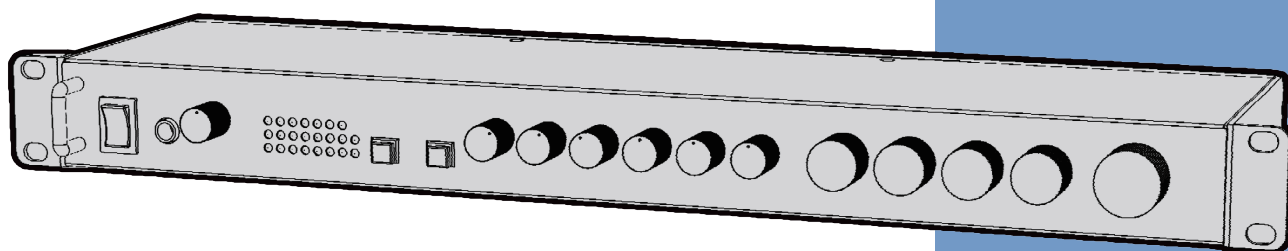


datavideo



AUDIO MIXER

AM-100

Instruction manual

www.datavideo.com

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Disclaimer of Product & Services

The information offered in this instruction manual is intended as a guide only. At all times, Datavideo Technologies will try to give correct, complete and suitable information. However, Datavideo Technologies cannot exclude that some information in this manual, from time to time, may not be correct or may be incomplete. This manual may contain typing errors, omissions or incorrect information. Datavideo Technologies always recommend that you double check the information in this document for accuracy before making any purchase decision or using the product. Datavideo Technologies is not responsible for any omissions or errors, or for any subsequent loss or damage caused by using the information contained within this manual. Further advice on the content of this manual or on the product can be obtained by contacting your local Datavideo Office or dealer.

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Warnings and Precautions

1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your Datavideo dealer or your local power company.
8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord rating.
10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:
 - a. When the power cord is damaged or frayed;
 - b. When liquid has spilled into the unit;
 - c. When the product has been exposed to rain or water;
 - d. When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation;
 - e. When the product has been dropped or the cabinet has been damaged;
 - f. When the product exhibits a distinct change in performance, indicating a need for service.



Warranty

Standard Warranty

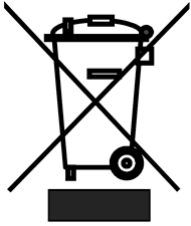
- Datavideo equipment are guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period begins on the purchase date. If the purchase date is unknown, the product warranty period begins on the thirtieth day after shipment from a Datavideo office.
- All non-Datavideo manufactured products (product without Datavideo logo) have only one year warranty from the date of purchase.
- Damage caused by accident, misuse, unauthorized repairs, sand, grit or water is not covered under warranty.
- Viruses and malware infections on the computer systems are not covered under warranty.
- Any errors that are caused by unauthorized third-party software installations, which are not required by our computer systems, are not covered under warranty.
- All mail or transportation costs including insurance are at the expense of the owner.
- All other claims of any nature are not covered.
- All accessories including headphones, cables, and batteries are not covered under warranty.
- Warranty only valid in the country or region of purchase.
- Your statutory rights are not affected.

Three Year Warranty

- All Datavideo products purchased after July 1st, 2017 are qualified for a free two years extension to the standard warranty, providing the product is registered with Datavideo within 30 days of purchase.
- Certain parts with limited lifetime expectancy such as LCD panels, DVD drives, Hard Drive, Solid State Drive, SD Card, USB Thumb Drive, Lighting, Camera module, PCIe Card are covered for 1 year.
- The three-year warranty must be registered on Datavideo's official website or with your local Datavideo office or one of its authorized distributors within 30 days of purchase.



Disposal



For EU Customers only - WEEE Marking

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.



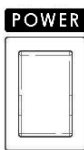
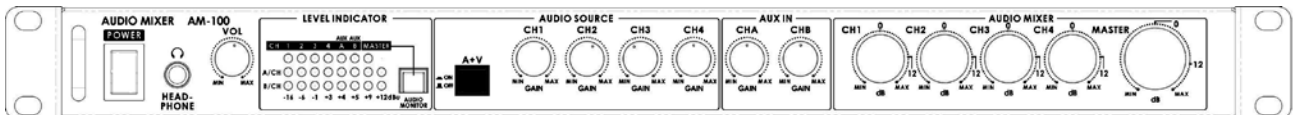
CE Marking is the symbol as shown on the left of this page. The letters "CE" are the abbreviation of French phrase "Conformité Européene" which literally means "European Conformity". The term initially used was "EC Mark" and it was officially replaced by "CE Marking" in the Directive 93/68/EEC in 1993. "CE Marking" is now used in all EU official documents.

Product Features

- 1U 19" rackmountable professional audio mixer
- Ultra compact 4 input + 2 AUX mixer featuring low noise, high-headroom design
- Four studio-grade Dynamic Range mic preamps with:
 1. Ultra –wide 60dB gain range
 2. 130dB dynamic range
 3. +22dBu line input handling
 4. Extended low-frequency response
 5. Distortion under 0.0007% (20Hz~20KHz)
 6. Phantom power for studio condenser mics
- Six high-headroom line inputs
- Advanced DC pulse transformer RF rejection
- 18 dB/ octave, 100Hz low-cut filter on mic input channels
- High resolution 8 segment stereo meters
- Supports both Line or Microphone with 48v Phantom power
- Fifth auxiliary channel can be used as line or for daisy chaining with other AM-100 (upto 12 channels)
- When used with SE-900 & MS-900 the AM-100 provides synchronized audio follow video using a 15-pin D-Sub connection

Connections & Controls

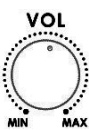
Front Panel



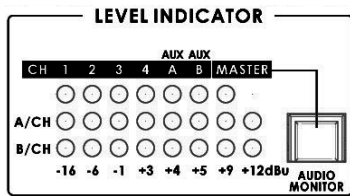
Power Switch
Switches the power On / Off.



Headphone
Accepts a stereo mini jack plug for stereo headphones. The headphone volume is adjusted by the rotating Head phone volume control.



Headphone Volume Control
Controls Headphone volume level.
Use the Headphone section to accurately monitor any of the sources.



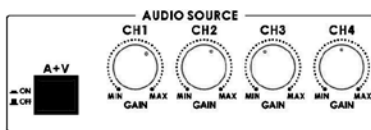
Audio LED Meters

These meters play a vital part in correctly setting the audio levels to avoid clipping or other distortion.

The LED style Audio meters, show the signal strength at the Audio Output. The signal they measure is determined by the sources selected by the Audio Bus selectors and the levels set by the rotary pots and faders.

Audio Monitor Button

Use the Headphone section to monitor any of the sources (CH1, CH 2, CH3, CH4) or “Master” output. Repeated presses of the Headphone Audio Monitor button will cycle through the monitoring choices. In many cases, headphones may be a more useful and accurate choice than speakers for audio monitoring.

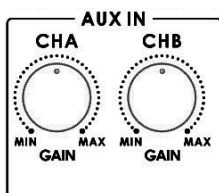


Audio Input Source Level Controls

This section of the AM-100 controls which audio input channel (CH1~CH4) will be sent to the Audio Bus and its associated Fader. This row of audio channel selection buttons has LEDs built in to show which input channel is active. Level control for each audio input source is via the rotary pots above each of the audio channel selection buttons.

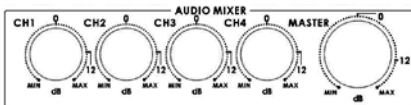
A+V (Audio-Follow-Video)

When this button is engaged or lit, the audio associated with a selected video input source automatically follows the video through any transition between the Main and Sub Sources. When the A+V button is inactive, the audio sources must be switched manually. For more information, see [A+V](#).



AUX Audio Input

Mix input for background music



Audio mixer

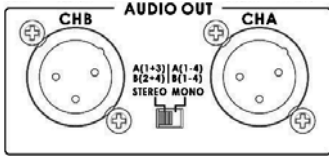
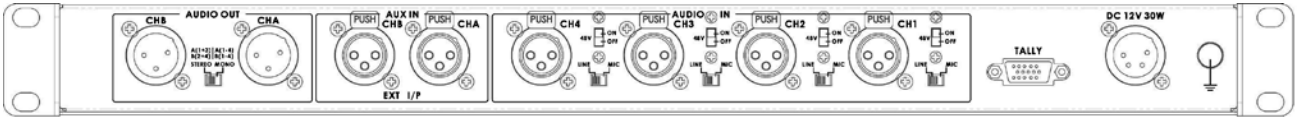
These CH1~CH4 Audio Level Faders are for controlling the CH1~CH4 audio mix.

These faders correspond to the Audio Source selector buttons and control the relative volume of each input in the master output as well as the master output level.

MASTER

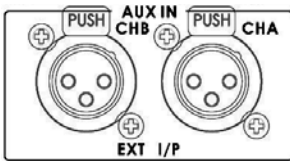
This Slider is for controlling the audio level for the Mixed audio output.

Rear Panel



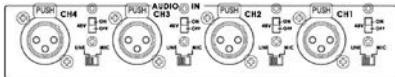
AUX Audio Output

2 channels of XLR Balanced Audio output.



AUX Audio Input

Mix input for background music or daisy chaining AM-100 units together. To daisy chain units together, take the AUDIO OUT pair from the first unit and connect these to the AUX IN on the second unit. For more information, see [Example Cascade Setup](#).



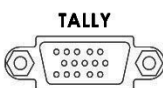
AUDIO IN

The AM-100 supports four XLR Balanced Audio Input channels.

There are two kinds of switches under **AUDIO IN**:

LINE/MIC switch is used to set the audio as LINE in or MIC in. When LINE in is selected please also set the **48V ON/OFF** switch to **OFF** in order to prevent burn-out damage to the circuit.

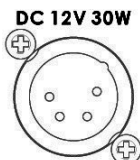
The **48V ON/OFF** switch is for phantom power. If you want to use MIC in, please set the **LINE/MIC** switch first, and then if using a Condenser microphone turn ON the **48V ON/OFF** switch. If you wish to use a Dynamic microphone please turn OFF the **48V ON/OFF** switch.



TALLY

TALLY IN socket. This supplies tally source, control output by A+V.

For more information please see the [A+V](#).



DC IN – 4pin XLR

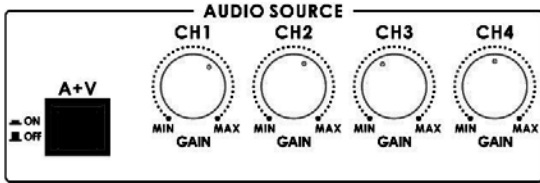
DC in socket connect the supplied 12V 2.5A PSU to this socket. The connection can be secured by screwing the outer fastening ring of the DC In plug to the socket.



Grounding Terminal

When connecting this unit to any other component, make sure that it is properly grounded by connecting this terminal to an appropriate point. When connecting, use the socket and be sure to use wire with a cross-sectional area of at least 1.0 mm².

A+V (Audio-Follow-Video)



The Audio Input Channel Selectors and Level pots are the first stage in the audio signal path. Each channel carries the audio associated with a video input channel. When the A+V button is active, the audio follows the video through a transition. This means that

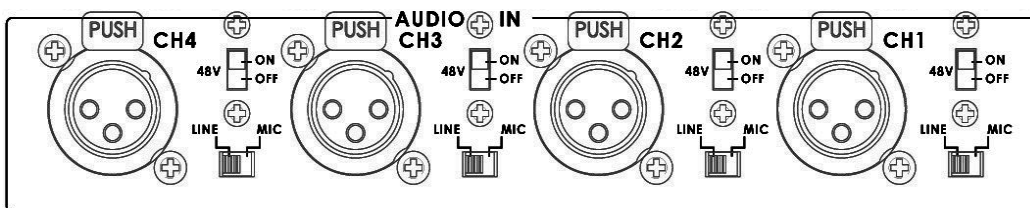
when this LED is lit, only one channel of the Audio input section (CH1, CH2, CH3, CH4) can be activated at a time. When the transition is a CUT, the audio will switch abruptly at the same time.

Try this: With the A+V button engaged or lit, select Channel 2 on the Main Source bus (of course, you must have a valid video and audio source connected). Notice that CH2 is lit in the Audio Source section. Now, select channel 1 on the Sub Source bus. Work the T-Bar to manually perform a transition (if no specific transition is selected, the sources will dissolve) and watch Audio Input Source channel change from CH2 to CH1, following the video.

When the A+V button is not engaged or off, you can manually select which of the 4 Audio input channels will be applied to the Video bus at the Fader. In fact, you have to select one or more of these channels, or there will be no audio present at the audio out connections.

The A+V button should be inactive while doing level settings at the beginning-of-session so that you can select an input and adjust the initial level correctly.

Audio Inputs and Levels



Analogue audio comes into the AM-100 through the XLR connectors on the rear panel (see above diagram). The AM-100 supports four XLR Balanced Audio Input channels.

There are two kinds of switches next to each XLR input under **AUDIO IN**:

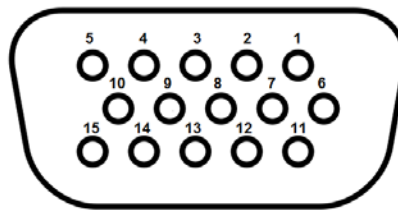
The **LINE/MIC** switch is used to set the audio as **LINE** in or **MIC** in. When **LINE** in is selected please also set the **48V ON/OFF** switch to **OFF** in order to prevent burn-out damage to the audio circuit/Mic*.

The **48V ON/OFF** switch is for *Phantom power*. If you want to use **MIC** in, please set the **LINE/MIC** switch first, and then if using a *Condenser microphone** turn ON the **48V ON/OFF** switch. If you wish to use a *Dynamic microphone* please turn OFF the **48V ON/OFF** switch.

***NOTE:** Always double check the manual for the microphone being used to see what advice it gives regarding power as some Mics have internal batteries too.

Tally Input Connector (A+V feature)

The Tally output from a video mixer allows the AM-100 to automatically switch between audio sources with the video mix.



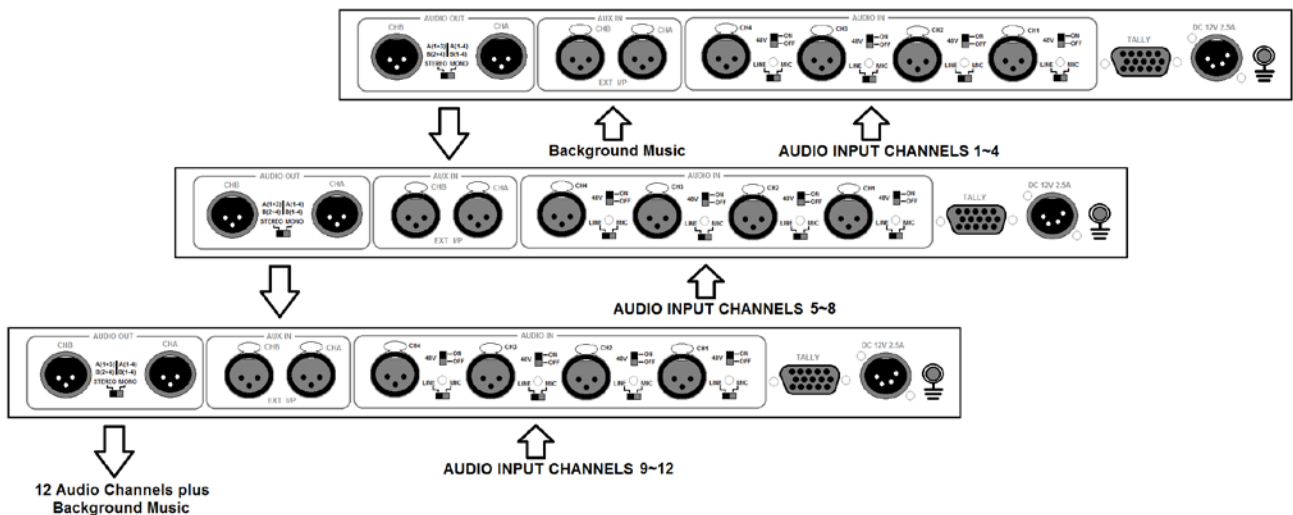
D-Sub 15PIN Female

PIN assignment of the Tally Connector is shown in the table below:

Audio Channels	CH 1	CH 2	CH 3	CH 4
		Pin 1	Pin 6	Pin 11
GND	Pins 4 / 9 / 14			

Example Cascade Setup

It is possible to cascade or daisy chain several AM-100 units together. This allows more audio sources to be added to the set up and provided at the final mixed output. To daisy chain units together take the AUDIO OUT pair from the first unit and connect these to the AUX IN on the second unit. Below diagram shows 3 units connected in this way.



Specifications

Audio Input				
Parameter	Specifications	Limit	Units	Conditions/Comments
MIC/Lin Connectors (CH1~CH4)	3Pin XLR Female			Pin2=(+) Pin3=(-) Pin1=GND
Mic/Lin Input Impedance	3K/5.5K	1%	Ω	
Mic Gain Range	off to +80	±1.5	dB	Audio source GAIN (knob)
Line Gain Range	off to +20	±1.5	dB	Audio source GAIN (knob)
Signal to noise ratio	-70	min	dB	@1KHz, 0dB (Lin IN)
THD+N	0.06	max	%	@1KHz, 0dB (Lin IN)
Frequency Response	20Hz~20KHz	±3	dB	
Lin in Max Level	+26dBu	±3%	dB	
AUX IN				
Parameter	Specifications	Limit	Units	Conditions/Comments
AUX Input (CH A – CH B)				
Line Connectors	3 PIN XLR Female			Pin2=(+) Pin3=(-) Pin1=GND
Line Input Impedance	45K	1%	Ω	
Line Gain Range	off to +20	±1.5	dB	AUX IN(knob)
Signal to noise ratio	-70	min	dB	@1KHz,0dB
THD+N	0.06	max	%	@1KHz,0dB
Frequency Response	20Hz~20KHz	±3	dB	
Audio Output				
Parameter	Specifications	Limit	Units	Conditions/Comments
Connector	3 PIN XLR Male			Pin2=(+) Pin3=(-) Pin1=GND
Impedance	300	1%	Ω	
Gain Range	off to +20	±1.5	dB	Audio Mixer (CH1~CH4) (knob)
Output Max Level	+26dBu	±3%	dB	
Headphone				
Parameter	Specifications	Limit	Units	Conditions/Comments
Connector	1/4" TRS			Tip(+) Ring=(-) Sleeve=GND
Signal to noise ratio	-70	min	dB	@1KHz,0Db(Lin IN)
THD+N	0.5	max	%	@1KHz,0Db(Lin IN)
Frequency Response	20Hz~20KHz	±3	dB	
Others				
Parameter	Specifications	Limit	Units	Conditions/Comments
Phantom Power	+48V	±3%	VDC	
Power Consumption	+12V,1.5A(18W)	±3%	watts	
Power Input connector	4Pin XLR Male			Pin4=(+) Pin1=GND
Dimensions	440 X 155 X 4.5	±1%	mm	L X W X H

Specifications are subject to change without notice

Service & Support

It is our goal to make owning and using Datavideo products a satisfying experience. Our support staff is available to assist you to set up and operate your system. Contact your local office for specific support requests. Plus, please visit www.datavideo.com to access our FAQ section.

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