WZ³14:4:2 Architects Specification

The mixer shall be a rack-mountable compact mixer designed for professional front-of-house, monitor, recording or multi-function mixing applications. Key features to include: 10 mono input channels and 2 dual stereo input channels, each with 6 aux sends and 4 bands of equalisation; 4 groups; 6x2 matrix; 100mm faders; system expandability; rotating connector panel for desktop, rack or flight-case mounting. Advanced features for multi-mode operation shall be provided, activated using recessed switches, including: the ability to provide monitors or sub-groups on 100mm faders with inserts and balanced outputs and a balanced M output which can be used as a listen wedge or as a mono output.

External audio connections will be provided on metal-bodied jacks or Neutrik XLRs with gold-plated contacts. Rotary audio control potentiometers will be individually secured to the front panel using threaded nuts and all faders shall be 100mm with smooth travel and dustcover. Internal configuration jumpers shall be plug on, requiring no soldering and internal grounding will be based on a solid copper grounding strip. Power will be supplied by an internal switched mode power supply, with provision for simultaneous connection to a backup external power supply. The chassis shall include a 4-pin XLR connector for a gooseneck lamp.

Each mono input shall feature balanced mic and line connections using an XLR connector normalled through a stereo ¼" jack socket. A line/pad switch shall select between the two connections and provide a 20dB pad for the XLR input if the jack socket is unused. Input gain shall be continuously variable in the range +10dB to +60dB (mic) and -10dB to +40dB (line/padded mic). An 80Hz, 12dB/octave filter with in/out switching shall be provided pre-insert. There shall be a pre-EQ, pre-mute TRS ¼" insert point. A 4-band semi-parametric EQ shall be provided with shelving HF and LF controls at 12kHz and 80Hz respectively. Two sweepable mid-range controls shall be provided, each with a Q of 1.8. Frequency sweeps will be in the range 500Hz to 15kHz (HM) and 35Hz to 1kHz (LM). All four bands shall provide cut/boost in the range +/- 15dB using centre-detented rotary potentiometers. A direct output shall be provided on an impedance-balanced ¼" jack socket, sourced pre-fade by default and selectable as post-fade using internal jumpers. Channels shall feature 6 auxiliary sends on individual rotary controls, each having a maximum additional boost of +6dB. Auxes are switched pre/post-fade in banks 1-4 and 5-6. Internal jumpers shall be provided to enable auxes to be sourced pre/post fade and pre/post EQ for pre-fade sends. A channel pre-fade listen (PFL) switch shall be provided, which half-lights the adjacent peak LED when activated. A 2-LED pre-fade signal level meter on each channel shall be provided – the first 'sig' LED shall illuminate when channel pre-fade signal exceeds -12dBu. The second 'peak' LED shall illuminate when signal is within 5dB of clipping. Rotary channel Pan control with centre detent shall adjust signal routing to the Left(odd)/Right(even) mixes. A 100mm linear fader shall provide level setting of all post-fade sends, facilitating a maximum additional boost of +10dB. An illuminated Mute switch shall be provided. Switches shall be provided for routing post-fade to LR, groups 1-2 and groups 3-4.

Two dual stereo input channels shall be provided. Stereo inputs shall be on ¼" jack sockets with L normalled through R for connection of mono sources. Stereo inputs 1 and 3 shall be unbalanced, stereo inputs 2 and 4 shall be balanced. An input gain control shall be provided for each stereo input with control over the range OFF to +16dB. Each input stage shall feature an independent ON switch. Inputs 1 and 3 shall feature recessed switching to route the signal direct to LR mix or to mix into the stereo input channel with input 2/4. A four-band fixed-frequency EQ shall be provided. Cut/boost of +/-15dB shall be available at each band via a centre-detented potentiometer. The HF and LF shelving elements shall be set at 12kHz and 80Hz respectively with the two mid bands centred at 250Hz and 2.5kHz with a Q of 1.8. Stereo channels shall feature 6 auxiliary sends on individual rotary controls, each having a maximum additional boost of +6dB. Auxes 1-4 shall be switchable pre/post fade as shall auxes 5-6. Stereo inputs shall mix

into mono to feed the aux send controls but internal jumpers shall enable the left channel to feed odd-numbered auxes and the right channel to feed even-numbered auxes. A centre-detented rotary balance control shall be provided for adjusting the LR balance. A channel pre-fade listen (PFL) switch shall be provided, which half-lights the adjacent peak LED when activated. A 2-LED pre-fade signal level meter on each channel shall be provided – the first 'sig' LED shall illuminate when channel pre-fade signal exceeds -12dBu. The second 'peak' LED shall illuminate when signal is within 5dB of clipping. A 100mm linear fader shall provide level setting of all post-fade sends, facilitating a maximum additional boost of +10dB. An illuminated Mute switch shall be provided. Routing switches shall be provided for LR, Groups 1-2 and groups 3-4. The left channel shall feed L and odd groups and the right channel shall feed R mix and even groups.

Aux masters 1-6 shall each feature a rotary level control with +10dB maximum gain. An illuminated AFL switch shall be provided. Aux outputs shall be on ¼" impedance-balanced jack sockets with optional electronic balancing available.

Group outputs shall be controlled using 100mm smooth travel faders with illuminated mute and AFL switching. A 4-LED post-fade signal meter shall be provided along with a switch for routing to the LR mix and an associated rotary, centre-detented pan control. Outputs shall be presented on balanced XLR connectors with pre-fade TRS inserts on ¼" jacks.

Main mix LR outputs shall be controlled using individual 100mm faders, each providing +10dB maximum boost. LR and M outputs shall be presented on balanced XLR connections and LR shall feature pre-fade TRS inserts on ¼" jacks. Each fader shall have an associated illuminated mute and AFL switch along with a 4-LED post-fade signal meter. The M output shall be controlled using a rotary level trim with +10dB maximum boost and can be sourced from a mono sum of the LR mix or the AFL/PFL mix, determined by a recessed mode switch.

Two matrix outputs shall be provided on impedance-balanced ¼" jack sockets. A balancing option shall be available. Each matrix section shall feature rotary source level controls for: Group 1, Group 2, Group 3, Group 4, L and R. An overall output level control shall be provided for each matrix output, with control over the range OFF to +6dB. Illuminated mute and AFL switches shall be provided for the matrix outputs.

A comprehensive monitor section shall be provided with a rotary level control and ¼" jack stereo headphone socket. Source selection shall default to post-fade LR mix. A switch shall be provided to facilitate monitoring of the 2 Trk return. A pair of 12-LED signal meters shall provide visual indication of monitor source levels. An LED shall indicate when PFL/AFL is active. Monitor source shall be over-ridden automatically by any PFL/AFL signal.

A 2 track send shall be provided on unbalanced RCA (phono) connections, sourced from the post-fade LR mix. A 2 track return on RCA connections, shall also be provided. An illuminated switch shall route this input direct to the LR mix, via a rotary level control with the range OFF to +10dB, when required.

A talkback facility with balanced XLR mic input (with optional 48V phantom power)and a rotary talkback trim control shall be provided along with routing switches for LR, Groups, Aux 1-2, Aux 3-4 and Aux 5-6. A momentary talk button to activate talkback shall be provided. A signal generator for test purposes enabling routing of a 1kHz tone or pink noise to destinations selected on the talkback routing section shall be included. Oscillator activation shall be achieved using a recessed switch with associated LED indicator. A rotary level control shall be provided for the test signals.

The mixer shall be designed for operation in Front-of-House or Monitor mode with dual functionality implemented using recessed mode switches within the master

section. Aux masters shall be supplied with mode switches which place 100mm fader, mute, AFL, insert and balanced XLR outputs in their signal path. Auxes 1-4 shall reverse with groups 1-4 and auxes 5-6 shall reverse with L/R. In reverse mode, the groups will be controlled using the aux master potentiometers and shall continue to feed the matrix and LR mix. The M output shall feature a recessed switch to enable it to become a listen wedge, monitoring the PFL/AFL signals.

The unit shall be constructed using an all-steel chassis with compact footprint, designed for easy rack mounting or table-top operation. Protective side trims shall be fitted which can be easily removed for flight-cased or rack-mounted operation.

An optional balanced connection system shall be provided for linking mixing console busses together from the same manufacturer for system expansion.

The console shall weigh 10kg (22lbs) and shall have dimensions (w x h x d) of 483mm(19”) x 444mm(17.5”)/10U x 122mm(4.8”) when rack-mounted, or 507mm(20”) x 194mm(7.6”) x 530mm(20.9”) when desk-mounted and side trims fitted.

The mixing console shall be the Allen & Heath WZ^{3}14:4:2.