

MIDAS DL8 Stage Box





MIDAS DL8 Stage Box User Guide

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MIDAS DL8 Stage Box



Product Information

Specifications

• Product Name: DL8

Description: PoE-Powered 8 Input, 8 Output Stage Box with Midas PRO Microphone Preamplifiers and 2
 Powered ULTRANET Monitoring Outputs

• Version: 2.0

Product Usage Instructions

Step 1: Hook-Up

Follow the below steps to hook up the DL8:

- 1. Connect Midas PRO mic/line combo inputs to AES50 ports A and B using shielded Cat-5e Ethernet cable.
- 2. Connect XLR outputs to balanced XLR female plugs.
- 3. Ensure the POWER LED lights up when the unit is powered on.
- 4. Use ULTRANET ports for direct connection of 2 P16-M personal mixers.
- 5. Connect a PC to the USB port for firmware updates.
- Use the OUTPUT select switch to determine which group of 8 AES50-A channels appear at the physical XLR output jacks.
- 7. Turn the unit on/off using the POWER switch.

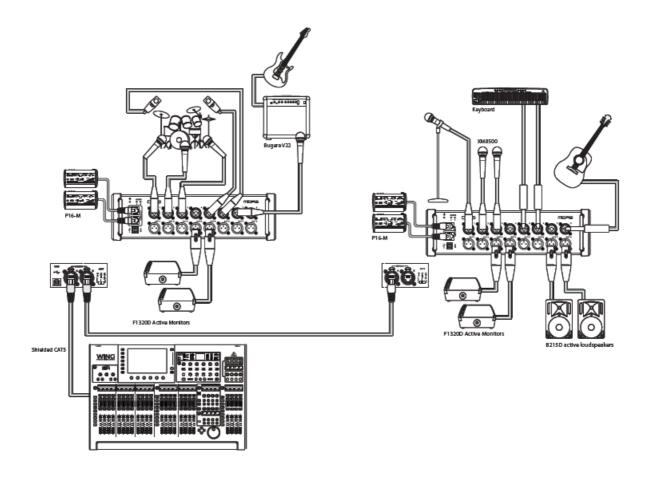
Step 3: Channel Management

To manage channels on the DL8:

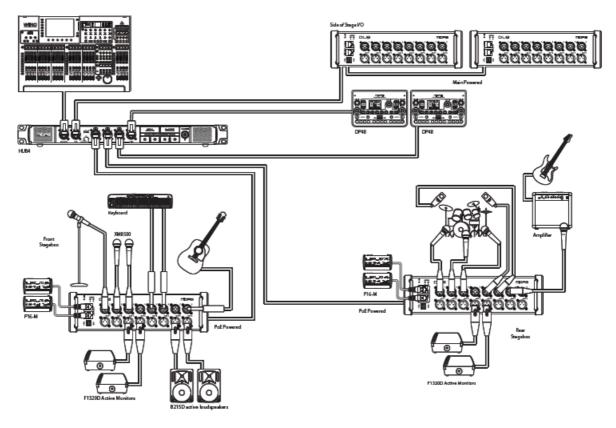
- 1. Route signals to and from the DL8 and mixer/S16/DL16 via CAT-5e cable with maximum runs up to 80 meters.
- 2. Receive clock source on AES50 port A.
- 3. Use the output switch to select AES50-A channels 1-8, 9-16, or 17-24.
- 4. Utilize P-16 ULTRANET signals on AES50-A channels 33-48.

DL8 Hook-up

Step 1: Hook-Up



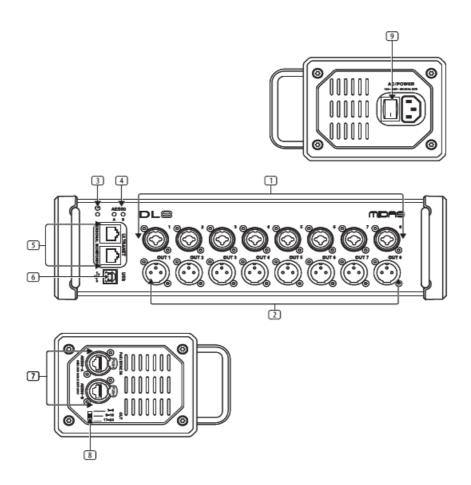
Setup example with WING collecting 32 mic inputs from the stage and feeding 4 P16-M and two DP48 personal monitoring mixes on stage, all powered from HUB4 via PoE (no mains supply required on stage).



Step 2: Controls

- 1. Midas PRO mic/line combo inputs accept balanced XLR and 1/4" male plugs.
- 2. XLR outputs accept balanced XLR female plugs.

- 3. **POWER LED** lights when the unit is powered on.
- 4. **AES50 LEDs** light green when the corresponding AES50 port is connected and synchronized, and light red when connected but not synchronized.
- 5. **ULTRANET** ports allow direct connection of 2 P16-M personal mixers. The ports provide phantom power, allowing the P16-M units to operate without additional power supplies.
- 6. **USB** port can be used to connect a PC for updating the firmware.
- 7. **AES50** ports A and B allow connection to a SuperMAC digital multi-channel network via shielded Cat-5e Ethernet cable with terminated ends compatible to Neutrik etherCON. The unit can also be powered via compatible Midas hubs connected to port A. **NOTE:** The clock master, typically the digital mixer, must be connected to the AES50 port A, while additional stage boxes would be connected to port B. See 'Step 3: Channel Management' for details.
- 8. **OUTPUT** select switch determines which group of 8 AES50-A channels appear at the physical XLR output jacks. When using multiple stage boxes, this allows different output signals to be sent to each unit.
- 9. POWER switch turns the unit on and off.



DL8 Channel Management

Step 3: Channel Management

Signals are routed to and from the DL8 and a mixer or S16/DL16 via CAT-5e cable, with maximum cable runs up to 80 meters. The clock source is always received on AES50 port A, and the P-16 ULTRANET signals are carried on AES50-A channels 33-48. The 8 analog outputs can carry AES50-A channels 1-8, 9-16, or 17-24, selectable via the 3-position switch on the side of the stagebox.

44.1/48 kHz	Output 9	Switch		XLR analog	P-16 Ultranet
	Out	Out	Out	out 1-8	
clock sync	1-8	9-16	17-24	= AES50-A,	
A FO 50 A				ch01-ch08	14.40
AES50-A	X				out 1-16
				= AES50-A,	= AES50-A,
AES50-A		x		ch09-ch16	ch33-ch48
				= AES50-A,	
AES50-A			X	ch17-ch24	

When chaining multiple DL8 units, the input signals from the other stageboxes in the chain are sent to the first DL8 stagebox's AES50 port B. These signals are shifted up by 8 channels and then forwarded to the mixer from AES50 port A (see chart for details). The output select switch would typically be set to the '9-16' position to allow different signals to be sent from the 2 stageboxes.

To mixer

	TX		RX		TX		RX	
—	A	DL8 -1 (Out 1-8)	В		A	DL8 -2 (Out 9-16)	В)
	1-8	Local In 1-8 (DL8-1)	1 - 8		1-8	Local In 1-8 (DL8-2)	1 - 8	
	9 - 16	Local In 1-8 (DL8-2)	9 - 16	K	9 - 16	4	9 - 16	K
	17-24	-	17-24	K	17-24	4	17-24	K
	25-32	-	25-32	K	25-32	4	25-32	K
	33-40	4	33-40	K	33-40	4	33-40	1
	41-48	4	41-48		41-48	4	41-48	
	TX		RX		TX		RX	

From mixer

	RX		TX		RX		TX
-	A	DL8 -1 (Out 1-8)	В)	A	DL8 -2 (Out 9-16)	В
_	1 - 8	Local XLR OUT 1-8 *	1-8	\rightarrow	1 - 8	Local XLR OUT 1-8 *	1-8
	9 - 16	Local XLR OUT 9-16 *	9 - 16	→	9 - 16	Local XLR OUT 9-16 *	9 - 16
	17-24	Local XLR OUT 17-24*	17-24	→	17-24	Local XLR OUT 17-24 *	17-24
	25-32		25-32	→	25-32		25-32
	33-40	P16 OUT 1-8	33-40	→	33-40	P16 OUT 1-8	33-40
-	41-48	P16 OUT 9-16	41-48	→	41-48	P16 OUT 9-16	41-48
	RX		TX		RX	•	TX

Specifications

Processing

A/D-D/A conversion 24-bit @ 44.1 / 48 kHz,

- 114 dB dynamic range (A-weighted)
- Networked I/O latency (stagebox in > console processing* > stagebox out) 1.1 ms

Connectors

- Programmable mic preamps, designed by Midas, balanced XLR/TRS combo 8
- Line outputs, balanced XLR 8
- ULTRANET outputs, RJ45 (power supplied for Behringer P16-M personal mixers) 2
- AES50 port, SuperMAC networking, NEUTRIK etherCON 2
- USB port for system updates, type B 1

• Mic Input Characteristics (Midas PRO)

- Mic input impedance XLR jack, unbal. / bal. 5 k, / 10 k,
- THD + noise, 20 dB gain, 0 dBu out < 0.006%, unweighted
- Phantom power, switchable per input +48 V
- Equivalent input noise level, XLR (input shorted) -125 dBu, unweighted
- CMRR, XLR, @ 20 dB gain (typical) >75 dB

• Input/Output Characteristics

- Frequency response @ 48 kHz sample rate 10 Hz 22 kHz, 0 dB to -1 dB
- Dynamic range, analog mic in to analog out (typical) 106 dB, 22 Hz to 22 kHz, unweighted
- A/D dynamic range, mic preamp to converter (typical) 109 dB, 22 Hz to 22 kHz, unweighted
- D/A dynamic range, converter and output 108 dB, 22 Hz to 22 kHz, unweighted
- o Crosstalk rejection @ 1 kHz, adjacent channels 100 dB
- Non clip maximum input level, XLR +23 dBu
- Line input impedance TRS jack, unbal. / bal. 5 k, / 10 k,
- Non clip maximum input level, TRS +23 dBu

Output Characteristics

- Output impedance, XLR, unbal. / bal. 50 , / 100 ,
- Output level, XLR, nom. / max. +21 dBu
- Residual noise level, XLR -88 dBu, 22 Hz to 22 kHz, unweighted

Digital In/Out

- AES50 SuperMAC networking @ 48 or 44.1 kHz, 24-bit PCM 2 x 48 Channels, bidirectional
- AES50 SuperMAC cable length, CAT5 shielded** < 80 m recommended
- ULTRANET networking @ 48 or 44.1 kHz, 22-bit PCM 2
- ULTRANET cable length, CAT5 shielded < 75 m
- ULTRANET phantom power for P16-M personal mixers 2 powered outputs

Power

- Switch-mode autorange power supply 100-240 V (50/60 Hz)
- Power consumption 35 W
- Powered over Ethernet (PoE) AES50-A PoE/SYNC IN

Physical

- Standard operating temperature range 5°C to 40°C (41°F to 104°F)
- Dimensions (H x W x D) 95 x 149 x 332 mm (3.7 x 5.9 x 13.1")
- Weight 2.45 kg (5.4 lbs)

* Klark Teknik NCAT5E-50M recommended

Important information

1. Register online.

Please register your new Music Tribe equipment right after you purchase it by visiting <u>musictribe.com</u>.

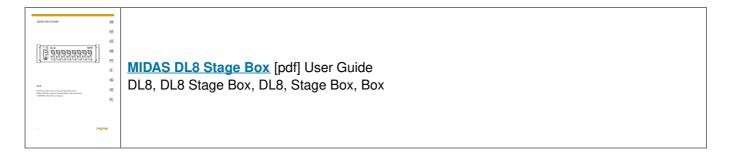
Registering your purchase using our simple online form helps us to process your repair claims more quickly and efficiently. Also, read the terms and conditions of our warranty, if applicable.

- 2. Malfunction. Should your Music Tribe Authorized Reseller not be located in your vicinity, you may contact the Music Tribe Authorized Fulfiller for your country listed under "Support" at <u>musictribe.com</u>. Should your country not be listed, please check if your problem can be dealt with by our "Online Support" which may also be found under "Support" at <u>musictribe.com</u>. Alternatively, please submit an online warranty claim at <u>musictribe.com</u> BEFORE returning the product.
- 3. **Power Connections.** Before plugging the unit into a power socket, please make sure you are using the correct mains voltage for your particular model. Faulty fuses must be replaced with fuses of the same type and rating without exception.

Frequently Asked Questions

- Q: How do I update the firmware of the DL8?
 - A: You can update the firmware by connecting a PC to the DL8 using a USB cable and following the firmware update instructions provided by the manufacturer.
- Q: Can I connect multiple DL8 units together?
 - A: Yes, you can chain multiple DL8 units together by sending input signals from one stagebox to another
 via AES50 ports. Refer to the user manual for detailed instructions on chaining multiple units.

Documents / Resources



References

- Music Tribe
- User Manual

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