

27 buss live sound
VCA console

The **ML5000** is a fitting flagship for our range, satisfying those loyal **ALLEN&HEATH** customers who wanted a console with the complete professional tool set. We really set out to change the rules for VCA desks with this console, forever raising the pro audio industry's price / performance expectations. From its enhanced P/AFL facilities to its sidecar and dual power supply options, **ML5000** is clearly capable of competing for touring work against old-style large format desks costing far, far more.

FEATURES:

- Dual Functionality** → Dual Functionality = Full Functionality at FOH or Stage Monitor position. GRP/Aux Mode switches [with blue leds] allow you to choose any combination of up to **16 Aux** sends and up to **8 subgroups**. **Group Mode**: individual channel routing buttons, 16 Auxes (8 on rotaries, 8 on faders). **Aux Mode**: 16 pre/post mixes on faders with inserts and full metering. **Centre Mode**: converts the 100mm C fader to an engineer's listen wedge control with insert
- Frames Available** → **32+4, 40+4, 48+4**, plus up to **2 x 24** input **sidecars**. Option for **4 dual stereo** channels in place of 4 mono channels.
- 8 Audio Groups** → Assigned from individual routing buttons [pre/post pan] from channel. Groups are routed to LCR^{plus} via a single button. Pre [led] & post [VU] metering
- 8 VCA Groups** → Top quality SSM2018 devices - easy to edit with channel **assignment leds**, **PAFL**, **Mute** and '**snapshot**' automation plus **RS232/MIDI** interface. VCA groups of input channels can be P/AFL'd with single button
- 16 Auxiliary Sends** → **9-16** with **fader masters** can be configured as **Stereo** pairs for in-ear monitoring. Auxes 1-8 are post-fade in Group Mode and switchable pre or post-fade with fader master in Aux Mode
- LCRplus Panning** → Available from channels and groups. Uses blend and pan controls to allow any signal positioning across the C and LR busses
- 12x8 Matrix** → Fed from the **groups, LR & C** and **external** input on rotary controls - with **inserts** and **VU** meter access
- 8 Mute Groups** → Easy to edit, single key press mute groups created from **channel, fader master, matrix** and **LCR** mutes
- 4 Band EQ plus HPF** → 'Responsive' feel with separate controls for **sweep** and **cut/boost**, plus **Q** on midrange. Swept **20-400Hz** HPF
- Stereo Channels** → All **ML5000** consoles are supplied with 4 dual stereo channels additional to the channel count. These are in the master section and feature mixable A (**TRS**) and B (**XLR**) inputs with gain, 'on' switch 4 band EQ and mono summing. **Option** for 32 and 40 channel consoles with **4 extra dual stereo** channels at far right in place of the last 4 mono channels.
- Balanced XLR & Inserts** → **Gold-plated** XLR connectors. Separate send and return inserts [TRS] on channels, Grp/Aux, matrix and LCR
- Intercom** → '**ClearCom**' compatible - uses engineer's phones and TB mic. Indicator lamp on bridge. Listen & talk controls
- Intelligent PAFL system** → **Momentary** or **latching** action buttons with **auto cancel** and **add mode**, **clear all** button and destructive **solo-in-place** facility, **PFL** or **stereo AFL-in-place** on input channels (which override output AFL). **Mono or stereo AFL** on all outputs (which cancels input PAFL selected) - ideal for checking stereo in-ear monitors!
- 128 Snapshot memories** → Show automation of VCA assignment / mute 'scenes' which can be up/down loaded via MIDI/RS232 to 'Archiver' software. Channel safe and edit safe facilities
- Talkback** → Talk to any of the 27 outputs via TB enable switches with led in each section. +48V and trim control for mic
- Engineer's Toolbox** → **Phones**, **wedge** and **local monitor** controls, - **20dB 'dim'** when TB active. **PFL trim** control. **Pink noise** and **oscillator**, balanced **direct outs** on channels, **2TRK, LR & C** monitor selection with **mono** check. Peak & VU metering
- Lamps** → 4 XLR lamp sockets are provided
- PSU** → High-performance, **lightweight switched mode 2U** supply with built in combiner for backup
- Configuration Options** → Internal jumpers to configure Aux1 to direct out, pre/post direct out, pre/post EQ / pre-insert for the pre-fader source. Isolate pre-fade from channel mute
- Latching Option** → **ML5000L** available with gold-plated locking Neutrik XLR connectors throughout.

ML 5000



Mechanical specifications

Dimensions in mm	Width	Depth	Height	Weight
ML5000-32	1596 (62.9")	872 (34.4")	298 (11.7")	84kg (185lb)
ML5000-40	1851 (73.2")	872	298	96kg (211lb)
ML5000-48	2106 (82.9")	872	298	110kg (243lb)
ML5000-24SC	831 (32.7")	872	298	48kg (106lb)

Connections

INPUTS

Input	Connector	Impedance	Gain	Dynamic Range	Headroom
Mic (Pad out)	XLR	balanced, pin2+	2kohm	variable -60 to -10dBu	Max +11dBu
Mic/Line (Pad in)			>20kohm	variable -40 to +10dBu	Max +31dBu
Stereo A	TRS jack	balanced, tip+	>20kohm	variable -18 to +6dBu	Max +27dBu
Stereo B	XLR	balanced, pin2+	>20kohm	variable -18 to +6dBu	Max +27dBu
2-Track	TRS jack	balanced, tip+	>20kohm	+4dBu	Max +25dBu
Matrix Ext in	TRS jack	balanced, tip+	>20kohm	+4dBu	Max +25dBu

INSERTS

Insert	Connector	Impedance	Gain	Headroom
Input send	TRS jack	ground comp, tip+	<50ohm 0dBu	Max +21dBu
Input return	TRS jack	balanced, tip+	>20kohm 0dBu	Max +21dBu
Output send	TRS jack	ground comp, tip+	<50ohm -2dBu	Max +21dBu
Output return	TRS jack	balanced, tip+	>20kohm -2dBu	Max +21dBu

OUTPUTS

Output	Connector	Impedance	Gain	Headroom
L,R,C	XLR	balanced, pin2+	<75ohm 0dBu	Max +23dBu
Grp/Aux 1-16	XLR	balanced, pin2+	<75ohm 0dBu	Max +23dBu
Matrix 1-8	XLR	balanced, pin2+	<75ohm 0dBu	Max +23dBu
Post Aux 1-8	TRS jack	ground comp, tip+	<50ohm -2dBu	Max +21dBu
Direct out	TRS jack	ground comp, tip+	<50ohm 0dBu	Max +21dBu
2-Track	TRS jack	ground comp, tip+	<50ohm -2dBu	Max +21dBu
Local Monitor	TRS jack	ground comp, tip+	<50ohm 0dBu	Max +21dBu
Headphones	TRS jack	tip left, ring right for stereo headphones	>30 ohms	

Technical Specifications

0 dBu = 0.775 Volts rms

Operating Levels

Channels	OdBu	Headroom +21dB
Mix	-2dBu	Headroom +23dB

Frequency Response Referred to 1kHz at 0dBu

Output	Gain	Frequency Range	Tolerance
Mic to main output	(+40dB)	20Hz to 30kHz	+0/-0.5dB
Line to main output	(0dB)	20Hz to 30kHz	+0/-0.5dB

Distortion @1kHz +14dBu

THD+noise	< 0.01%
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CMRR Common mode rejection @1kHz

Mic (+40dB)	> 80dB
Mic + Pad (0dB)	> 50dB

Crosstalk Referred to driven channel @1kHz

Channel to channel	< -100dB
Mute shutoff	< -90dB
Fader shutoff	< -90dB

Noise Performance Measured rms 22Hz to 22kHz unweighted

Mic EIN with 150 ohm source	-128dB
Residual output noise	< -98dBu
Mix noise, nothing routed	< -88dBu
Mix noise, 24 channels routed	< -84dBu

Metering

Reading	OVU=0dBu at XLR outputs
LED meters	Peak reading, 3 colours
VU meters	Ave reading, illuminated moving coil
Peak indicators	5dB before clip, multi-point sensing
Input meters	5 segment LED (sig, -6, 0, +6, pk)
Group mix meters	5 segment LED (sig, -6, 0, +6, pk)
Group/Matrix meters	VU
L,R,C meters	VU and 16 segment LED

Channel Filters

Slope	12dB/oct high pass
Frequency	20Hz to 400Hz variable

Mono Equaliser

HF	+/-15dB, 2kHz to 20kHz shelf
HM	+/-15dB, 500Hz to 15kHz bell, Q = 0.6 to 2.5
LM	+/-15dB, 35Hz to 1kHz bell, Q = 0.6 to 2.5
LF	+/-15dB, 20Hz to 200Hz shelf

Stereo Equaliser

HF	+/-15dB, 12kHz shelf
HM	+/-15dB, 2.5kHz bell
LM	+/-15dB, 250Hz bell
LF	+/-15dB, 60Hz shelf

Lamp Connectors x4

Connector	XLR-F 4pin
Rating	12V 400mA max

Power Supply Model MPSI4

Type	External 2U high rack or floor mount
Mains input	100-230V 50/60Hz universal input
Power consumption	500W
	Full protection and fan cooling