MixWizard Series
WZ14:4:2

WHEN YOU'RE MIXING WITH PROFESSIONALS

Front-of-house and monitor mixing

4-busses, 6 auxes

QCC desk or rack mounted

ALLEN & HEATH

WZ14:4:2

MixWizard WZ14:4:2 brings to the serious sound engineer an amazingly versatile 4-group live mixer, packed with features and built to Allen & Heath's *MSP* sound standards -

With up to 26 inputs to the mix, its unique *dual function* mode-switching makes WZ14:4:2 easy to use for front-of-house mixing or for stage monitors, or both jobs at once.

Extra features such as 4-band, 2-sweep EQ, 6 auxes, lo-cut filters, dual stereo inputs, talkback, 2-track send and return levels with LR replay, and direct outs for multitrack recording, combine with the MixWizard *QCC* system in a compact 10U rack/desk case to make this a truly versatile solution for hire companies, touring bands, project studios, churches and small venues.

WZ14:4:2 - Multi-function for live sound, MSP architecture for superb sound quality.

- 10 mic/line balanced inputs
- 2 dual input stereo line channels
- 4 stereo returns with LR and aux routing
- 4 groups with subgrouping to LR
- 6 auxes with balanced sends
- Mode switching for f.o.h. or monitors
- Intuitive panel layout for easy operation
- Full 100mm faders throughout
- L,R,M, Aux and Group balanced outputs
- 4-band, 2-sweep EQ with bypass switch
- Low-cut filters
- Extra 6 dB gain on aux sends combines with 10dB boost on masters

- 70 dB-range, quiet, low-distortion inputs
- Comprehensive aux routing, pre/post fade
- XLR and TRS jacks on all mic/line inputs
- Phantom 48V power, switchable
- A (phono) and B (jack) inputs with independent level controls on each stereo channel
- Talkback to auxes in switchable pairs
- 12-segment led master bargraph metering
- 4-segment led meters for all six main outs
- Comprehensive AFL/PFL monitoring
- Mode switch for mono out or engineer's wedge feed
- 2-track send and return with level controls

- 2-track to LR replay switch
- Channel-on switches for all inputs and masters
- Inserts on all mic/line inputs and main outs
- Direct outputs on all mic/line channels
- QCC for desk, flightcase or rack mounting
- 10U rack size
- Built-in power supply
- Optional A&H Sys-Link™ expander system
- RIAA equalisation add-on option
- Rugged go-anywhere professional build: steel case, nutted pots and vertical circuit boards
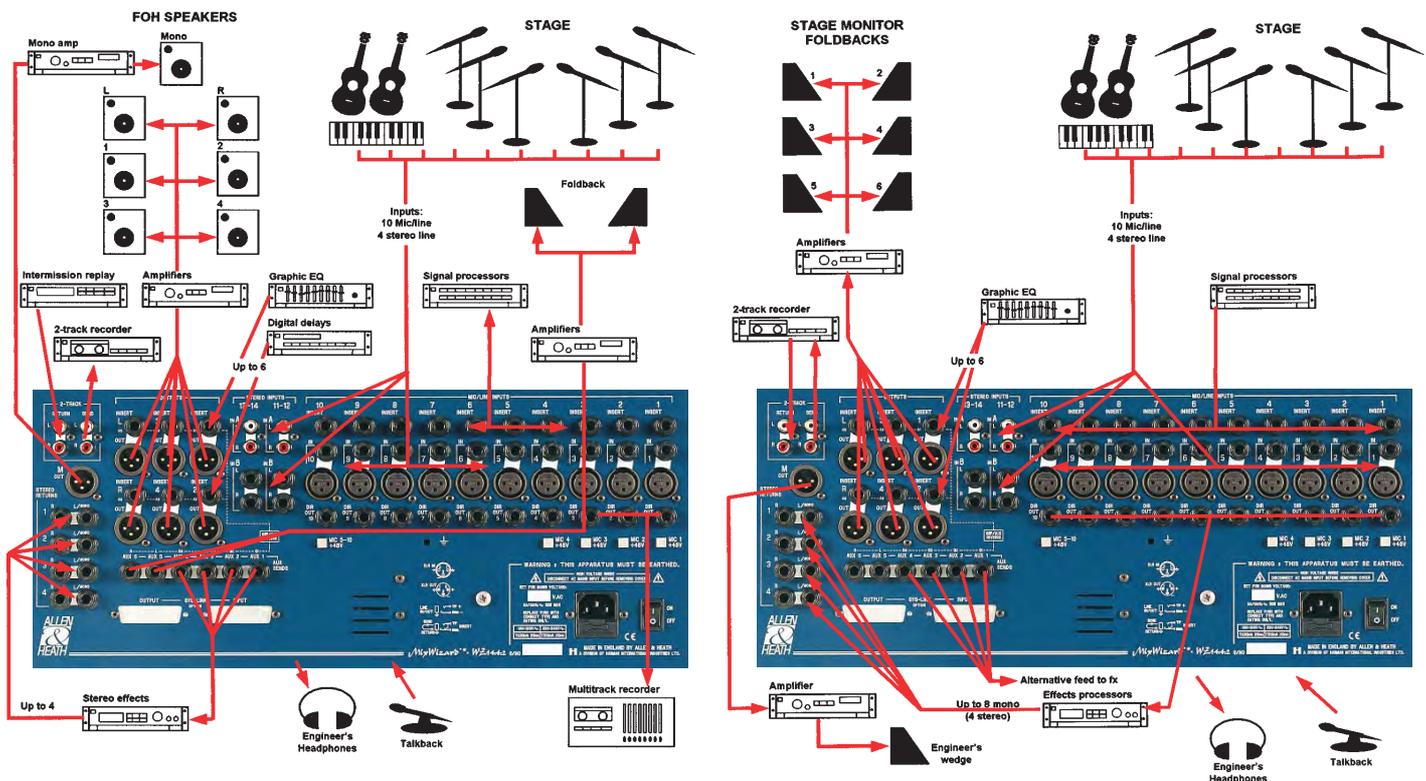
PROFESSIONAL QUALITY FROM THE TOP.

High gain, low noise, low distortion preamps introduce MixWizard's professional build, with both XLR and 1/4" TRS jack balanced connectors for each input. Calibrated controls match all instruments from a delicate -60dBu mic signal to a high +10 dBu electronic source.

Phantom power at 48V can be selected individually on rear panel switches for mic channels 1 to 4, and globally for 5-10, and a front panel switch with led indicator turns 48V on or off.

Jack inserts on each input give quick access for gates, compressors and other dedicated fx (tip send, ring return, 0dB line level).

100 Hz low-cut filters can be switched in to block that tiresome stage rumble or wind noise, those unwanted mic handling thumps or other source rumbles.

Powerful EQ with 4 bands and 2 sweeps gives you the outstanding signal quality control normally missed in smaller mixers. Our overlapping optimum-Q sweeps let you, for example, kill noise and feedback yet still sweeten the acoustic guitar, or compensate for the singer's mic's frequency response. Only with a full-spectrum four-band EQ can you fully control tonal response. Inferior three-band designs often miss out entire frequencies between bands.

EQ by-pass switches give instant comparisons and transparent EQ lock-out - ideal for setting up or mood changes during sessions.

Cues and warnings.

Peak and PFL red warning leds light fully with any pre fade signal within 5dB of clipping. Selection of pre fade listen ("solo") for signal checking half-lights the led.

ROUTING FOR VERSATILITY.

Six pre or post fade aux sends

The six auxiliary sends can be set (separately for auxes 1-4 and 5-6) pre fade for stage monitor feeds, or post fade for mono or stereo fx processing. Coupled with its 4 group busses and *operating mode* switches, this comprehensive routing system makes WZ14:4:2 a most versatile live mixer.

Aux levels can send up to 6dB boost for that extra monitor or fx signal when you don't want to rebalance the whole mix. The sends are taken after the EQ and after the ON switch so that the monitors and effects are muted when the channel is off, but internal links enable these settings to be changed if you prefer.

Channel outputs

Three routing switches enable you to pan each channel output across L-R and group 1-2 and 3-4 busses, via a *channel ON* switch and fader.

Professional 100mm faders provide up to +10dB extra boost, and constant power pan controls give smooth panning with dead-centre calibration.

Direct outs are provided post-fade for all mono channels on buffered, impedance balanced TRS jacks at 0dBu line level., for multitrack recording or special feeds.

Two inputs are provided to each of the full-feature stereo channels, with independent gain controls and *on* switches for both A and B sources.

Input A has phono connectors for easy cabling to CD players, dj decks (an RIAA matching board is available for A inputs) and other sound sources, and input B is fitted with 1/4" jacks to suit stereo fx returns, keyboards etc. Use either way to match your cable availability.

The *mono* switch on each channel means you can mono the keyboard for stage monitors, or if your f.o.h. speakers are too widely spaced for its stereo image, or feed one-legged signals both left and right.

4-band EQ on each channel gives you excellent control to compensate for source frequency response or venue acoustics - or add sparkle and punch.

Full aux routing matches the capabilities of the mono channels, complete with pre/post fade switching and 6dB boost capability. Great flexibility for fully processed foldback feeds as well as f.o.h work. Each level control sends the LR sum to its nominated auxiliary, whether or not the channel's *mono* switch is pressed. Internal links allow selected auxes to be configured as stereo.

Outputs to busses have the same controls as the mono channels, but now the stereo image is positioned with a *balance* control, attenuating left and right feeds as it's rotated right or left. With the *mono* switch selected the control reverts to a normal pan.

Peak and PFL led and switch are again provided on each channel.

4 stereo returns

An additional set of 4 stereo returns are provided for fx, signal processors or other stereo or mono line sources not requiring EQ correction or enhancement. This makes a total of 8 possible fx returns - excluding the 2-track return - for extensive versatility, particularly in stage monitor applications. Inputs are on pairs of 1/4" jacks and the left input commoned to L and R when no jack is plugged into the R connector.

Routings: return 1 (mono sum) can be sent to aux 1, return 2 to aux 2 etc for easy dedication of fx returns to monitors 1 to 4. Also, each stereo return can be fed to the L-R buss for stereo f.o.h. applications. Individual levels for all sends are set on smooth rotary controls from 'off' to up to 10dB boost.

Pre-fade listen with an accompanying red warning led is provided for all stereo returns.

Full 100mm fader controls

Whether you're mixing for f.o.h. or monitors, you will want to set accurate levels, make smooth, subtle changes or maybe make smooth fadeouts.

MixWizard 14:4:2 has 100mm faders throughout - ultimate control where you need it. Shorter fader controls would be a compromise, one nudge giving an unacceptable jump in level.

All WZ14:4:2's mono and stereo input channels as well as the L-R and group masters have full 100mm faders. Total control.
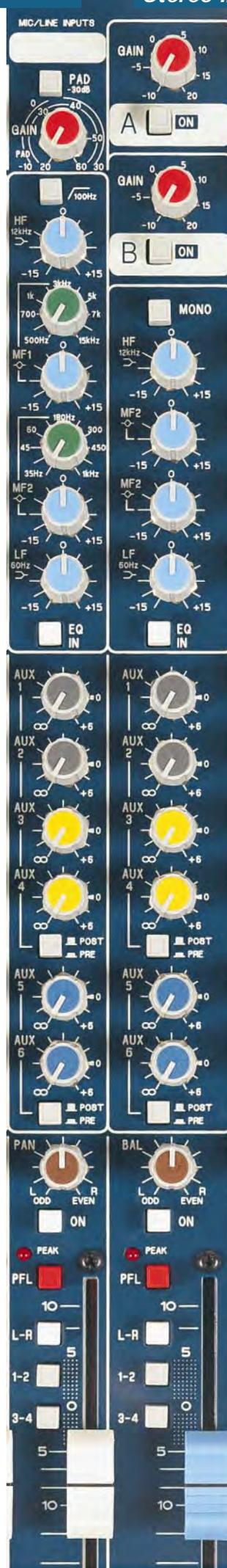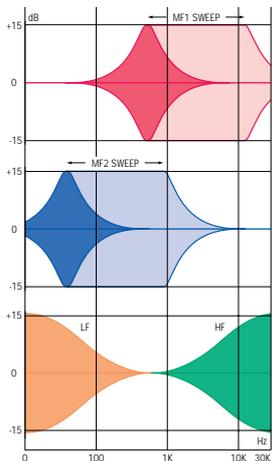
Dual functionality

Like a wizard the WZ14:4:2 transforms itself to fit your needs.

For full f.o.h mixing the 4 group and LR master outputs drive feeds to auditorium speaker arrays, dressing room, foyer, creche, restaurant or other zones, whilst aux sends are available for local monitors and effects.

But, as a stage monitor console, a touch of its tamperproof *operating mode* switches swaps the aux and group/LR feeds to give XLR output with master fader controls to all six independent aux mixes, with inserts for graphic EQ.

And if you want to do both of these jobs, swap the *operating mode* for as many outputs as you need for foldback and leave the rest for f.o.h.

Engineer's monitoring

The front panel headphone socket (with independent level control) and 12-segment peak-reading bar meters receive the L-R buss signal to monitor your master output (or auxes 5/6 in *stage monitor mode*). Any AFL/PFL selection(s) overrides this monitor feed, and illuminates the large red PFL/AFL warning led by the meters - and the led next to the source will show you which has been selected.

Even with AFL/PFL selected, you won't lose touch with your output levels: WZ14:4:2 has a further six 4-segment level meters fed from its six main outputs, post-fader, post-*on*. This feature, unique in this size of mixer, monitors auxes when in the *stage monitor mode*, and master groups 1-4/L-R in *f.o.h. mode*.

2-track send and return

Separate phono connections and level trims are provided for 2-track recording from the L-R mix. Selecting the *L-R replay* button routes this signal to the L-R mix for intermission replay.

Alternatively, the engineer can monitor the replay privately on his headphones and main bargraph monitor.

Mono output

Another special feature is WZ14:4:2's *mono output mode switch*. The L-R mono-sum signal is fed to a balanced XLR output with independent level control for broadcast, f.o.h fill or other feed. Alternatively, pressing the *mode switch* enables you to feed an engineer's wedge with any selected AFL/PFL signals.

OUTPUT MASTERS

All 4 groups can be panned as subgroups to the L-R mix as well as having their own outputs. Depending upon the *operation mode switch* positions, these signals are sent either to the balanced XLR outputs via the faders and their *channel ON* and AFL buttons, or to the balanced jack aux send outputs via their level controls and AFL buttons.

Each of the six XLR outputs has an insert point pre-fade for graphic EQs and other signal processing, and its own peak-reading meter. In the *stage monitor mode* the auxes take the benefit of all the master output features. The mono output follows the LR faders (auxes 5/6) unless *wedge mode* is selected, in which case it remains quiet until a PFL or AFL is selected.

Talkback to auxes

Front panel XLR socket and level trim accept your talkback mike, and unlatched press-buttons enable you to talk to auxes in selected pairs.
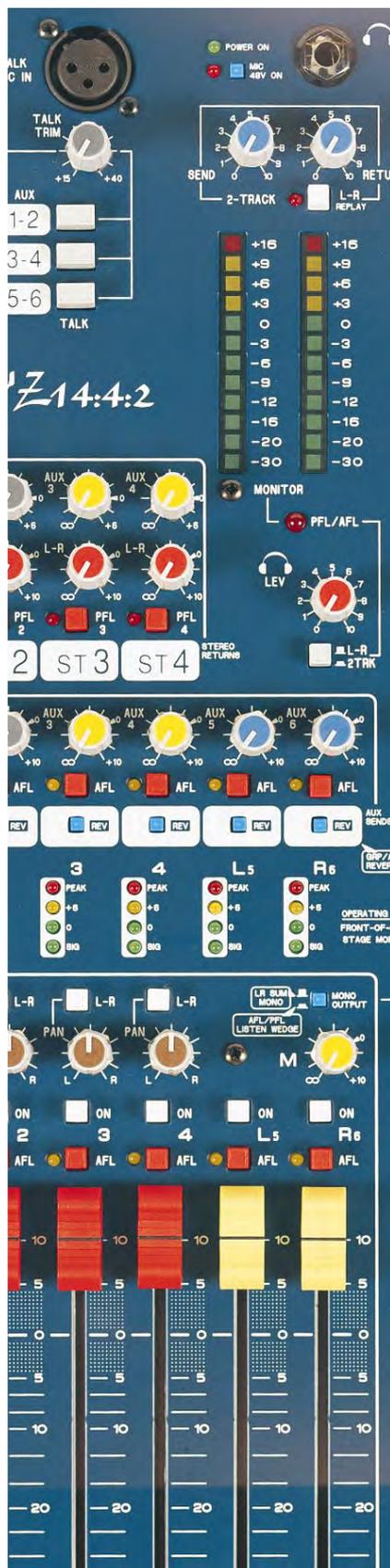
QCC

You may want to rack-mount the mixer, or keep it separate on a desk, so we've included Allen & Heath's unique QCC system which allows the connector panel to be positioned for rack mounting or rotated for desktop use; and you won't have to carry a separate power supply - it's built in.

Wherever you use WZ 14:4:2 you can rely on its rugged, steel-cased, vertical circuit-board construction.

MSP
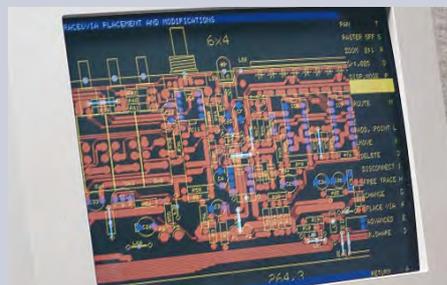
Any processing will inevitably change an original sound, even if it's imperceptible to the human ear -just sending a signal down a wire, or making a connection will have a minute influence.

First and last, WZ 14:4:2 is carefully designed to give you top-end sound quality. Allen & Heath's MSP (minimum signal path) electronics with wide-band flat amplifiers, top-grade low noise components and solid grounding give professional, low noise, "transparent" performance. You create the music - not the mixer.

Signal colour correction and enhancement is added only by you, using the 4-band, wide-sweep EQ circuits on each channel.

ADD-ON EXTRAS

Complete in its own versatility, WZ14:4:2 needs no extras. If you want to couple it to other Allen & Heath mixers through the Sys-Link™ single-cable interconnection system, an appropriate board and connector set is available for retro-fitting.

An RIAA piggyback pcb and earth post can be retro-fitted to stereo A inputs to match vinyl-player cartridge characteristics.

APPLICATIONS INFORMATION

This brochure introduces MixWizard WZ14:4:2's terrific sound qualities and versatility. Many of its technical features are described here, but you might like to know more about exactly how WZ14:4:2 meets your particular application needs. Discuss it with your dealer, or contact us by mail, 'phone or Internet - details on back page.

0dBu = 0.775 Volts rms   **0dBV = 1 Volt rms**

MAXIMUM OUTPUT LEVEL
XLR and jack	+25dBu
	into 2k ohm load

INTERNAL HEADROOM
Mix to output	+23dB
Channels	+21dB

PEAK LEDs
Turn on 5dB before clipping

METERS
L,R: Peak reading 12 segment, 3 colour, led bars
Auxes/Groups+L,R (6 meters): 4 segment led

FREQUENCY RESPONSE
20Hz to 50kHz	+0/-1dB

TOTAL HARMONIC DISTORTION
THD+noise measured at +14dBu 1kHz
Channel to mix output	< 0.006%

CROSSTALK measured at 1kHz, ref driven channel
Channel fader down	< -90dB
Channel off	< -90dB

NOISE measured rms 22Hz to 22kHz
Mic EIN referred to 150 ohm source	<-128dB
L-R residual output noise	<-97dBu (101dB S/N)
L-R faders unity mix noise	<-87dBu (-91dB S/N)

MAINS POWER
	Internal unit, linear regulated
AC mains input	100 to 240V AC @ 50/60Hz
	Internally wired to required country voltage

Power consumption	35W max
Mains fuse rating	
100-120V AC use	T630mA 20mm
220-240V AC use	T315mA 20mm

MECHANICAL SPECIFICATIONS
Dimensions (mm)	Width	Height	Depth
Desk mounted	483mm	195mm	530mm
Rack mounted	483(19")	444(10U)	135
Packed	590	260	610
	Unpacked	Packed	
Weight	11kg	14kg	
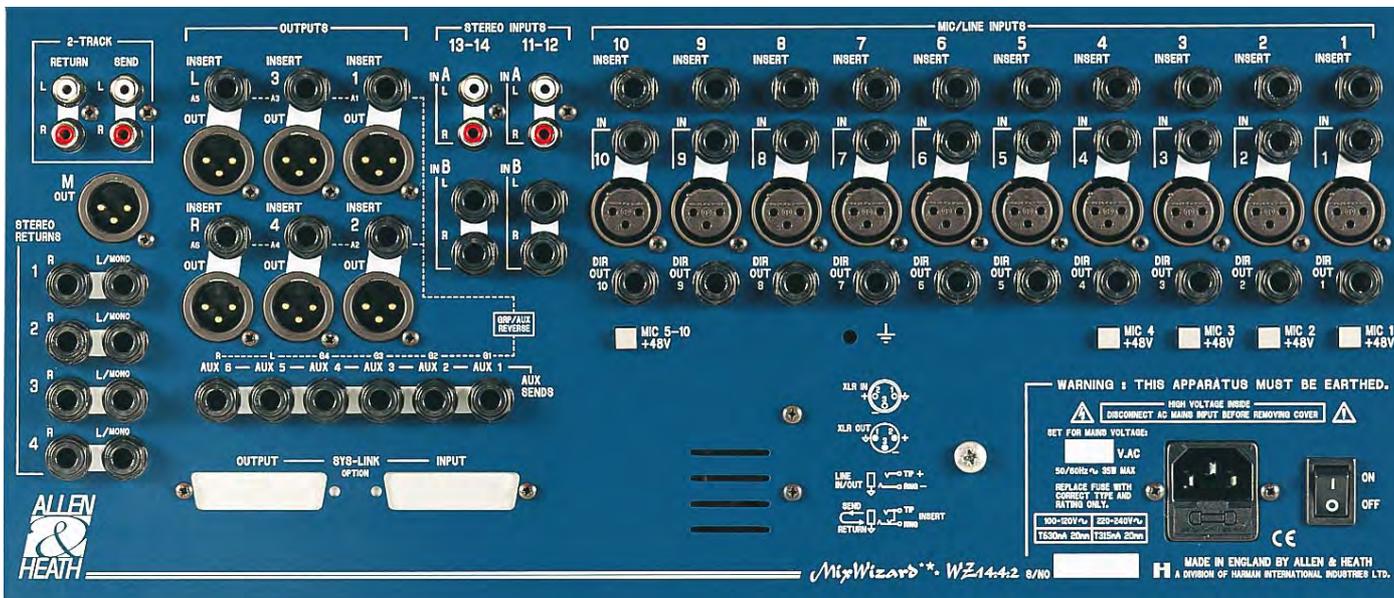
CONNECTOR PANEL

Apart from the headphone and talkback plugs on the front panel, all connections are made to the *QCC* panel which can be swung and fixed for rear or back orientation.

Inputs		Connector			Impedance	Level
Mono 1-10	x10	XLR	pin2 hot, 3 cold	balanced } pad out	2k ohm	-60 to -20dBu
	x10	TRS jack	tip hot, ring cold	balanced } pad in	>10k ohm	-30 to +10dBu
Stereo ch 11-14	2x2	TRS jack	tip hot (L for Mono)	unbalanced	>10k ohm	-20 to +10dBu
	2x2	RCA phono		unbalanced	>10k ohm	-20 to +10dBu
Stereo returns 1-4	4x2	TRS jack	tip hot, ring grnd	unbalanced	>10k ohm	-10dBu minimum
2-track return	x2	RCA phono		unbalanced	>10k ohm	-10dBV minimum
Talkback mic	x1	XLR	pin2 hot, 3 grnd	unbalanced	2k ohm	-40 to -15dBu
Inserts						
Channel 1-10	x10	TRS jack	tip send, ring return	unbalanced	<75 ohm, >3k ohm	0dBu
L-R mix/Groups	x6	TRS jack	tip send, ring return	unbalanced	<75 ohm, >7k ohm	-2dBu
Outputs						
Direct, ch 1-10	x10	TRS jack	tip hot, ring cold	impedance balanced	<75 ohm	-0dBu
Aux 1-6	x6	TRS jack	tip hot, ring cold	balanced	<75 ohm	+4dBu
2-track send	x2	RCA phono		unbalanced	<75 ohm	-10 dBV minimum
L,R,M,Groups	x7	XLR	pin2 hot, 3 cold	balanced	<75 ohm	+4dBu
Headphones	x1	TRS Jack	tip L, ring R, on front panel	30 to 600 ohm headphones recommended		
Mains power inlet	x1	Standard IEC	3 pin L,N,E. IEC to moulded plug (country-dependent), internally wired for required worldwide voltage			

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