

## GL2400 Architects Specification

The console shall be a four group, six aux mixer fully equipped for dual function operation using recessed switches for tamperproof selection of operating mode between front-of-house and monitor mixing. Recording facilities shall be provided via channel direct outputs. Advanced facilities for multi-mode operation shall be provided to configure the M output as a LR sum, listen wedge or aux-fed sub, and to reverse the aux outputs with group & LR outputs on 100mm faders with inserts and balanced XLR outputs. Two patchable mic pre-amps shall be provided to allow for adding ambience feeds to in-ear monitors created on matrices. 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 16, 24, 32 or 40 input channels.

All external audio connections will be provided on metal-bodied jacks or Neutrik XLRs with gold-plated contacts. Fully differential balanced connections shall be provided on the group outputs (XLR), LR outputs (XLR), M output (XLR), mono channel mic inputs (XLR), mono channel line inputs (3-pole TRS jack socket), stereo channel 'second' line inputs (3-pole TRS jack socket) and talkback mic (XLR). Impedance balanced connections shall be provided on 3-pole TRS jack sockets for aux outputs, matrix outputs, monitor outputs and mono channel direct outputs. A differential balanced option shall be available for aux/matrix outputs. Mono channels shall handle a maximum input level of +34dBu. 100mm smooth-travel faders with integral dustcovers 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 and illuminated PFL(inputs) or AFL (outputs) switches, along with 4-bar LED meters showing pre-fade (input channels) or post-fade (outputs) signal levels. All balance, pan and cut/boost rotary controls shall be centre-detented.

Rotary audio control potentiometers will be individually secured to the front panel using threaded nuts. Internal grounding will be based on a solid copper grounding strip. All formats except the 40 channel console will have an internal switching power supply which can have a simultaneous connection to a backup external power supply and shall auto-switch to this secondary supply when required. The 40 channel console shall use an external linear power supply unit and connection for two power supplies shall be provided for automatic dual redundant operation. The chassis shall include connections for gooseneck lamps.

Mono input channels shall each feature: mic inputs normalised through the line input connector; line/pad switch selecting between the two connectors or providing 20dB pad for the XLR input if the jack socket is unused; input gain continuously variable in the range +6dB to +60dB (mic) and -14dB to +40dB (line/padded mic); polarity reverse switch; +48V phantom power switch; 100Hz, 12dB/octave filter with in/out switch; 4-band parametric EQ with in/out switch. Mono channel EQs shall provide shelving HF and LF controls at 12kHz and 80Hz respectively and two sweepable mid-range controls, each with a Q of 1.8 and frequency sweeps in the range 500Hz to 15kHz (HM) and 35Hz to 1kHz (LM). Mono input channels shall also feature: 6 auxiliary sends on individual rotary controls, each having a maximum send level of +6dB; a pre/post fade switch for aux sends 1-4 and another for aux sends 5-6; pre-fade aux-sends sourced pre-insert, pre-EQ with internal jumpers for changing to post insert, post-EQ; pre-EQ, pre-mute TRS insert point; PFL facility; signal meter; pan control for L(odd)/R(even) adjustment to main mix and groups; routing switches to LR, groups 1-2 and groups 3-4; channel fader.

Stereo input channels shall each feature: mono XLR mic input and two stereo line inputs on TRS jack sockets, each with a rotary gain control; direct post-gain mic out; mic gain adjustable in the range +6db to +60dB; line gain in the range OFF to +16dB; +48V phantom power switch on the mic input; recessed switches routing each line input direct to the LR main mix or to the input channel; four-band fixed-frequency EQ with in/out switching. The HF and LF shelving elements shall be set at 12kHz and 80Hz respectively and the two mid bands shall be centred at 250Hz and

2.5kHz. Stereo channels shall be provided with 6 post-EQ auxiliary sends on rotary controls, with each auxiliary fed in mono; internal jumpers to enable auxes 1, 3 and 5 to be fed from the left channel and auxes 2, 4 and 6 from the right; pre/post fade switch for aux 1-4 and another for aux 5-6; balance control to adjust between left(odd) and right(even) signals; mute switch for all aux sends and post fade

signals; signal meter; PFL switch; routing switches for LR, groups 1-2 and groups 3-4; channel fader.

Auxiliary masters shall be controlled using individual rotary potentiometers with +10dB maximum boost available and AFL switch.

A 7 x 4 matrix section shall be provided and each matrix output shall be generated using a mix of groups, LR and an external input. Matrix mixes shall be created using rotary controls with the overall output level set using a rotary control with +6dB maximum boost. Illuminated mute and AFL buttons shall be provided on each matrix master. External inputs shall be normalised to allow a single mono or stereo source to feed all the matrices or individual connections to break the normalising, providing an independent source to each matrix.

The default operating mode shall be front-of-house. Mode switches within the auxiliary master section shall reverse control and connection of aux outputs 1-4 with groups 1-4 and aux sends 5-6 with LR. In monitor mode, the matrix shall continue to be fed from the groups and LR mix. Ambience feeds for in ear monitor mixes shall be available by directly patching stereo channel mic inputs to matrix external inputs.

Each group master shall feature an individual pan control adjacent to a LR main mix routing switch. Each group, LR and M master shall provide 4-LED meter for indication of post-fade signal levels, a 100mm linear fader with +10dB maximum boost and an illuminated mute and AFL switches.

A comprehensive console monitor section shall be provided, featuring a headphone socket and rotary level control. A local monitor output shall be provided, duplicating the headphone output. The default monitor source shall be switchable between LR and 2-track. LED indication of AFL/PFL activity shall be provided. Twin 12-LED bargraph meters shall be provided to indicate the selected monitor signal, automatically switching to the AFL/PFL buss when a PFL or AFL switch is activated. Talkback facilities shall be provided with destination being selectable using switches for LR, Group 1-4, Aux 1-2, Aux 3-4 and Aux 5-6. Phantom power shall be provided for the Talkback mic and be removable using internal jumper links. A rotary trim control shall enable adjustment of talkback levels and a momentary TALK button shall be used to activate talkback to the selected destinations. A signal generator shall be provided for test purposes, enabling routing of a 1kHz tone or pink noise to destinations selected on the talkback routing section.

The Mixing Console shall be constructed using an all-steel chassis with compact footprint, designed for easy flightcasing. The channels shall use individual channel PCB's for ease of servicing.

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

The mixing console shall be the Allen & Heath GL2400.