

## GL4800 Architects Specification

The audio console shall be an eight group mixer, fully equipped for dual function operation using recessed switches for tamper-proof selection of operating mode between front-of-house and monitor mixing. Live multitrack recording facilities shall be provided via channel direct outputs and group outputs with individual trim controls and pre/post fader switching. Advanced facilities for multi-mode operation shall be provided to configure the M output as a dedicated centre/sub mix, LR mono sum or engineers listen wedge, and to reverse the aux master controls with group and LR masters. The channel and output mutes shall be managed by an on board computer system with MIDI interface. The console shall be fully expandable using a balanced bussing system to enable mixers from the same manufacturer to be interconnected. The unit shall be available with 24, 32, 40 or 48 input channels, arranged in one of the following configurations: all mono inputs; 4 stereo channels to the right of the master section; 4 stereo channels on the right of the console or 8 stereo channels on the right of the master section, all with full length VU meter-bridge.

Fully differential balanced XLR connections shall be provided on LRM outputs, group outputs, aux outputs and mic inputs, and on TRS jacks for mono/stereo channel line inputs and insert returns. Impedance-balanced connections shall be provided on TRS jack sockets for insert sends, matrix outputs, secondary LR outputs, monitor outputs and channel direct outputs. All external audio connections will be provided on metal-bodied jacks or Neutrik XLRs with gold-plated contacts. Mono channels shall handle a maximum input level of +34dBu. 100mm ultra-smooth-travel dual rail faders providing up to +10dBu boost shall be provided on all input channels, group outputs, LRM outputs and shall be accompanied in each case by illuminated mute switches with safe/preview LED and illuminated PFL(inputs) or AFL(outputs) switches, along with 4-bar LED meters showing pre-fade signal levels. All balance, pan and cut/boost rotary controls shall be centre-detented.

Rotary controls will be individually secured to the front panel using threaded nuts. All formats shall use an external linear power supply and provide an additional power input socket to enable simultaneous auto-switching connection of a backup external power supply. The chassis shall include connections for 4pin XLR gooseneck lamps.

Each mono channel shall feature: mic input normalised through the line input connector; line/pad switch to select between the two connections, providing 20dB pad if the jack socket is unused; mic input gain control in the range +6dB to +60dB; line/padded-mic input gain control in the range -14dB to +40dB; polarity reverse switch; +48V phantom power switch; adjustable 12dB/octave high-pass filter with rotary selection of cut-off frequency over the range OFF to 400Hz; 4-band semi-parametric EQ with illuminated bypass switch. The EQ shall feature: shelving HF and LF with rotary sweep adjustment from 2kHz-20kHz and 20Hz-200Hz respectively; two sweepable mid-range controls, each with a switchable Q of 1 or 2.4 and frequency sweeps in the range 500Hz to 15kHz (HM) and 35Hz to 1kHz (LM). Channels shall also feature: 10 auxiliary sends on rotary controls, each having a maximum additional +6dB boost; pre/post fade switches for auxes 1-4, 5-8 and 9-10 with pre-fade auxes sourced post-EQ, post-mute; internal jumper links for pre-EQ or pre-mute sourcing of pre-fade auxes; channel post-fade direct output with recessed mode switch for control via the aux 10 send control and associated pre/post switch; pre-EQ, pre-mute insert send and return; PFL switch; pre-fade signal level meter; pan control to adjust signal routing to Left/Right main mix and odd/even groups; switches for routing to LR and M main mix and groups 1-2, 3-4, 5-6 and 7-8; channel fader; mute switch for muting all pre-fade and post-fade signals, with the exception of any aux sends which have been internally configured for pre-fade pre-mute operation; safe/preview LED to indicate when the channel cannot be muted by mute groups, snapshots or MIDI.

Each stereo input shall feature: mono microphone/line input and stereo line input with the left input normalled through the right input for mono operation; stereo line input gain control with range OFF to +10dB; mono input mic/line switch and gain control with range -14dB to +40dB (line) or 6dB to 60dB (mic). Mono input feature +48V phantom power switch, polarity reverse switch and sweepable 12dB/octave high pass filter with cut-off frequency in the range OFF to 400Hz. Stereo inputs feature: polarity reverse switch on right input; centre-detented width control for narrowing or widening the stereo separation; post-gain, post-width stereo PFL switch; illuminated LR routing switch. A switch shall be provided for selecting the main channel source between the mono and stereo inputs. A four-band fixed-frequency EQ shall be provided with: illuminated in/out switching; HF and LF shelving elements, set at 12kHz and 70Hz respectively; two mid bands centred at 250Hz and 2.5kHz. Other channel features shall be: 10 rotary auxiliary sends with +6dB maximum boost, fed in mono from the input channel; pre/post fade switches for aux sends 1-4, 5-8 and 9-10, sourced post-EQ, post-mute; rotary pan/balance control to adjust between left and right signals and odd/even groups; channel mute to kill all signals including pre-fade monitor sends; routing switches for LR and M main mix and groups 1-2, 3-4, 5-6 and 7-8; channel fader; safe/preview LED, to indicate when the channel cannot be muted by mute groups, snapshots or MIDI.

Auxiliary masters shall each feature: smooth travel 60mm fader with +10dB maximum boost ;AFL switch; fully automatable mute switch; safe/preview LED; pre-fade mix bus signal meter; separate insert send/return jacks.

Each group master shall feature: output fader; pan control; LR and M routing switches; mute switch; safe/preview indicator; AFL switch; pre-fade mix bus signal meter; four matrix send controls with +6dB maximum boost and group pre/post fade sourcing; rotary output trim control with recessed in/out switch and pre/post fade switch for creating mix-independent recording feeds.

LR and M masters shall each feature: output fader; mute switch with safe/preview indication; pre-fade mix bus signal meter; AFL switch; rotary send controls to the 4 matrix outputs, providing +6dB maximum boost and switchable in groups for pre/post fade operation; rotary sends to the M mix, in the range OFF to 0dB. A secondary LR output shall be provided on impedance-balanced ¼" jack sockets, sourced from the main LR mix, switch-selectable pre or post the main LR faders. L2 and R2 shall each feature: rotary level control ranging from OFF to 0dB; illuminated AFL and ON switches.

Four matrix outputs shall be provided, each generated using a mix of groups 1-8, LR and M and featuring: rotary master control with range OFF to 0dB; illuminated ON and AFL switches.

The default operating mode shall be front-of-house. Mode switches shall be provided for recording and monitor functions as follows: matrix 'output reverse' for reversing matrix connectors 1-4 with auxiliary sends 5-8 respectively, placing balanced inserts and XLR outputs on the matrix signal path; LR2 'output reverse' switches to swap connectors with auxes 9-10, enabling the secondary stereo mix to be presented on balanced XLR outputs with jack inserts; four 'matrix to aux' switches, routing matrix mixes 1-4 to aux mixes 1-4 so that effects/monitor sends shall be available from the groups; 'group reverse' switches to reverse the functions of the group and aux master controls without changing connections, aux sends 1-8 being controlled by group masters 1-8 and sends 9-10 being controlled by the LR masters; 'mono mode' switch to enable the M output to function as a listen wedge output, M AFL being disabled and the M mix continuing to feed the insert and matrix sends.

There shall be eleven 12-segment, 3 colour, peak-reading LED meters: meters 1-10 shall follow the large faders (normally groups and LR) and shall be switchable, individually, to follow the small faders (normally auxes 1-10) Meters 9-10 shall be switchable, to enable automatic monitoring of stereo PFL signals when active.

Meter 11 shall normally follow the M mix but shall be interrupted to show AFL or PFL signals when present. In addition, an integral meter-bridge shall visually indicate master output levels - groups and LRM, or Auxes depending on mode selected - on moving coil, illuminated VU meters with additional PFL/AFL LED.

Comprehensive monitoring facilities shall feature: two headphone sockets with shared rotary level control; dedicated stereo monitor output with separate rotary level control; switches for selecting the LR mix as the default monitor source; automatic AFL/PFL monitoring, with PFL over-riding AFL; master PFL trim control; mono switch, enabling stereo signals to be monitored in mono; separate AFL and PFL activity indicator LEDs; talkback facilities, routable to M, LR, matrix and groups, featuring rotary trim control and momentary TALK button with illumination confirming a destination has been selected; 'talk' switches on each aux master, enabling them to receive talkback signals when TALK is activated; automatic listen wedge dimming when 'TALK' is active in monitor mode, reducing feedback risk; dedicated 2-track replay input with illuminated LR routing switch, PFL switch and rotary level control with maximum 10dB boost.

A comprehensive mute control system shall be provided with: 8 mute groups on dedicated illuminated master switches, a recessed global enable/disable switch and preview/edit facilities; mute snapshot system, enabling global clearing/setting of console mutes, 128 snapshots, snapshot enable/disable and MIDI control; individual mute 'safe' facility to prevent control from the master section or MIDI; MIDI IN, THRU and OUT, enabling mutes to control, or be controlled by, external equipment; SOLO-IN-PLACE facility, enabled in the mute control system and utilised using channel mute switches; 'last solo' facility to enable comparison of solo'd signals/mixes with the main mix.

An optional balanced bus interconnection system shall be provided for linking in another console from the same manufacturer to expand the number of input channels.

The console shall be constructed using a steel and aluminium extrusion chassis with compact footprint, designed for easy flight-casing or installation.

The console dimensions and weight shall be published in product literature according to frame size.

The mixing console shall be the Allen & Heath GL4800.