

# **OPERATORS MANUAL**

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(359 941)

## IMPORTANT SAFETY INSTRUCTIONS



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. AVIS: RISOUÉ DE CHOC ELECTROUE. NE PAS OUVRIR. The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintance (servicing) instructions in the literature accompanying the appliance.

- 1. Read these instructions.
- 2. Keep these instructions.
- 3. Heed all warnings.
- 4. Follow all instructions.
- 5. Do not use this apparatus near water. Do not expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, ase placed on this apparatus.
- 6. Clean only with a dry cloth.
- 7. Do not block any of the ventilation openings. Install in accordance with the manufactures instructions.
- 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
- 9. Only use attachments/accessories specified by the manufacturer.
- 10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus (including amplifiers) has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 11. To completely disconnect mains power from this apparatus, the power supply cord must be unplugged.

#### For US and CANADA only:

Do not defeat the safety purpose of the grounding-type plug. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrican for replacement of the absolete outlet.

## IMPORTANT SERVICE INSTRUCTIONS

CAUTION: These servicing instructions are for use by qualified personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the Operating Instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

- 1. Security regulations as stated in the EN 60065 (VDE 0860) and the CSA E65 94 have to be obeyed when servicing the appliance.
- 2. Use of a mains separator transformer is mandatory during maintenance while the appliance is opened, needs to be operated and is connected to the mains
- 3. Switch off the power before retrofitting any extensions, changing the mains voltage or the output voltage.
- 4. The minimum distance between parts carrying mains voltage and any accessible metal piece (metal enclosure), respectively between the mains poles has to be 3 mm and needs to be minded at all times. The minimum distance between parts carrying mains voltage and any switches or breakers that are not connected to the mains (secondary parts) has to be 6 mm and needs to be minded at all times.
- 5. Replacing special components that are marked in the circuit diagram using the security symbol (Note) is only permissible when using original parts.
- 6. Altering the circuitry without prior consent or advice is not legitimate.
- 7. Any work security regulations that are applicable at the location where the appliance is being serviced have to be strictly obeyed. This applies also to any regulations about the work place itself.
- 8. All instructions concerning the handling of MOS circuits have to be observed.

Note:

#### SAFETY COMPONENT (HAS TO BE REPLACED WITH ORIGINAL PART ONLY)

### **VENICE CONNECTORS**

VENICE 160



#### VENICE 240

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#### VENICE 320

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**Input / Output XLR** Pin 1: Ground Pin 2: Hot Pin 3: Cold.



Lamp out Pin 1: Chassis Pin 2: n.c. Pin 3: Ground Pin 4: +12V





Insert Tip: Send Ring: Return Sleeve: Ground

Input / Output Tip: Hot Ring: Cold Sleeve: Ground

Tape IN / OUT



#### **External Power Supply**



### **ATTENTION!**

The following special limitations apply to the console and must be observed in order to maintain safety and electromagnetic compatibility performance:

#### **POWER CONNECTION**

The console should only be operated with the power supply connected to ground via its mains supply connector.

#### **AUDIO CONNECTIONS**

The console should only be operated with high quality screened twisted pair audio cables. All connector shells should be of metal construction so that they provide a screen when they are plugged into the console. All JACK connector shells should be connected to the cable screen. All XLR connectors should have pin 1 connected to the cable screen.

#### **ELECTRIC FIELDS**

If the console is operated in an electromagnetic field that is amplitude modulated by an audio frequency signal, the signal to noise ratio may be degraded. Degradation of up to 60dB may be experienced under extreme conditions (3V/m, 90% modulation).

### **INSTALLATION**

There are a number of points to consider when installing a mixing console. Many of these points will have been addressed before the console is even unpacked but it is worth repeating them.

#### POSITION

The console should be located in a convenient space commensurate with the use to which the console is being put. Ideally a cool area is preferred not in close proximity to power distribution equipment or other potential sources of interference. Provision should be made for some flat surface surrounding the console to prevent people using it as a table top.

#### **INTERNAL POWER SUPPLY**

The console is equipped with an internal power supply. It must be set for the appropriate line voltage and pluged in to the mains outlet using the supplied cable.

#### MAINS VOLTAGE SETTING

The console is shipped with a specified mains voltage setting (see rear panel marking). If the mains voltage is ever changed by the mains voltage selector at the bottom of the console, the mains fuse has to be changed as well to the rating matching the selected voltage on the label.



#### **ADDITIONAL EXTERNAL POWER SUPPLY FOR VENICE 240/320**

The power supply should be located as far from the console as the connecting cable will allow. It should be set for the appropriate line voltage and plugged into the mains outlet using the supplied cable. The external power-supply overrides the internal supply after power on. The internal supply acts in this case as spare supply.

#### THE CONSOLE AND THE EXTERNAL POWER SUPPLY SHOULD NEVER BE OPERATED WITH THE MAINS EARTH DISCONNECTED

Please note that the power supply contains LETHALVOLTAGES and that its rails can produce extremely large currents which could burn out equipment and wiring if shorted. All testing and servicing should ONLY be carried out by qualified engineers.

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# MIDAS VENICE MONO INPUT CHANNEL

The Venice Mono Channel is equipped with an XLR input, which can be used for Mic or Line level signals up to +22dBu. An additional ¼ inch jack socket, provides an input for line level signals, which require protection against accidental 48 volt connection. The Line input gives 20dB of permanent attenuation to the input signal which will allow the connection of extreme high linelevel signals up to +42dBu.

The HI PASS switch connects the the 80Hz hi-pass-filter in the input channel signal path before the insert point and equaliser.

The HI MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The LO MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The BASS control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent. The bass equaliser acts on 80Hz with a traditional MIDAS shelving response.



The +48V led monitors if phantom power is assigned. The +48V switch for each channel is placed on the rear-panel of the console. It connects +48V phantom power to the XLR input connector. This is suitable for a condenser microphone or DI box.

The GAIN control gives continuous adjustment of the input amplifier gain from 0dB to +60dB for the Mic input and - 20dB to + 40dB for the Line input.

The TREBLE control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent. The treble equaliser acts on 12kHz with a traditional MIDAS shelving response.

The HI MID FREQ control gives continuous adjustment of the frequency range that the hi mid equaliser acts on from 400Hz to 8kHz with a 1 octave bandwith.

The LO MID FREQ control gives continuous adjustment of the frequency range that the lo mid equaliser acts on from 100Hz to 2kHz with a 1 octave bandwith.

The EQ switch connects the equaliser in the input channel signal path.

The FX controls give continuous adjustment of the post fader level sent from the input channel to the FX busses. The level adjustment is from + 10dB to off with 0dB at the centre position of the rotary control.

The AUX controls give continuous adjustment of the level sent from the input channel to the AUX busses. The level adjustment is from + 10dB to off with 0dB at the centre position of the rotary control.

AUX1 and 2 can be configured globally for pre- or post-fader operation by pressing the PRE/POST switch on the appropriate AUX-rail in the master section.



The MON controls give continuous adjustment of the pre- fader and pre- equaliser signal sent from the input channel to the MON busses. The level adjustment is from + 10dB to off with 0dB at the centre position of the rotary control.

The PAN controls the channel placement within the master stereo- or group mix and has a constant power law. i.e. - 3dB at the centre position and 0dB or off at either extreme setting.

The MUTE switch mutes the input channel at all points after the insert send, including all auxiliary sends.





# MIDAS VENICE STEREO INPUT CHANNEL

The Venice stereo input channel is equipped with an XLR input which can be used for Mic or Line level signals up to +22dBu. Two additional ¼ inch jack sockets, provide an input for Stereo- or Mono Line level signals up to +28dBu. The stereo channel features the same hi-value microphone pre-amp as the mono channel. Because the stereo input channel uses independet circuits for Mic and Stereo Line, it is possible to have all inputs connected at the same time, without interference.

The LINE TRIM control gives continuous adjustment of the stereo input amplifier gain from -20dB to + 20dB for the Stereo Line input.

The HI MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent. The HI MID equaliser acts on 3kHz with a 1.4 octaves bandwith.

The BASS control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent. The bass equaliser acts on 80Hz with a traditional MIDAS shelving response.



The +48V switch for each channel is positioned at the rear panel of the console. It connects +48 V phantom power to the XLR input connector. This is suitable for a condenser microphone or DI

The MIC GAIN control gives continuous adjustment of the input amplifier gain from 0dB to + 60dB for the Mic input.

The HI PASS switch connects the the 80Hz hi-pass-filter in the input channel signal path right after the mic input amplifier.

The TREBLE control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent. The treble equaliser acts on 12kHz with a traditional MIDAS shelving re-

The LO MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent. The LO MID equaliser acts on 300Hz with a 1.4 octaves bandwith.

The EQ switch connects the equaliser in the input channel siThe FX controls give continuous adjustment of the level sent from the input channel to the FX busses. The level adjustment is from + 10dB to off with 0dB at the centre position of the rotary control. The FX controls are connected post-fader and send the mixed left/right signal to the FX busses.

The AUX controls give continuous adjustment of the mixed left/right signal level sent from the input channel to the AUX busses. The level adjustment is from + 10dB to off with 0dB at the centre position of the rotary control. AUX1 and 2 can be configured globally for pre- or postfader operation by pressing the PRE/POST switch on the appropriate AUX-rail in the master section.

The MUTE switch mutes the input channel at all points, including all auxiliary sends.



The MON controls give continuous adjustment of the level sent from the input channel to the MON busses. The level adjustment is from + 10dB to off with 0dB at the centre position of the rotary control. The MON controls are connected pre fader, pre equaliser and send the mixed left/right signal to the MON busses.

The BAL (pan) control is used to balance the relative levels of the left and right channel signals that are sent to the masters or groups. The control has a constant power law, i.e. -3dB at the centre position and + 0dB or off at either extreme setting. If the Stereo channel used as mono input, the BALANCE (pan) controls the channel placement within the master stereo- or group mix.





# MIDAS VENICE MASTER SECTION









The SOLO switch routes the aux send signal to the PFL/ mono and AFL/ stereo busses. Whenever a solo switch is engaged the man 1/2 display is automatically used for solo metering.

The MON controls give continuous adjustment of the level sent from the aux return to the MON busses. The level adjustment is from +10dB to off with 0dB at the centre position of the rotary control. The TAPE inputs provide a feed The MAS switch connects the tape In from an unbalanced phono sour-TAPE IN signal to the master ce to the stereo master busses or L/R busses right after the master to phones and speakers outputs. mute switch. This allowes i. e. The TAPE IN level control probackground music during a mas vides nominal adjustment from show, even when the master +20dB to off with 0dB at the cenmute switch is engaged. The tre position of the rotary control. MAS switch should be off during masters b recording via TAPE OUT. leve The MASTERS B rotary control gives continuous adjustment of stereo the masters B (stereo/mono) outnono The PRE/POST switch changes put level from +10dB to off with DIE L the signals sent to the masters b 0dB at the centre position of the outputs from pre master fader to rotary control. post master fader. By the STEREO/MONO switch the Master B outputs can be configured in two modes. In STE-REO mode the master b outputs are fed with the stereo left and right mix signals. In Mono mode The BAL control is used to bathey are fed with the summed left lanced the relative levels of the and right mix signal. left and right master signals that are sent to the masters outputs. The control has a constant power law, i. e. 0dB at the centre positimute on and +3dB or off at either ex-The MUTE switch mutes all sitreme setting. masters gnals sent to master and master b outputs. Only the Tape In signal to masters is not affected by the MUTE switch. The stereo Fader gives continous adjustment of the left and right mix levels from +10dB to off. masters



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The input for a TALKBACK Microphone is provided via a 3pinfemale XLR connector. The +48V Phantom power is permanently connected which is suitable for condenser microphones.

A convenient connection for two 12V desk lamps is provided via the 4pin-female XLR connectors. The power rating 5W is the maximum rating per output and **may not be exceeded.** 

The 1/4 inch jack sockets provide stereo outputs for two PHONES. Both outputs are controlled via the phones rotary control.

Whenever a solo button is engaged the SOLO led turns on and the mon 1/2 metering is automatically used as solo meter.

In pfl-mode the mon1 meter displays the signal level in dBu of the selected solo source at the pre- fader position.

In afl-mode the mon1 (afl-l) and mon2 (afl-r) meters are active and display the signal levels in dBu in the stereo image at the after- fader position.

1 mor		mast	ers
afi-l	afi-r	left	rlght
<b>–</b> +16	+16	+16	
+12	+12	+12	$\mathbf{O}$
+9	+9	+9	$\bigcirc$
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<mark>)</mark> - 9	- 9	0 - 9	$\bigcirc$
<mark>o</mark> -12	<b>-</b> 12	<mark>)</mark> -12	$\mathbf{O}$
<mark>o</mark> -15	<b>-</b> 15	<mark>o</mark> -15	$\bigcirc$
-18	-18	-18	$\bigcirc$
<mark>o</mark> -21	-21	<mark>-</mark> 21	$\bigcirc$
<mark>-</mark> 24	<mark>-</mark> 24	<mark>o</mark> -24	$\bigcirc$
	0 dB = 0	dBu	

The MON meters display the post fader peak signal levels of the monitor outputs. Whenever a solo button is engaged the meter
displays the peak signal levels of the selected pfl or afl solo source.

The MASTER meters monitor the peak signal levels of the master outputs left and right (post fader).

## **BLOCK DIAGRAMS**







FX-send, FX-return



Aux, Groups and Talkback



## **MIDAS VENICE SERIES 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 impeda	nce balanced 1/4 in	nch jacks
Aux Pre-Fader (Monitor)		oalanced)	
Aux Post-Fader (Effects)	-	nce balanced 1/4 in	nch jacks
Aux switchable Pre/Post-Fader	,	oalanced)	
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 impedance balanced 1/4 inch jacks		ich jacks
Size (mm/inch)			
Width	490 / 19.		
Depth	568 / 22.		
Heights	194 / 7.6	" 194 / 7.6"	194 / 7.6"
Weight (kg/lbs)	16,4 / 36	.2 21,1/46.5	25,8 / 56.9
Power Consumption	75W	95W	120W
Mains Voltage	110V/120V/220V/230V/240V, 50-60Hz		
Additional Features			
Connector for desk lamps		2 x 12V/5W (4-Pin	n XLR)
19"-rack-mounting- kit,	yes	-	-
rotatable connector panel	yes	-	-
External Power Supply (EPS 1200, not included)	-	yes	yes
Accesories	Dust Cover (included) 12 V Desk Lamp (not included) Input Transformer (not included)		

## Venice Technical Specifications

Lengt lange dance	M	Ol- Dalamand
Input Impedance	Mic Line	2k Balanced 20k Balanced
Input Gain	Mic	Continuously variable from 0dB to + 60dB
	Line Mono Channel	Continuously variable from - 20dB to + 40dB
	Line Stereo Channel	Continuously variable from - 20dB to + 20dB
	Line Level Inputs	0dB
Maximum Input Level	Mic Line Level Inputs Line Mono Channel Line Stereo Channel	+ 22dBu + 22dBu + 42dBu + 28dBu
CMR at 100Hz	Mic (gain + 40dB)	Typ. 75dB
CMR at 1kHz	Mic (gain + 40dB) Line	> 85dB > 45dB
Frequency Response (20 to 20kHz)	Mic to Mix (gain + 60dB)	+ 0dB to - 1dB
Noise (20 to 20kHz)	Mic EIN ref. 150ohms (gain + 60dB)	- 129dBu
System Noise (20 to 20kHz)		
	Summing Noise (16 channels routed with faders down)	- 90dBu
	Line to Mix Noise (16 channels routed at 0dB, pan centre)	- 86dBu
Distortion at 1kHz	Mic to Insert (+ 30dB gain, + 20dBu output)	Тур 0.0007%
	Mic to Mix (+30dB gain, + 20dBu output)	< 0.009%
Crosstalk at 1kHz	Channel to Channel Mix to Mix Channel to Mix Fader Attenuation Switch Rejection	< - 80dB < - 80dB < - 80dB > 100dB > 100dB
Output Impedance	All Line Outputs Headphones	75 Ohms Balanced Source To drive 320hms
Maximum Output Level	Master Outputs on XLR All other Outputs on XLR All Outputs on 1/4 inch jacks Headphones	+ 25dBu + 22dBu + 22dBu + 22dBu/600ohms
Nominal Signal Level	Mic Line	- 60dBu to 0 dBu 0dBu

Equaliser Mono Channel

Hi Pass Frequency Treble Gain Treble Frequency Hi Mid Gain

Hi Pass Slope

Hi Mid Frequency

Hi Mid Bandwidth Lo Mid Gain

Lo Mid Frequency

Lo Mid Bandwith Bass Gain

**Bass Shelving Frequency** 

Equaliser Stereo Channel

Hi Pass Slope Hi Pass Frequency Treble Gain

Treble Frequency Hi Mid Gain

Hi Mid Frequency Hi Mid Bandwidth Lo Mid Gain

Lo Mid Frequency Lo Mid Bandwidth Bass Gain

**Bass Shelving Frequency** 

12dB / Oct 80Hz Continuously variable + 15 dB to - 15 dB Centre detent = 0dB

12k Continuously variable + 15 dB to - 15 dB Centre detent = 0dB

Continuously variable Centre from 400Hz to 8k

1 Oct. (Q = 1.4)

Continuously variable + 15 dB to - 15 dB Centre detent = 0dB

Continuously variable Centre from 100Hz to 2k

1 Oct. (Q = 1.4)

Continuously variable + 15 dB to - 15 dB Centre detent = 0dB

80Hz

12dB / Oct 80Hz Continuously variable + 15 dB to - 15 dB Centre detent = 0dB12k Continuously variable + 15 dB to - 15 dB Centre detent = 0dB3k 1.4 Oct. (Q = 1)Continuously variable + 15 dB to - 15 dB Centre detent = 0 dB300Hz 1.4 Oct. (Q = 1)Continuously variable + 15 dB to - 15 dB

Centre detent = 0dB 80Hz

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#### DIMENSIONS





# Modification for Venice 160 Rack Mounting

The Venice 160 comes with additonal rack mounting brackets. For modification you need a Torx screwdriver type T20 (fig.1) and Phillips screwdrivers type Ph1 (fig. 2) and type Ph2 (fig.3). To modify the Venice 160 for rack mounting follow these steps:

- 1. Disconnect the unit from mains by all means. Remove all cables (mains, audio, lamp, etc.).
- 2. Loosen the 16 screws shown in fig. 4 with the Torx screwdriver and remove the two plastic side covers and the armrest. Keep the side covers, the armrest and the screws for later use.

Attention: If you wish to rotate the connection panel in addition to the rack bracket mounting (fig. 6), perform steps 3 - 8. If not, proceed directly to step 9.

- 3. Turn the unit upside down and place it carefully on a smooth support.
- 4. Loosen the 8 screws fastening the cover sheet and the connection panel on the sides of the unit (fig. 5) with the Phillips screwdriver type Ph1.
- 5. Then dismount the connection panel with the 6 screws (fig. 5). Be careful not to unplug the cable connectors by mistake. Then remove the cover sheet via 3 further screws.
- 6. The cover sheet must be mounted with the angular side up, like shown in fig. 6. The connection panel is now mounted in such a way that the mains socket is left upwards on the unit (fig. 6).
- 7. The cover sheet and the connection panel are fastened additionally with 8 screws on the sides of the unit.
- 8. Turn the unit and place it with the control panel upside.
- 9. Finally the rack brackets are fastened with the screws contained in the mounting set (fig. 7) by using the Phillips screwdriver type Ph2.

**Warning:** Use only screws which were loosened during modification or such ones, which are contained in the mounting set.

