



VPU QuickManual deutsch / english



Version XVI.05



Intended use

The MA Video Processing Unit (VPU) is an element of the MA system family. Intended use is output of audio and video via DVI or ArtNet. Two different versions of the MA VPU are available to suit all needs. MA VPU plus and MA VPU basic. With a huge amount of functions, features and effects together with any console of the grandMA family these will be the most innovative tool available to control visual effects independent of the type of fixtures needing control. By following the link below you will find an detailed manual.



Manufacturer: MA Lighting Technology GmbH
Dachdeckerstraße 16
D – 97297 Waldbüttelbrunn
Germany

For more information and detailed manuals see: www.malighting.com

Please check our Frequently Asked Questions first, that you can find online at www.malighting.com. If there are any questions left, just send us an e-mail with your contact details and subject information at **tech.support@malighting.com**. We service your request within 48h on working days. This E-Mail Service is monitored during MA Lightings regular business hours in Germany from 8.30 a.m. until 5 p.m., Monday through Friday. Alternatively you can call our Technical Support during that time: +49.5251.688865-30.

For emergency services please contact your local distributor or contact the MA Lighting Service Hotline. Call: +49.5251.688865-99

Please note, this 24/7 hotline is strictly for emergency cases (so-called show stoppers) – for people being in trouble out in the field. Thank you for your understanding.

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Dimensions:	485 x 211 x 627 mm / 19.1 x 8.3 x 24.7 inch 5 Height Units / 5 HE (for rack installation)
Weight:	15,0 kg / 33 lbs + 0,8kg / 1.7 lbs screen protector (only for transport)
Voltage:	230 V ~ 50Hz 120 V ~ 60 Hz (USA, Canada) No switching necessary!
Cable type:	Only adequately protected cables may be used (min. Ø 3 x 1,0mm²) (Power supply cabel and connector not included ex works)
Socket type Power In:	PowerCon (blue) by NEUTRIK AG, Liechtenstein
Socket type Power Out:	PowerCon (grey) by NEUTRIK AG, Liechtenstein

ATTENTION! The total current power consumption of the units connected in series must not exceed the maximum of the power source!

Rated Power Consumption:

VPU BASIC:	max. 300 VA
VPU PLUS:	max. 400 VA

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Please be aware of the weight of the product. Be careful when moving it; otherwise you may injure your back or other parts of your body.

Video processing unit (VPU)

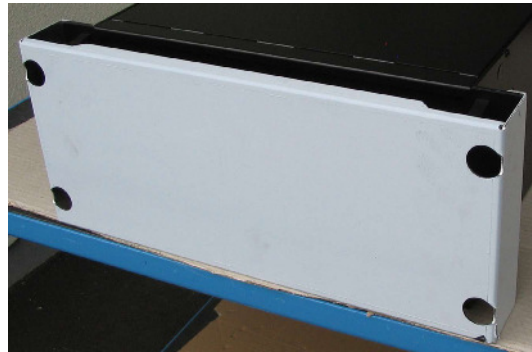
approx. 15 kg (+ 0,8 kg transport protector)

Secure all covers prior to transport. Remove all cables on the back cover and the USB connectors on the front panel

Handles on the products are designed exclusively for personnel to hold or carry the product. It is therefore not permissible to use handles for fastening the product to or on means of transport such as cranes, fork lifts, wagons, etc. The user is responsible for securely fastening the products to or on the means of transport and for observing the safety regulations of the manufacturer of the means of transport. Noncompliance can result in personal injury or material damage.

Use safe transport device for transport and storage.

If the front of the VPU cannot be protected with a transport case, install the protection cover.



Do not place the unit on surfaces, vehicles, cabinets or tables that for reasons of weight or stability are unsuitable for this purpose. Do not twist the body.



Check the apparatus after transport before installation! If body of the apparatus is damaged (bend or broken), monitor is broken or connectors are damaged do not connect the apparatus to power! Call our hotline for technical support!

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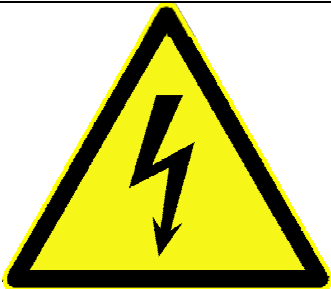
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Symbols and warning labels

		I 0	~
Warning Danger Area	Warning Danger of electric shock	Supply voltage ON/OFF	Alternating current (AC)

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General Safety Instructions

Read all the instructions in the user's manual, especially the safety requirements see Safety requirements

Follow all instructions. Keep the user's manual for later use. Follow all cautions and warnings indicated on the unit. Disconnect the mains plug before cleaning the unit; don't use any liquid or spray cleanser. Clean with a dry cloth.

Do not use the unit near water. Do not expose it to a humid environment. Do not spill any liquid over the unit. Unplug this apparatus during lightning storms or when unused for long periods of time.

Do not block or cover any ventilation slots in the housing - they guarantee the reliable functioning of the unit and protect it against overheating. Do not install the unit into a frame unless sufficient ventilation is guaranteed. Install in accordance with the manufacturer's instructions.

Do not insert any objects through the slots of the unit, as these could get in contact with live parts or could cause short circuits. This may cause a fire and an electric shock. Do not place the unit on unstable surfaces. It may fall and get damaged.

Do not place any objects on the power cord. Protect it from being walked on or pinched particularly at plugs and the point where they exit from the apparatus.

If using an extension cord, make sure the rated output of all units connected in aggregate does not exceed the maximum rated output of the extension cord. The rated output of the units plugged into the socket should in aggregate not exceed 10 amperes.

If the power cord or the mains plug is damaged, let a qualified technician replace it immediately.

Only use power cords which are marked as safety-proof. All service work should be exclusively performed by qualified service technicians. Do not use any high-power walkie-talkies or cellular phones near the unit.

The unit is provided with a safety plug. This plug can only be used with safety sockets. These precautions should by all means be followed. If the plug should not fit into a given socket (e.g. the case with old sockets), the socket should be replaced by an electrician.

Do not ignore the safety purpose of the grounding-type plug. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

As with all industrially manufactured goods, the use of substances that induce an allergic reaction such as aluminum cannot be generally excluded. If you develop an allergic reaction (such as a skin rash, frequent sneezing, red eyes or respiratory difficulties), consult a physician immediately to determine the cause.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus 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. Besides others, you run the risk of suffering an electric shock.

If one of the following conditions occurs, please disconnect the mains plug and call your dealer or technical support!

Power cord or mains plug is damaged or worn.
Liquid penetrated the unit.

The unit was exposed to rain or high ambient humidity.
The unit does not function properly, even when following all the instructions in the manual. Only manipulate the controls as stated in the manual, wrong settings on the controls may damage the unit.

The unit fell and the housing was damaged.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE

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IMPORTANT SAFETY INSTRUCTIONS

Read these instructions.

Keep this instructions.

Heed all warnings.

Do not use this apparatus near water.

Clean only with dry cloth.

Do not block any ventilation openings.

Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.

Protect the power cord (not included) from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Only use attachments / accessories specified by the manufacturer.

When a cart is used, use caution when moving the cart / apparatus combination to avoid injury from tip-over.

Unplug this apparatus during lightning storms or when used for long period of time.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, 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.

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Electric shock warning

The unit should be serviced by qualified personnel only, as live parts may be exposed when opening and/or removing coverings; besides others, you run the risk of suffering an electric shock.



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LIMITATIONS

The screens of grandMA2 series and other units of the new generation are subject to conditions of failure class 2. Following items are acceptable and no reason to worry:

ITEMS:

Permanent bright dots

2 dots adjacent permanent bright
Permanent dark dots

2 dots adjacent permanent dark
Total bright and dark dots

ACCEPTABLE COUNTS:

max 2 (minimum distance between bright dots \geq 15mm)

max 1
max 5 (minimum distance between dark dots \geq 15mm)

max 1
max 5

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Operating limits



Temperature 0°C - 30°C / 32°F – 86°F (recommended 10°C – 25°C / 50°F – 77°F, due to extreme processing power)
Deeper temperature can cause failure of the displays, higher temperature can overcharge the cooling system of the apparatus and can destroy hardware components.

Humidity

Operation: 20% - 90% relative humidity (no condensation)
Storage: 10% - 90% relative humidity (no condensation)

Environment

Follow all the IMPORTANT SAFETY INSTRUCTIONS.

Use the apparatus only within the environment operating limits.

Use the apparatus only indoor.

Air must be free of dust and hazardous and explosive substances.

Avoid vibrating support, and extreme loud environment.

This apparatus is not protectet against splash water. Do not use this apparatus near water.

Do not use the apparatus in rain or moisture.

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3x DVI OUT (DVI-D Dual Link / DVI-D Dual Link / DVI-I Dual Link)

Mains switch ON / OFF (In standby mode – switch on “I”, the AC power voltage is present within the instrument, even if the apparatus is switched off by the push button on the front)

Mains Input (blue) 120 / 230V, 50/60Hz no switching of voltage necessary (Cable not included ex works)

Mains Output (grey) 120 / 230V, 50/60Hz no switching of voltage necessary (Cable not included ex works)

2x Ethernet (for connecting MA-consoles, grandMA onPC)

2x USB e.g. mouse, keyboard, storage device (+ 2 more USB at the front panel)

SDI In 1 + 2 (option)

Audio OUT Left / Right

eSATA –port for connecting extern drive Use only cable with max length 0,5m! Do not disconnect drive when at work!

Switching the apparatus On/Off



Caution: *Do not power down during booting.* Such a switch-off may lead to corruption of the solid state disk files.

Power switch

Position I = ON

In the I position, the instrument is in standby mode or in operation, depending on the position of the ON/STANDBY key at the front panel.

Note:

The AC power switch may remain ON continuously. Switching to OFF is only required when the instrument must be completely removed from the AC power source.

Position O = OFF

The 0 position implies an all-pole disconnection of the instrument from the AC power source.



Standby switch

The ON/STANDBY switch activates two different operating Modes:

Operation ON

First push on ON/STANDBY - button

The apparatus starts booting.

STANDBY

Second push on ON/STANDBY – button

The apparatus switch to standby - mode



Caution: *In standby mode, the AC power voltage is present within the apparatus*

Switching On the Instrument

In order to switch on the apparatus, set the power switch on the rear panel to position I.

Set the apparatus to operating mode by pressing the ON/STANDBY button on the front panel.

Switching Off the Instrument

In order to switch off the apparatus, push the ON / STANDBY button on the front panel and confirm with the softbutton “YES”.

NOTE: In this standby mode, the AC power voltage is present within the instrument. For longer non use switch the power switch to “0”.

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Cleaning

The VPU demands only minor attention. Clean the surface only with dry soft cloth and look for proper condition of ventilation. Do not use any liquid cleaner or compressed air.

Maintenance

Electric shock warning: The unit should be serviced by qualified personnel only, as live parts may be exposed when opening and/or removing coverings; besides others, you run the risk of suffering an electric shock.

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Declaration of Conformity

Manufacturer's name: MA Lighting Technology GmbH

Manufacturer's address: Dachdeckerstraße 16
D-97297 Waldbüttelbrunn
Germany

declares that the product

Product category: Control unit

Name of product: Video Processing Unit (VPU)

is conform to the following directives and harmonized standards:

Safety: EN60065, EN60950-1

EMV (EMC): 2014/30/EG

EN55103-1:2009 as well as EN55103-2:2009

ROHS (II): 2011/65/EU

Additional information: DMX512, Ethernet, USB, LTC, Audio In, Midi and analogue inputs must be shielded and the shielding must be connected to the earthing resp. to the housing of the corresponding plug.

Waldbüttelbrunn, February 4th 2013

Dipl. Ing. Michael Adenau



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