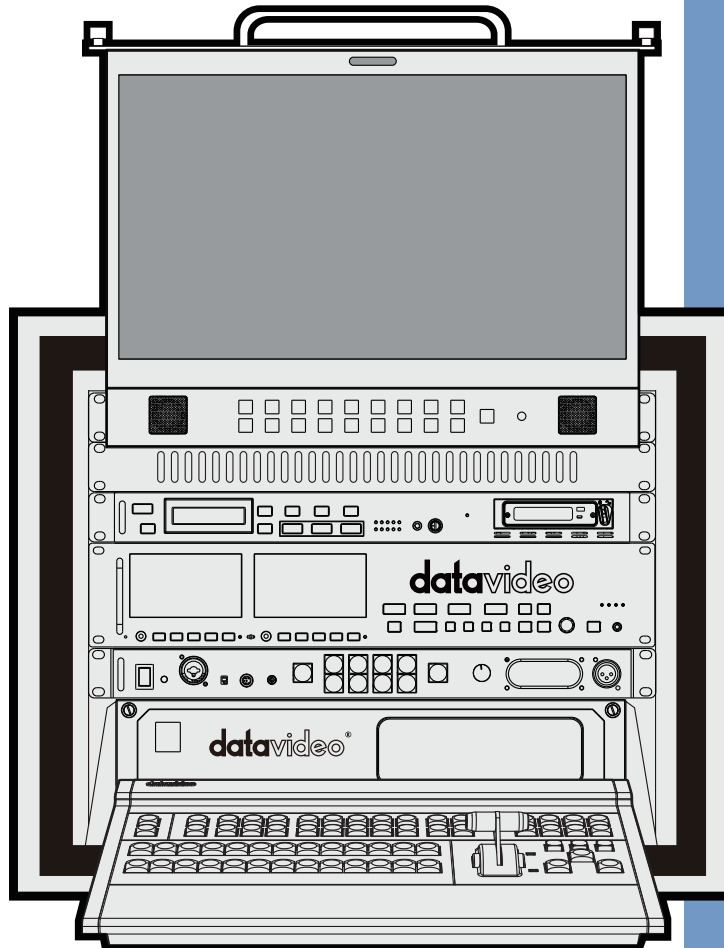


datavideo



**HD/SD 8/12-CHANNEL
MOBILE VIDEO STUDIO
MS-2850**

Instruction manual

www.datavideo.com

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Disclaimer of Product and 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

The MS-2850 is HEAVY – approximately 70Kg. Two or more people are required to move this unit.

The MS-2850 should be always moved and placed in an upright position; do not place or try to move the unit in any other position as damage or injury could result. There are two sets of carry handles on either side of the case, please use these handles to safely share the weight between the people lifting the unit.

Always use a trolley to safely transport the unit over distances of 2 metres or more.

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

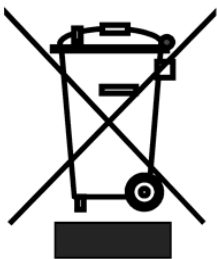
- Datavideo equipment are guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period begins on the purchase date. 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.

Introduction

Datavideo MS-2850 HD/SD mobile video studio series is a ready to go solution. It is designed around the SE-2850 8-channel (upgradeable to 12 channels) broadcast-quality video switcher. It is perfect for outdoor events, conferences, education places of worship and many more applications. Producing superb quality pictures with versatile input/output configurations, the SE-2850 also has powerful, easy-to-use effects, such as dual picture in picture, downstream keyer (DSK), CG and logo insertion.

The switcher is integrated with the essential elements required for live production including a recorder, a multi-view monitor and an intercom system.

MS-2850 can be equipped with the Datavideo VSM-100 Sampling Vector Scope Monitor which allows you to accurately analyze and calibrate video signals to ensure consistent video color and luminance levels. For an overview on all configurations, please visit the Datavideo website.

That's Datavideo; sharing the value!

To get more value out of your equipment, please take a few minutes to read through this overview manual, and the other associated user manuals supplied within the product Manual Binder. This will help you to familiarize yourself with all aspects of the MS-2850 portable production unit.

Features

- Available in 4 versions: **MS-2850A**, **MS-2850B**, **MS-2850C** or **MS-2850D**

MS-2850A without VSM-100 Vectorscope and Waveform monitor and PD-6 DC Power Center,

MS-2850B with additional VSM-100 Vectorscope and Waveform monitor and PD-6 DC Power Center,

Both also contain

- SE-2850 - HD/SD 8 channel digital video switcher (upgradeable to 12 channels).
- TLM-170LM - 17" HD/SD 1U rackmount LCD underscan/overscan monitor.
- HDR-70 - HD-SDI 4:2:2 I frame only recorder with removable drive enclosure.
- ITC-100 – 8 Channel talkback unit with integrated bi-colour tally system.
- AD-100M – Audio delay unit allows delay of program audio by up to 17 frames.
- PD-2A – Power Distribution Center with automatic AC to DC failover switch.
8U flight case - Foam filled, impact protective, for secure and safe transport.

MS-2850C without VSM-100 Vectorscope and Waveform monitor and PD-6 DC Power Center,

MS-2850D with additional VSM-100 Vectorscope and Waveform monitor and PD-6 DC Power Center,

Both also contain

- SE-2850 - HD/SD 8 channel digital video switcher (upgradeable to 12 channels).
- TLM-170LM - 17" HD/SD 1U rackmount LCD underscan/overscan monitor.
- HDR-70 - HD-SDI 4:2:2 I frame only recorder with removable drive enclosure.
- ITC-100 – 8 Channel talkback unit with integrated bi-colour tally system.
- AD-200 – Audio delay unit allows delay of program audio by up to 17 frames.
- PD-2A – Power Distribution Center with automatic AC to DC failover switch.
8U flight case - Foam filled, impact protective, for secure and safe transport.

Compatible Video Standards

- 1920 x 1080i 50
- 1920 x 1080i 59.94
- 1920 x 1080i 60
- 1920 x 1080p 25
- 1920 x 1080p 29.97
- 1920 x 1080p 30
- 1920 x 1080p 50
- 1920 x 1080p 59.94
- 1920 x 1080p 60
- 720 x 576i 50 (PAL)
- 720 x 480i 59.94 (NTSC)

Installation

Transport & Placement

The MS-2850 is heavy – approximately 70Kg – Do not attempt to lift or move it on your own.

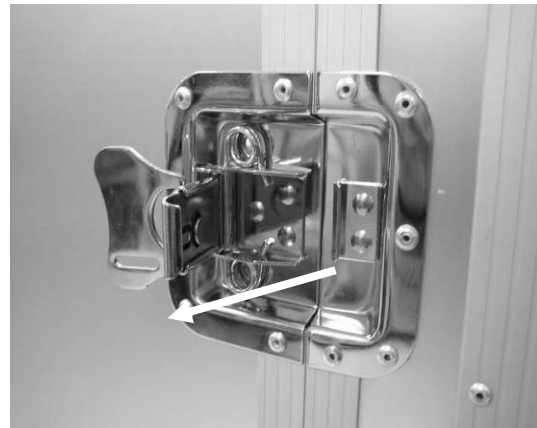
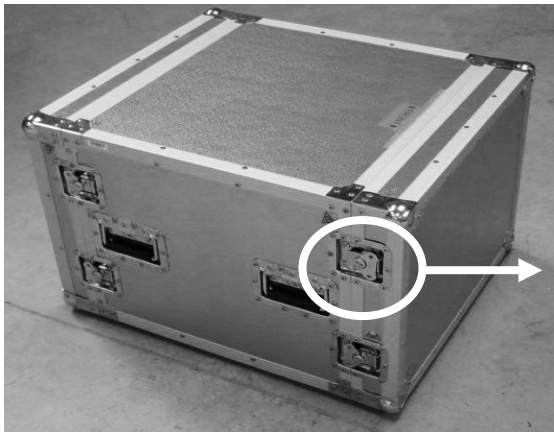
A minimum of two people are required to lift or move this product. There are two carry handles on either side of the product, please use these handles to safely share the weight between the people lifting the unit.

Always use a trolley to safely transport the MS-2850 over distances of 2 Metres or more. The unit should be always moved and placed in an upright position; do not place or try to move the unit in any other way as damage or injury could result.

Place the MS-2850 on a strong, stable, flat surface that is capable of supporting the weight. Do not use a folding or single leg table to support the MS-2850.

Opening the case

On each side of the MS-2850 case there are wing nut clasps securing the front and rear covers.



Undo each clasp by folding the wing nut out and then rotating it. The clasp can then swing free of the catch.

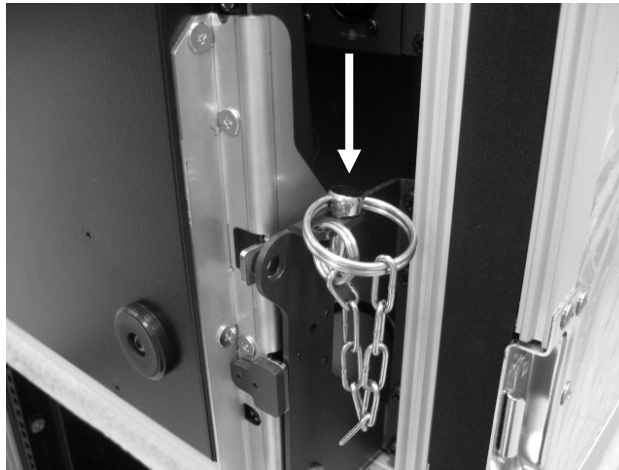
Once undone you can then remove the front and rear covers.

Unpacking the SE-2850 Control Panel Keyboard

The SE-2850 Control Panel Keyboard is held in its shipping position by a securing bolt on either side. To lower the Control Panel first remove the securing bolts as indicated below.



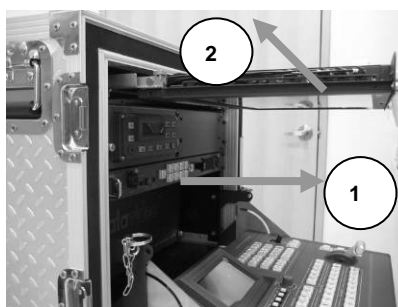
The bolts can then be stored on each hinge bracket before lowering the Control Panel Keyboard.



Setting up the TLM-170LM - 17" LCD monitor

Follow the steps below to set up the LCD monitor:

- Unfasten the two silver screws on the Left and Right of the TLM-170LM drawer handle.
- Using the handle pull out the TLM-170LM monitor until it clicks into place at the end of its rail.
- Now bring the LCD panel into an upright viewing position.



Front Panel

TLM-170LM : 17" HD / SD monitor which slides out from a 1 RU storage position. Connections for SDI / HD-SDI, and HDMI. Display overlays for Timecode, Center Mark, 4:3 aspect ratio, Cinema Zone and embedded audio peak meter (SDI / HDMI only).

HDR-70 : SDI / HD-SDI Removable HDD recorder. Records I-Frame only 100Mbps to m2t files.

ITC-100: Eight channel wired talkback system with integrated tally interface. Supplied with cables, belt packs, headsets and tally lights.

SE-2850 CTL: SD / HD Digital Video Switcher. Main unit and Control Panel. Provides 10 bit 4:2:2 broadcast quality pictures.

Rear Panel

RP-31: ITC-100 talk back breakout panel. Rack panel for connection of ITC-100 belt pack cables (5pin XLR).

AD-100M: Audio Delay Unit. Delay Program audio by up to 17 frames.

PD-2A: Power Distribution unit with automatic failover from AC to DC input.

SE-2850 Main Unit: Main unit rear panel with power, control panel and multi-view outputs already connected for your convenience.



Front Panel

TLM-170LM: 17" HD / SD monitor which slides out from a 1 RU storage position. Connections for SDI / HD-SDI and HDMI. Display overlays for Time code, Center Mark, 4:3 aspect ratio, Cinema Zone and embedded audio peak meter (SDI / HDMI only).

HDR-70: SDI / HD-SDI Removable HDD recorder. Records I-Frame only 100Mbps to m2t files.

VSM-100: Waveform and Vector scope monitor for video signal analysis.

ITC-100: Eight channel wired talkback system with integrated tally interface. Supplied with cables, belt packs, headsets and tally lights.

SE-2850 CTL: SD / HD Digital Video Switcher. Main unit and Control Panel. Provides 10 bit 4:2:2 broadcast quality pictures

Rear Panel

RP-64: 1U rack mount panel with 8 CVBS output ports.

RP-31: ITC-100 talk back breakout panel. Rack panel for connection of ITC-100 belt pack cables (5pin XLR).

PD-6: Power Distribution center for non-Datavideo production kit whilst on location or in studio.

RP-51: 1U Half Rack panel with Switcher's SDI PGM outputs and HDMI Multi-view output 2.

AD-100M: Audio Delay Unit. Delay Program audio by up to 17 frames.

PD-2A: Power Distribution unit with automatic failover from AC to DC input.

SE-2850 Main Unit: Main unit rear panel with power, control panel and multi-view outputs already connected for your convenience.



Front Panel

TLM-170LM : 17" HD / SD monitor which slides out from a 1 RU storage position. Connections for SDI / HD-SDI and HDMI. Display overlays for Timecode, Center Mark, 4:3 aspect ratio, Cinema Zone and embedded audio peak meter (SDI / HDMI only).

HDR-70 : SDI / HD-SDI Removable HDD recorder. Records I-Frame only 100Mbps to m2t files.

AD-200 CTL : Control Panel for Audio Delay Unit.

ITC-100: Eight channel wired talkback system with integrated tally interface. Supplied with cables, belt packs, headsets and tally lights.

SE-2850 CTL: SD / HD Digital Video Switcher. Main unit and Control Panel. Provides 10 bit 4:2:2 broadcast quality pictures.

Rear Panel

RP-31: ITC-100 talk back breakout panel. Rack panel for connection of ITC-100 belt pack cables (5pin XLR).

AD-200 Main Unit: Audio Delay Unit. Delay Program audio by up to 3 seconds.

PD-2A: Power Distribution unit with automatic failover from AC to DC input.

SE-2850 Main Unit: Main unit rear panel with power, control panel and multi-view outputs already connected for your convenience.



Front Panel

TLM-170LM: 17" HD / SD monitor which slides out from a 1 RU storage position. Connections for SDI / HD-SDI and HDMI. Display overlays for Timecode, Center Mark, 4:3 aspect ratio, Cinema Zone and embedded audio peak meter (SDI / HDMI only).

AD-200 CTL: Control Panel for Audio Delay Unit.

HDR-70: SDI / HD-SDI Removable HDD recorder. Records I-Frame only 100Mbps to m2t files.

VSM-100: Waveform and Vector scope monitor for video signal analysis.

ITC-100: Eight channel wired talkback system with integrated tally interface. Supplied with cables, belt packs, headsets and tally lights.

SE-2850 CTL: SD / HD Digital Video Switcher. Main unit and Control Panel. Provides 10 bit 4:2:2 broadcast quality pictures.

Rear Panel

RP-62: ITC-100 talk back breakout panel with Switcher's SDI PGM outputs and HDMI Multi-view output 2. Rack panel for connection of ITC-100 belt pack cables (5pin XLR).

RP-64: 1U rack mount panel with 8 CVBS output ports.

PD-6: Power Distribution center for non-Datavideo production kit whilst on location or in studio.

AD-200 Main Unit: Audio Delay Unit. Delay Program audio by up to 3 seconds.

PD-2A: Power Distribution unit with automatic failover from AC to DC input.

SE-2850 Main Unit: Main unit rear panel with power, control panel and multi-view outputs already connected for your convenience.



Powering On

Each product built into this Mobile Video Studio receives DC power from the PD-2A or PD-6 unit on the rear of the MS-2850.

Please ensure the PD-2A or PD-6 is fed with either an AC or DC feed before attempting to switch on the MS-2850.

For more information on the PD-2A or PD-6 please refer to its manual in the binder.

If a product within the MS-2850 fails to start after the PD-2A or PD-6 is switched on please locate the on/off switch for that product which has not yet started.

For further advice on using a product within the MS-2850 please refer to its manual in the binder.

Powering Off

Before powering off the MS-2850 via the PD-2A or PD-6 on/off switch please ensure the HDR-70 has been stopped.

Packing Away

Once the external source and camera cabling have been removed from the rear connection plates replace and secure the rear case cover.

Return the ITC-100 gooseneck mic, any ITC-100 cabling, tally lights and headsets etc to your accessory kit bag/box.

Carefully lower the 17" TLM-170LM monitor and slide it back into its horizontal 1U shipping position. Please remember to secure the silver screws so it cannot slide/move when in transit.

Now raise/tilt upwards the SE-2850 Control Panel Keyboard and secure it in its shipping position with the chained securing bolts.

Now return and secure the front cover and the MS-2850 is ready to be moved.

Dimensions

All dimensions in mm.

	MS-2850 A	MS-2850 B	MS-2850C	MS-2850D
Height	800	800	800	800
Width	670	670	670	670
Depth	620	620	620	620
	Accessory Kit A	Accessory Kit B	Accessory Kit C	Accessory Kit D
Height	330	330	330	330
Width	520	520	520	520
Depth	280	280	280	280

Weights

The MS-2850 is heavy – approximately 70Kg – Do not attempt to lift or move it on your own.

A minimum of two people are required to lift or move this product. There are two carry handles on either side of the product, please use these handles to safely share the weight between the people lifting the unit.

	MS-2850 A	MS-2850 B	MS-2850 C	MS-2850 D
Net Weight (unpacked unit only)	62.794 Kg	72.552 Kg	64.278 Kg	73.984 Kg
Accessory Kit (Gross packed)	11 Kg	11 Kg	11 Kg	11 Kg
Gross Weight (packed unit)	73.794 Kg	83.552 Kg	75.278 Kg	84.984 Kg

Always use a trolley to safely transport the MS-2850 over distances of 2 Metres or more.

The unit should be always moved and placed in an upright position; do not place or try to move the unit in any other way as damage or injury could result.

Place the MS-2850 on a strong, stable, flat surface that is capable of supporting the weight. Do not use a folding or single leg table to support the MS-2850.

Specifications

The MS-2850 is a combination of Datavideo products, for the specifications of a particular product please refer to its manual within the supplied binder.

Service & Support

It is our goal to make your products ownership a satisfying experience. Our supporting staff is available to assist you in setting up and operating your system. Please refer to our web site www.datavideo.com for answers to common questions, support requests or contact your local office below.

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www.datavideo.com/product/MS-2850

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