
SERIES
FOUR
Soundcraft

Big spec. Small footprint.



Series FOUR is a compact live sound mixer for front-of-house applications. Its high feature count combined with small footprint makes it ideal for budget-conscious touring applications, where the familiar control layout found on its big brother, the Series FIVE, will be highly appreciated. Partnered with the SM20 monitor console, the Series FOUR also provides a flexible audio mixing solution for live sound venues.

The Series FOUR is available in four frame sizes providing 24, 32, 40 and 48 mono inputs into 8 group busses, 10 auxiliary busses and stereo and mono main mix busses. 4 full-function stereo input channels are also included in each frame in addition to the mono modules. The output section includes 8 VCA groups, and a 16x8 matrix section, which includes feeds from four of the Aux busses.

SERIES FOUR



- 24-48 channel frame sizes
- 4 stereo mic / line inputs with full EQ as standard
- Rugged power supply with three year warranty
- Fully modular design in a compact frame
- 8 subgroups
- 10 auxiliary busses
- 8 VCA groups
- Built-in 16x8 matrix section
- 4-band fully parametric EQ on both mono and stereo inputs
- Sweepable filters on all input channels
- 8 mute groups plus 126 mute snapshots
- Advanced logic-controlled solo system
- LED input metering on every channel
- VU output meterbridge
- 100mm channel and master faders
- MIDI programme change transmission and reception

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Power and Reliability

Professionals need a console that works the way they do.

The robust, modular construction of the Series FOUR allows channel strips to be removed and replaced quickly and easily. A motherboard bussing system is used, giving optimum noise performance and virtually no cables to disconnect.







The Series FOUR console is shipped with the ultra high-powered CPS2000, as used on the Series FIVE and FIVE Monitor consoles. This power supply unit features high quality components and uses fewer voltage rails for a simpler, more reliable system.

Safety and performance are demonstrated throughout the CPS2000. It features built-in diode linking, enabling two units to be used in parallel for fail-safe operation without the need of an external switching box. Heavy-duty Socapex® DC connectors link the PSU to the Series FOUR console, with heavy current wiring used throughout the PSU for optimum performance.

The CPS2000 features quiet PAPST® thermostatically controlled fans, forcing filtered air through the unit. All voltage rails are protected against short circuits and excess temperature, with front panel status LEDs indicating thermal shutdown and low mains power.

With the Series FOUR in use all around the world, its power supply needs to be capable of operating reliably at many different voltages. The CPS2000 features a front panel digital display, providing precise monitoring of incoming voltage, with a warning indicator when the mains voltage falls to within 3% of the dropout point.



- Linear circuitry, using industry standard components
- Fewer voltage rails for greater simplicity and reliability
- Load is spread across several power devices on each rail, for optimum heat dissipation
- Heavy current wiring is all hard soldered, minimising number of connectors
- Built-in diode output linking allows two supplies to be paralleled for redundant operation, without a separate switcher box
- Heavy-duty Socapex® DC connectors on both the console and power supply
- Thermal sensing fan speed control for reduced noise and longer life
- Housed in a 4U 19" rack-mountable case
- Three year warranty



Mono Input Module





WIDE-RANGE, LOW-NOISE INPUT PRE-AMP

The input stage uses the same circuit as used on our Series FIVE console, and was developed in response to feedback our customers gave us. The XLR input can handle mic or line level signals up to +30dBu, with the 'Range' switch selecting high or low sensitivity. This uses patented active circuitry rather than a PAD, which would degrade the noise performance and the common mode rejection of the stage. The 48V switch applies phantom power, and the Phase switch reverses the phase of the signal.

SWEEPABLE HIGH-PASS FILTER

Good filters are incredibly useful and the FOUR gives you the capability to clean up the low end of an input signal, minimising the amount of corrective EQ, which needs to be applied. The filter covers the range 20-700Hz, and can be completely bypassed when not required.

BALANCED INSERT POINT WITH IN/OUT SWITCH

The channel insert point uses separate balanced jacks for send and return. It is normally positioned immediately after the filter and before the equaliser, but can be repositioned using internal jumpers to be post-EQ if required.

EQ

The EQ section is based on the same circuits used in Series FIVE. Four sweepable bands are provided, and the two mid bands are fully parametric, with adjustable Q. The HF and LF bands can be switched to work either as shelving or Bell controls. The frequency ranges are 30-480Hz (LF), 70Hz-1.5kHz (Low mid), 450Hz-12kHz (High mid) and 1-20kHz (HF). +/-15dB of cut or boost is available at any frequency, and the Q on the two mid bands is variable from 0.5-3.0. The EQ can be switched out of the circuit when not required.

ROUTING AND PAN CONTROLS

The post-fade signal is routed to the 8 mono subgroup and main stereo mix bus and mono mix bus using individual routing switches. The pan control always controls the stereo mix bus feed, but can also be switched by the PAN switch to control the subgroups. The Mono or Centre bus is ideal for creating a separate feed for a centre cluster or sub-bass system. The LCR switch allows true LCR panning between the Left, Mono/centre and Right buses. In LCR mode, when the pan pot is in the centre, no signal appears on left and right outputs.

AUXILIARY SENDS

10 Aux sends are provided, all of which are switchable pre or post-fader in pairs. When pre-fade, internal links allow the source to be changed from post-EQ to pre-EQ, with or without muting with the channel mute. Aux 1-2 and 3-4 have dual concentric controls, and either or both pairs can be globally switched to work as a stereo send, with the lower control becoming the pan pot. The layout of the output section means that, on those occasions when 6 aux sends is enough, these two stereo sends can be used as additional stereo subgroups - they even have access to the matrix outputs.

DIRECT OUTPUT

A balanced direct output is available on a male XLR on the rear panel. This is normally fed from the output of the channel fader, but pressing the DIR switch on Aux 10 allows it to be controlled from the Aux 10 pot, and its associated pre-fade internal link options.

FADER AND MUTING

A high-quality 100mm channel fader controls the level to all busses, and has 10dB of gain when full up, as well as an expanded scale around the critical unity gain area, for maximum resolution.
The Channel mute switch defeats all post-mute feeds from the input channel, and can be remotely controlled by the console's mute master section, allowing creation of up to 8 mute groups.
A semi-recessed Mute Safe switch allows the channel to be prevented from remote muting by Mute groups, but still allows it to be locally muted.

MUTE GROUP AND VCA GROUP ASSIGNMENT

Each input channel can be assigned to any combination of 8 mute groups and/or 8 VCA groups, using the dual-function recessed switch bank next to the fader. The Assign Mode (Mute or VCA) has to be selected first using a global switch on the Master module. When pressed, the switches next to the fader will illuminate in green when VCAs are assigned, or red when Mute groups are assigned. The corresponding mute master buttons and VCA master faders are located on the master module.

LED INPUT METERING

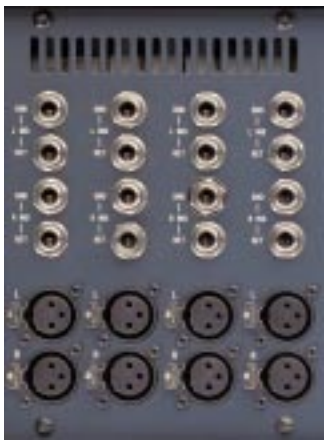
Every channel is fitted with a 10-segment peak-reading bargraph meter, positioned next to each fader for maximum visibility and giving immediate and graphic indication of incoming signals. An internal jumper changes the source from pre-EQ to post-fade. The top LED in the meter is configured as a Peak LED, and monitors the signal path in three places, (pre-EQ, post-EQ and post-fader) giving warning that the signal is within 3dB of clipping.

SOLO SWITCH

The Solo button provides a mono PFL or stereo AFL feed to the engineer's headphones and monitor outputs, or triggers a destructive solo-in-place, depending on mode selection at the master section. 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.

Stereo Input Module





Four stereo input modules are fitted to all Series FOUR consoles. These are designed to serve either as FX returns, or full-function input channels for any stereo sources including microphones.

The stereo module is as close as possible to two mono inputs in a single strip. Additional stereo inputs can be added in blocks of four, in place of mono inputs, to radically expand the number of possible inputs to the console - e.g. a 40ch frame with 16 stereo modules fitted gives a massive 60 microphone-capable inputs in an extremely compact size.

INPUT STAGE

The same wide-range mic/line input stage as on the mono input is used, with a dual concentric control adjusting left and right gain independently. Independent RANGE and 48V switches are provided for left and right channels, and the left channel can be phase inverted using the Phase switch, to correct wiring problems or for special effects. (An internal link option allows the switch to reverse both left and right inputs.)

SWEEPABLE HIGH-PASS FILTER

Ganged high pass filters are provided for left and right channels; they are switched out of the signal path by a click switch at the end stop of the frequency control.

EQ

The equaliser is a full stereo implementation of the mono channel EQ. The EQ can be switched in or out of the signal path.

INSERT POINTS

Separate left and right insert points are provided. The send and returns are fully balanced on separate jacks, and the insert point can be switched in or out of the circuit.

AUX SENDS

Full access to all 10 Aux sends is provided, as with the mono input. Each pair of sends is switchable pre/post fader. Internal switches allow each pair of sends to be either sourced individually from a mono sum of L and R signals or to be fed as stereo pairs of sends from L and R module signals.

ROUTING AND PAN CONTROLS

The post-fade stereo signal is routed to the 8 subgroup and main stereo and mono mix busses using the individual routing switches. Two pan pots are provided, using a dual concentric control - one each for the left and right channels. This means that exact control of the stereo image width is possible by setting the two pan pots at various positions away from centre, and also allows independent panning of the two inputs connected to the module. The Mono or Centre bus is independent of the pan control, and is derived from a sum of the left and right signals.

FADER AND MUTING

A high-quality 100mm stereo channel fader controls the level to all busses, and has the same scaling as the mono inputs. The Channel mute switch mutes both left and right channels and all post-mute Aux sends, and can be remotely controlled by the console's mute master section, in the same way as for the mono input. A recessed Mute Safe switch is also fitted - this is useful when the stereo channel is used as an FX return, and effectively prevents the channel from being muted by either the master muting system or the solo-in-place system.

MUTE GROUP AND VCA ASSIGNMENT

As with the mono inputs, each stereo input can be assigned to any combination of the 8 Mute Groups and 8 VCA subgroups, using the dual function assign switch bank beside the fader. Both left and right channels of the module will be controlled as a pair from any one or more of the 8 VCA master faders.

LED INPUT METERING

Two peak-reading 5-segment input meters are positioned adjacent to the fader, and meter the left and right input signals immediately after the input gain stages. The top LED in each bar is configured as a Peak LED, and monitors the signal path in three places, (pre-EQ, post-EQ and post-fader) giving warning that the signal is within 3dB of clipping. The meter point is internally switchable to be post-fader, if required.

SOLO SWITCH

The Solo button provides mono sum PFL or stereo AFL feeds to the engineer's headphones or monitors, or activates a destructive solo-in-place, depending on mode selection at the master section. Intercancel or additive soloing is possible.

Output Section



Subgroups 1-8 / Aux 5-8



Aux 1/2 & 3/4 with global stereo /mono switch



Aux 9/10

The output section of the FOUR is packed with powerful features. It provides the master output level controls for the 8 Subgroups, 10 Aux sends, 8 matrix, and stereo and mono main mix busses, plus master facilities, aux return, oscillator and talkback.

The layout of the subgroup and Aux masters has been specially designed to allow excellent flexibility, depending on the numbers of subgroups and aux sends required for each job. All the subgroup and aux master outputs have identical facilities, so that if 8 subgroups are not enough for a particular job, some of the aux sends can be used as additional subgroups. Thus all the aux master sections have 60mm faders, insert points and routing to the main mix busses. In addition, Aux masters 1-4 have access into the matrix outputs.

8 SUBGROUP MASTER FADERS

Each of the 8 subgroups has a 60mm master fader controlling signal level to the electronically balanced output XLR on the rear panel. Each group is equipped with PFL or AFL solo and automated mute, plus a fully balanced insert point with in/out switch. The STE and MNO buttons route the subgroup signal to the main stereo and mono (centre) busses. The PAN control allows positioning of the subgroup signal within the stereo field. The LCR switch changes the pan mode to true LCR, as on the mono input modules.

10 AUX MASTER FADERS

Each Aux master has identical facilities to the subgroups described above. This allows any spare aux sends to be used as subgroups if required. Aux 1-4 also have global mono/stereo switching, and can be sent to the 8 matrix outputs, for even more subgrouping flexibility.

GLOBAL MONO/STEREO SWITCHING

Aux 1/2 and 3/4 have a Global Mode switch on their output section. This allows these two pairs of sends to be easily configured as mono or stereo sends. When set to stereo, the dual concentric input send pots are automatically configured as stereo level on top, and pan on bottom. In mono mode, top and bottom work as independent mono sends. In addition, in stereo mode, the Solo buttons on the output section are logic-linked for convenience.

MATRIX OUTPUTS 1-8

8 matrix outputs allow individual mixes to be derived from the 8 subgroups, left, right and Mono(centre) outputs, plus Aux 1-4 and an individual external line input. All the matrix outputs appear on electronically balanced XLRs on the rear of the console. Each matrix output has a rotary fader, AFL or PFL solo, and automated Mute button with recessed mute safe switch.

The TB button on each output routes talkback, tone or pink noise from the central talkback/oscillator section. All matrix outputs feature fully balanced insert points with in/out switch.

VCA MASTER FADERS

8 VCA master faders control the levels of any mono or stereo input channels assigned to them. An associated Mute button is provided for each fader – operating this switch acts as a remote control of the Mute buttons on the assigned channels.

Master Section



The master section contains the main stereo and mono (centre) output faders, Aux return, plus monitor and solo controls, talkback and test oscillator.

MASTER FADERS

Three 100mm faders control the left, right and mono (centre) output levels. These are fed to balanced XLRs on the rear panel.

INSERT POINTS

Pre-fade insert points are provided for left, right and mono (centre) outputs. These are fully balanced and use separate jacks for send and return.

ALTERNATE STEREO OUTPUT

In addition to the main stereo mix outputs, an Alternate stereo output is provided, derived either pre- or post- the main stereo master faders. This output is controlled by a pair of 60mm faders and can be switched to a mono sum if necessary. In this case you then have two additional fader-controlled mono outputs. The outputs appear on balanced XLRs on the rear panel. This pair of outputs is invaluable for providing a last-minute stereo feed for broadcast or recording, or supplying a stereo or mono mix to an additional flown system.

MONITOR SECTION

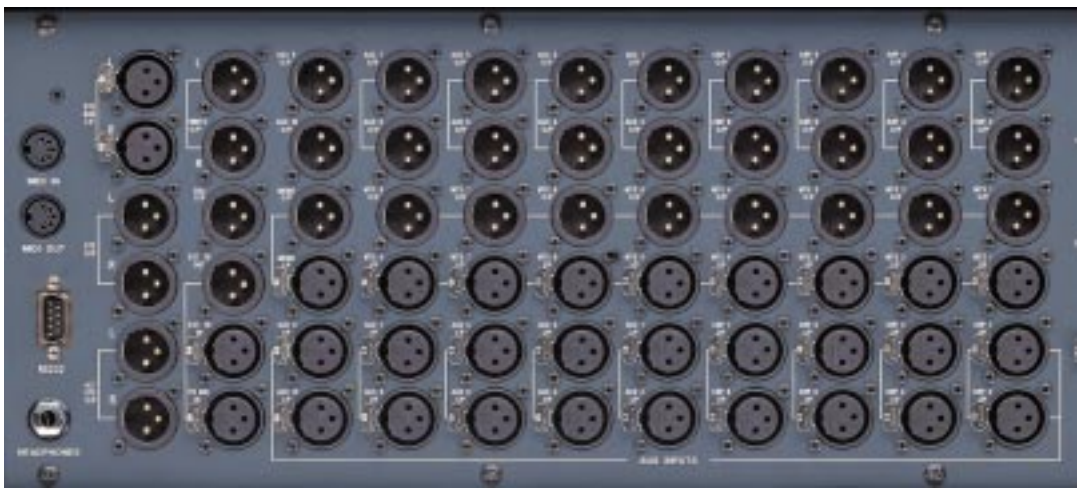
Separate level controls and outputs are provided for engineer's monitor speakers and headphones. Both these outputs normally receive either the main stereo bus signal, mono bus signal, Aux return (2TK) or nothing, depending on the Monitor Source selection switch settings, but this is automatically overridden by any input or output solo signal.
A high-power headphone amp drives two parallel-connected headphone sockets, one recessed into the fader panel area below Aux 9/10 master faders, the other on the rear panel.

SOLO CONTROLS

The FOUR incorporates an advanced logic-controlled solo system, giving a number of useful features:
The Solo Clear button allows any solo on the console to be cancelled at the touch of a button.
The PFL/AFL Master Mode button controls which type of solo is obtained across the whole console when any solo button is pressed. Either mono PFL or stereo AFL can be chosen using this switch.
The PFL and AFL trim controls give +/-10dB of level adjustment of the soloed signals in the monitor / phones output.
The Autocancel On button, when selected, allows any solo button selected to cancel the previous solo. When this mode is not selected, solos can be selected additively.
The Input Priority On 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 Enable button (with 2 second press and hold, for safety) selects destructive in-place stereo solo rather than mono PFL or stereo AFL. Group, Aux and Matrix output solos remain in either PFL or AFL mode, regardless of this switch setting.

TALKBACK AND OSCILLATOR SECTION

The talkback and oscillator signals can access any of the console busses, including matrix outputs, by means of the local TB/OSC buttons on each output section. The talkback section has front and rear panel XLRs for mic or line level signals, with phantom power capability. The mic signal can be routed either to selected internal busses, by pressing the Talk to Outputs button, or sent to a ClearCom™-compatible intercom system using the EXT button. The CALL button is used to send a Call signal onto the loop. An incoming CALL signal from a remote station will cause the console Littlites™ to flash, alerting the engineer.



Master Section



Mute Master Module

A Soundcraft proprietary intercom output (compatible with SM monitor consoles or another FOUR) is also available. Return talkback from the ClearCom system is switched onto the headphones, by pressing the EXT button in response to a CALL signal, where it dims the programme signal. This process is automatic when using the Soundcraft intercom. The oscillator generates either tone from 63Hz -10kHz or pink noise, and has its own independent balanced XLR output on the rear panel.

AUX RETURN

An additional stereo return is fitted to the master module, with bypassable 2-band shelving EQ at 60Hz and 12KHz, and is routed to either the stereo or mono mix busses, or both. This return is ideally suited to cassette or CD music replay. The Mute button is controlled by the Mute Scene system and has a recessed 'safe' switch, to protect it from muting during solo-in-place conditions.
The Solo button provides mono PFL, stereo AFL or Solo-In-Place, depending on the mode selected at the master section. A rotary fader controls the level of the return, and the return can be selected for monitoring on phones even if it is muted.

LEFT AND RIGHT LED METERS

A pair of 16-segment LED peak meters are fitted at the top of the master module. These provide accurate metering of main mix outputs and soloed signals, even if the VU meterbridge is not fitted.

INPUT ASSIGN MODE BUTTONS

Located on the Mute Master module, these two adjacent buttons are used in conjunction with the bi-colour illuminated assign switches next to the input faders, to display and set up VCA and Mute group assignments.
The two buttons form a toggle switch, so that one is always active:
Pressing the VCA button puts all the input VCA/Mute assign switches into VCA assign mode. The input assign switches illuminate in green when pressed, to show these assignments.
Pressing the MUTE button puts all the input VCA/Mute assign switches into Mute group assign mode. The input assign switches illuminate in red when pressed to show the mute group assignments.

ASSIGN SAFE SWITCH

If the SAFE switch is pressed, the input assignment switches cannot be used to make or change assignments, but they can still be viewed. Toggling between VCA and Mute Group assign modes by pressing the VCA or MUTE Master Assign switches will display the current assignments in green or red respectively, on the input channels.

MUTE MASTER BUTTONS

These large illuminated buttons allow activation of the 8 mute groups. Mute groups can be activated in any combination, and operate separately from the internal snapshot automation.

MUTE CONTROL/MIDI SECTION

The FOUR incorporates a mute snapshot system built into the console as standard. This allows the creation of up to 126 snapshots of the console's mute and VCA Assignment status, as well as the generation and reception of MIDI program change messages, allowing the console to remotely control patch changes on an FX rack. Additionally, pressing any mute button on the console will send out a MIDI note command, which can be used to trigger sound effect generation from samplers.

7-SEGMENT DISPLAY AND UP/DOWN BUTTONS

These allow the selection and display of the current snapshot number. The display flashes if the selected number does not match the currently active snapshot.

STORE BUTTON

Pressing this button stores the current mute settings to the snapshot number shown in the display. A confirm yes/no message is given.

RECALL BUTTON

Pressing this button recalls the mute snapshot selected in the display.

PROCESSOR RESET BUTTON

A recessed switch allows the mute control processor to be disabled in the unlikely event of a failure. Once disabled, all console mutes and faders are manually controllable. VCA and Mute group operation is not possible with the processor stopped, but the audio path will not be interrupted.

CONSOLE LINKING

All audio busses on the Series FOUR have balanced line level bus inputs, allowing the outputs of any other console to be easily connected. If full logic linking of VCAs and the solo controls to another Series FOUR is required, an RS232 port allows two consoles to be linked.

Architect's Specifications

The Mixing Console shall be constructed in a chassis that is itself supported by a rigid steel subframe, and shall be available in 24, 32, 40 and 48 mono input sizes. All internal PCBs shall be individual for each channel. The mixing console shall provide ten auxiliary sends, eight mono subgroups, as well as stereo and mono outputs. There shall be an alternative stereo output in addition to the main. A Mute Scene set system shall be included, enabling up to 126 scenes to be stored and recalled, with eight mute groups. The console shall be provided with 4 Stereo Input channels, 1 FX Return, Master Section and MIDI Scene Set Section. There shall be a fully flexible matrix system. The console will be supplied with a separate CPS2000 19-inch rack-mounting Power Supply.

The Mono Input shall have the following features; electronically balanced low-impedance input via an XLR socket with a switched continuously variable gain giving a sensitivity range of -2dBu to -70dBu (high gain range) and -20dBu to +10dBu for high level inputs, individually switchable 48V phantom power and a 20 - 700Hz High-pass filter. A by-passable 4-band equaliser shall be provided, with switchable bell/shelving response HF and LF controls with cut-off points 1kHz - 20kHz and 30Hz - 480Hz, and two parametric mid-frequency controls covering the range of 450Hz - 12kHz and 70Hz - 1.5kHz. The mid bands shall have a Q factor which is variable between 0.5 and 3.0. All bands shall have a cut and boost of 15dB (centre detented). 10 auxiliary sends shall be provided: pairs 1-2 and 3-4 shall have dual concentric pots, and can be switched to stereo pairs via global switches on the output modules, and 5-10 shall have individual level controls. The sends shall be switchable pre/post fader in pairs. The balanced XLR direct output shall be switch-selectable from post-fade or from the Aux 10 pot. Routing to the 8 subgroups shall be switchable post-fade or post-pan, with an individual routing switch to each group. The pan control also feeds the stereo mix bus via the mix switch. Routing to the mono (centre) mix shall be via a separate switch. There shall also be an LCR switch which changes the mode of the pan pot from normal to true LCR panning. Solo and Mute switches shall control the main signal path and allow the pre and post fade signals to be monitored at all times. A mute safe switch shall allow the channel to be protected against remote muting from Mute Groups, VCA masters, Solo-in-Place or snapshots. A 10-segment LED meter (jumperable pre-or post-fade) with separate multipoint peak indicator shall be provided. Assignment switches to 8 VCA groups shall be provided in a recessed area adjacent to the 100mm channel fader. The same assignment switches shall be used to assign up to 8 mute groups, using a global VCA/Mute Group mode switch, and bi-colour indication in the assign switches. There shall be a pre-EQ insert point (insert can be internally switched pre or post EQ - default=pre) using separate balanced jacks for send and return, enabled by an 'insert in' switch.

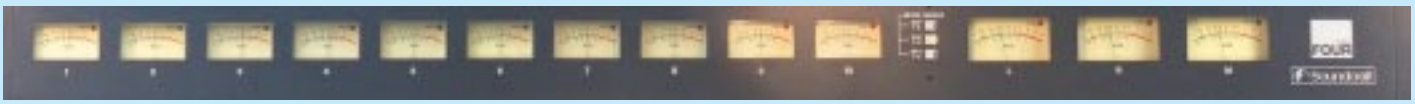
The Stereo Input shall have the following features; stereo mic or line level input on balanced XLRs with a continuously variable gain range giving a sensitivity of -2dBu to -70dBu (high gain range) and -20dBu to +10dBu for high level inputs, individually switchable 48V phantom power for left and right inputs, a 20 - 700Hz ganged High-pass filter and phase switch which operates either on left channel only or both left and right (internally jumperable). A by-passable 4-band equaliser shall be provided, with exactly the same facilities as the mono input. 10 auxiliary sends shall be provided: pairs 1-2 and 3-4 shall have dual concentric pots, and 5-10 shall have individual level controls. These sends shall be switchable pre/post fader in pairs. Each pair of sends shall be switched to be fed by a mono sum of the module or alternately left/right, using internal switches. Routing to the 8 subgroups shall be switchable post-fade or post-pan, with an individual routing switch to each group. Independent pan controls are provided for the left and right halves of the module, they also feed the stereo mix bus via the mix switch. Routing to the mono (centre) mix shall be via a separate switch. Solo and Mute switches shall control the main signal path and allow the pre or post fade signal to be monitored at all times, with Mute Safe for protection from remote muting. Twin 5-segment LED meters (jumperable pre- or post-fade) for left and right channels with separate multipoint peak indicator shall be provided. Assignment switches to 8 VCA groups shall be provided in a recessed area adjacent to the 100mm stereo channel fader. The same assignment switches shall be used to assign up to 8 mute groups, using a global VCA/Mute Group mode switch, and bi-colour indication in the assign switches. There shall be pre-EQ insert points (insert can be internally switched pre or post EQ - default=pre) for left and right channels, each using separate balanced jacks for send and return, enabled by a single 'insert in' switch.

Eight Group Outputs, 10 Aux Outputs, 8 Matrix Outputs shall be provided, using 8 combined Matrix/Aux/Group master channels, plus an additional Aux-only module for Auxes 9,10. The Group/Aux master sections shall each have a 100mm fader, an illuminated Mute switch and an illuminated Solo switch. The Group/Aux outputs shall be routable to the main mono (centre) bus via a switch, and to the main stereo busses via a pan pot and a switch. Panning shall be switchable either normal LR or true LCR. They shall each have an insert point via separate balanced jacks for send and return, with an 'insert in' switch. 8 Matrix outputs shall be provided, located above the Group/Aux sections. Each Matrix O/P shall receive a contribution from each of the 8 groups, Mix L, R and mono (centre), Aux 1-4, and an External line input. The Matrix output shall be controlled by a master rotary fader with associated illuminated Mute and Solo controls. The Output shall be electronically balanced, and an insert point shall be provided on separated balanced jacks for send and return, enabled by an 'insert in' switch. The Grp/Aux master modules controlling Aux 1,2 and 3,4 shall each have a global switch for selecting mono or stereo operation for these pairs of sends. Balanced line inputs shall be provided for all console busses, in order to link a second console. The Master Module shall have 3 x 100mm master faders which control L, R and mono (centre) outputs, Solo Clear, master AFL/PFL selection, Solo-in-Place and Auto Cancel selection, Talkback microphone socket and switching, oscillator and monitor controls. An Alternate Stereo Output shall be provided, derived from the main stereo output and switchable pre or post the main faders; this shall be switchable to a mono sum. A Stereo Aux Return shall be provided for stereo line level inputs, with rotary volume, 2-band shelving EQ at 60Hz and 12KHz, and snapshot controlled mute. The console will have an overbridge as standard, with 3 large VU meters to monitor Left Mix, Right Mix and mono (centre) Mix; it will also have 10 smaller VU meters to monitor Group/Aux/Matrix Outputs, as selected by a 3-position meter source switch bank. The left and right meters shall automatically switch to read an AFL or PFL solo, whenever one is activated. The console shall be provided with 8 VCA master faders with associated Mute switches, for control of the input channels. The Mute shall activate the Mute buttons of any assigned channels. The MIDI Scene Set section shall be capable of storing up to 126 snapshots comprising mono and stereo input mutes and group, aux, matrix output mutes and input VCA Assignments (if enabled). A MIDI Program change message shall be transmitted upon recalling a snapshot. A 3-digit LED display shall be used to show snapshot number for the current snapshot. Eight mute master buttons shall be used to activate mute groups; these shall work independently of the snapshot system. Presetting of external devices shall be possible via MIDI Program Changes and Note On/Off data.

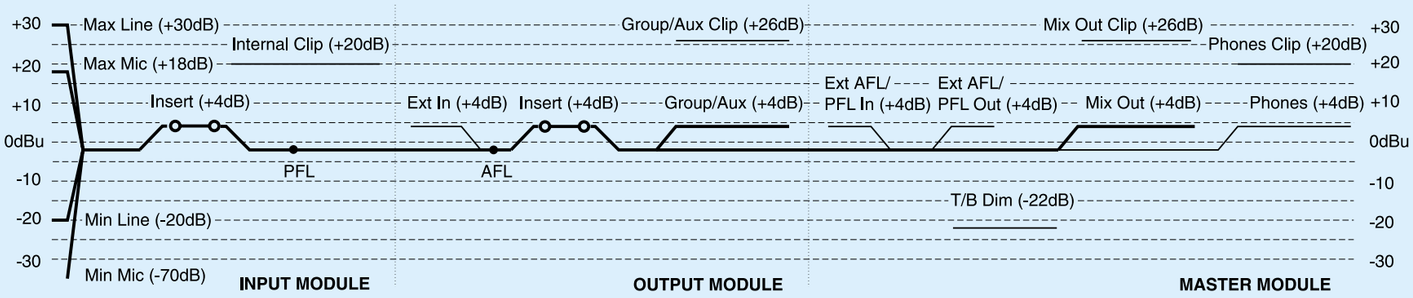
The dimensions and specifications shall be as published on the rear cover of this brochure. The console shall be the Soundcraft Series FOUR.

Metering

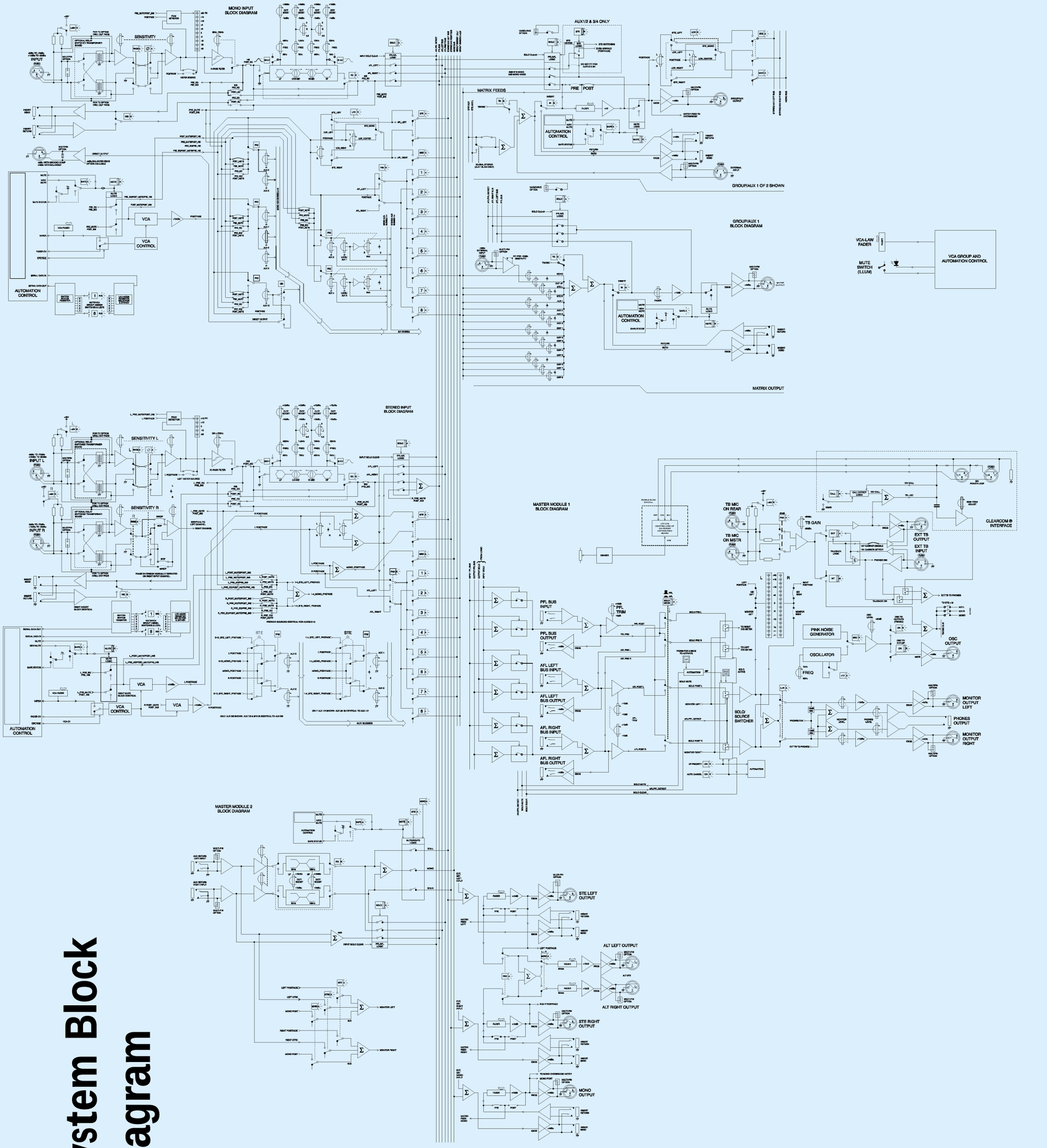
A removable VU meterbridge contains 10 VU meters for metering of the Subgroup, Aux and Matrix outputs (switchable as three banks using the meter source selector on the overbridge) and 3 larger VU meters dedicated to the main Left, Right and Mono (centre) outputs. The left and right meters automatically switch to read any AFL or PFL selection. All VU meters are illuminated using LED backlighting rather than unreliable filament lamps, and each meter incorporates a large peak LED that illuminates when the output is within 3dB of clipping.



Level Diagram

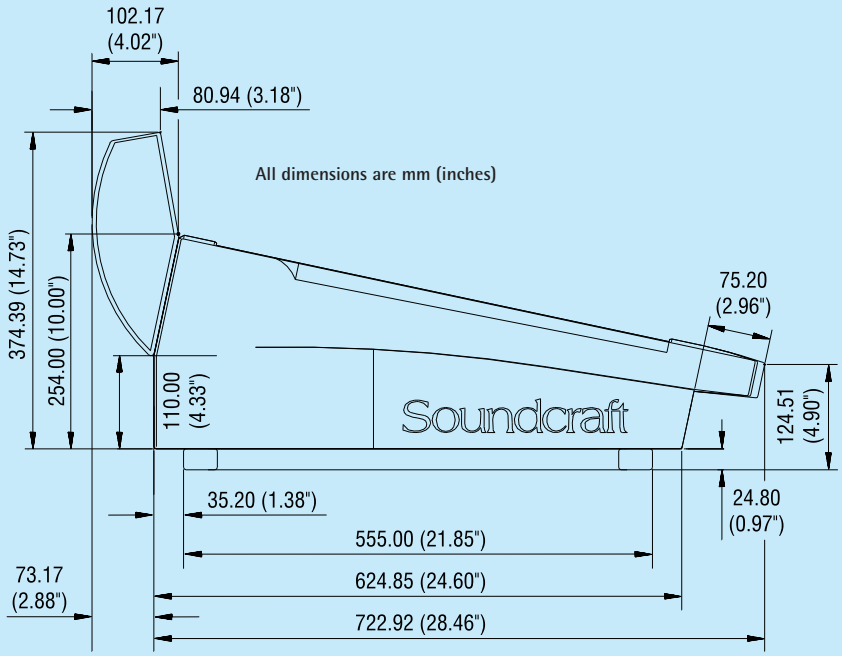


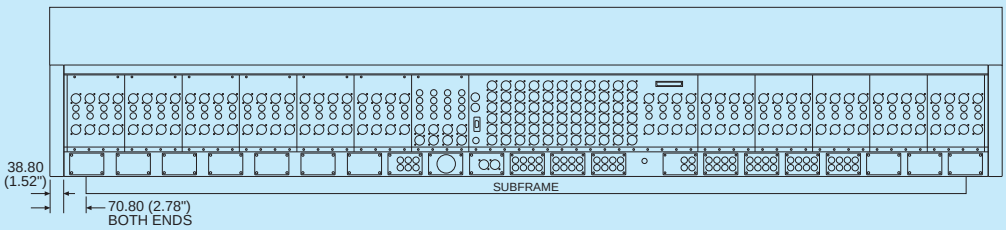
System Block Diagram



Dimensions & Configs

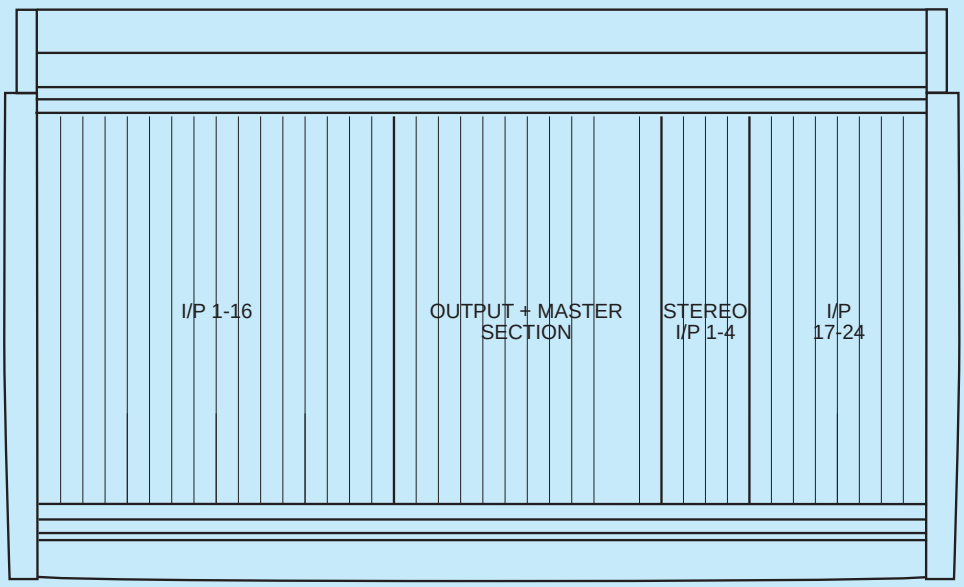






Console	Overall Width
24+4 frame	1366mm (53.80")
32+4 frame	1620mm (63.78")
40+4 frame	1874mm (73.78")
48+4 frame	2128mm (83.78")

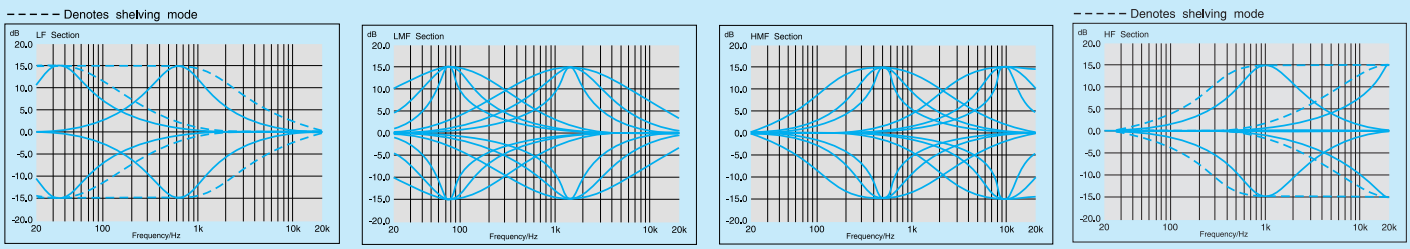
24+4 channel console shown below.
Larger sizes have 8 extra mono inputs on the left hand side.
The 40+4 has an additional 8 inputs on the right hand side
and the 48+4 has an additional 16 inputs.



Input / Output Specifications

	Module	Signal	Connector	Pin	Nom. Level	Max. Level	Impedance
Inputs	Mono Input	Input	Female XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	-70 to -2dBu -20 to +10dBu (Switched Range)	+30dBu	2kΩ
	Stereo Input	STE IN (Left & Right)	Female XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	-70 to -2dBu -20 to +10dBu (Switched Range)	+30dBu	2k2Ω
	Matrix	Ext. In	Female XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	+4dBu	+26dBu	> 10kΩ
	Master	TB Mic I/P	Female XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	-20 to -70dBu	0dBu	2kΩ
		EXT TB I/P	Female XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	+4dBu	+26dBu	> 10kΩ
		Aux Returns (L & R)	Female XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	+4dBu	+26dBu	> 10kΩ
Insert points	Mono Input	Channel Snd & Ret	TRS (1/4" Jack)	Tip - Signal Hot Ring - Signal Cold Sleeve - Ground	Send +4dBu Return +4dBu	+26dBu (into 4kΩ) +21dBu	Send < 75Ω Return > 15kΩ
	Stereo Input (L & R)	Channel Snd & Ret	TRS (1/4" Jack)		Send +4dBu Return +4dBu	+26dBu (into 4kΩ) +21dBu	Send < 75Ω Return > 15kΩ
	Matrix	Matrix Snd & Ret	TRS (1/4" Jack)		Send +4dBu Return +4dBu	+26dBu (into 4kΩ) +21dBu	Send < 75Ω Return > 15kΩ
	Group/Aux Master	Group/Aux Snd & Ret	TRS (1/4" Jack)		Send +4dBu Return +4dBu	+26dBu (into 4kΩ) +21dBu	Send < 75Ω Return > 15kΩ
	Output Master	Main Mono, L&R, Snd & Ret	TRS (1/4" Jack)		Send +4dBu Return +4dBu	+26dBu (into 4kΩ) +21dBu	Send < 75Ω Return > 15kΩ
Outputs	Mono Input	Direct Output	Male XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	+4dBu	+26dBu (into 2kΩ)	< 75Ω
	Matrix	Matrix Output	Male XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	+4dBu	+26dBu (into 2kΩ)	< 75Ω
	Group Master	Group Output	Male XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	+4dBu	+26dBu (into 2kΩ)	< 75Ω
	Aux Master	Aux Output	Male XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	+4dBu	+26dBu (into 2kΩ)	< 75Ω
	Output Master	L/R/Mono/Alt L&R Outputs	Male XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	+4dBu	+26dBu (into 2kΩ)	< 75Ω
		Ext TB Output	Male XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	+4dBu	+26dBu (into 2kΩ)	< 75Ω
		Oscillator Output	Male XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	+4dBu	+14dBu (into 2kΩ)	< 75Ω
		Headphones Output	TRS (1/4" Jack)	Tip - Left Ring - Right Sleeve - Ground	+4dBu	+20dBu (into 600Ω) 1W (into 8Ω)	50Ω
	Console Linking Inputs	All Inputs	Female XLR	Pin 1 - Ground Pin 2 - Signal Hot Pin 3 - Signal Cold	+4dBu	+26dBu	> 15kΩ

EQ Curves



Series FOUR Typical Specifications

Frequency Response	XLR Input to any Output ..... +0/-0.5dB, 20Hz - 20kHz
T. H. D. (All measurements at +4dBu)	XLR In to Group or Mix Out ..... Less than 0.015% @ 1kHz Less than 0.04% @ 10kHz
Noise (22Hz - 22kHz, unweighted)	Mic Input E. I. N. ..... Less than -127.5dBu (200Ω source) Group Output Noise ..... Less than -80dBu (40ch routed) Mix Output Noise ..... Less than -80dBu (40ch routed)
Crosstalk (All measurements at 1kHz)	Input Channel Muting ..... Greater than 100dB Input Channel Send Pot Isolation ..... Greater than 100dB Group Fader Isolation ..... Greater than 95dB Group to Group Crosstalk ..... Less than -90dB Group to LR Crosstalk ..... Less than -90dB
Input and Output Impedances	Input ..... 2kΩ balanced All Insert Sends ..... Less than 75Ω balanced All Insert Returns ..... Greater than 15kΩ balanced Outputs ..... Less than 75Ω balanced
Input/Output Capability	Maximum Input Level ..... +30dBu All Input Insert Sends ..... +26dBu into 4kΩ All Output Insert Sends ..... +26dBu into 4kΩ All Insert Returns ..... +26dBu All Balanced Outputs ..... +26dBu into 4kΩ Headphone Output ..... +20dBu into 600Ω, 1W into 8Ω
Input and Output Levels	Input Sensitivity (XLR) ..... -2dBu to -70dBu, +10dBu to -20dBu Insert Sends/Returns ..... +4dBu nominal Outputs ..... +4dBu for 0VU
Oscillator	63Hz to 10kHz / pink noise, variable level
Filters	20-700Hz high-pass
EQ	HF ..... 1 - 20kHz, +/-15dB, bell or shelf Hi-Mid ..... 450 - 12kHz, +/-15dB, Q = 0.5 - 3.0 Lo-Mid ..... 70 - 1.5kHz, +/-15dB, Q = 0.5 - 3.0 LF ..... 30 - 480Hz, +/-15dB, bell or shelf
Metering	VU Meterbridge with 10 VU meters selectable between Groups 1-8, Aux 1-10 or Matrix 1-8 and 3 VU meters for the main mix outputs. Each meter has a peak LED set to 3dB below clipping level. Input Module ..... 10-LED bargraph incl. peak LED
Weight	24ch - 68 kg (150 lbs), 32ch - 91 kg (200 lbs), 40ch - 106 kg (233 lbs), 48ch - 121 kg (266 lbs), incl. meterbridge
Operating Conditions	-10°C to +30°C, 0% to 80% humidity

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US; ZL0542

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This equipment complies with the EMC Directive 89/336/EEC

CE

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Note: These figures are typical of performance in a normal electromagnetic environment. Performance may be degraded in severe conditions