



Venice Series

live sound

installation

audio / visual

Venice Series Winner of International Awards



introduction

Since 1969, Midas has been the premier console brand throughout the world of professional audio. MIDAS consoles have been on the road with superstars like Aerosmith, Bon Jovi, the Rolling Stones, Bruce Springsteen, U2, and Madonna, to name just a few.

From the famous Pro Series consoles to the industry-standard XL-3 and XL-4, the current state-of-the-art Heritage series, Midas consoles remain the first choice for live sound professionals who expect the very best from their equipment.

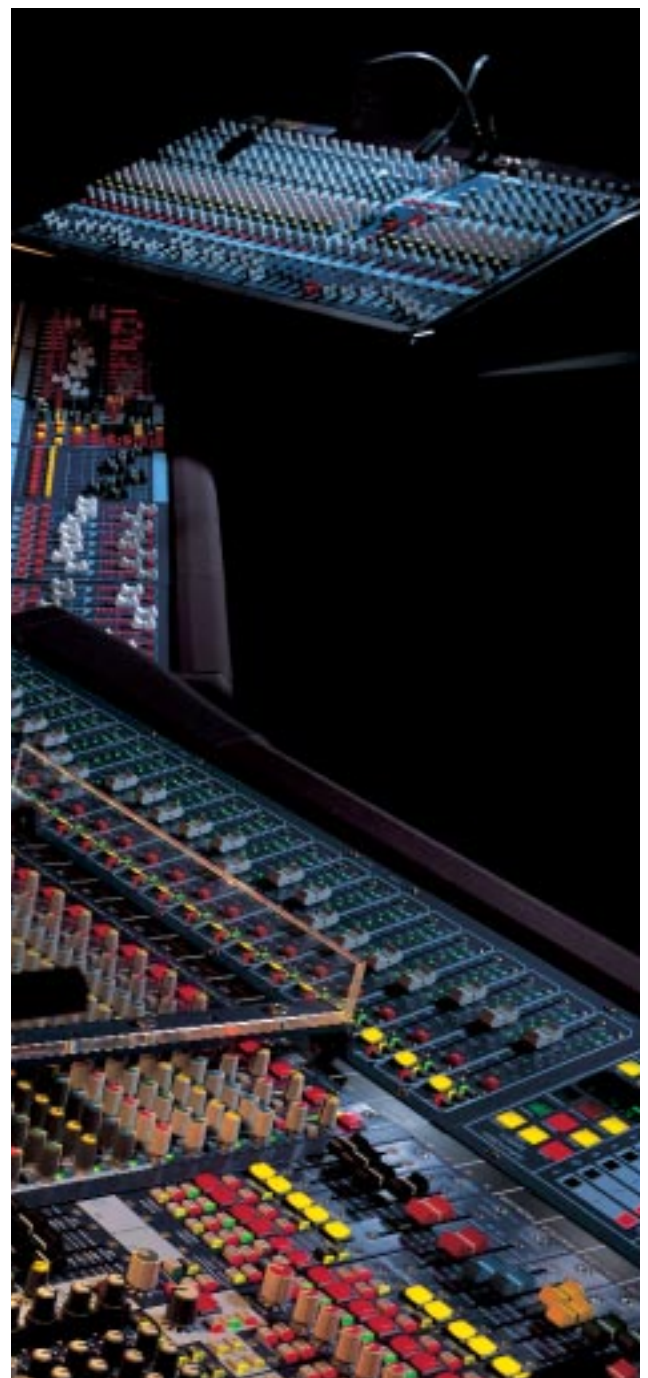
Midas consoles are regarded as essential tools in numerous other applications. Countless theatres, broadcast suites, conference specialists, and installation companies entrust their live sound requirements to Midas. The reasons for this trust and confidence in the product are simple, born of the fundamental philosophy behind Midas: totally uncompromising research, design, engineering, and manufacturing processes, which together produce a product of rare quality.

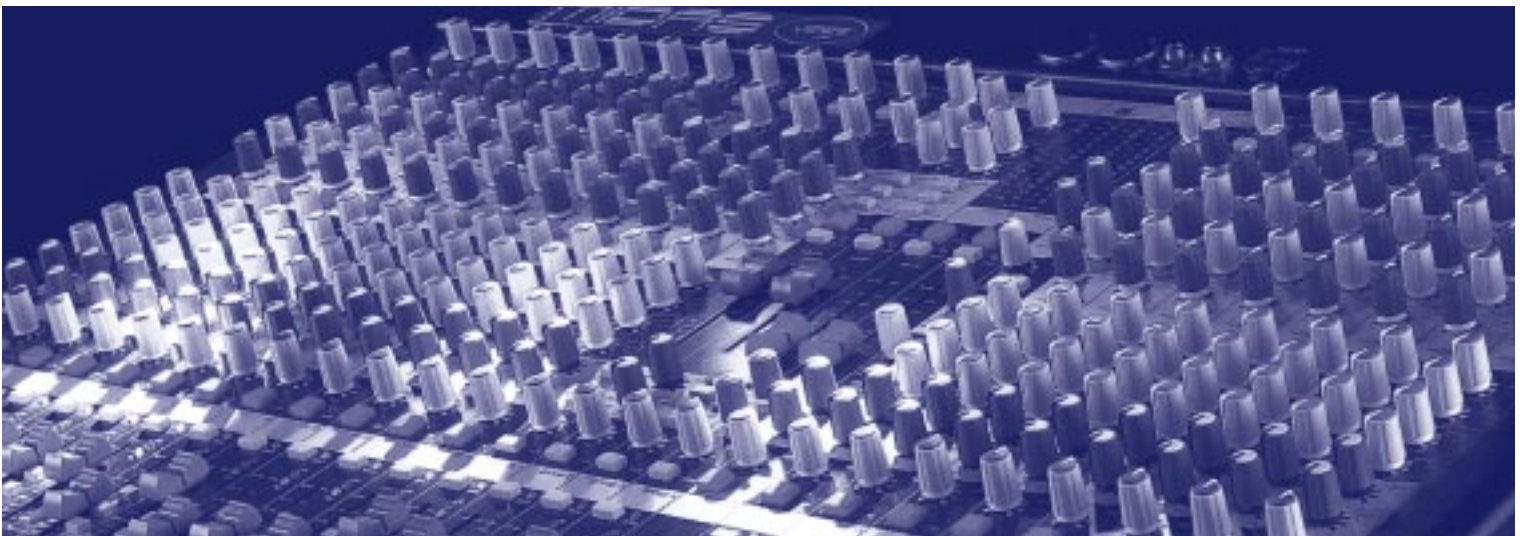
The "Midas Sound", a commonly-heard phrase in the world of pro audio usually connotes the sonic performance of the Midas consoles as the mark by which others are judged – What is the "Midas Sound"? It comes simply from a unique combination of dynamic headroom, noiseless signal paths, unmatched EQ, the finest microphone pre-amps money can buy...and thirty years of experience!

Such sonic performance is not the only reason that Midas is number one.- It's also the outstanding reliability of the product. Midas consoles are able to handle thousands of events and hundreds of thousands of miles of travelling without fault. Still, life can be tough on the road, so our global support network of dealers and distributors is on call at all times should any of our products need any kind of after-sales service.

All Midas products are developed in close consultation with leading audio engineers from all over the world. Following consistent demand for the legendary sound and reliability of Midas in compact format,

Midas is very proud to present the Venice Series of compact mixing consoles.





a new standard in compact mixing consoles

Now, for the very first time, our customers can enjoy all the great features that go into every MIDAS console in three very manageable frame sizes – Venice 160, Venice 240 and Venice 320.

For instance, standard features for Venice 160 include rack-mounting hardware, and rotatable connector panel. These allow optimum configuration for the application, whether fixed or mobile. Whether as the main console for events requiring up to 24 mono plus 4 stereo inputs, as a sub-mixer for larger productions, or as an onstage mixer for performers to control, Venice sets a new standard in compact mixing consoles for all applications.



“Despite the obvious fewer facilities, the Venice passed the biggest test – it sounded like a Midas! The EQ section may be simple but it works. And to have such headroom and low noise in a mixer of this size is fantastic.”

Stuart Mørch-Kerrison • FOH Engineer • HIT Awards Norway

[MIDAS: Top-Class
Quality and
design]



Legendary Midas Sound - The overall sonic performance of any console can only be as good as the incoming signal interfaces, namely the microphone pre-amplifier. Midas consoles always incorporate the very best microphone pre-amps available. Venice uses an updated version of the ground-breaking Midas XL3 microphone pre-amp, which uses Midas' own "long-tailed pair" circuitry. This means that the Venice pre-amp has ample headroom and gain range to accept both microphone and line-level signals without any pad or range switching.

Frequency response and distortion (a 'hot' issue) - To retain the natural qualities of many different sorts of input signals, a console must be able to handle incoming signals across a very wide frequency range with lowest possible distortion. The maximum input capability of Venice is +22dBu, enabling the console to deal with even the hottest line signals within a 15Hz- to 100kHz- frequency range. High-value EMI suppression filters shelter the signal-path from unwanted external noise, one of the fundamental Midas design specialities.

Venice EQ Pure Performance - Leading audio professionals all over the world confirm: it's not the number of pots that make an EQ section, it's the audible result, the ability to accurately control and fine-tune audio signals in the most musical way possible. Great EQ also provides the creative processing power to create personalized soundscapes without any unwanted side-effects. For instance, this means that the HF and LF filters won't interfere with the mid-band frequencies: All filters keep their gain regardless of frequency settings, and +/-15dB on a gain potentiometer means exactly what it says. The Venice EQ is what thousands of Midas owners and users expect from our products: pure performance.

Highest Quality Components - The world-class audio performance expected of a Midas can only be achieved by using first-class components with minimized tolerances. There's no other way to do it: The operational benefit is that two identical signals will sound equal regardless of which channel they are fed into.





Midas Venice -first-class electromechanical parts throughout: Pots, knobs, switches, connectors and faders. These components work hard throughout the long life of the console, and are constantly exposed to heat, moisture, cold, dust and heavy mechanical usage. Venice uses only pots and faders with metal shafts from ALPS and connectors from NEUTRIK, ensuring low maintenance and first class reliability.

Clear and Straightforward Layout - All console manufacturers have their own philosophy of control surface design and layout. While Venice can certainly be used for recording, Midas's "dedicated to live production" approach means the design layout of Venice is optimized for quick and easy control. Every function is exactly placed where it should be, easy to find, operate and read even at low light levels (though connectors for two desk lamps are fitted as standard). Venice provides the right feature set for all live applications: very clear and straightforward, and easy to reach despite the high density of controls.

Gain Structure and Output signals - All controls on Venice that affect actual output levels feature a center position at 0dB with range from minus infinity to plus 10dB (enough to make any output signal more than twice as loud than at the 0dB position). This allows the user to see at a glance whether a signal is really boosted or just adjusted to the overall mix. Additionally, all outputs that would typically be linked to loudspeakers via amplifiers are fitted with electronically balanced XLR connectors, protected by relays. This provides ultimate protection for the loudspeakers should the Venice be accidentally switched off during use.

Redundant Power Supply - maximum safety: large Midas consoles are always equipped with two power supplies for redundancy. While space limitations in Venice consoles allow the inclusion of only one power supply, an external redundant power supply, the EPS1200, is available as an accessory for the Venice 240 and 320. In the unlikely event of a failure of the external power supply, the internal power supply guarantees interruption-free use of these consoles.



[Venice input channel features]

The three Venice models (160, 240, 320) differ only in their numbers of mono inputs, 8, 16 and 24 respectively. All three consoles provide four stereo channels which can be used as either a dedicated input for stereo sources (keyboards, playback, effect return, and so forth), or as an additional mono microphone input, with separate input trim controls. This allows even the smallest version to handle up to 12 microphone and 8 line signals, not to mention the 4 stereo returns for external effect units.

The extremely linear and noiseless Venice pre-amp enables the operation of both microphone- and line-levels up to +22dBu without using external switching or an additional pad switch. A high-resolution gain pot allows fine adjustment over the entire gain range.

48-volt "phantom power" (for condenser microphones and active DI boxes) is switchable individually per-channel, rather than globally, from the connector panel. Two yellow LEDs indicate "phantom power" status on both, the control surface and the connector panel.

A second-order Butterworth hi-pass filter set at 80Hz with an enable switch allows effective elimination of unwanted low-frequency noise, such as stage rumble.

Insert points are provided on all mono inputs for connection to external processing, and are placed right after the hi-pass filter in the signal path. All mono channels also feature direct outputs (for connection to additional FX or direct to multi-track recording) which operate post-fader, but which can be internally reconfigured to pre-fader and post-EQ if required.

The stereo input channel features the same microphone pre-amp as the mono channel, including the hi-pass filter. In addition, two line-level inputs are fitted to accept stereo signals. Because the inputs have two independent circuits, it is possible to have all three inputs connected at the same time, providing silent backup in the event of something unexpected happening - (a common occurrence in live sound situations).

Mono channels are fitted with a 4-band Midas EQ section, featuring fixed frequency HF and LF shelving filters (at 80Hz and 12kHz respectively), plus two swept-frequency mid-EQ bands. The low-mid band is adjustable between 100Hz and 2kHz, whilst the high-mid band controls frequencies between 400Hz and 8kHz, and both controls have a fixed "Q" factor of 1.4. The stereo channels are fitted with a fixed 4-band EQ, controlling frequencies at 80Hz, 300Hz, 3kHz and 12kHz respectively. All the EQ gain controls offer plus and minus 15dB of cut and boost over the selected frequencies.



Venice features a total of six auxiliary sends, designated according to their intended application. FX1 and FX2 provide a post-fader signal at their respective outputs, designed to provide feeds for external effect / signal processing such as reverbs and delays. However, these sends can be internally reconfigured for pre-fade operation. Monitor 1 and Monitor 2 are pre-fade, pre-EQ, to provide controllable feeds for foldback and monitoring applications: These can also be modified internally to post-EQ.



[mono channel]



To accommodate constantly-changing monitor / FX requirements, Venice offers two further auxiliary busses (labelled Aux 1 and Aux 2), which can be individually switched pre- or post- fader on the master module. In pre-fade mode they follow the pre / post-EQ selection of Monitor 1 and Monitor 2, thus Venice thus offers the flexibility to provide 2 FX sends plus 4 monitors, 3 FX sends plus 3 monitors, or 4 FX sends and 2 monitors. On stereo channels, the auxiliary sends provide a sum of the left and right inputs. All auxiliary sends offer a range of minus infinity to plus 10dB, providing accurate level control over a very wide gain range.

The individual pan controls define the position of their respective channel within the overall stereo image. The pan rotary also controls the level of the selected channel being routed to audio subgroups if either of the routing switches is engaged. On the stereo channels, the "bal" controls the balance between left and right input signal.

A large mute switch (with red LED status indicator) mutes all outputs from the channel, including all auxiliary sends and direct outputs.



[stereo channel]



The solo button (with yellow LED indication) switches the signal from the selected channel to the headphone buss and control room speakers. It is possible to choose between PFL (pre-fade listen) in mono or AFL (after fader listen) to evaluate and control a signal within the full stereo image. In addition the level of the "soloed" signal is displayed on the high-resolution LED metering on the master section, without disrupting the metering for the master outputs. The solo switch is situated well away from the mute switch to avoid unintended operation of either.

Incoming signal levels to both mono and stereo input channels are displayed on two LED indicators. The green signal present LED illuminates when the incoming signal exceeds -16dBu, enabling the user to see at a glance which channels have signal present at their inputs. The red peak LED illuminates when the incoming signal exceeds +16dBu, and continues to sense the input even if the EQ section is bypassed. However, because of the quality of the Midas input circuitry, there is still around 6dB of headroom available even when the red peak LED is flashing.

The routing switches direct the signal from their channel to master L/R outputs or the subgroups. When using the subgroups routing switches, the level of the channel signal directed to the selected groups is determined by the position of the pan control.

Venice is fitted throughout with long-life "Super-Slide" faders from ALPS throughout. These high-quality faders ensure exact level settings and smooth fade control even at lower levels.



[Groups and master section]

The comprehensive master section on Venice features two full-function stereo FX-return inputs with faders, mute, solo, routing to groups and master controls as well as send controls to monitor 1 and 2. This feature allows the user to avoid using up stereo input channels as FX returns, without sacrificing the necessary controls.

The two FX-master sends determine the overall level of the FX send to the connected effect unit.

Four high-resolution LED bargraphs monitor the output signals for monitor 1 and 2 and for Master L/R. The monitor 1 bargraph is automatically switched to Solo (PFL or AFL) if any channel solo button is engaged. The master output metering is always active.



The two dedicated monitor sends are equipped with faders to allow precise control and easy visual reference for monitor outputs. They too have mute and solo functions with LED status indication.

Auxiliary sends 1 and 2 can be individually switched pre or post fader for monitor or FX applications as required. The auxiliary master sends feature mute and solo functions with LED status indicators, plus an additional 10dB extra gain.



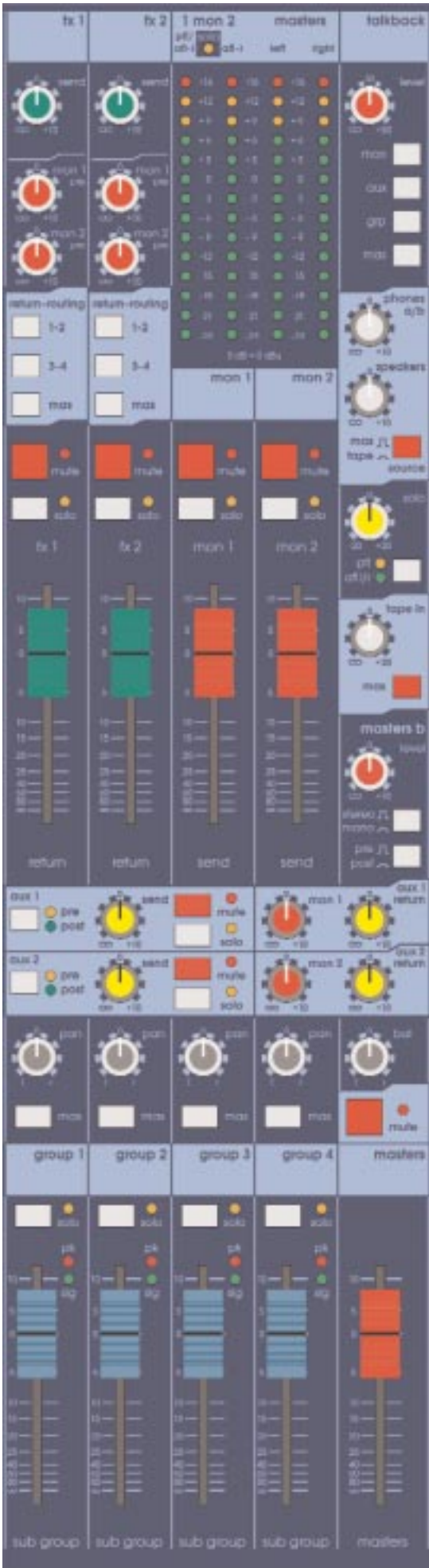
There are also two further stereo auxiliary returns with level-to-master and send-to-monitor controls. This means that even with Venice configured to accept 4 stereo returns, it does not affect the number of available stereo input channels.

The four audio subgroups can be routed to the stereo master outputs, or used as independent outputs from the connector panel. Pan adjusts the position of the group within the overall stereo image. The AFL mode can be used in conjunction with the group solo button to monitor a whole group signal, including any applied FX, giving an accurate audio picture that includes the whole stereo image.



An XLR microphone talkback input is provided on the front panel to connect a microphone for talkback use, and is controlled by a rotary input control offering up to +50db of gain. Phantom power is permanently applied to this input to allow the use of condenser microphones, though dynamic microphones may also be used without risk of damage. The talkback input may be routed through a series of non-latching switches to monitors, aux, groups and masters.





Both headphone outputs are controlled via the phones a/b rotary control, which provides a further 10db of extra gain, as well as the output for control-room speakers. In the same section, the source switch controls whether the tape or the master signal is present at the headphones and control-room speakers if no solo button is engaged.



The solo rotary control adjusts the solo output level by +/-20dB. This is useful for balancing between a louder PFL and a lower AFL signal. The PFL/AFL mode switch with LED status indicator selects between listening in mono to the pre-fade signal (PFL) or in stereo after the fader (AFL).



The tape in rotary control, with $-\infty$ to +20dB gain, provides output level control over a stereo source plugged into the phono inputs on the connector panel. This is designed to provide a simple stereo input for playing (for instance) background music during a show, and the signal from this control remains on the master output even when the master mute is activated. However, there is also a further pair of phono outputs in this section for connecting a recording device, if desired. The signal for this tape output is pre-master fader, insert, and master mute.



The master B control provides a second, independently switchable stereo or mono master signal which can be used for a variety of purposes. For instance, in stereo it can feed other zones, while in mono it can be used for delay lines or subwoofer feeds. This function is unique to Venice within this class of console, and also (of course) features the extra 10dB of gain on the output.

The stereo master output has a balance control, to allow correction of left / right imbalances. It also allows the overall stereo image to be controlled by just one (stereo) fader. The master mute affects the master outputs of the console except the tape return signal to master, providing a convenient method of turning audio on and off as required.



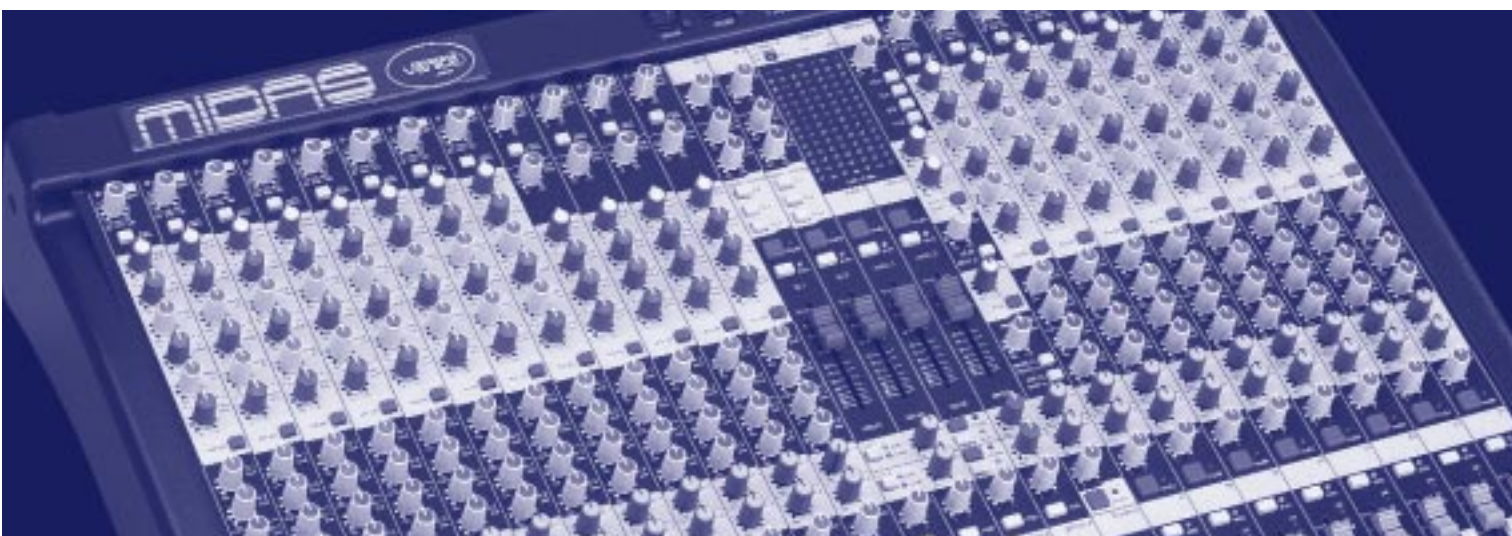
[master section]

**“I loved the Venice,” said Andy.
 “It sounded massive, but it was so small
 I tried to smuggle it out under me coat!”**

Andy Dockerty • FOH Engineer • Ian Mc Culloch

[performance specifications]

Features and Specifications	Venice 160	Venice 240	Venice 320
Inputs (total)	30	38	46
Mono-Inputs (Mic/Line) with Inserts	8	16	24
Stereo-Line/Mono-Mic-Input Channels	4/4	4/4	4/4
Stereo-Effect>Returns (Line)	4	4	4
Stereo-Tape-Return (Line)		1 left/right	
Busses		15	
Subgroups		4	
Aux Pre-Fader (Monitor)		2	
Aux Post-Fader (Effects)		2	
Aux switchable Pre/Post-Fader		2	
Master L/R		2	
Mono-PFL		1	
Stereo-AFL		2	
Outputs			
Subgroups (with Inserts)	4 impedanced balanced 1/4 inch jacks		
Aux Pre-Fader (Monitor)		2 XLR (balanced)	
Aux Post-Fader (Effects)	2 impedanced balanced 1/4 inch jacks		
Aux switchable Pre/Post-Fader		2 XLR (balanced)	
Master (with Inserts)		2 XLR (balanced)	
Master B Out		2 XLR (balanced)	
(switchable Mono/Stereo, pre-post Fader)			
Tape Send (Recording)		1 Stereo (Phono)	
Direct Outputs (1/4 inch Jack)	8	16	24
Stereo-Headphones		2 Stereo-1/4 inch jack	
Stereo-Speakers		2 impedanced balanced 1/4 inch jacks	
Additional Features			
Connector for desk lamps		2 x 12V/5W (4-Pin XLR)	
19" -rack-mounting- kit,	yes	-	-
rotatable connector panel	yes	-	-
Accessories			
		Dust Cover (included)	
		12 V Desk Lamp (Art. Nr. 112850)	
		Input Transformer (Art. Nr. 173024)	
		EPS1200 External power supply (Art. Nr. 173023)	
Technical Data			
Input Impedance			
Mic		2k Ω Balanced	
Line		20k Ω Balanced	
Input Gain			
Mic		Continuously variable 0dB to +60dB	
Line (Mono Channel)		Continuously variable -20dB to +40dB	
Line (Stereo Channel)		Continuously variable -10dB to +20dB	
Line Level Inputs		0 dB	



Maximum Input Level

Microphone and Line	+22dBu
Line Mono Channel	+42dBu
Line Stereo Channel	+28dBu

CMR at 1kHz

Mic (Gain +40dB)	> 85dB
Line	> 45dB

CMR at 100Hz

Mic (Gain +40dB)	75dB typical
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Frequency Response (20Hz-20kHz)

Mic to Mix (Gain +60dB)	+ 0dB to -1dB
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Noise (20Hz-20kHz)

Mic EIN ref. 150Ω gain +60dB	-129dBu
Mic EIN ref. 150Ω gain 0dB	-107dBu

System Noise (20Hz-20kHz)

Summing Noise (16channels routed, faders down)	-90dBu
Line to Mix Noise (16 channels routed at 0dB)	-84dBu

Distortion at 1kHz

Mic to Insert (+30dB Gain, +20dBu Output)	Typ 0.0007%
Mic to Master (+30dB Gain, +20dBu Output)	< 0.009%

Crosstalk at 1kHz

Channel to Channel	< -80dB
Mix to Mix	< -80dB
Channel to Mix	< -80dB
Fader Attenuation	> 100dB
Switch Rejection	> 100dB

Output Impedance

Line Outputs	75Ω balanced
Headphones	to drive 32Ω

Maximum Output Level

Master Outputs	+25dBu
Line Outputs	+22dBu
Headphones	+22dBu / 600Ω

Nominal Signal Level

Microphone	- 60dBu to 0dBu
Line	0dBu

Equalizer Mono Channel

Hi Pass Filter	2nd order Butterworth, 80Hz
Treble	+/-15dB at 12kHz (Shelv)
Hi Mid	Continuously variable 400Hz to 8kHz (1 Oct) +/-15dB
Lo Mid	Continuously variable 100Hz to 2kHz (1 Oct) +/-15dB
Bass	+ /-15dB at 80Hz (Shelv)

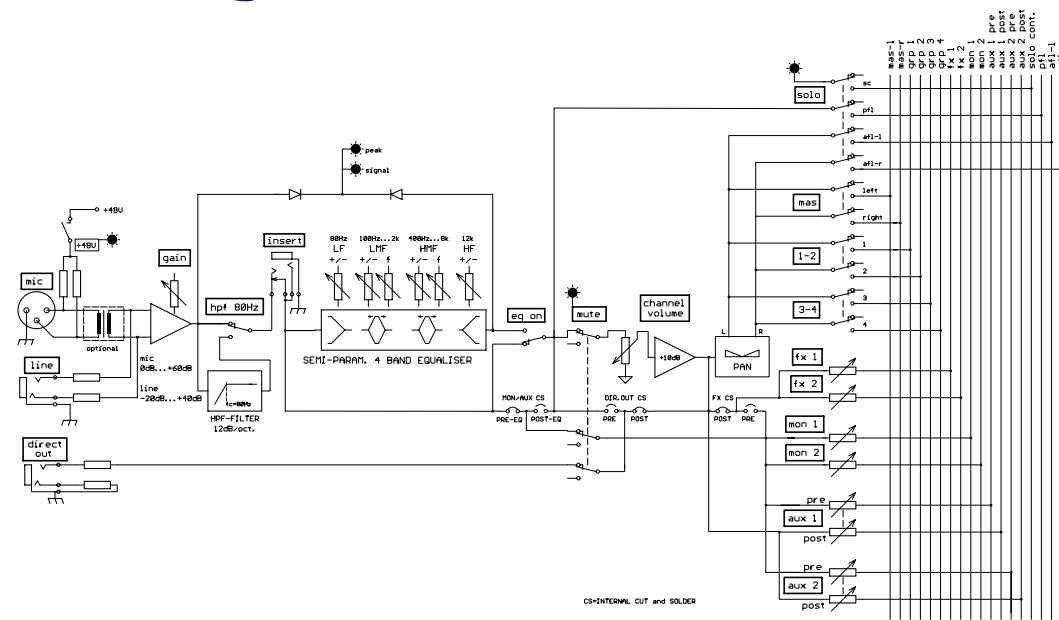
Equalizer Stereo Channel

Treble	+/-15dB at 12kHz (Shelv)
Hi Mid	3kHz (1,4 Oct) +/-15dB
Lo Mid	300Hz (1,4 Oct) +/-15dB
Bass	+/-15dB at 80Hz (Shelv)

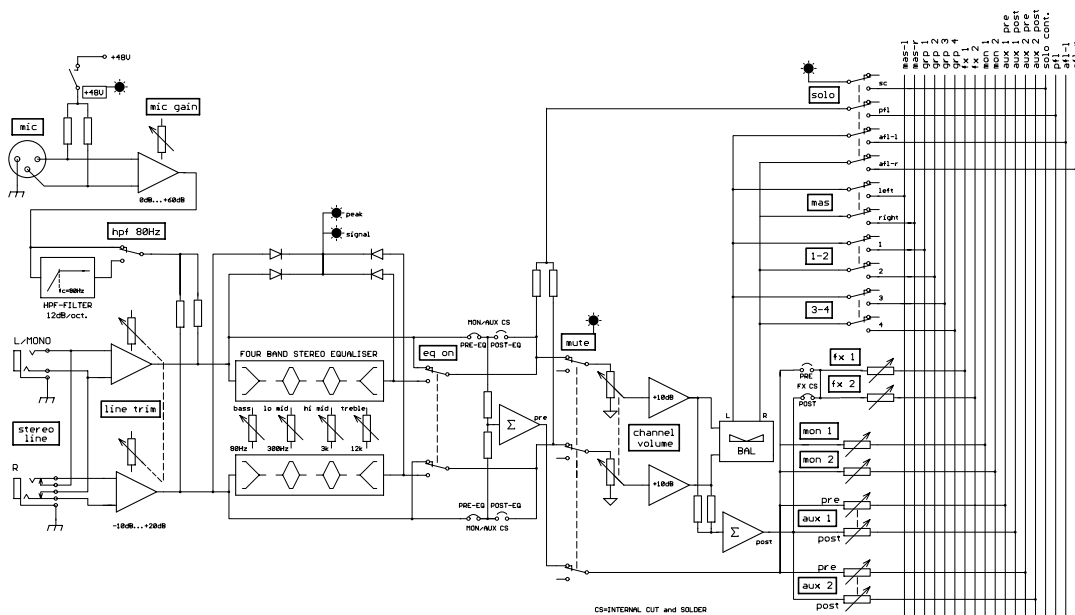
“The Midas Venice represents great value without compromising on quality with such features as improved XL3 mic pre-amps, great EQ and most importantly, the classic Midas sound.”

Dave Flockton • FOH Engineer • Orbital

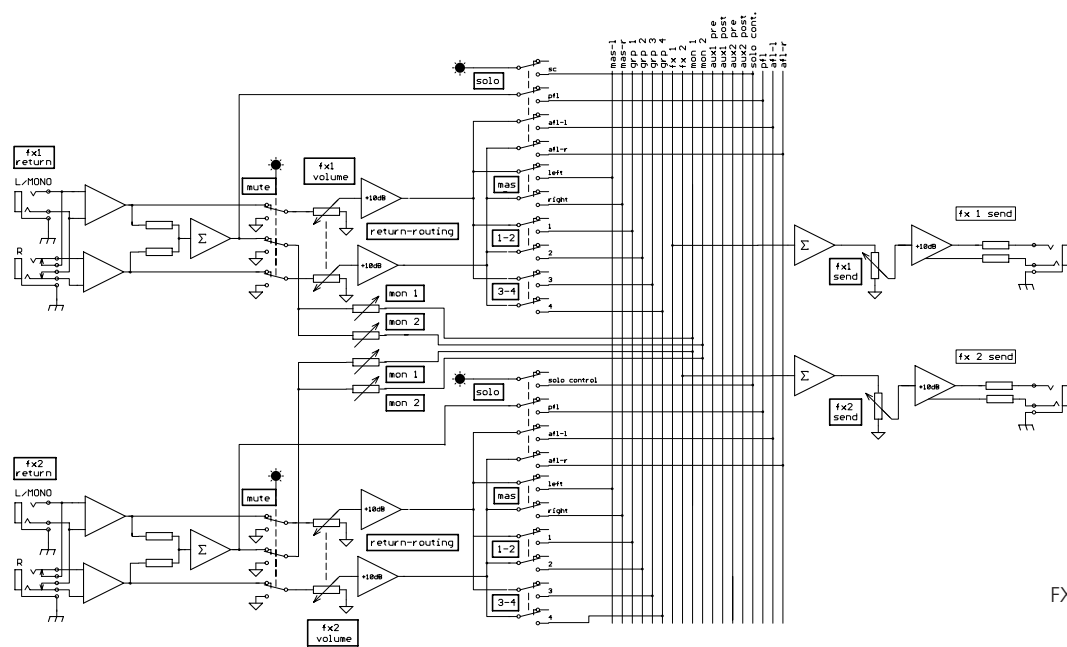
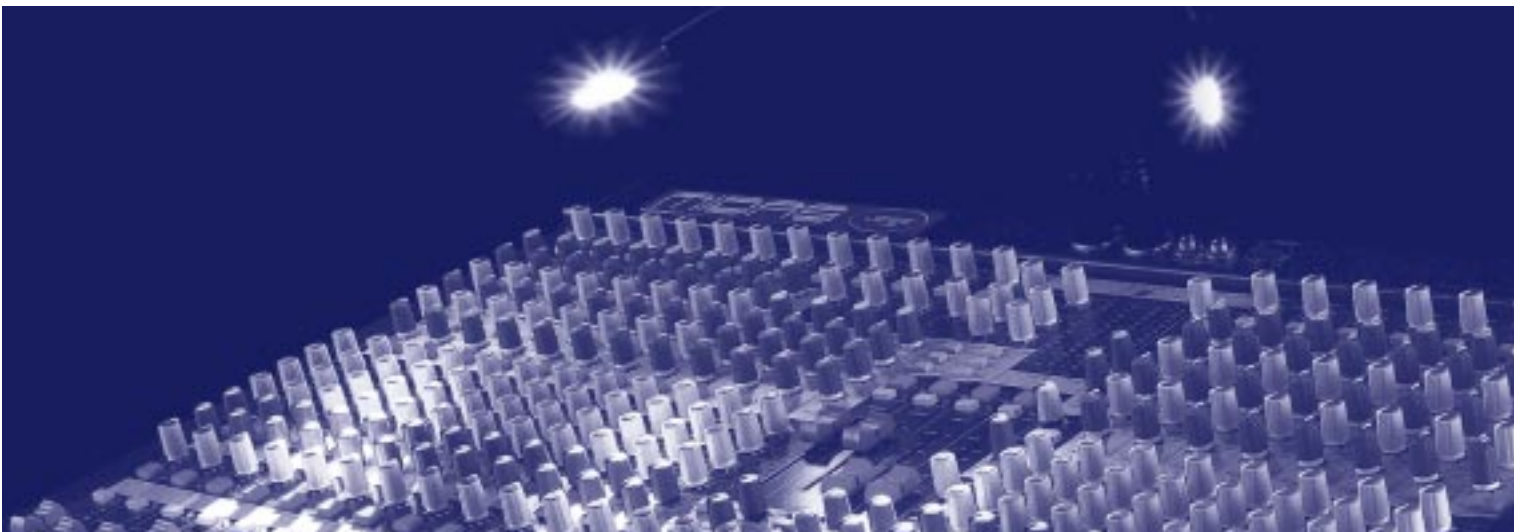
[block diagrams]



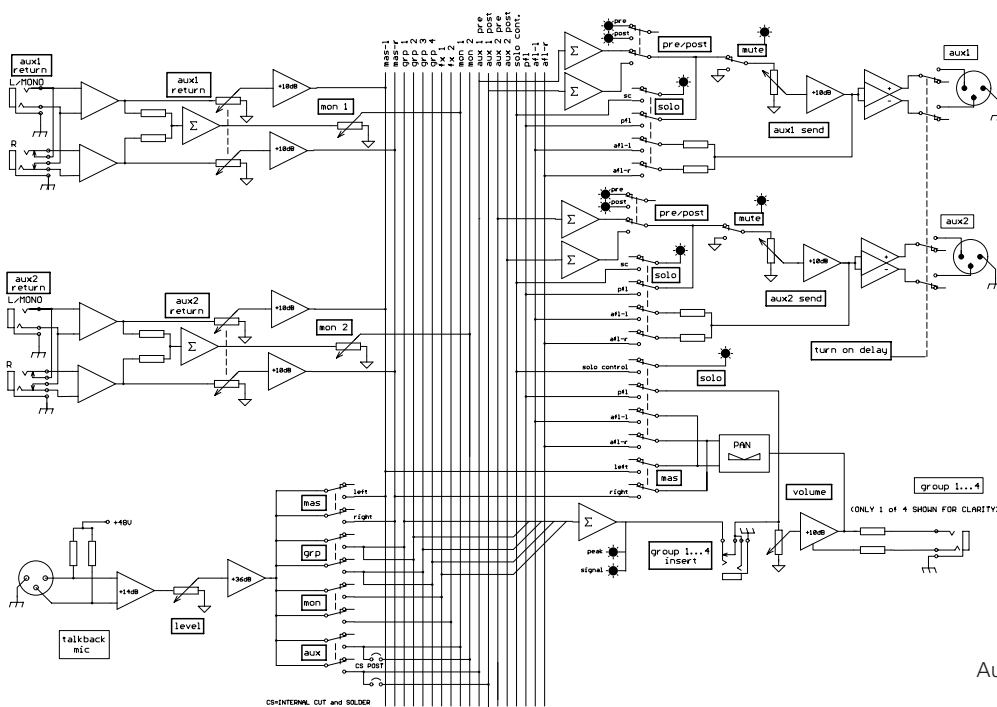
Mono Channel



Stereo Channel



FX -Send, -Return



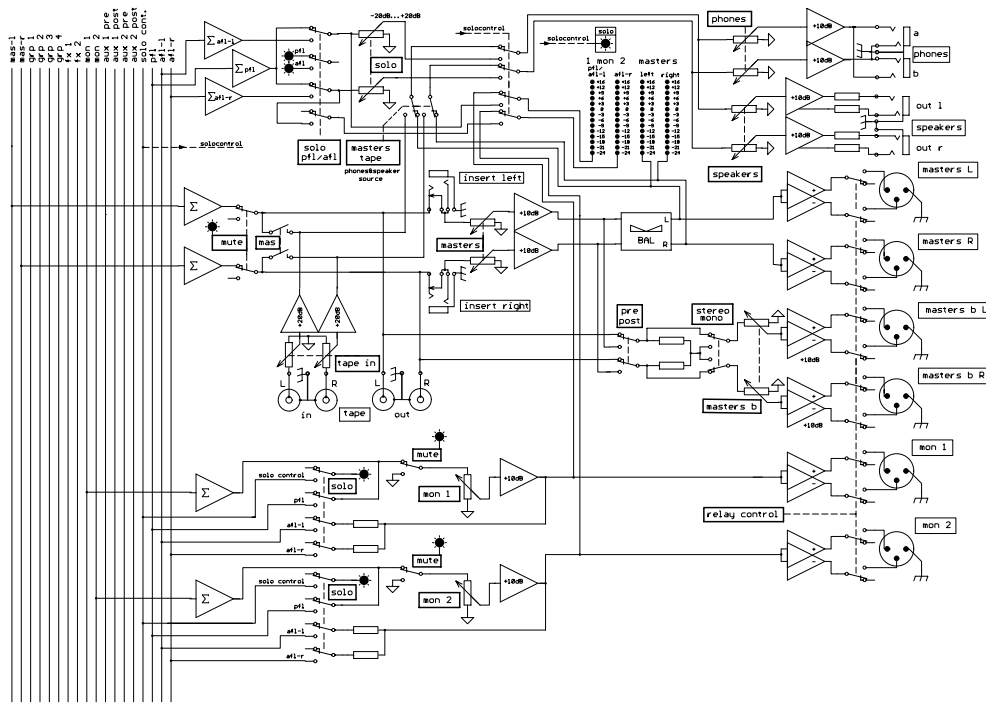
Aux, Groups and Talkback

CS-INTERNAL CUT AND SOLDER

“Now that we've got everything from the Venice through to the Heritage 3000 we can cater for almost any type of event.”

DEE Sound • Belgium

[block diagrams]



Masters, Monitor,
Tape and Solo

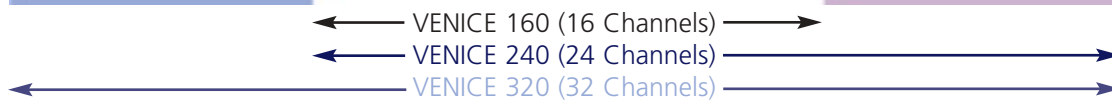
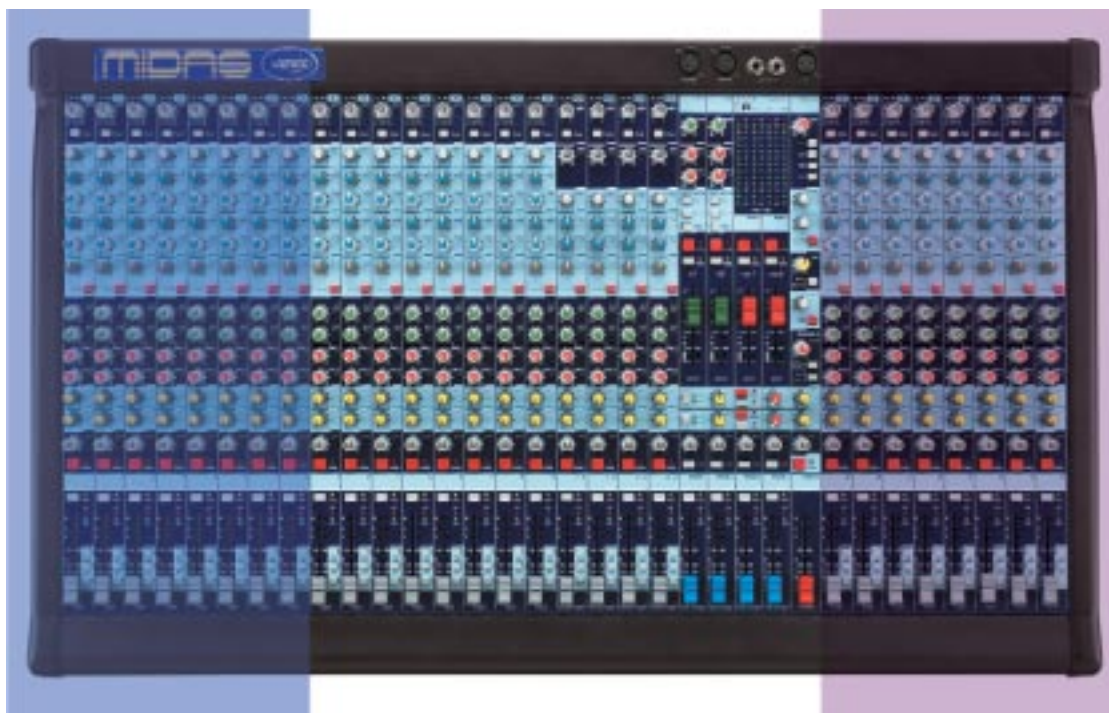
[19" Rack mount]



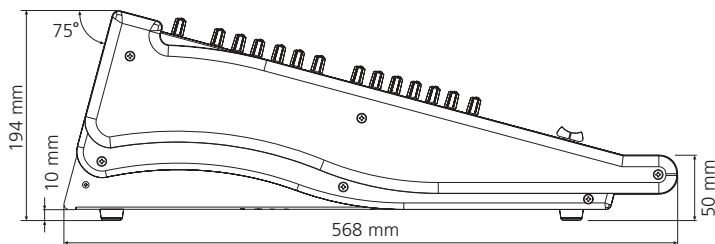
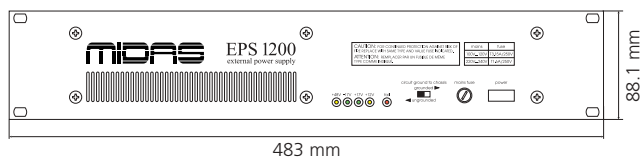
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The connector panel of the Venice 160 is conveniently rotatable, allowing use of the console in either horizontal or upright position (rackmounted).



[external power supply eps1200]



	VENICE 160	VENICE 240	VENICE 320
Size (mm/inch)			
Width	490 / 19.3"	698 / 27.5"	906 / 35.7"
Depth	568 / 22.4"	568 / 22.4"	568 / 22.4"
Heights	194 / 7.6"	194 / 7.6"	194 / 7.6"
Weight (kg/lb)	16,4 / 36.2	21,1 / 46.5	25,8 / 56.9



Midas has been designing and manufacturing live performance mixing consoles for the world's most demanding sound engineers, performers and production rental companies since the early 1970s.

The evolution of Midas consoles throughout the 30-year history of this classic marque has always paralleled, and often led, increasingly sophisticated audio innovations for the world-wide entertainment technology industry. Raising the standards of sonic quality through continual research and development has always been - and still remains - our overall aim.

Equally important to us is the design and implementation of many new areas of control functionality and user-friendly desk operation to anticipate and accommodate the rapidly changing and expanding needs of audio professionals who specify Midas consoles for their major tours, festivals, international events, broadcast projects and prestigious fixed installations.

The Midas design pedigree has, since our birth, been founded upon a track record of achieving a unique symbiosis with working sound engineers around the planet - engineers who respect and endorse our proven technology in the light of their responsibilities to their internationally-based clients who are themselves the leading lights of our industry.

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