

3000
LEGEND



MIDAS

DESIGNED FOR A PURE PERFORMANCE





INTRODUCTION

Midas are proud to announce their Legend console, which combines the Midas sound and reliability with unprecedented affordability for a console of its calibre. It is designed for the tour operator, hire company or installer who cannot justify the cost of a Midas Heritage yet who are reluctant to buy a 'second division' console. Legend includes the XL4's high performance preamps plus the XL3 EQ to deliver the trademark Midas sound, and it uses the same snapshot automation system as its larger cousins, but there are also some innovative new features that make the console particularly attractive.

Firstly, a significant cost saving has been achieved by designing the Legend around blocks of eight channels, yet the clever design means that servicing is still very straightforward. Furthermore, acknowledging that many of the Legend's potential customers need on occasions to provide a monitor mix from the FOH position, each Legend input channel provides independent FOH and Monitor controls with dedicated EQ and faders. There are 12 highly flexible auxiliary sends, which may be used individually as foldback or FOH effects sends, and the user has complete freedom in how these are assigned. In the Legend, we can truly say that the only material compromise is on price.

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L3001 MONO INPUT MODULE.

The L3001 module features XL4's high performance preamps plus the XL3 EQ and has 12 fully configurable Aux sends. The channel features the Legend's unique topography whereby both the monitor and FOH controls are presented within the same channel strip and both sets of faders are located at the bottom of the strip for ease of use. A HI PASS filter is available pre- the insert point after which the signal path splits to feed both the FOH and MON paths.

Both the monitor and FOH signal paths can benefit from a XL3-derived 4-band equaliser, which features two fully parametric mid range sections and two variable frequency, shelving equalisers at the extremes. Each frequency section of the equaliser can be independently removed from the monitor signal path if desired and uniquely two additional sections of EQ are dedicated for monitor use only. Independent Mon switches in each EQ section enable the EQ to influence the Mon feed as well as the FOH if desired.

The Mon insert point is normally pre EQ, but can be switched to post- the front of house EQ where it will not affect the monitor signals.

12 AUX controls are provided and each can be globally assigned to derive signals from the FOH signal path or the MON signal path. The AUX PRE switches change the signal sent to the Aux busses from post fader to pre fader.

SIS: When the Spatial Imaging System is active, the mix can be configured for a three speaker system, a two speaker system or a blend of the two, so that the optimum degree of centre image focus and loudspeaker power sharing can be obtained. When the image control and Pan control are both set centrally, the channel signal will be routed equally to all three speakers.

The SOLO switch sends the input channel monitor signals to the MON PFL/AFL busses and also sends input channel front of house signals to the FOH PFL/AFL stereo busses. If the switch is pressed for a short time it will latch on or off, but, if it is held on for more than 1 second, the latching is disabled. By default, the Solo system is auto cancelling, though the SOLO ADD mode switch on the Master Module defeats the auto cancelling to allow multiple channel Solo monitoring. If the Master Module SOLO SIS is enabled, the front of house Solo busses will switch to LCR operation.

Separate MON MUTE and FOH MUTE switches are fitted and may be accessed via the snapshot automation. Independent MON and FOH FADERS provide independent adjustment of the monitor and front of house input channel levels and 10 ASSIGN LEDs display the status of the FOH VCA, MON VCA, and AUDIO Group assignments.



L3011 MIX OUTPUT MODULE.

TALK BACK SECTION.

The talkback section includes the expected monitor and talkback features, plus a brightness control for the console Littlites and LEDs. A TAPE input routes to the stereo and/or mono master busses.

The test oscillator is continuously adjustable over the range 50Hz to 5K while activating the integral pink noise switch overrides the oscillator. The signal generator output may be routed to the console's internal talk busses and to the talk external output XLR.

An on-board mic amp with phantom power accommodates all standard talkback mics and a number of routing options are available for the talk/signal generator signal where it can feed the external output, Groups 1,2,3 and 4 busses, Groups 5,6,7 and 8 busses or all the matrix busses.

There's also an inbuilt ambience mic preamp with phantom power and the Talk section includes a 4-band semi-parametric equaliser with swept mid controls. The meters can display levels from the Monitor Group, Stereo Return or Matrix signals.

MIX SECTION.

The Mix section provides metering for the peak signal level at the post fader mix outputs while the MON switch acts globally across a single mix buss to reconfigure the input module and stereo Aux return module sends so that they derive their signal from the monitor signal path in place of the front of house signal path.

The Ambience level control enables an external microphone to feed the mix buss. The control provides continuous adjustment over the range +6dB to off.

The equaliser in this section is the full 4-band design used in the input channels and the EQ switch inserts the equaliser into the mix output signal path. Phase switch, Mute and Solo facilities are provided where the Mute may also be controlled via the snapshot automation system. SOLO sends the input mix signals to the MON PFL/AFL busses and to the FOH PFL/AFL stereo busses. Solo on/off latching is as per the input section.

The MIX FADER provides continuous adjustment of mix levels from +10dB to off.





L3011 MIX OUTPUT MODULE.

VCA MASTER SECTION.

The VCA Master section provides centralised control over the VCA functions of the Legend and includes the VCA MUTE switch, which acts on the pre and post fader signals of any input channels assigned to the VCA master. This function can also be controlled from snapshot automation.

A VCA SOLO switch monitors the VCA master fader by creating a mix on the Solo busses comprising all those input channels that are assigned to the VCA master. If a VCA Solo switch is pressed for a short time it will latch on or off, but if it is held on for more than 1 second the latching is disabled.

When the console is operating in SOLO ADD MODE, input channels have priority over VCA solos and will temporarily override them.

The VCA MASTER FADER controls the output level of any input channels assigned to the VCA master over the range +10dB to off.





L3021 MASTER MODULE.

The master module includes the Aux Return master controls plus metering for the Group, Stereo Return or Matrix signals. Source selection is via the Meter Selector assign switches on the mix module. A 4-band, semi-parametric equaliser is available in the stereo effects return signal path.

AUX controls (1 to 12) provides continuous adjustment of the level sent from the corresponding stereo effects return to the Aux busses and Aux busses may be globally assigned to derive their signals from the FOH signal path or the MON signal path. The returns have level controls, pans and Mute switches and the MONO switch routes the post fader stereo effects return signal to the mono master buss. The ST switch routes the post fader stereo effects return signal to the master stereo buss via the Pan control.

The SOLO switch sends stereo effects return monitor channel signals to the MON PFL/AFL busses and sends front of house stereo effects return signals to the FOH PFL/AFL stereo busses. Solo on/off latching is as per the input section.

The FOH MUTE switch mutes the front of house stereo effects return signal path at all points and can be automated. The stereo effects return audio Group assignments are programmable while the central controller MODE switches and ASSIGN keys select the desired audio Group. SET switch toggles the stereo effects return buss feed on and off.

GROUP SECTION.

This section includes the Group Pan controls, which can be configured for either 2-speaker or 3-speaker panning. A MONO switch connects the post fader Group signal to the mono master buss while a ST switch routes the post fader Group signal to the master stereo buss via the Pan control. The Group MUTE switch function may also be controlled via snapshot automation.

The SOLO switch routes Group signals to the MON PFL/AFL busses and the FOH PFL/AFL stereo busses. Solo on/off latching is as per the input section.

MATRIX SECTION.

This section includes metering for the Masters and Solo Monitors. Meter selection defaults to Master L, C, R and Ambient input, but when a Solo is active, the meters show FOH Solo L, C, R and Monitor Solo levels. If the Solo is monitored pre fade, the meters also follow this selection. Matrix metering is accommodated in the Mix output section.

MATRIX SEND controls (1 to 8) set the levels sent from the Group outputs to the matrix busses while the LEFT/RIGHT rotary controls provide continuous adjustment of the levels sent from left and right master outputs to the matrix busses. A CENTRE (mono) rotary control sets the levels sent from the mono master output to the matrix busses.

An EXT input is summed on to the matrix buss and has its own level control.

The MUTE switch mutes the matrix post level control signals and can be controlled from snapshot automation.

The SOLO switch sends matrix signals to the MON PFL/AFL busses and the FOH PFL/AFL stereo busses. Solo on/off latching is as per the input section.





L3021 MASTER MODULE.

AUTOMATION CENTRAL CONTROL SECTION.

This section provides access to the automated features of the Legend and follows the same paradigm as the Heritage and XL4 consoles.

The interlocking FOH VCA, MON VCA, Group and Aux switches determine the current assignment/display mode for the input module assign LEDs. If they are pressed down for more than 0.5 second, the interlock is removed. This function is used for 'clear mode'.

The ASSIGN KEYS are used to change the settings for input VCA FOH, VCA MON, audio Group or Aux assignment in conjunction with the SET switch on each channel. The mode switches can be used to select which assignments are cleared; pressing VCA mode clears the VCA routing, pressing Group mode clears the Group routing and so on. Press the mode switch (long press) to engage more modes for simultaneous clearing.

SNAPSHOT AUTOMATION SYSTEM.

The console is fitted with a powerful Snapshot automation system capable of storing and recalling up to 500 snapshots. A snapshot stores the settings of the channel mutes controls, the routing assignments and VCA assignments.

When the LOCK switch is illuminated, all assignment changes are disabled and virtual fader operation is locked (either on or off). The console automatically reverts to a locked state if no assignment controls are operated within a 90 second period.

When Solo In Place is selected, any input Solo that is pressed causes all the other channels to be muted. This switch must be pressed for 3 seconds before it will operate as a precaution against accidental operation

An A/B switch selects which of two micro cards is controlling the console assignment and automation systems. For reliability, the entire assignment and automation systems are duplicated and the console can operate on either of the systems. All snapshots are stored to BOTH systems. Operating the STORE key will store the current console assignments and settings to the current snapshot.

Snapshots can also be programmed to generate MIDI information so that when a snapshot is recalled, these messages are sent via the console's MIDI Out.

The system menu includes the LOCK function, which selects from four possible levels of console operation: -

- TOTL All automation and assignment functions are disabled
- RCAL Only recall and assignment functions are available.
- STOR Scene storage/editing, recall and assignment are operational
- SYST All functions are available.

The CHECK switch provides a preview of the mute status on the console surface WITHOUT recalling the snap shot settings. While in check mode, the ACT/ SCENE C/O, and UP/DOWN switches may be used to step through the snapshots. Snapshots can be stored in the automation system as either ACTs or SCENEs where scenes are simply subsets within acts.

The LAST, NOW and NEXT switches recall snapshots to the console surface.





L3021 MASTER MODULE.

MONITOR SECTION.

The MONO SOLO TRIM adjusts the incoming Solo level before sending it to the monitor output while the STEREO SOLO TRIM adjusts the incoming Solo level before sending it to the monitor output. The MONO Master switch routes the post fader mono Master Mix to the mono Local Monitor output.

The mono SOLO switch routes Soloed signals to the mono Local Monitor output and overrides any signals sent from the mono master.

The SIS switch routes Solo signals to the mono and stereo Local Monitor outputs with full left, centre, right imaging overriding signals from other sources whenever a Solo is active.

The stereo SOLO switch routes Solo signals to the stereo Local Monitor outputs whenever a Solo is active on the console, overriding any signals sent from the Mono Master, Stereo Master or Tape Input.

The MONO Master switch routes the post fader mono Master Mix to the stereo Local Monitor outputs while the ST Master switch routes the post fader stereo Master Mix to the stereo Local Monitor outputs.

A TAPE switch routes the stereo tape input to the stereo Local Monitor outputs and the MON switch reconfigures the local monitor signals to be derived from the MON signal paths. FOH signals are monitored as a default. The Local Monitor level control gives continuous adjustment of all three Local Monitor output levels. The Local Monitor outputs are fitted with Mute switches.

A PHONES output is available where operating the SOLO PFL switch sends the mono PFL Solo buss signals to the headphones and causes the AFL signals to be replaced by the Local Monitor outputs. This also changes the Solo meters to monitor PFL Solo buss signals.

The SOLO ADD MODE allows multiple channel access to the Solo busses. When the Solo Add mode is off, the action of pressing a Solo switch will cancel any previously active Solo. When the Solo add mode is on, the auto cancelling is defeated, which allows multiple channel or output soloing. When the SOLO ON/CLEAR switch is pressed it clears any active Solo switches.

MASTER SECTION.

The BALANCE control functions as a buss left/right balance trim for the pre-insert left and right master signal paths. The stereo master MUTE switches (which are not linked to the snapshot system) cut the post fader output signals.

The mono master MUTE switch (which is not linked to the snapshot system) cuts the post fader output signal fader.

The two master FADERS control the output levels of the main mix over the range +10dB to off.





L3750 POWER SUPPLY.

A smaller, lighter, cooler and quieter design. Two PSUs in a 2U rack with the capability of hot swapping and rail indication on the console.

DIMENSIONS AND WEIGHT.

Width 482.6mm (19")
 Height 90 mm (3.54")
 Depth 343mm (13.5")
 Depth inc connectors 389mm (15.31")

Weight 13Kg (28.6lbs)



SERVICEABILITY.

The Legend 3000 has a unique "hinged module" design allowing easy servicing.

Each 8 channel PCB is split into 3 sections with separate pre-amp, AUX/EQ and fader tray. All electronics are on the underside, making component change simple.

All electrical systems are engineered on a channel by channel basis (including separate fuses). This provides maximum protection from catastrophic failure (ie loss of all 8 channels).

With the use of light pipes and carefully designed metal work removal of knob caps is not necessary for replacing PCBs.

APPLICATION NOTES OVERVIEW

On major live events the audio mix is passed through two separate consoles, one giving a dedicated mix for Front of House and the second the monitor mix. However on smaller productions, where cost is more of an issue, a single console is used to perform both tasks as a Front of House and Monitor desk. This inevitably leads to compromises being made on the mixes, this is further compounded by the use of a Front of House console where there is very little concession made to the monitor mix. The Legend 3000 overcomes these compromises by having on each input channel independent Front Of House and Monitor controls with dedicated EQ and faders, as shown in diagram 1.

However, the Legend 3000 is extremely flexible when used as either a dedicated Front of House or Monitor console. Diagram 2 shows possible additional applications for features that are released when the desk is used as a dedicated console, making the Legend 3000 the most flexible desk available on the market in this price band.

APPLICATION NOTES

DIAGRAM ONE

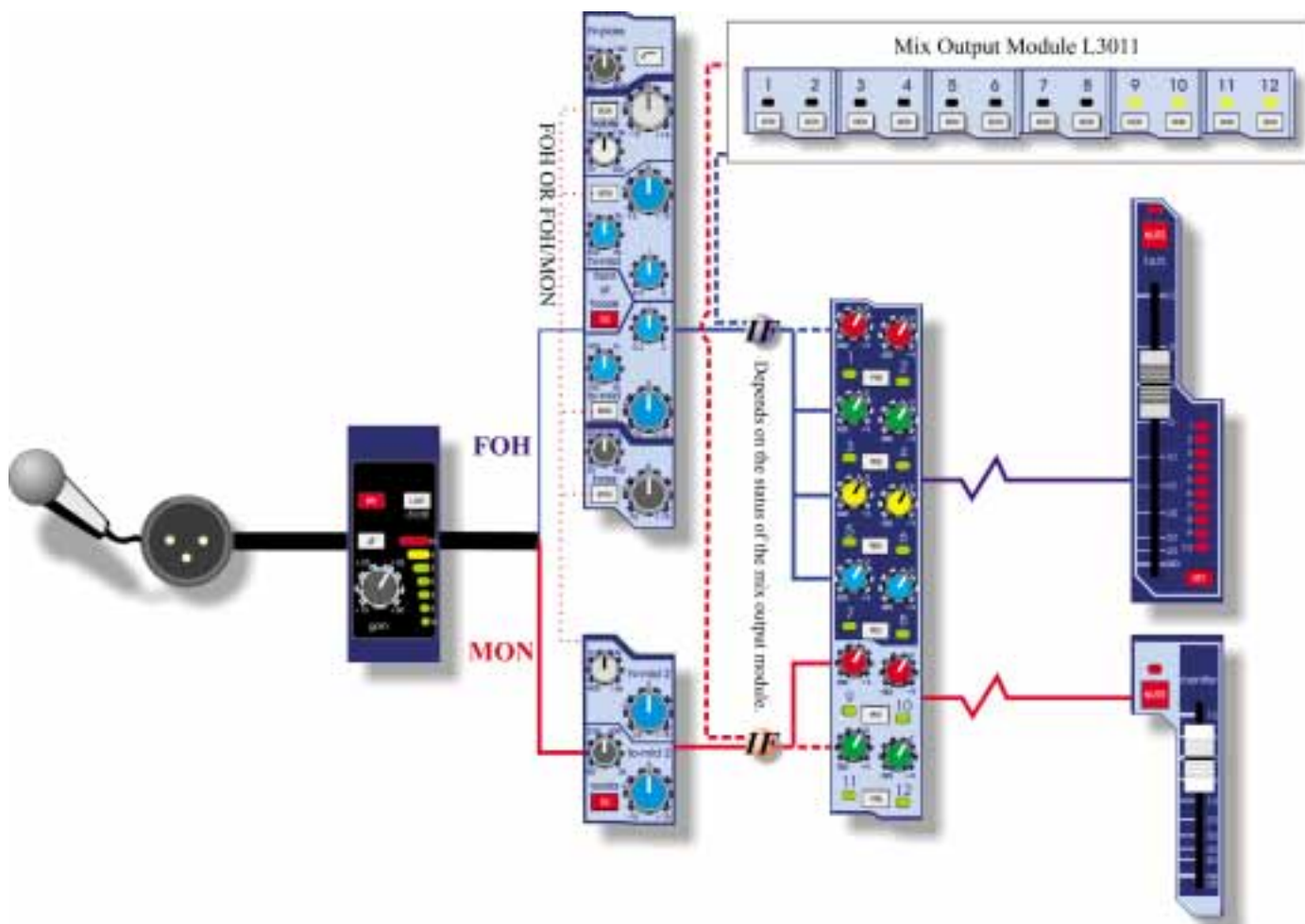
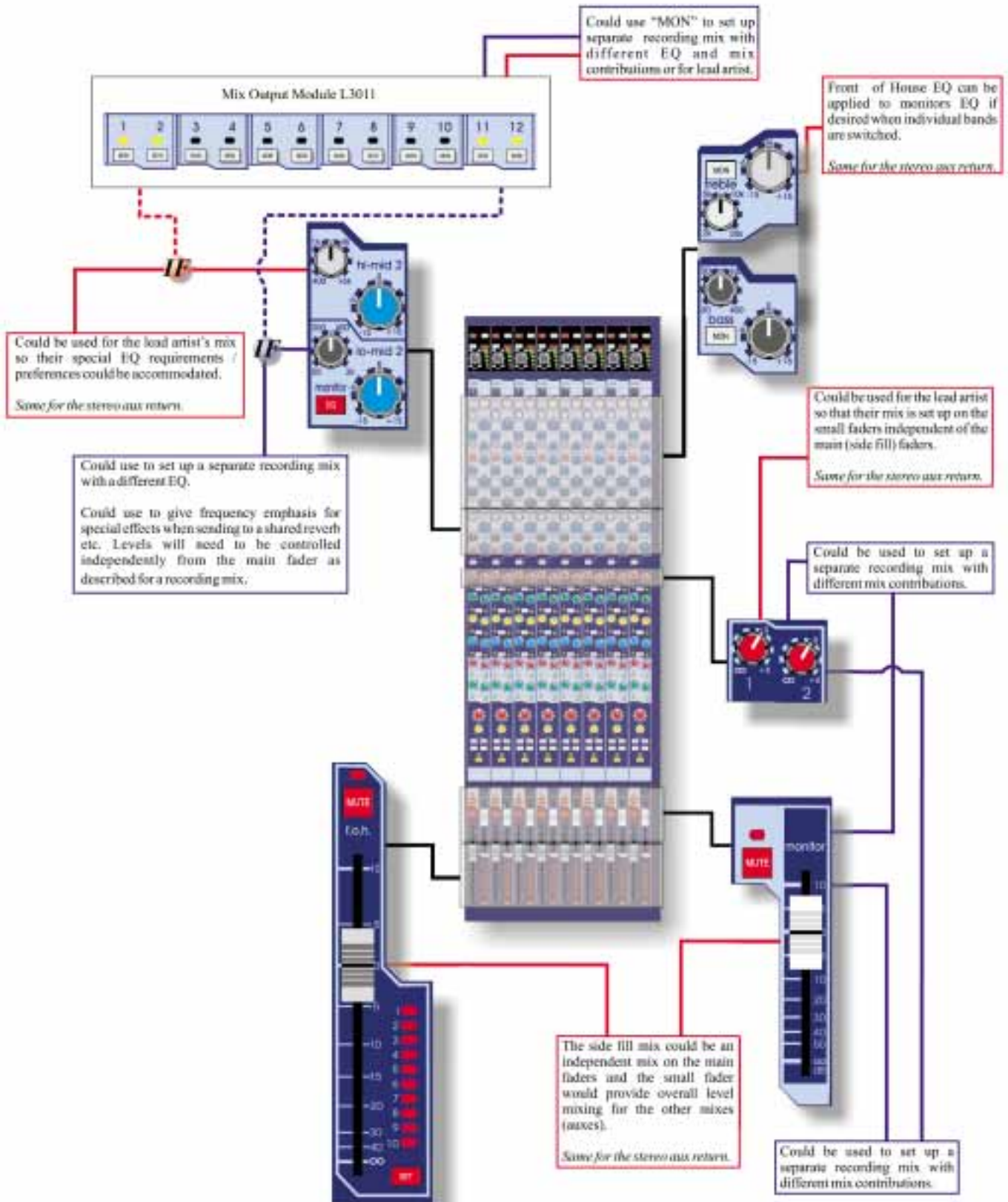
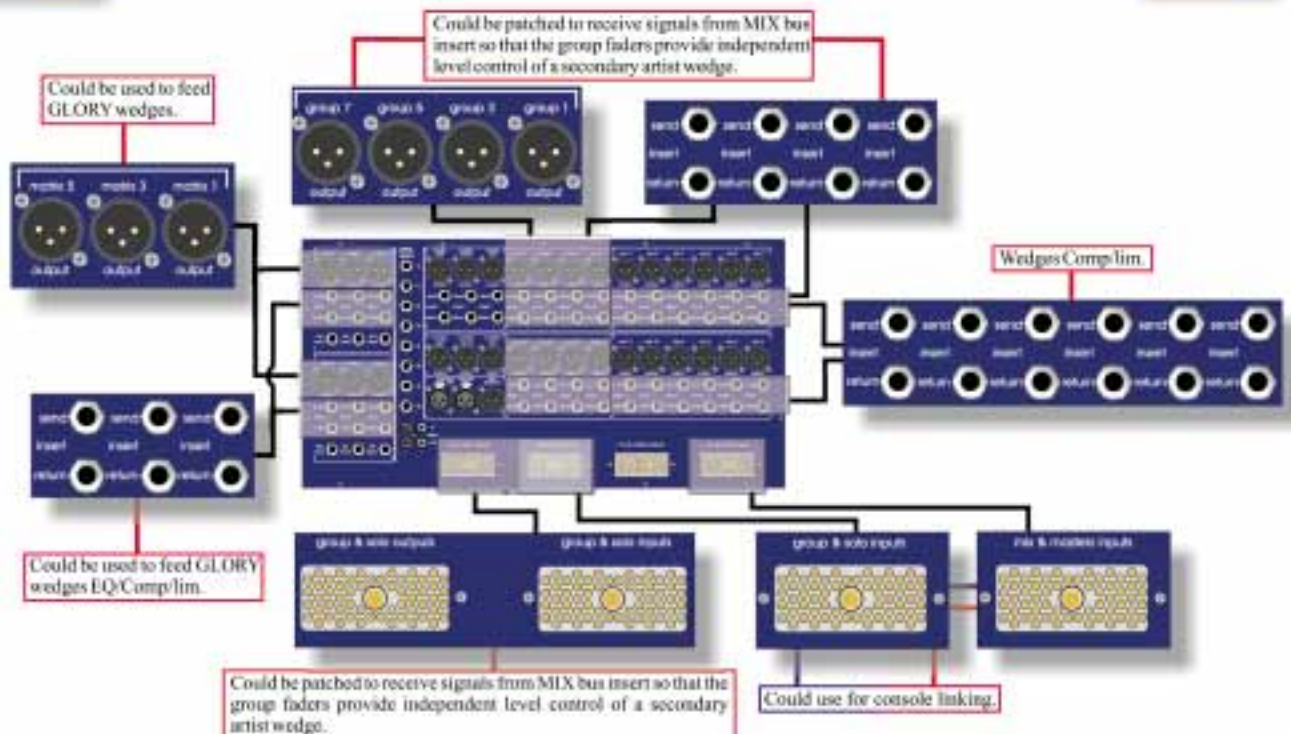
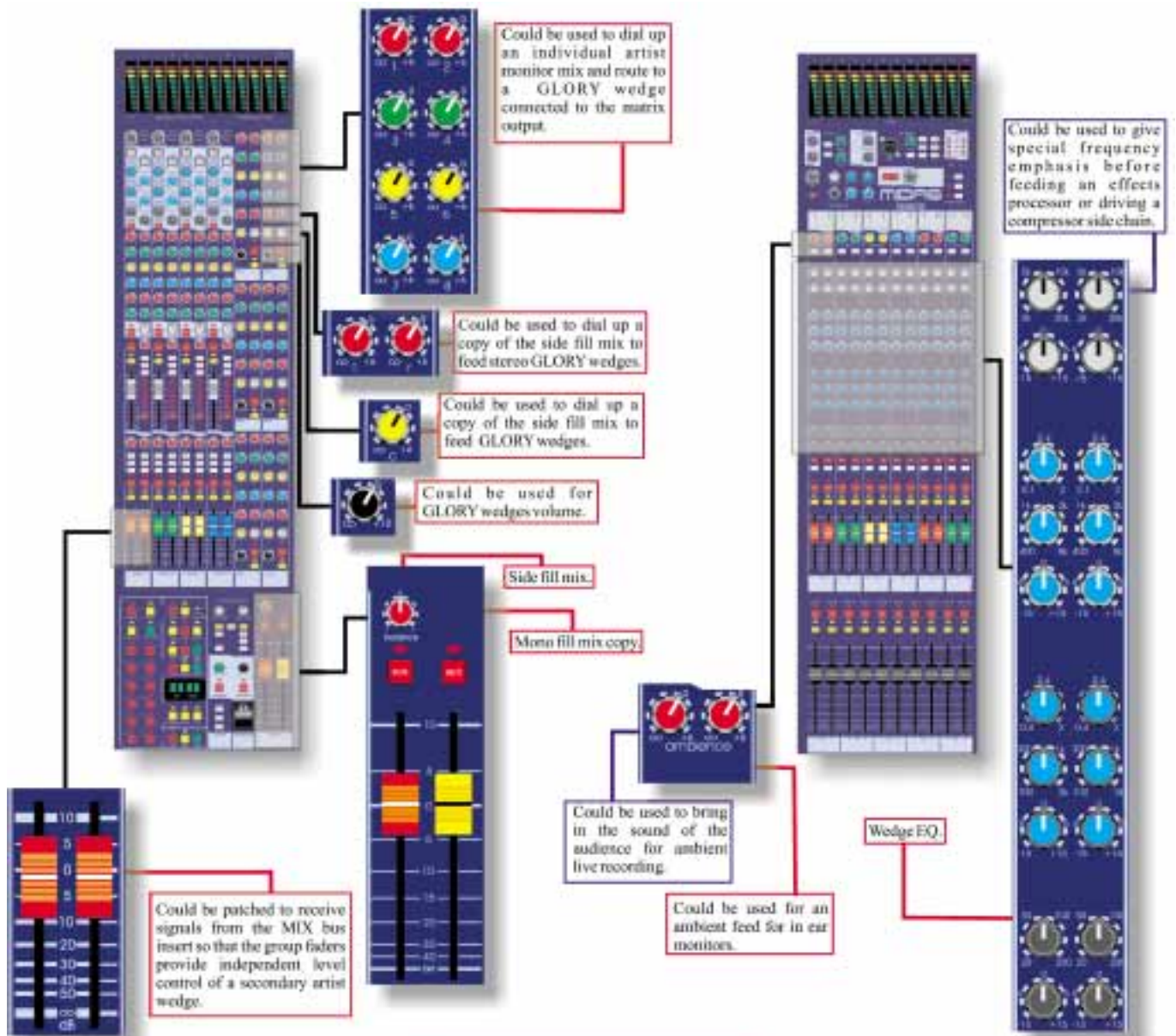


DIAGRAM TWO

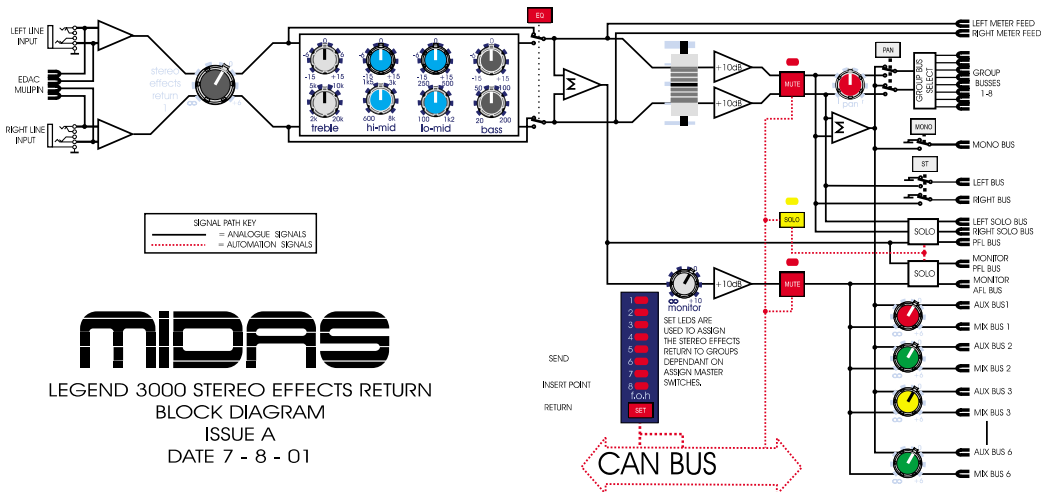
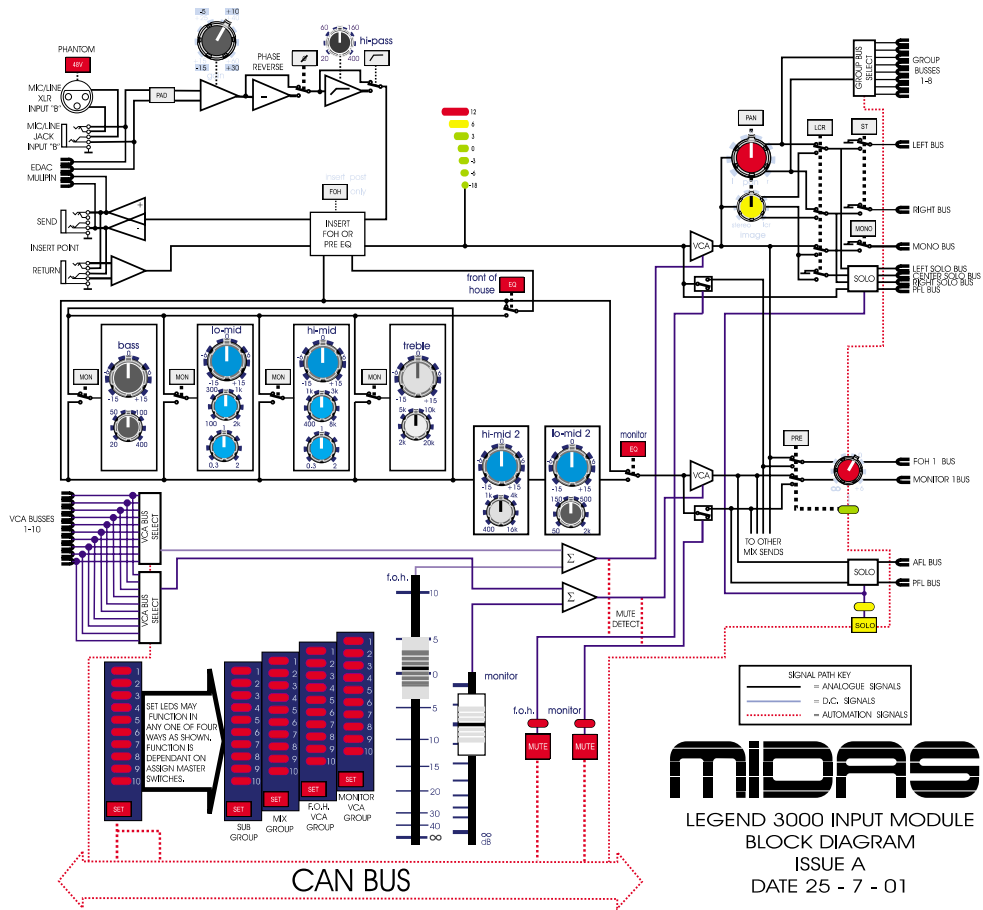
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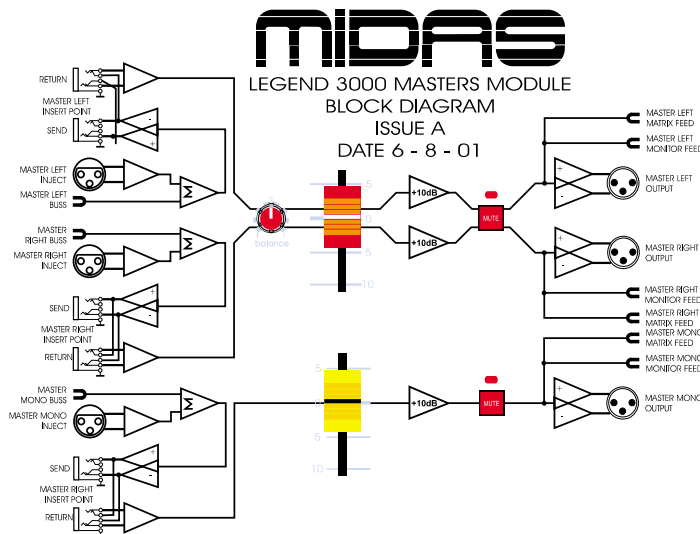
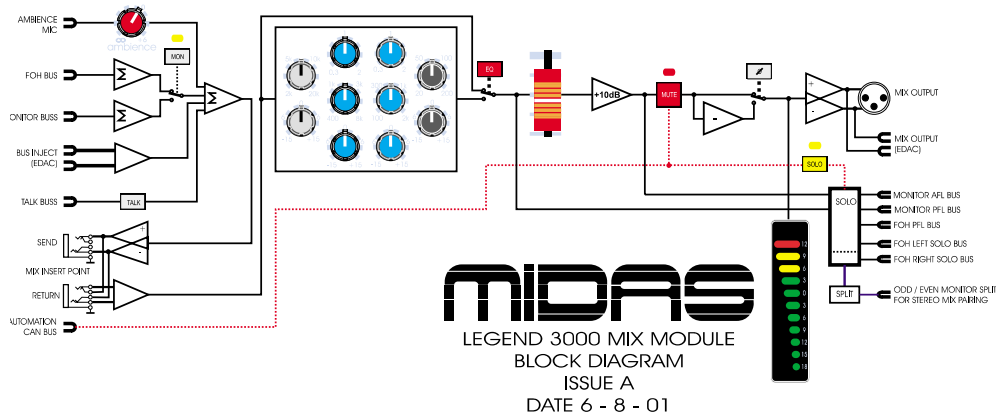
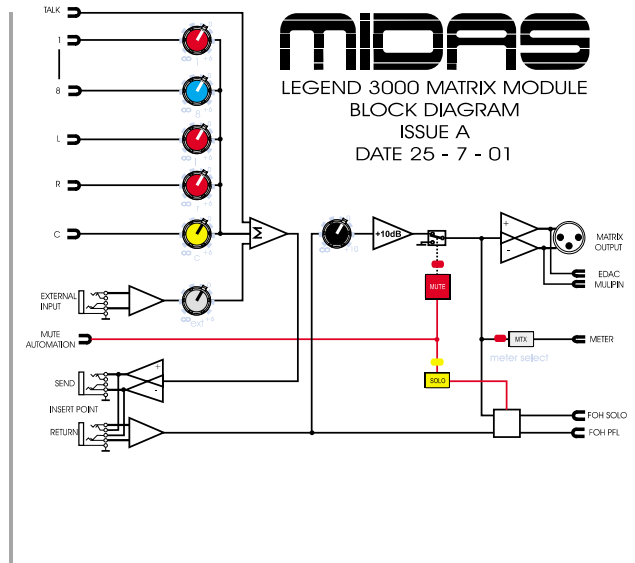
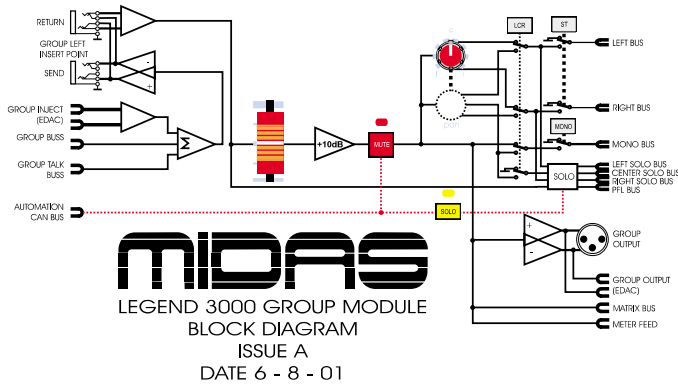
FRONT OF HOUSE APPLICATIONS ADDITIONAL FEATURES
 WEDGE MONITOR APPLICATIONS ADDITIONAL FEATURES

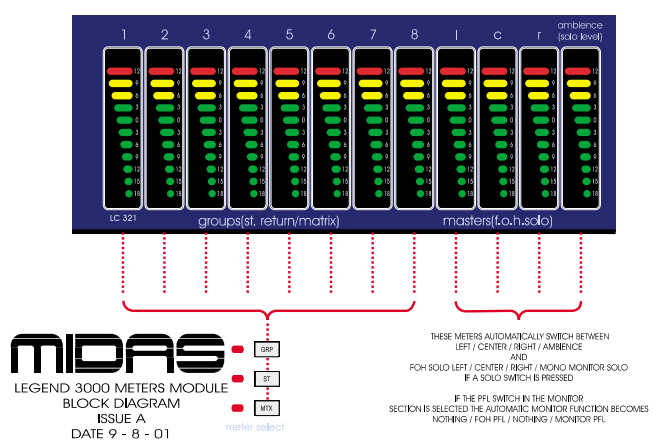
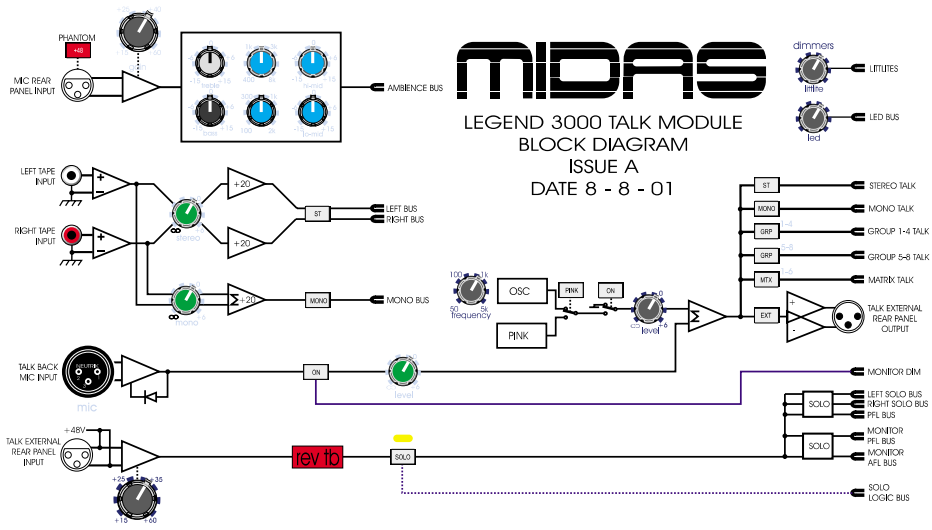
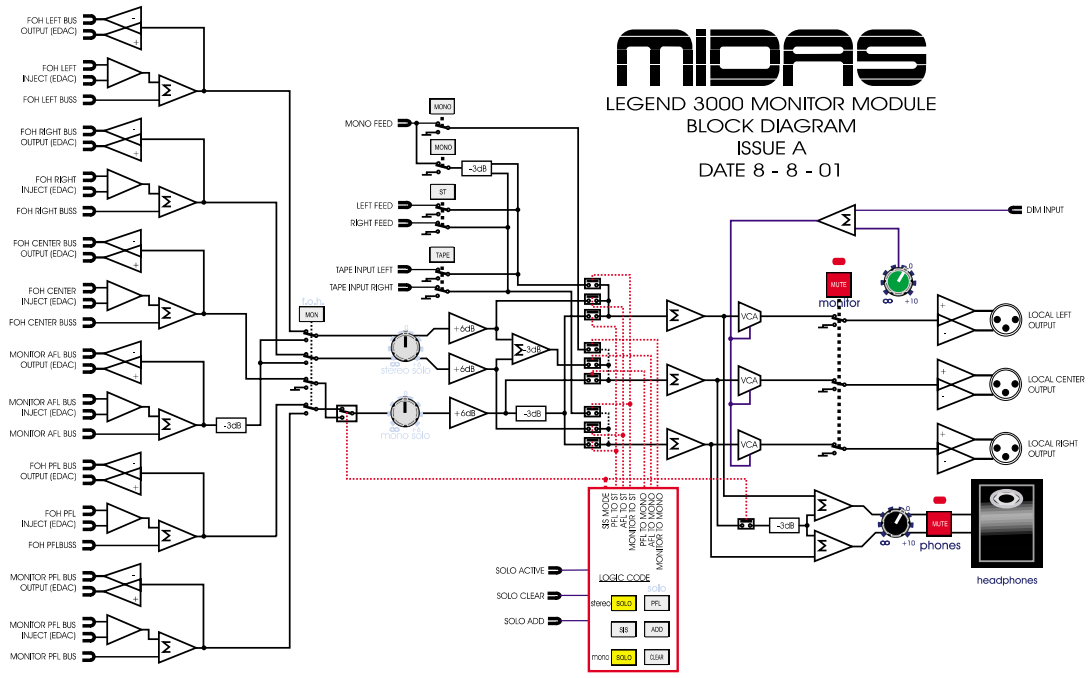




BLOCK DIAGRAMS







OVERVIEW AND STATISTICS

The 52 Channel Legend 3000 is a 28 buss console with an additional 11 x 6 output matrix. A total XLR input count of 51 are

The busses are

8 audio groups	=	8
12 mono aux	=	12
1 stereo master	=	2
1 mono master	=	1
1 stereo AFL	=	2
1 mono PFL	=	1
2 monitor solo	=	2
TOTAL	=	28

10 VCA sub groups which include VCA sub group muting

A total XLR output count of 33 are

8 audio group outputs
12 aux outputs
6 matrix outputs
3 master outputs
3 local outputs
1 talk external output

2060 automated switch functions are

576 input channel aux virtual assign switches
1344 input channel VCA sub group virtual assign switches
96 input channel mute switches
8 audio sub group mute switches
12 aux mute switches
10 VCA master mute switches
6 matrix mute switches
8 stereo effects mute switches

A total XLR input count of 51 are

48 channel mic inputs
2 talk mic input
1 ambient mic input

A total of 216 balanced 1/4 inch jacks for inserts are

48 input channel insert sends
48 input channel insert returns
8 audio group insert sends
8 audio group insert returns
12 aux insert sends
12 aux insert returns
6 matrix insert sends
6 matrix insert returns
3 master insert sends
3 master insert returns
(48 channel line inputs)
(8 stereo effects inputs)
(6 matrix external inputs)

60 long throw faders for mix control

72 short throw faders

There are a total of 72 peak programme meters with 11LED segments on all outputs and 7 LED segments on input channels.

Input EDAC per channel are

8 x Pre insert direct output
8 x Mic/Line inputs

Mix and Master EDACs are

12 mix outputs
12 mix bus injects
3 master outputs
3 master bus injects

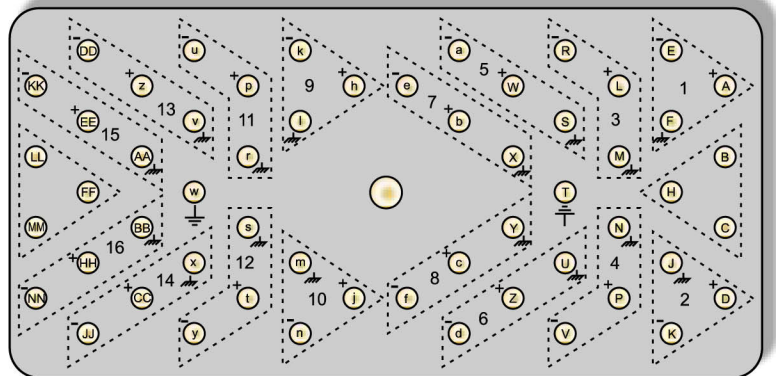
Group and solo EDACs are

8 group outputs
8 group bus outputs
6 solo bus outputs
6 solo bus injects

Littlites

6 on a 52 channel

EDAC WIRING DIAGRAM



≡ = Individual Screens ⊥ = Overall Screen

INPUTS

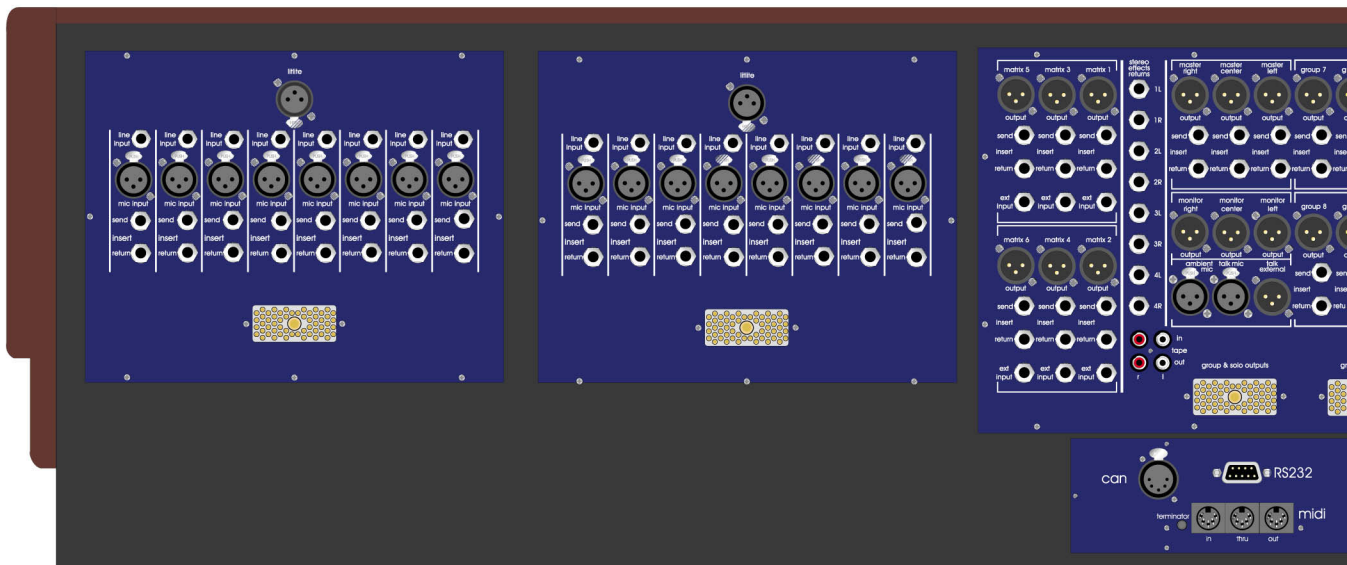
- 1 Mic In 1
- 2 Mic In 2
- 3 Mic In 3
- 4 Mic In 4
- 5 Mic In 5
- 6 Mic In 6
- 7 Mic In 7
- 8 Mic In 8
- 9 Direct Out 1
- 10 Direct Out 2
- 11 Direct Out 3
- 12 Direct Out 4
- 13 Direct Out 5
- 14 Direct Out 6
- 15 Direct Out 7
- 16 Direct Out 8

MIX & MASTERS

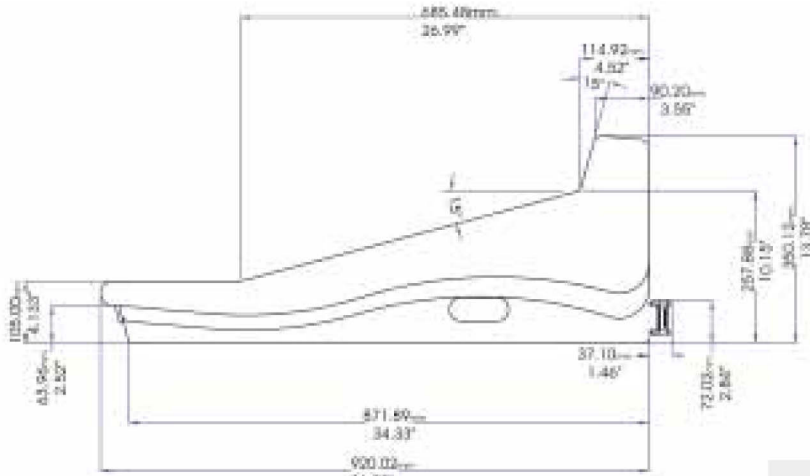
- Mix Out & Mix Bus Injects*
Master Out & Master Bus Injects
- 1 Mix 1
 - 2 Mix 9
 - 3 Mix 2
 - 4 Mix 10
 - 5 Mix 3
 - 6 Mix 11
 - 7 Mix 4
 - 8 Mix 12
 - 9 Mix 5
 - 10 Master L
 - 11 Mix 6
 - 12 Master C
 - 13 Mix 7
 - 14 Master R
 - 15 Mix 8
 - 16 Chassis

GROUP & SOLO

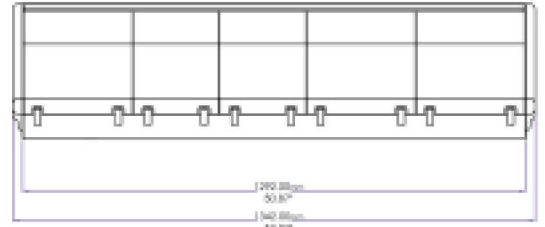
- Group Out & Group Bus Injects*
Solo Out & Solo Bus Injects
- 1 Group 1
 - 2 FOH L
 - 3 Group 2
 - 4 FOH C
 - 5 Group 3
 - 6 FOH R
 - 7 Group 4
 - 8 MON AFL
 - 9 Group 5
 - 10 FOH PFL
 - 11 Group 6
 - 12 MON PFL
 - 13 Group 7
 - 14 Chassis
 - 15 Group 8
 - 16 Chassis



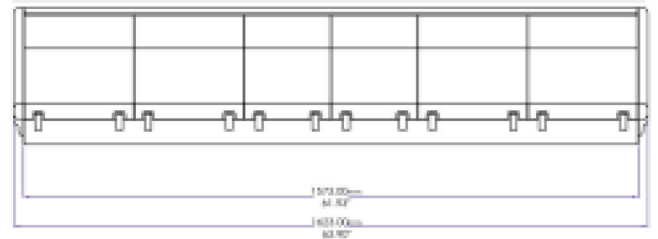
FRAME SIZES



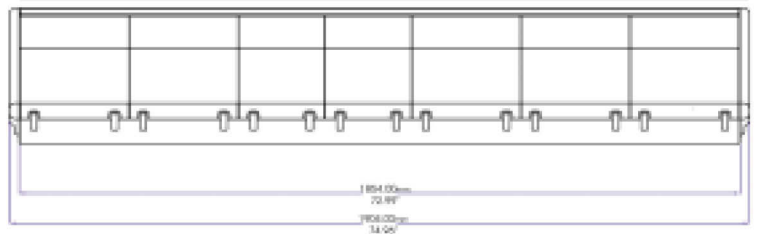
28 Channel (24 mono/4stereo)



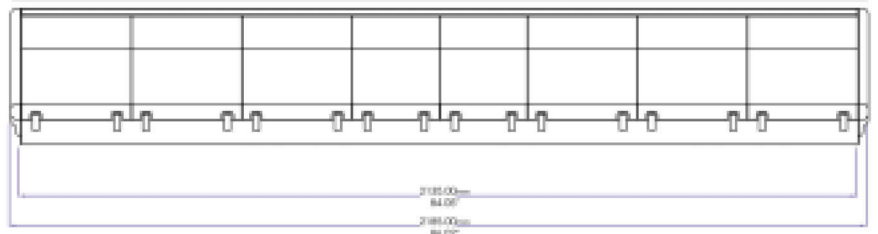
36 Channel (32 mono/4stereo)



44 Channel (40 mono/4stereo)



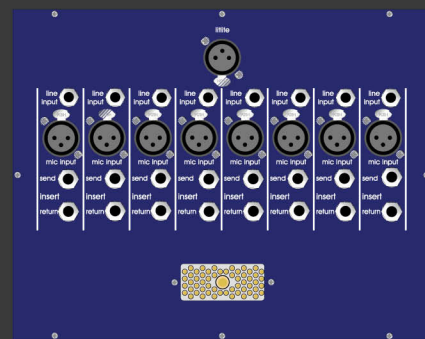
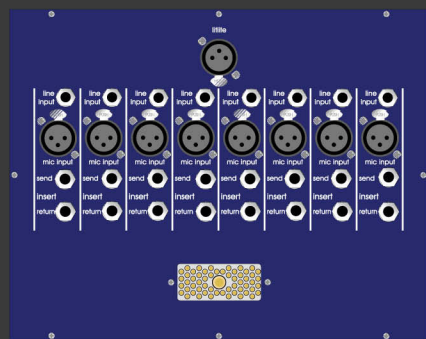
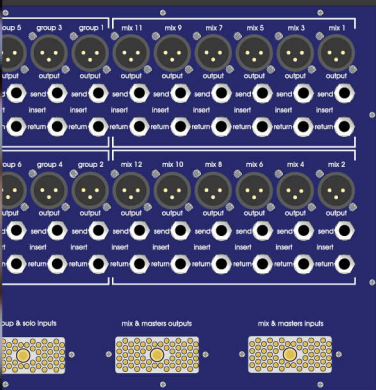
52 Channel (48 mono/4stereo)



Weights (out of flight case)

28 channel	24 mono/4 stereo	71kg	156.5lbs
36 channel	32 mono/4 stereo	85kg	187.4lbs
44 channel	40 mono/4 stereo	100kg	220.5lbs
52 channel	48 mono/4 stereo	114kg	251.3lbs

These weights are approximate.



KLARK TEKNIK GROUP



KLARK TEKNIK
SIGNAL PROCESSING BY DEFINITION



MIDAS
DESIGNED FOR A PURE PERFORMANCE

Since 1974 the Klark Teknik brand has been synonymous with the single-minded pursuit of excellence in professional signal processing. Recognised worldwide for their innovation, Klark Teknik have introduced many ground-breaking designs including the world's first digital delay and reverberation units. Their pioneering tradition continues to this day, with the recent introduction of the DN9848 digital loudspeaker processor and DN1248 active splitter systems. With these units and others, Klark Teknik have once again defined the standards to which others aspire. Although famous for their equalisation and analysis units, the range today also encompasses dynamic processors, digital and analogue system controllers, analogue utility units, multi-purpose processors and active DI boxes. All Klark Teknik units are designed, engineered and tested to the most stringent standards, providing the longest possible working life in the field with the lowest downtime, and the highest residual values of any comparable product.



Since their original genesis in the late 1960s, Midas consoles have remained the premier choice of discerning audio professionals all over the world. Their unique combination of engineering quality, audio performance, real-world reliability and global acceptance makes them the definitive article in the world of professional audio. The legendary XL3 brought Midas back into the big league in 1990, and was later followed by the XL200, the XL250 and the awesome XL4 which remains the flagship of the range. The introduction of the Heritage range of consoles further consolidated Midas' global domination of the industry, with the award-winning Heritage 3000 becoming the most popular console the company has ever manufactured. Now, the Venice compact console and the fabulous Legend range bring the great sound of Midas to a whole new group of users, whilst the striking new Broadcast 2000 console brings Midas' unrivalled expertise to the world of broadcast.

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