

# MA 8Port Node QuickManual

8 Port Node Name



S# 100000. SW 12.41  
Node type: onPC

A	B	C	D	E	F	G	H
OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT
255	255	255	255	255	255	255	255

ENU



The MA 8Port Node allow the conversion of DMX via different protocols to DMX 512, using Ethernet. The MA 8Port Node features 1Gbit capability und fit perfectly into the MA system which is based on this high speed to ensure maximum performance. Optimised for touring and installations purposes, both have a rugged steel housing for a long life even under harsh conditions. The front panel offers a menu button, a USB connector and a 2” colour TFT as well as four LEDs displaying the current status. Additionally there is a USB –port for optionally update of firmware vis USB-stick. The mains switch is located on the back, along with the powerCON and etherCON connectors, as well as eight DMX ports. The MA 8Port Node is fully configurable from the grandMA2 consoles or from grandMA2 onPC. To achieve the highest flexibility, each DMX port can be individually configured as DMX-in or DMX-out.

MA 8Port Node is also available as “onPC” versions, meaning that the MA 8Port Node onPC can be used in combination with the free-of-charge grandMA2 onPC software running on a computer to provide 2,048 parameters. Furthermore MA 8Port Node onPC can be combined with the MA onPC command wing and MA onPC fader wing for parameter expansion.

## Intended Use

The complete grandMA2 family is intended for control of all kinds of lighting genres such as conventionals, moving lights, LEDs, video and media via DMX signal.



MA 8Port Node  
MA 8Port Node onPC

Optional accessory: Device for rack mounting

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

For more information and detailed manuals see: [www.malighting.com](http://www.malighting.com) Please check our Frequently Asked Questions first, that you can find online at [www.malighting.com](http://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](mailto:tech.support@malighting.com). This E-Mail Service is monitored during MA Lightings regular business hours in Germany. 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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## Data

<b>Current:</b>	100 – 240 V ~ (+/- 10%) 50 / 60 Hz (USA, Canada) Automatic operation, no switching necessary!
<b>Power cable:</b>	Only adequately protected cables may be used (min. $\varnothing = 3 \times 1,0\text{mm}^2$ ). (Power supply cable and connector not included ex works)
<b>Socket type Power In:</b>	PowerCon (blue) by NEUTRIK AG, Liechtenstein
<b>Socket type Power Out:</b>	PowerCon (grey) by NEUTRIK AG, Liechtenstein
	<b>ATTENTION!</b> The total current power consumption of the units connected in series must not exceed the maximum of the power source!
<b>Required plug connector:</b>	Must meet the standard in the respective country. The plug connector is not included in delivery.
<b>Power source</b>	<b>The socket should be serviced by qualified personnel only!</b>
<b>Power input:</b>	max. 20 VA

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## Specification



Weight approx.	2,2 kg / 4,8 pounds
Dimensions:	19"/1HU // 440mm (without rack mounting brackets) x 47mm x 190mm 17,3 inch (without rack mounting brackets) 19.0 inch (with rack mounting brackets) x 1,8 inch x 7,5 inch
8 DMX – OUT	(XLR 5 pin) on the rear side. Each DMX OUT can be individually configured as DMX IN.
Ethernet RJ 45	network connector
USB Port	connector on the front side. For update via USB-stick only. Do not connect any peripheral device (mouse, keyboard or similar)
2" TFT color monitor	
2 048 Parameter (MA 8Port Node onPC)	

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## Transport

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.

**MA onPC command wing**      **approx. 2,2 kg / 4,8 pounds** without cover, packaging, case

Remove all cables prior to transport.

The user is responsible for securely fastening the products for the means of transport and for observing the safety regulations of the manufacturer when using means of transport. Non-compliance can result in personal injury or material damage.

Use protective transport device for transport and storage.

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



**Please be aware of temperature and humidity during transport. Limits see chapter “Safety and Environment”.**

**Check the apparatus after transport before installation! If body of the apparatus is damaged (bent or broken), or the monitor is broken or keys or faders are damaged do not connect the apparatus to power! Call our hotline**

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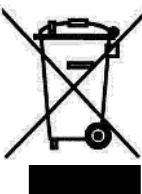
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## Symbols and warning labels

 <p><b>Warning</b> Danger Area</p>	 <p><b>Warning</b> Danger of electric shock</p>	 <p>Supply voltage ON/OFF</p>	 <p>Alternating current (AC)</p>	 <p>Dispose of as hazardous waste. Follow the local applicable regulations!</p>
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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 future use.  
Follow all cautions and warnings indicated on the unit.  
Disconnect the mains plug before cleaning the unit; do not 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 are necessary for the essential airflow within 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 could cause a fire and/or an electric shock.  
Do not place the unit on unstable surfaces. It may fall and become damaged.  
Do not place any objects on the power cord. Protect it from being walked on or pinched particularly at the plugs and the point where they exit from the apparatus.  
If the power cord or the mains plug is damaged, let a qualified technician replace it immediately.  
Only use power cords which are safety-marked for purpose.  
All service work should be exclusively performed by qualified service technicians.  
The unit is provided with a safety plug. This plug can only be used with safety sockets. These precautions should be followed by all means. 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 connection. The third connection is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement with an appropriate outlet.

As with all industrially manufactured goods, the use of substances that induce an allergic reaction such as aluminium 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 potential harm to 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 has fallen and the housing damaged.

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

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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 harm to others, you run the risk of suffering an electric shock.



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## Operating limits

### Temperature

Operation:

+5°C up to + 40°C / 41°F up to + 104°F

Higher temperature can over-stress the cooling system of the apparatus and destroy hardware components.

Storage / Transport:

-10°C up to + 50°C / 14°F up to + 122°F

### Humidity

Operation: 20% up to 80% relative humidity (no condensation)

Storage / Transport: 10% up to 80% relative humidity (no condensation)

### Environment

Follow all the IMPORTANT SAFETY INSTRUCTIONS.

Only use the apparatus within the environment operating limits.

Only use the apparatus indoors.

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

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

Do not use the apparatus in rain or moisture.

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## Connectivity (Illustration shows optional accessories)



8 x DMX OUT (XLR 5 pin)  
RJ45 Ethernet socket  
PowerCon (blue)

Ports can also be configured to DMX IN  
Network connection  
100 – 240 V~ (+/- 10%) 50/60 Hz (USA, Kanada)  
Automatic operation, no switching necessary!. PowerCon plug (blue) is Included in delivery. The open end must be fitted with a shock-proof plug and must meet the local requirements.

PowerCon Out (grey)

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

Main switch

To turn on or off the device



USB socket  
MENU –button  
POWER-LED green  
LINK-LED green  
DATA-LED green  
BOOT-LED red

To update via USB-stick - do not connect peripherals –mouse, keyboard, etc.!  
To switch the menu and setting of parameters (see also Quickstart ON/OFF)  
Steady = device is ready  
Steady = light signals correct connection to onPC or console  
Flashes = data-traffic  
Lights during the boot process

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## Connect / examples

MA 8Port Node connect to console - max 2048 parameters per Node



MA 8Port Node onPC + MA onPC command wing with Laptop/PC - max 4 096 parameters



MA Lighting offers a bunch of possibilities to expand your parameter count for grandMA2 onPC. All products in the “MA onPC” range are capable of adding parameters. There are just two simple rules that need to be followed:

First rule: The maximum parameter count with grandMA2 onPC is 4,096 parameters.

Second rule: In any combination MA 8Port Nodes onPC, MA 4Port Node onPC, MA 2Port Node onPC/PRO as well as MA onPC command wing and MA onPC fader wing will add parameters up to this maximum.

Example 1: grandMA2 onPC + MA onPC command wing (2,048 parameters) + MA 2Port Node onPC (512 parameters) + MA 2Port Node onPC PRO (1,024 parameters) = 3,584 parameters.

Example 2: grandMA2 onPC + MA onPC command wing (2,048 parameters) + MA 2Port Node onPC (512 parameters) + MA 48Port Node onPC (2,048 parameters) = is no higher number of parameters.

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# Installation

Options for 19" rack mounting



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## Display

The MA 8Port Node display will only show the most important settings. For configuring a node, you have to use a grandMA console or the „onPC“ software.

After switching the device on, the display will show this menu:



Name of MA 8Port Node

DMX Output

IP – Address

Mode

Number of Session

Configuration of DMX-Ports

Univers

e.g. support8Node

e.g. 30 = frequency of DMX-output in Hz; max. 30Hz possible

e.g..192.168.0.116

MANET2 or ARTNET

e.g. Session 3 - MA 8Port Node is part of session 3

e.g. Session 0 = no session

e.g. Session 3 + areas OUT grey highlighted = no active session

**In** – this port receives DMX

**OUT** – this port sends DMX

Flashing frequency of the green area corresponds to the refresh quote between MA 8Port Node and PC/console

**OFF** – this port is off

Univers number of respective ports 1 - 256

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## Display

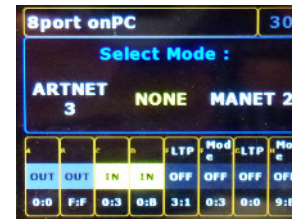
After switching on this menu is displayed:



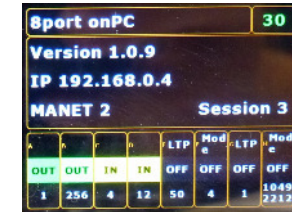
Hold button MENU as long until the desired menu appears. Release the button when in a menu adjustment is to be made. To change the setting, press the button briefly, the new setting is color-coded. After a short time display returns to the above menu.

Select Mode:

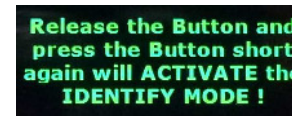
Use the MENU-button to select NONE, MANET 2 or ARTNET.



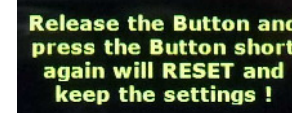
Info Mode: no settings possible



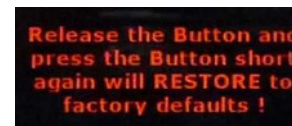
Identify Mode: identifies this MA 8Port Node by flashing the respective configuration line in the console/onPC



Reset Mode: the MA 8Port Node will be reseted, all settings will remain.



Restore Mode: the MA 8Port Node will be reseted to Factory Default  
NOTE: after reset customize IP -number.



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## Update without session

**Hinweis.** Do not use so-called Type U3 USB-sticks (with two physically drives on a single USB-stick) for firmware-update.



- create an USB-stick with STICKMAKER – programm and installation programm 8port\_v\_.x.y.imgz. (free of charge download from MA-web site)
- connect USB-stick.
- switch on MA 8Port, short after there following instruction appears:  
„Please press key for update/recovery”
  - press button MENU now.

Now following instruction appears

„Please press key for FORMAT”.

Simultaneously for a few seconds a loading bar starts.

- - When the button MENU is pressed within this few seconds, the MA 8Port Node will be reseted. And after automatic reboot the IP address is set to 192.168.0.xxx (xxx means the last three digits of serial number of the unit)
- - When the button MENU is not pressed within this few seconds, the MA 8Port Node will be updated – all settings remain.
- After instruction „Please remove USB stick for reboot” please remove the stick, MA 8Port Node starts booting automatically.

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## Update from grandMA2 console or onPC

The 8Port Node can be updated from a grandMA console or using the onPC software. To do so, the 8Port Node must be present in the same network as the console (grandMA2, grandMA2 light, grandMA2 ultralight, or grandMA2 onPC), i.e. the first 3 IP address groups must be identical.

If the cell „Firmware“ has red letters, the 8Port Node runs a software version different from that of the console or onPC. In this case, you have to adapt the software versions as follows:

The screenshot shows the 'Software Update' window in grandMA2. The title bar indicates 'Stations with updateable version' and 'Master 3'. The main area contains a table with the following data:

+ IP	Status	Name	Version	Type	Session Id	Session Name
192.168.0.222	Master	grandMA2	2.9.0.4	Fullsize	3	check2904
192.168.0.4	Standalone	8port onPC	1.0.1	8Port 2048	3	check2904

Below the table, there is a section for 'Your grandMA' with console details: 'Console Fullsize 2.9.0.4 / Build date: Oct 18 2013 / Build time: 15:22:37 / Parameter count: 8192'. Underneath, 'Available Network Software Update Packages' are listed: '- Console Linux 2.9.0.5', '- NPU Linux 2.9.0.5', '- Video Windows 2.9', and '- Node Linux 1.0.9'. At the bottom, there are buttons for 'Update Devices!', 'Show Same Version', and 'Session Filter Off'.

- create an USB-stick (FAT 32) with installation programm 8port\_v\_.x.y.update
- Open menu SETUP / CONSOLE XYZ / SOFTWARE UPDATE at the console or onPC.
- Connect USB-stick with the console.
- Select the appropriate MA 8Port Node in the overview.
- Press the button UPDATE DEVICE. After automatically Reboot of MA 8Port Node the cell "Firmware" must have white letters.

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## Quick Start

These are the basic steps to start up the MA 8Port Node::

- download grandMA2 onPC software from MA-Homepage and install software on PC or Laptop. For minimum requirements see : [www.malighting.com](http://www.malighting.com)

The 8Port Node is supported by grandMA2 consolen / grandMA2 onPC with software V2.9 and higher.

- connect MA 8Port Node (100 - 240V~ (+/- 10%) ,50 or 60 Hz).

- Connect the MA 8Port Node using a network cable (RJ45 plug). Either via the switch / hub or by directly plugging it into a PC or laptop computer or grandMA 2 console.

- start grandMA2 –console or grandMA2 onPC and switch on MA 8Port Node (set main switch at the back to „I“). It takes about 30 seconds until the MA 8Port Node ist ready.

The MA 8Port Node display will only show the most important settings. For configuring a node, you have to use a grandMA console or the „onPC“ software.

- Open menu SETUP / CONSOLE XYX / SOFTWARE UPDATE at the console or onPC..

If necessary update firmware-version of MA 8Port Node – (necessary when area "Version" is red colored.

- if necessary change IP – address of MA 8Port Node. When several MA 8Port Node are available, the respective node can be identified with button IDENTIFY - display and LED of the selected node flashes) - (not for version 2.8)

Name the MA 8Port Node (optional).

- select mode.

- select session ID (only at MANET) – use same ID as used in session of console or onPC.

- select function (IN, OUT or NONE) of DMX-Ports and set univers number.

- connect DMX-cable at the back side - ready.

## Turn OFF

- Set main switch an the back side to position „O“.

Note:

Disconnecting the MA 8Port Node from your PC or notebook is always possible – however DMX –output is interrupted immediately.

Show is always stored on your PC or notebook, not on your MA 8Port Node.

- For longer non use disconnect all cables.

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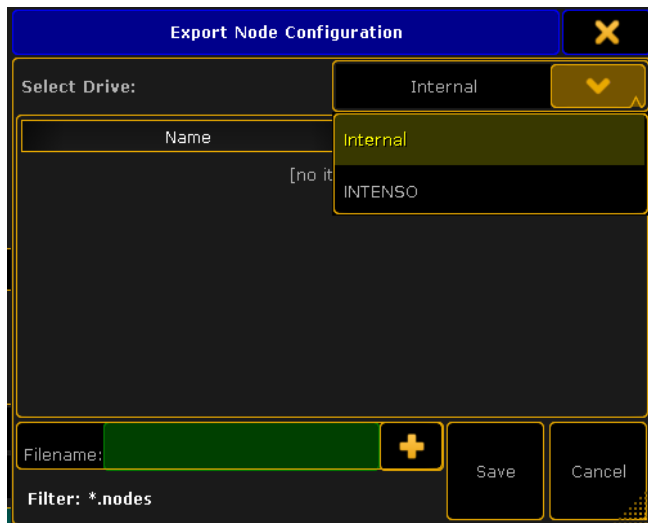
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## Save Configuration /settings

You can save the settings of MA 8Port Node on the hard drive of a grandMA2 console/onPC or (version 2.9 and higher) on a USB-flash drive.

- Open menu SETUP / NETWORK /MA NETWORK CONFIGURATION, select device and press button **EXPORT CONFIGURATION**.
- Select drive. Internal ( onPC or console) or External (name of USB-flash drive)
- Type file name and press **SAVE** or **CANCEL** (abort).



## Load Configuration /settings

- Open menu SETUP / NETWORK /MA NETWORK CONFIGURATION, select device and press button **IMPORT CONFIGURATION**.
- Select drive. Internal ( onPC or console) or External (name of USB-flash drive)
- Select file and press **OPEN** or **CANCEL** (abort).

If you have integrated additional MA 8Ports into the Show or exchanged a MA 8Port, after having saving the configuration, these MA 8Ports will not be taken into account when loading this configuration (even if the IP address wasn't changed). You will first have to configure these „new“ MA 8Ports and then create a new configuration file using EXPORT CONFIG.

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## Cleaning

The MA 4Port Node only requires minor attention. Disconnect electric power supply prior to cleaning. Clean the surface only with dry soft cloth. Do not use any liquid cleaner or compressed air. Do not use any solvent. Check ventilation holes are clear.

Depending on the environment we recommend to clean the device professionally every 2 – 5 years.

## 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:** MA 8Port Node

is conform to the following directives and harmonized standards:

**Safety:** EN60065, EN60950-1

**EMV (EMC):** 2014/30/EG

EN55103-1:2009 (E1) as well as EN55103-2:2009 (E2)

**ROHS (II):** 2011/65/EU

**Additional information:** DMX512, Ethernet and USB must be shielded and the shielding must be connected to the earthing resp. to the housing of the corresponding plug.

Waldbüttelbrunn, July, 5th. 2013

Dipl. Ing. Michael Adenau



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## grandMA2 onPC

This software tool incorporates all functions of a „real“ grandMA2 console. It communicates with grandMA2 consoles via MA-Net2 over Ethernet and is can be used for running, programming or offline programming a show. Furthermore it is expandable to a complete design studio by connecting it to grandMA 3D.

.... and it's the basis for the function of the MA 8Port Node.



The grandMA2 onPC and grandMA 3D software can be downloaded free of charge at [www.malighting.com](http://www.malighting.com) There you will find the relevant system requirements as well.



## ... and the other members of the grandMA2 family



grandMA2 full-size



grandMA2 light



grandMA2 ultra-light



grandMA2 faderwing

The new signature console of MA Lighting is the grandMA2 full-size. It controls all kinds of lighting genres like conventionals, moving lights, LEDs, video and media. Equipped with the most up-to-date technology and even some special tools (e.g. keyboard drawer or multi-touch command screen) the grandMA2 full-size is at home in all lighting segments. Intuitive and fast control over all connected fixtures and channels in different styles is self-evident. Furthermore the newly developed faderwing provides in addition up to 60 executor faders over almost unlimited amount of pages. Moreover the grandMA2 full-size can read 'series 1'-showfiles and is able to run in a special 'series 1'-mode. That means full compatibility with 'series 1'-sessions. All command keys within the new series can be found in the same place for easy operation. The grandMA2 offers a highly flexible and comfortable way of programming, including nearly infinite numbers of presets, cues, pages, sequences and effects.