim

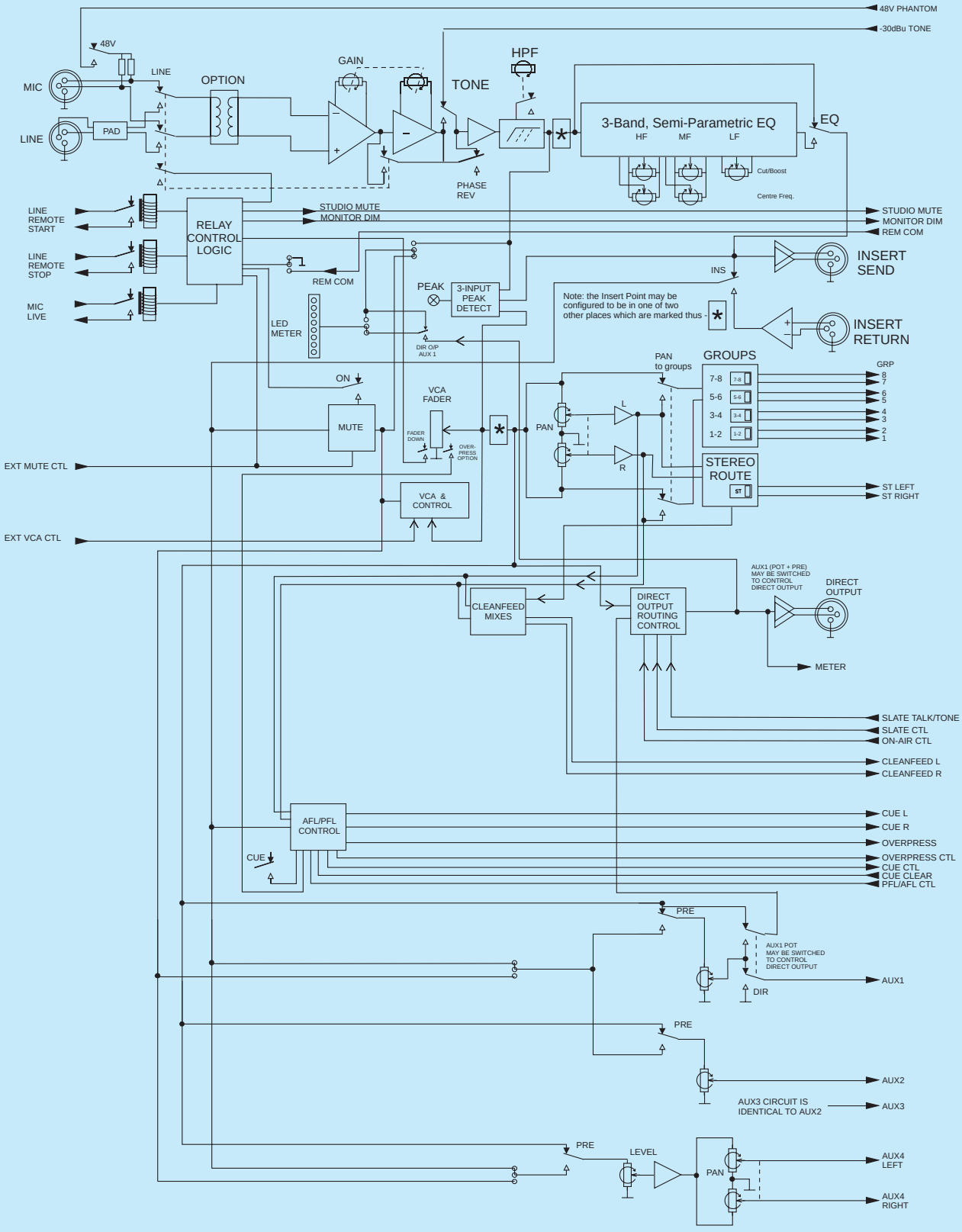
Comms Module

J1, 2	Option 1 & 2 switches	Feeds T/B to the external destinations. When not operated these can be either an external cue input signal (default) or no signal (grounded)
J3	Talkback to studio speakers	Mute kills T/B to speakers (default) or T/B overrides mute
J4	Talkback to studio speakers	T/B mixes with (default) or replaces program
J5, 6	Cleanfeed options	Allows engineer talkback to cleanfeed L/R busses

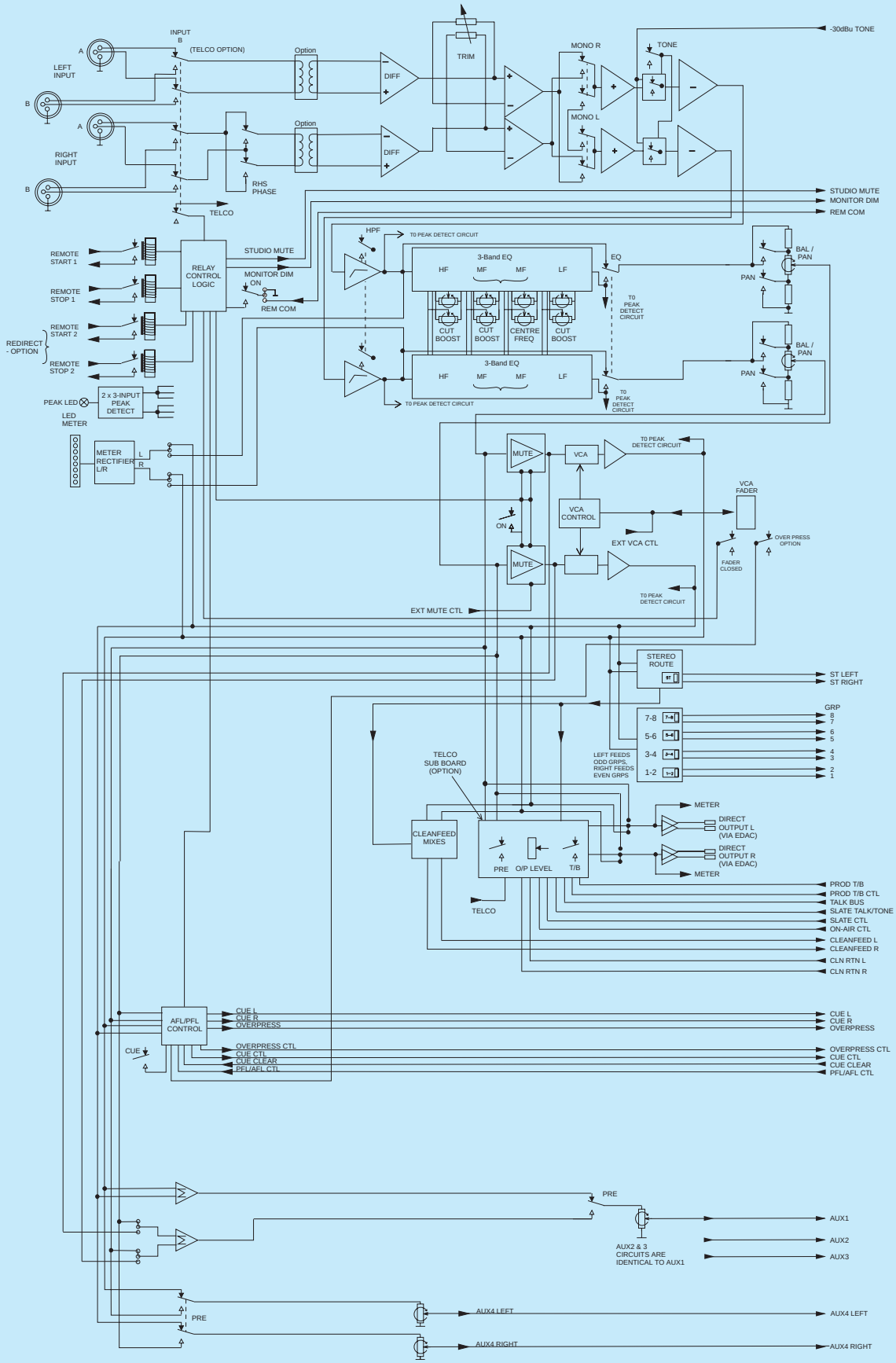
Internal Monitor Source Selection

The Monitor Module's bank of DESK 'A' switches allow selection of any one of six internal monitor signals. The sources of these six signals are determined by links on an internal scramble card., from: groups 1 to 8 (mono), the main stereo mix of the Stereo Master Modules (stereo), the mono mix of the Stereo Master Module (mono), AUX 1 to AUX 3 (mono), or AUX 4 (stereo).In addition to these, there are also two feeds, Spare L & R, which can be used to monitor any point in the console.

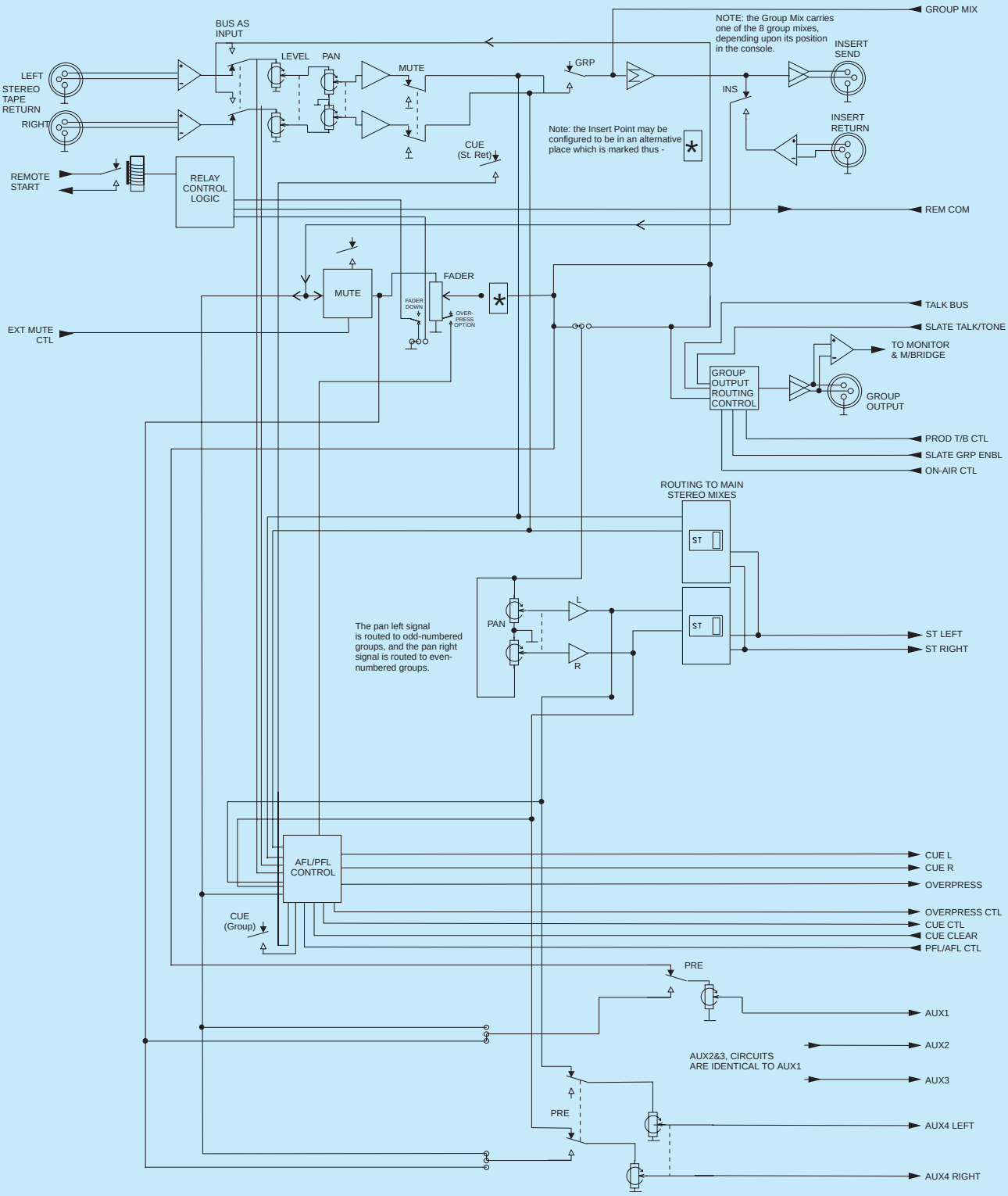
Mono Input Block Diagram



Stereo Input Block Diagram



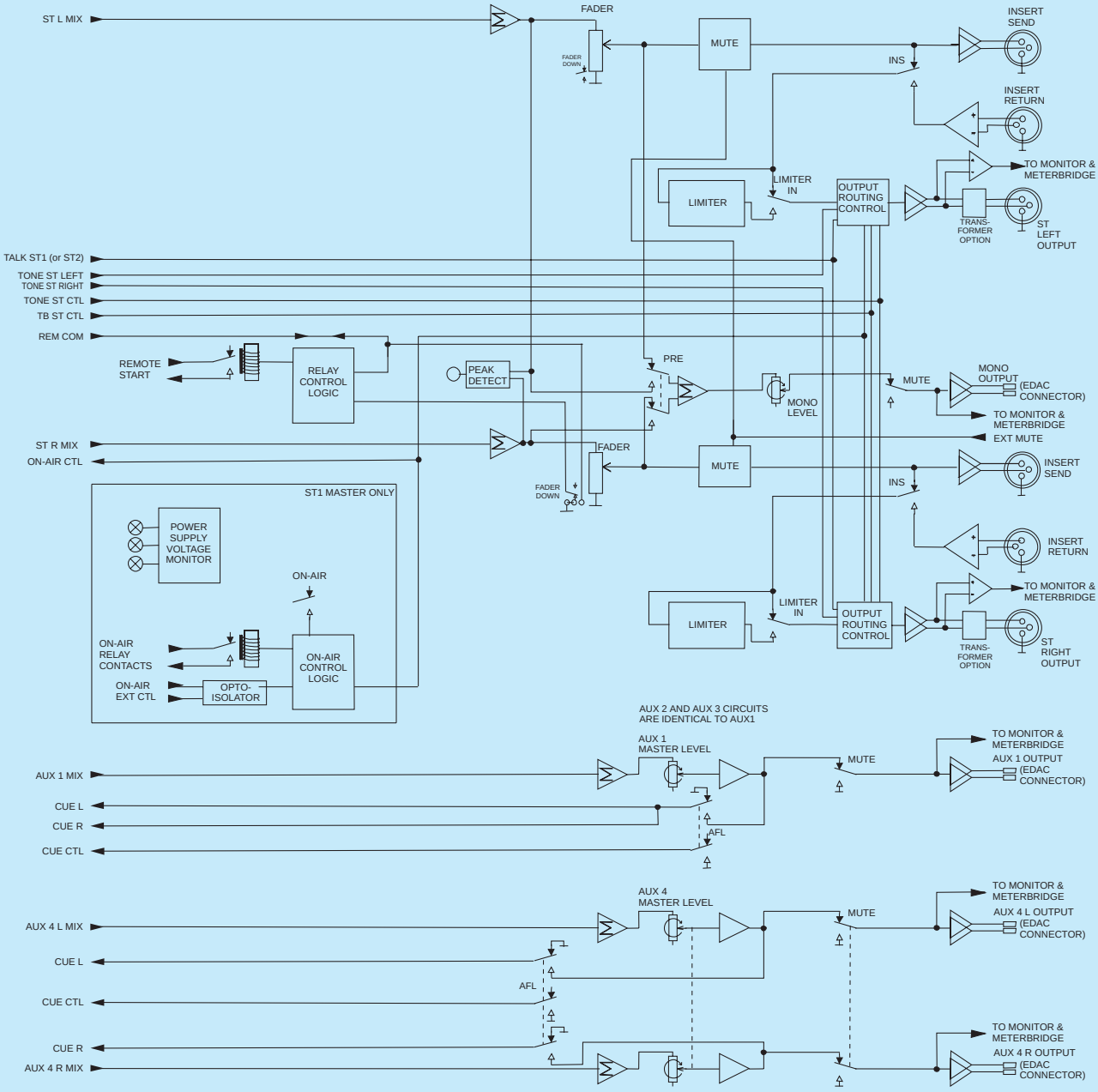
Mono Group Block Diagram



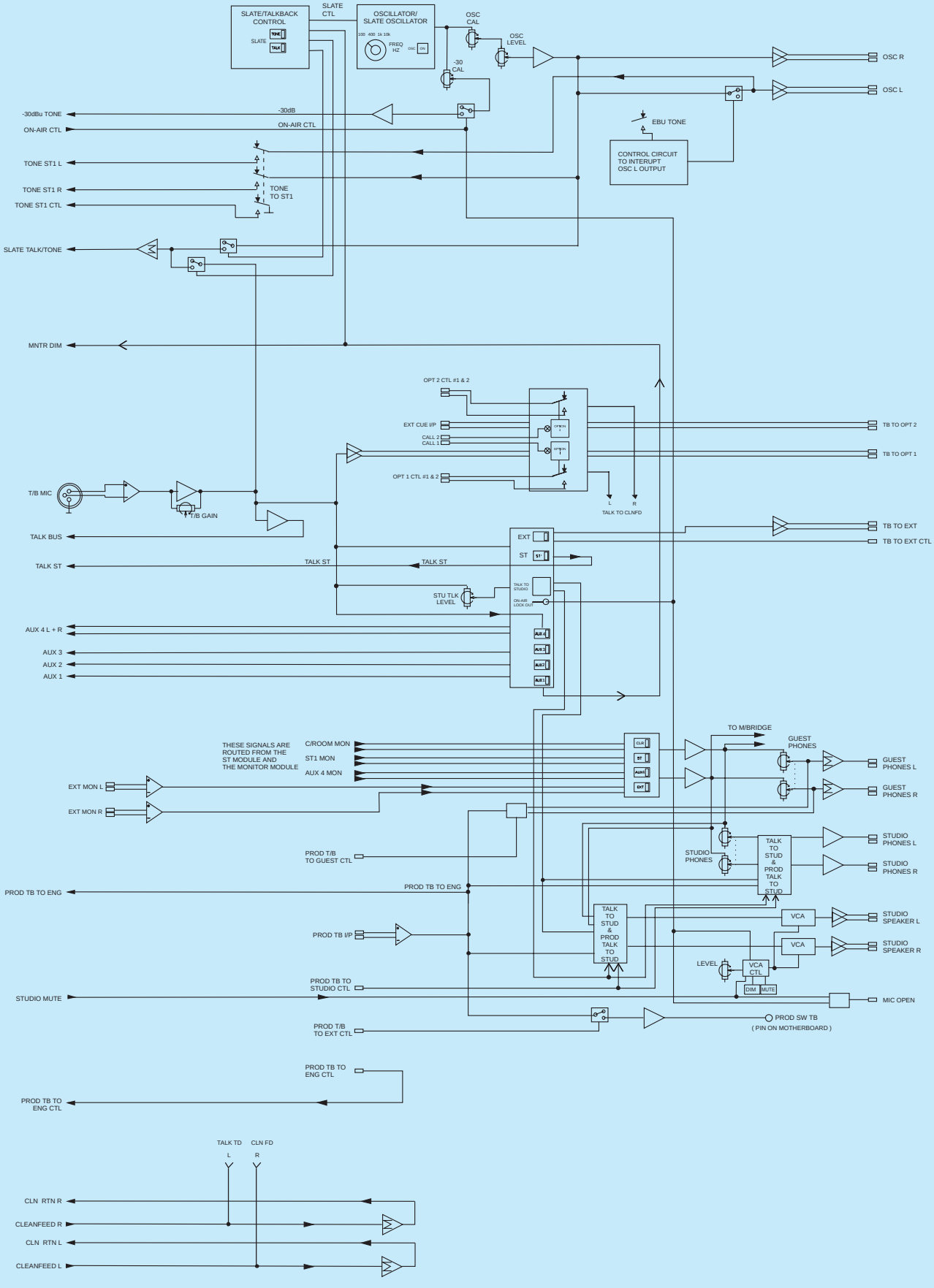
*Note

The stereo group is fitted with a balance control, switchable to pan, and a stereo image width control. These functions appear in the circuit, post the group summing amp and pre the insert switch. The rest is as per above block diagram but in stereo, with aux 4 being in true stereo.

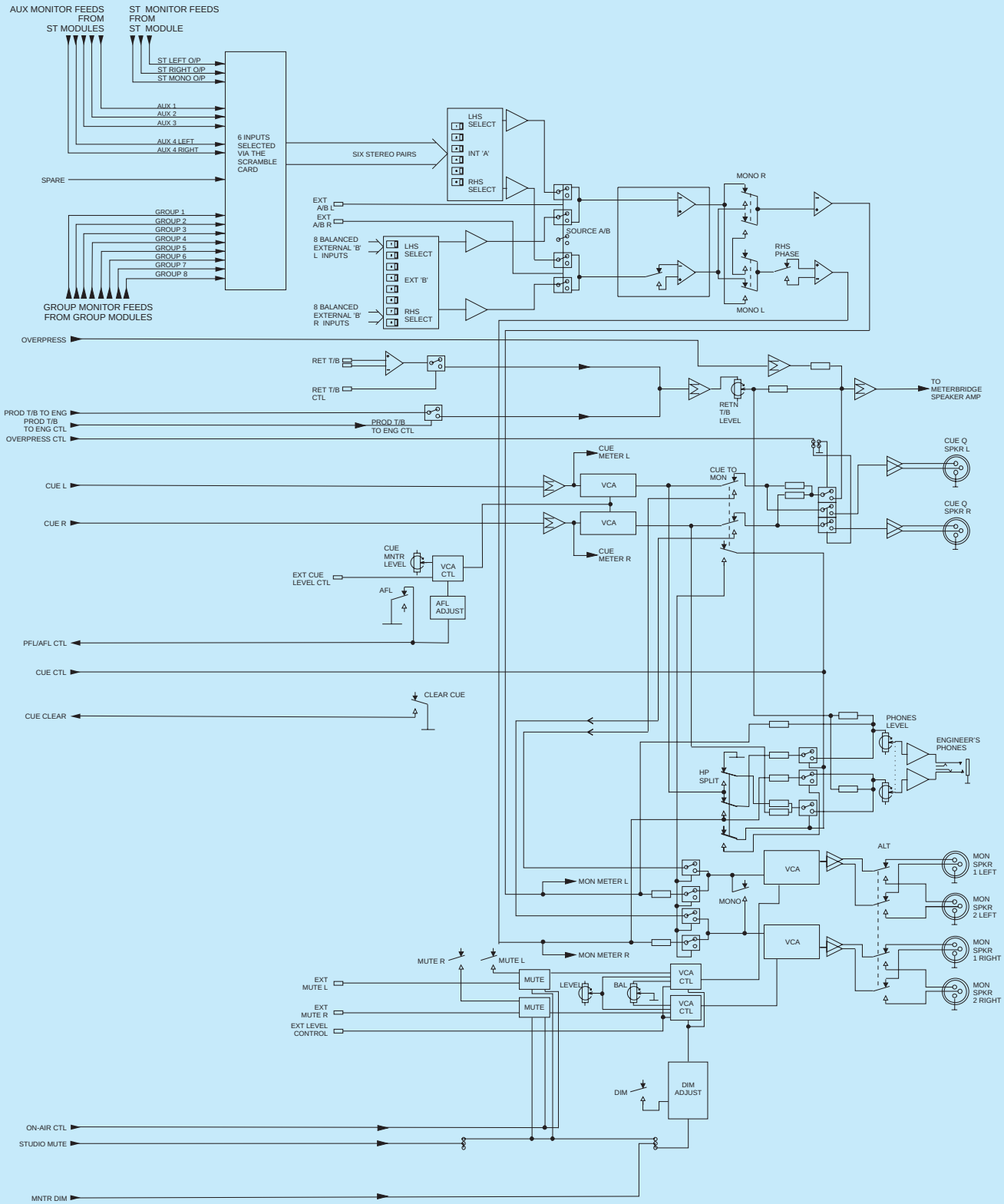
Stereo Master Module Block Diagram



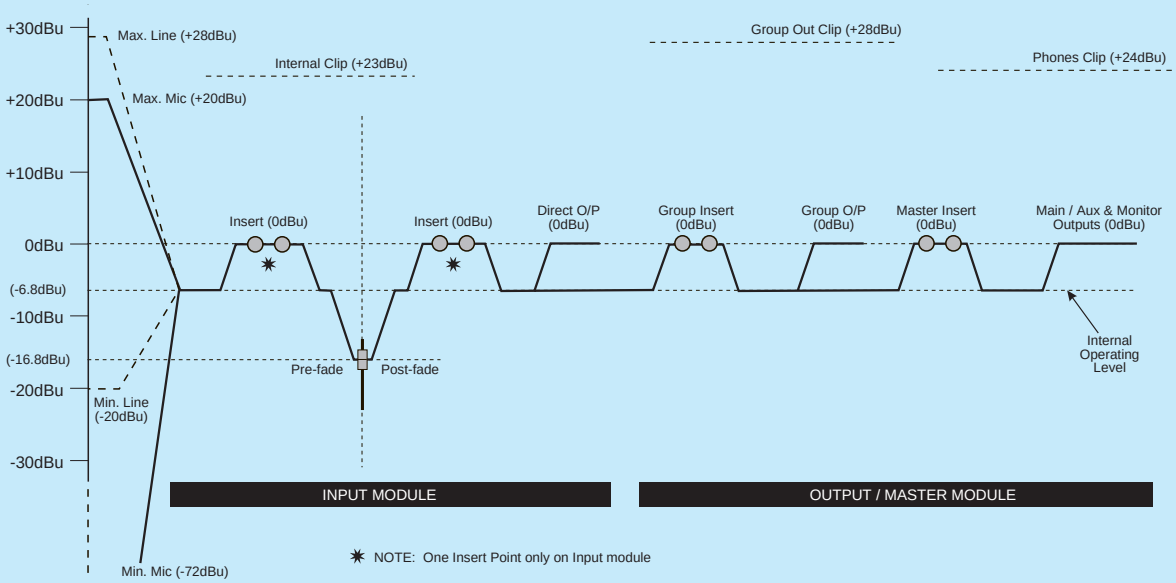
Communications Module Block Diagram



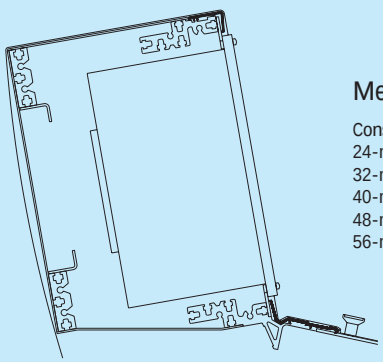
Monitor Module Block Diagram



Level Diagram

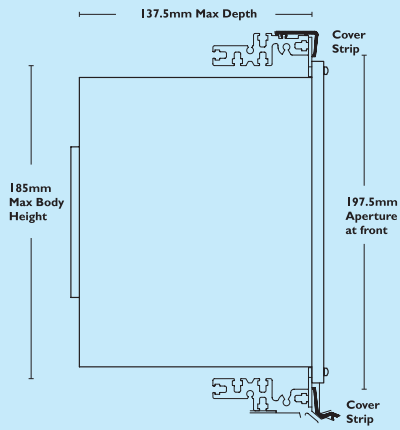


Meterbridge Dimensions

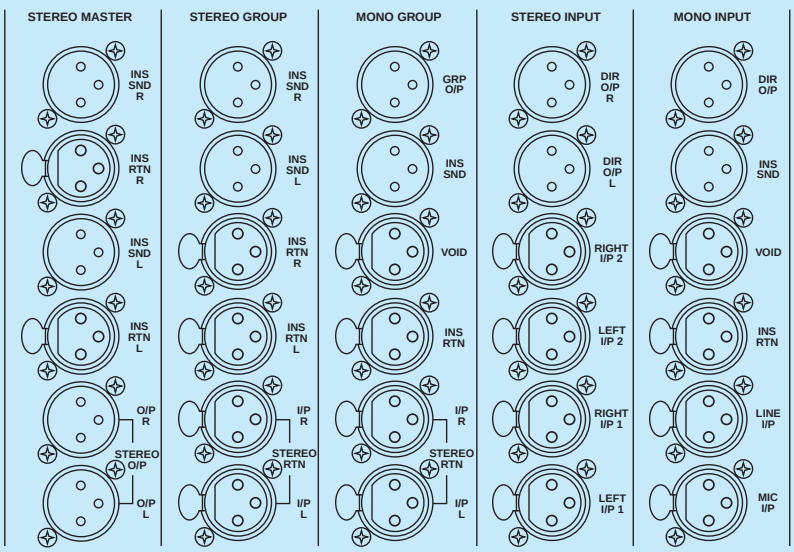


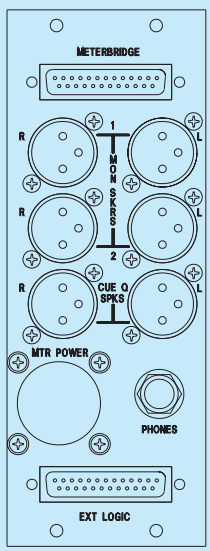
Meterbridge sizes

Console	Meterbridge
24-module frame	14 slots
32-module frame	20 slots
40-module frame	26 slots
48-module frame	33 slots
56-module frame	39 slots



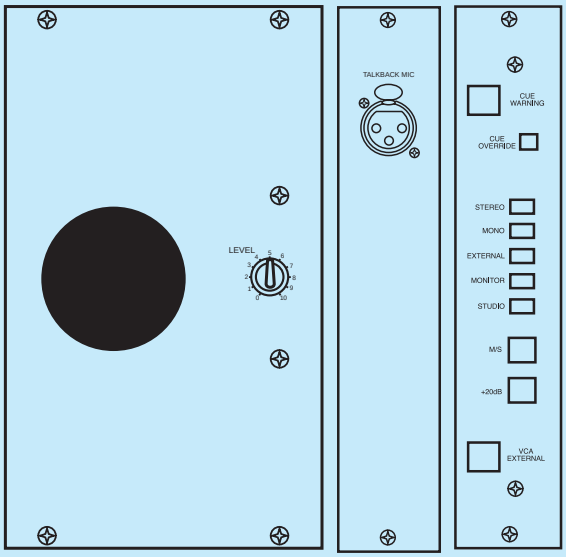
Rear Panels





Meterbridge Panels

The meterbridge of the B400 is designed to accept DIN standard and Nordic cassettes (European and Scandinavian standards), with apertures based on modules measuring 190x40mm (height x width). For example RTW & NTP Meters.



Meter Selector Panel

This panel allows you to monitor a variety of console signals. The meters which would be used in conjuction with this panel may be chosen from a range of Soundcraft meter panels which are available from your dealer. It is suggested that a suitable choice would be a Left / Right pair + phase correlator.

Selector Switches

There are five sources for monitoring: STEREO monitors the stereo output of the Master Module, MONO monitors the mono ouput from the Master Module (on the left and right meters), EXTERNAL monitors any signal placed on the external input L and R XLRs on the meterbridge rear connector panel, MONITOR monitors the Monitor Module's output (to output speakers), and STUDIO monitors the studio speakers.

Cue Override

If the CUE OVERRIDE switch is depressed, and Overpress or Cue generated from the console, it will replace the selected meter source. The green CUE WARNING lamp will light whenever a Cue or Overpress signal is present.

M/S

The M/S switch encodes an incoming stereo L/R signal into M/S for display on the meters. The +20dB switch works in conjuction with the M/S switch: it boosts the S signal by +20dB.

Meterbridge Speaker

The Meterbridge speaker feed is sourced from the Monitor Module and has its own volume control.

Talkback Mic

The talkback mic socket is routed onto the talk bus via the Communications Module.

Input / Output Specifications

	Module	Signal	Conn.	Pin	Nom Level	Max Level	Impedance
Inputs	Mono Input	Mic	Female XLR	Pin 1-chassis Pin 2-signal hot Pin 3-signal cold	-72 to -10dBu	+20dBu	>1.5kΩ
		Line			-20 to +10dBu	+28dBu	>10kΩ
	Stereo Input	Left/Right A&B	Female XLR		-20 to +10dBu	+28dBu	>10kΩ
	Mono Group	Tape return	Female XLR		-20 to +10dBu	+28dBu	>10KΩ
	Comms	TB mic	Female XLR		-60 to -25dBu	0dBu	>1.5kΩ
		Other Ext inputs	EDAC		0dBu	+26dBu	>10KΩ
Insert Points	Mono Input	Send & return	Send: Male XLR Ret: Female XLR	Pin 1-chassis Pin 2-signal hot Pin 3-signal cold	Send 0dBu Return 0dBu	+26dBu (into 1kΩ) +28dBu	<60Ω >10kΩ
	Mono Group	Send & return			Send 0dBu Return 0dBu	+26dBu (into 1kΩ) +28dBu	<60Ω >10kΩ
	Stereo Master	Send & return L/R			Send 0dBu Return 0dBu	+26dBu (into 1kΩ) +28dBu	<60Ω >10kΩ
Outputs	Mono Input	Direct output	Male XLR		0dBu	+26dBu (into 1kΩ)	<60Ω
	Stereo Input				0dBu	+26dBu (into 1kΩ)	<60Ω
	Mono Group	Group Output	Male XLR		0dBu	+26dBu (into 1kΩ)	<60Ω
	Stereo Master	ST Left & Right	Male XLR		0dBu	+26dBu (into 1kΩ)	<60Ω
	Monitor	Cue Q SPKR L&R Mon SPKR 1/2 L&R	Male XLR		0dBu 0dBu	+26dBu (into 1kΩ) +26dBu (into 1kΩ)	<60Ω <60Ω
		Headphones O/P	TRS (1/4") jack	Tip-left Right-right Sleeve-ground	0dBu	+20dBu (into 1kΩ)	50Ω
	Comms	Osc/TB/Phones & Spkr outputs	EDAC		0dBu	+20dBu (into 1kΩ)	

Back Panel Connections

B400 Typical Specifications

Connections

Mic Input (XLR)	>1.5kΩ balanced	-72dBu to -10dBu	+20dBu max
Line Input (XLR)	>10kΩ balanced	-20dBu to +10dBu	+28dBu max
Insert Send (XLR)	<60Ω balanced	0dBu	+28dBu max (+25dBu into 600Ω)
Insert Return (XLR)	>10kΩ balanced	0dBu	+28dBu max
Mono Direct Out (XLR)	<60Ω balanced	0dBu	+28dBu max (+25dBu into 600Ω)
Stereo Direct Out (XLR)			
Group Insert Send (XLR)	<60Ω balanced		
Group Insert Return (XLR)	>10kΩ balanced		
Group Output (XLR)	<60Ω balanced	0dBu	+28dBu max (+26dBu into 600Ω)
Aux Output (XLR)	<60Ω balanced	0dBu	+28dBu max (+26dBu into 600Ω)
Monitor Output (XLR)	<60Ω balanced	0dBu	+28dBu max (+26dBu into 600Ω)
Main O/P Insert Send (XLR)	<60Ω balanced	0dBu	+28dBu max
Main O/P Insert Return (XLR)	>10kΩ balanced	0dBu	+28dBu max (+26dBu into 600Ω)
Main Output (XLR)	<60Ω balanced	0dBu	+28dBu max (+26dBu into 600Ω)

Filter and EQ

		Mono Input	Stereo Input
Filters			
High Pass Filter	Freq	OFF / 32-500Hz	80Hz
	Slope	12dB/Oct	12dB/Oct
EQ			
High Frequency	Freq	1kHz to 16kHz	Fixed 10kHz
	Gain	±15dB	±15dB
	Q	Shelf / Bell=1	Shelf
Mid Frequency	Freq	250Hz to 4kHz	500Hz to 8kHz
	Gain	±15dB	±15dB
	Q	1.4	1
Low Frequency	Freq	100Hz	100Hz
	Gain	±15dB	±15dB
	Q	Shelf	Shelf

Auxiliaries

1, 2 and 3	Mono	Pre / post fade switched
4	Stereo	Individual level & pan, pre / post fade switched in stereo

Oscillator

Switchable 100Hz, 400Hz, 1kHz, 10kHz plus 30Hz Slate Override

Frequency Response

Any input into any output	Measured at +50dB gain	+0/-0.5dB, 20Hz - 20kHz

THD and Noise

Mic input to Group	Measured at +20dBu output	< 0.1% 40Hz - 16kHz
or Main output	Measured at 0dBu output	<0.025% @1kHz
		<0.05% 40Hz - 16kHz
Mic input EIN (22Hz - 22kHz bandwidth, unweighted)		<-128.5dBu (150Ω source)
Mix bus output noise (32ch routed)		Less than -80dBu
Mix bus noise (no channels routed)		Less than -90dBu
Line noise		Less than -88dBu

CMRR

Mic Input (min/max gain)	65/90dB @ 50Hz
	55/80dB @ 1kHz
	50/60dB @ 10kHz
Line Input (mono/stereo)	45/55dB @ 1kHz
	40/50dB @ 10kHz

Crosstalk

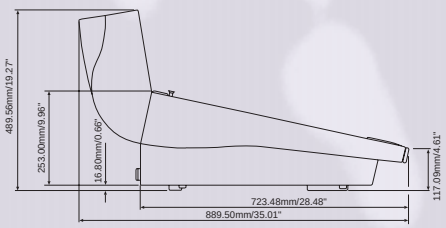
Channel muting	95/90dB @ 1kHz
(mono/stereo)	90/85dB @ 16kHz
Channel fader attention	90/90dB @ 1kHz
(mono/stereo)	85/85dB @ 16kHz

Shipping Weights

24 slot	156kg / 343.2lb
32 slot	172kg / 378.4lb
40 slot	195kg / 429lb
48 slot	218kg / 479.6lb
56 slot	280kg / 616lb

Dimensions

Width of 24-module frame 833.72mm / 32.82"
Width of 32-module frame 1087.72mm / 42.82"
Width of 40-module frame 1341.72mm / 52.82"
Width of 48-module frame 1595.72mm / 62.82"
Width of 56-module frame 1849.72mm / 72.82"



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.

Soundcraft

SOUNDCRAFT
HARMAN INTERNATIONAL INDUSTRIES LTD.
CRANBORNE HOUSE, CRANBORNE RD.,
POTTERS BAR, HERTS, EN6 3JN, UK.
TEL: +44 (0)1707 665000
FAX: +44 (0)1707 660742
EMAIL: info@soundcraft.co.uk
http://www.soundcraft.com

SOUNDCRAFT US
HARMAN PRO NORTH AMERICA INC.
AIR PARK BUSINESS CENTER 12
1449 DONELSON PIKE
NASHVILLE TN 37217, USA.
TEL: 1-615-399-2199
FAX: 1-615-367-9046

Part No. Standard; ZL0446
US; ZL0447

Andy Kershaw photo (page 3) courtesy of
BBC Radio Picture Publicity

Soundcraft reserve the right to improve or otherwise alter any information supplied in this document or any other documentation supplied hereafter.
E&OE 8/97

A Harman International Company