BOTEX
STAGE TECHNOLOGY

Dr. RDM I DMX RDM Tester

User Manual

Controller

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Table of contents

1 General information **5**

1.1 Symbols and signal words 5

2 Safety instructions **7**

3 Features **9**

4 Installation and starting up **10**

5 Connections and controls **13**

6 Operating **15**

6.1 Main menu 16

6.2 DMX 512 test 18

6.3 RDM-Test 30

6.4 MIDI-Test 52

6.5 Cable test 55

6.6 Device settings 56

7 Technical specifications **61**

8 Plug and connection assignment **63**

9 Protecting the environment **64**


MAIN MENU
Dr. RDM I DMX RDM Tester
DMX/RDM Analyzer

1 General information

This document contains important instructions for the safe operation of the product. Read and follow the safety instructions and all other instructions. Keep the document for future reference. Make sure that it is available to all those using the product. If you sell the product to another user, be sure that they also receive this document.

Our products and documentation are subject to a process of continuous development. They are therefore subject to change. Please refer to the latest version of the documentation, which is ready for download under *www.thomann.de*.

1.1 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this document.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.

Warning signs	Type of danger
	Warning – high-voltage.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is for testing devices that are controlled via DMX, RDM or MIDI or output these signals. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety

DANGER!

Risk of injury and choking hazard for children!

Children can suffocate on packaging material and small parts. Children can injure themselves when handling the device. Never allow children to play with the packaging material and the device. Always store packaging material out of the reach of babies and small children. Always dispose of packaging material properly when it is not in use. Never allow children to use the device without supervision. Keep small parts away from children and make sure that the device does not shed any small parts (such knobs) that children could play with.

DANGER!

Danger to life due to electric current!

Within the device there are areas where high voltages may be present. Never remove any covers. There are no user-serviceable parts inside. Do not use the device when covers, safety equipment or optical components are missing or damaged.

NOTICE!

Damage to the external power supply due to high voltages!

The device is powered by an external power supply. The external power supply can be damaged if it is operated with the incorrect voltage or if high voltage peaks occur. In the worst case, excess voltages can also cause a risk of injury and fires. Make sure that the voltage specification on the external power supply matches the local power grid before plugging in the power supply. Only operate the external power supply from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). Ensure that the power cord plug is easily accessible at all times if it is the only device to safely disconnect the device from the mains supply. As a precaution, disconnect the power supply from the power grid when storms are approaching or it the device will not be used for a longer period.

NOTICE!

Damage to the device due to use of unsuitable external power supplies!

If the device is operated with an unsuitable external power supply, the device can be damaged by overvoltage or incorrect polarity. If things go badly, using an unsuitable power supply can also cause a risk of injury and fire. Only use the external power supply designated for the device or an equivalent external power supply with identical parameters. If in doubt, compare the voltage specifications on the external power supply and the polarity (+/-) with the specifications in this manual and printed on the device. Voltage and polarity must always match.

NOTICE!

Damage to the device if operated in unsuitable ambient conditions!

The device can be damaged if it is operated in unsuitable ambient conditions. Only operate the device indoors within the ambient conditions specified in the "Technical specifications" chapter of this user manual. Avoid operating it in environments with direct sunlight, heavy dirt and strong vibrations. Avoid operating it in environments with strong temperature fluctuations. If temperature fluctuations cannot be avoided (for example after transport in low outside temperatures), do not switch on the device immediately. Never subject the device to liquids or moisture. Never move the device to another location while it is in operation. In environments with increased dirt levels (for example due to dust, smoke, nicotine or mist): Have the device cleaned by qualified specialists at regular intervals to prevent damage due to overheating and other malfunctions.

3 Features

- Universal test device for DMX, RDM and MIDI networks
- 5-pin DMX in and output
- MIDI input
- Plug-in power supply and adapter for 3-pin DMX plug included
- Operating via buttons and display on the unit

4 Installation and starting up

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.

The included lanyard can be threaded through the bottom of the device.

Inserting batteries

NOTICE!

Risk of fire due to incorrect polarity!

Incorrectly inserted batteries may cause fires and destroy the device and the batteries.

Observe the markings on the batteries and on the device.

Ensure that proper polarity is observed when inserting batteries.

NOTICE!

Possible damage due to leaking batteries!

Batteries can leak and cause permanent damage to the device.

Take the batteries out of the device if it is not going to be used for an extended period of time.

Only rechargeable NiMH batteries may be used.

The battery compartment is located on the back of the device.

The batteries are not included in the scope of delivery.

1. Loosen the screw of the battery compartment cover using a cross-head screwdriver. Remove the cover.
2. Insert the batteries (4 × NiMH, AAA, rechargeable) into the battery compartment. Pay attention to the correct location of the poles.
3. Replace the battery compartment cover. Tighten the cover.

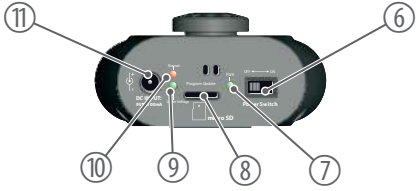
Charging the batteries

Use the included power adapter to charge the inserted batteries.

- Connect the supplied power adapter to the power supply input of the device and then plug the power adapter into a mains socket.

  ⇨ The batteries are being charged. The *[Normal]* LED lights up when the batteries are fully charged.

5 Connections and controls



1	Jog wheel for control and menu selection
2	Display. The display is turned off if no button is pressed within an adjustable period of time. Press the jog wheel to reactivate the display.
3	*[DMX/RDM OUT]* | 5-pin DMX/RDM output
4	*[DMX/RDM IN]* | 5-pin DMX/RDM input
5	*[MIDI In]* | MIDI input
6	*[Power Switch]* | Main switch. Turns the device on and off.
7	*[PWR]* | The LED indicates that the device is switched on.
8	*[Program Update]* | Micro-SD slot
9	*[Under Voltage]* | This LED lights up when the supply voltage is too low.
10	*[Normal]* | The LED indicates that the supply voltage is within the permitted range.
11	*[DC Input]* | Connection for the included power supply adapter.

6 Operating

The device can be powered by batteries or with the included power supply.

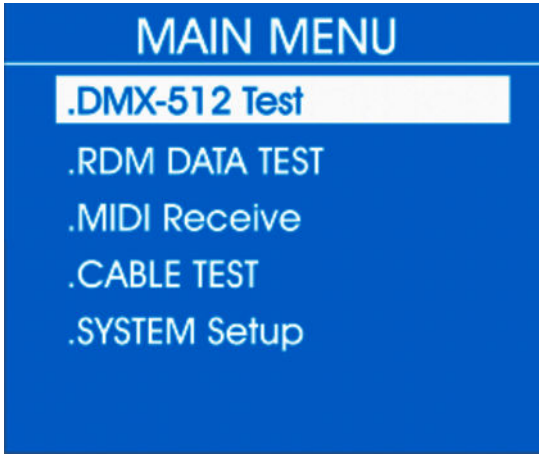
Battery operation: Insert the batteries in the device. *'Inserting batteries' on page 10*

Operation with the power supply: Connect the supplied power adapter to the power supply input of the device and then plug the power adapter into a mains socket.

6.1 Main menu

Selection in main menu

1. Turn the jog wheel to highlight a menu item.
2. Press the jog wheel to select the highlighted menu item.
3. Press the jog wheel again to open the associated submenu.
4. The display shows the available elements of the submenu.
5. Select the *'EXIT'* menu item and press the jog wheel to return to the main menu.


MAIN MENU
.DMX-512 Test
.RDM DATA TEST
.MIDI Receive
.CABLE TEST
.SYSTEM Setup

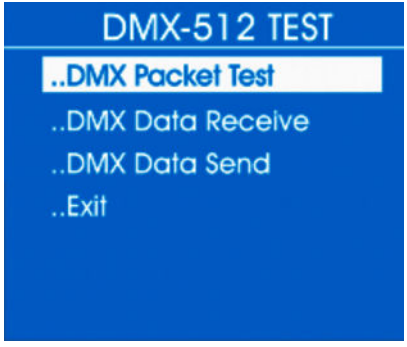
6.2 DMX 512 test

This menu allows you to monitor the data packets being received by DMX-controlled devices or sending test data to the devices.

1. Select the item *'DMX-512 TEST'* from the main menu.

2. Press the jog wheel to open the respective submenu.

⇨ The display shows:

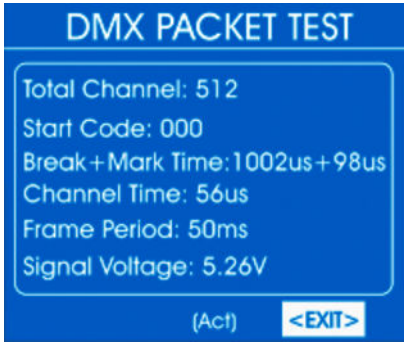


3. Select one of the submenus *'DMX Packet Test'*, *'DMX Data Receive'* or *'DMX Data Send'*.

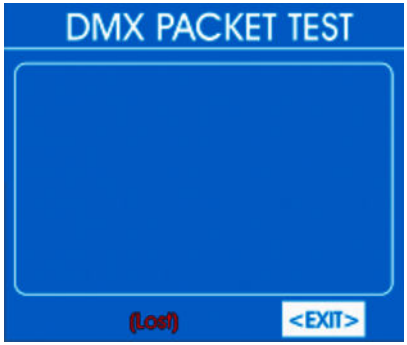
DMX packet test

1. In the *'DMX-512 Test'* submenu, select the item *'DMX Packet Test'*.
2. Press the jog wheel to open the respective submenu.

   ⇨ If the wiring is correct and a DMX signal is received, the display shows the following values:



If no signal is received, the display shows:



In this case, check the wiring and the correct fit of the connectors.

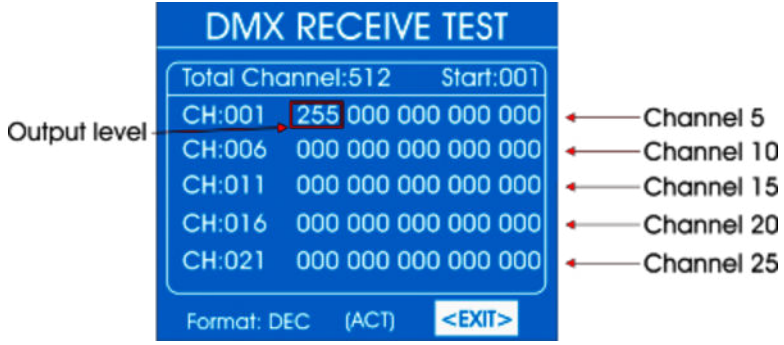
3. To return to the parent menu, select *'EXIT'* and press the jog wheel to confirm.

Analysis of received DMX data

1. In the *'DMX-512 Test'* submenu, select the item *'DMX Data Receive'*.

2. Press the jog wheel to open the respective submenu.

⇨ The display shows:



It will display the received DMX value (*'000'* … *'255'*) for every 25 channels.

3. To change the first displayed channel, use the jog wheel to select *'Start'* and press the jog wheel. Turn the jog wheel until the number of the desired channel appears at *'Start'*. Press the jog wheel to confirm.

4. To change the display format, use the jog wheel to select *'Format'* and press the jog wheel. Turn the jog wheel to select one of the following formats.

- *'DEC'*: Decimal values
- *'PER'*: Percentage values

- *'BAR'*: Bars of squares
- *'RGB'*: Squares with RGB colour mixing
- *'BRG'*: Squares with BGR colour mixing
- *'HEX'*: Hexadecimal values

Press the jog wheel.

5. To return to the parent menu, select *'EXIT'* and press the jog wheel to confirm.

Analysis of transmitted DMX data

1. In the *'DMX-512 TEST'* submenu, select the item *'DMX Data Send'*.
2. Press the jog wheel to open the respective submenu.
   ⇨ The display shows:

3. In the *'DMX-512 SEND'* submenu, select the item *'Single Channel Mode'*.
4. Press the jog wheel to open the respective submenu.
   ⇨ The display shows:

5. To select the channel on which the data should be sent, select the item *'Channel'*. Press the jog wheel. Use the jog wheel to set a value between 1 and 512 – or *'All'* for transmission on all channels.

6. To select an operating mode, select *'Mode'*. Press the jog wheel. Use the jog wheel to select one of the following options:

- *'Fader Only'*: The transmitted DMX value can be adjusted between 0 and 255 with the jog wheel.
- *'Auto ON/OFF'*: The transmitted DMX value automatically changes at the set speed
- *'Ramping'*: The transmitted DMX value rises evenly with the set speed, then the process repeats itself
- *'Stop'*: The transmitted DMX value can not be changed

7. To select the value range of the data transmitted, select the item *'Channel Level'*. Press the jog wheel. Use the jog wheel to set a value between 0 and 255.

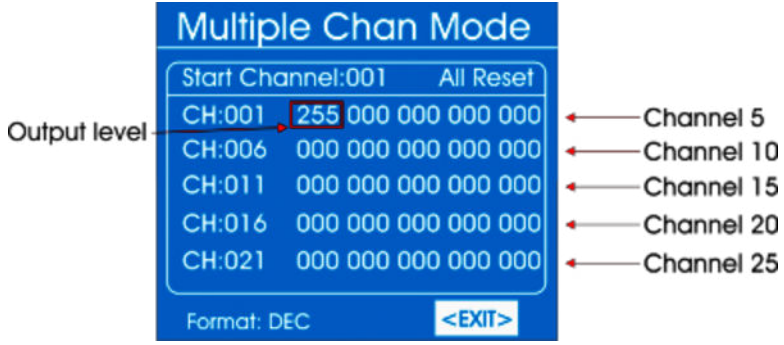
8. To set the rate of change, select *'Speed'*. Press the jog wheel. Use the jog wheel to set a value between *'level 0'* and *'level 10'*.

9. To return to the parent menu, select *'EXIT'* and press the jog wheel to confirm.

10. In the *'DMX-512 SEND'* submenu, select the item *'Multiple Channel Mode'*.

11. Press the jog wheel to open the respective submenu.

⇨ The display shows:



12. To change the first channel for which DMX values are to be sent, use the jog wheel to select *'Start/Channel'* and press the jog wheel. Turn the jog wheel until the number of the desired channel appears at *'Start'*. Press the jog wheel to confirm.

13. To set the transmitted DMX value in the range 0 to 255, first select the value with the jog wheel. Press the jog wheel. Set the desired value with the jog wheel. Press the jog wheel.

14. To change the display format, use the jog wheel to select *'Format'* and press the jog wheel. Turn the jog wheel to select one of the following formats.

- *'DEC'*: Decimal values
- *'PER'*: Percentage values
- *'BAR'*: Bars of squares
- *'HEX'*: Hexadecimal values

Press the jog wheel.

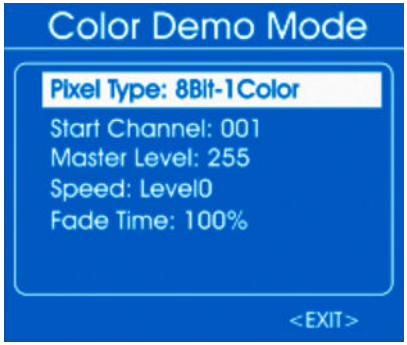
15. To reset the transmitted DMX value, use the jog wheel to select the item *'All Reset'* and press the jog wheel.

16. To return to the parent menu, select *'EXIT'* and press the jog wheel to confirm.

17. In the *'DMX-512 SEND'* submenu, select the item *'Color Demo Mode'*.

18. Press the jog wheel to open the respective submenu.

⇨ The display shows:



19. Use the jog wheel to select the setting to be changed and press the jog wheel. Turn the jog wheel to select or adjust a value. The following table shows the menu items and choices.

Menu item	Choices	Meaning
'Pixel Type'	*'8Bit'*, *'16Bit'*	Resolution of connected devices
'Start Channel'	*'1'* … *'512'*	First channel for which DMX values are to be sent
'Master Level'	*'0'* … *'255'*	Maximum DMX value
'Speed'	*'Level0'* … *'Level10'*	Running speed
'Fade Time'	*'0%'* … *'100%'*	Fade time

20. To return to the parent menu, select *'EXIT'* and press the jog wheel to confirm.

21. In the *'DMX-512 SEND'* submenu, select the item *'Chase Demo Mode'*.

22. Press the jog wheel to open the respective submenu.

⇨ The display shows:

23. Use the jog wheel to select the setting to be changed and press the jog wheel. Turn the jog wheel to select or adjust a value. The following table shows the menu items and choices.

Menu item	Choices	Meaning
'Start Chan.'	*'1'* … *'512'*	First channel for which DMX values are to be sent
'Master'	*'0'* … *'255'*	Maximum DMX value
'Pixel Type'	*'8Bit'*, *'16Bit'*	Resolution of connected devices

Menu item	Choices	Meaning
'Total Pixel'	*'1'* … *'512'*	Number of connected devices
'Pixel Group'	Value within the range of *'Total Pixel'*	Number of devices in a group
'Jump Pixel'	Value within the range of *'Pixel Group'*	Number of devices that will be switched within the group
'Test Color'	*'Color 1'*, *'All'*	Number of colours of the spotlight to be tested
'Speed level'	*'Level0'* … *'Level10'*, *'Manual'*	Running speed
'Fade Time'	*'0%'* … *'100%'*	Fade time

24. To return to the parent menu, select *'EXIT'* and press the jog wheel to confirm.

25. To return to the main menu, select *'EXIT'* again and press the jog wheel to confirm.

6.3 RDM-Test

This menu allows you to retrieve information about the connected RDM-controlled devices or send test data to the devices.

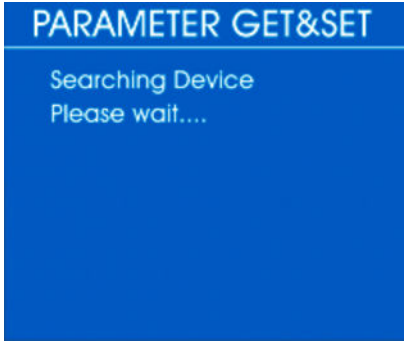
1. Select the *'RDM DATA TEST'* item from the main menu.
2. Press the jog wheel to open the respective submenu.
   ⇨ The display shows:

3. Select one of the submenus *'Get&Set RDM Parameter'* or *'Update RDM Device'*.

Retrieve RDM parameters - Identify Device

1. In the *'RDM DATA TEST'* submenu, select the item *'Get&Set RDM Parameter'*.
2. Press the jog wheel to open the respective submenu.

   ⇨ The display shows:



If the wiring is correct and an RDM-controlled device is found, the display shows real-time information about the device:

If no signal is received, the display shows:

In this case, check the wiring and the correct fit of the connectors.

3. For more detailed information, use the jog wheel to select *'Para'*. Press the jog wheel.

⇨ The display shows:

4. The selectable parameters depend on the respective device, examples: *'Identify Device'*, *'Device Info'*, *'DMX Start Address'*.

5. To retrieve a parameter, select it with the jog wheel and press the jog wheel. Select *'Get Parameter'* and press the jog wheel.

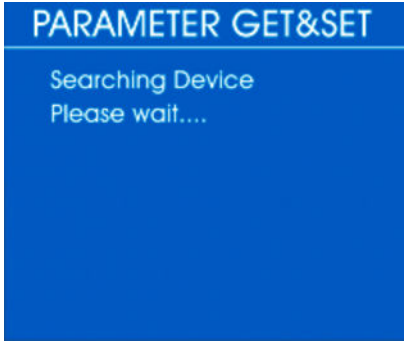
⇨ The display shows, for example:

6. Use the jog wheel to select *'Fresh'* to refresh the displayed information, or *'EXIT'* to return to the parent menu. Press the jog wheel.

Retrieve RDM Device Information - Device Info

1. In the *'RDM DATA TEST'* submenu, select the item *'Get&Set RDM Parameter'*.
2. Press the jog wheel to open the respective submenu.

   ⇨ The display shows:



If the wiring is correct and an RDM-controlled device is found, the display shows real-time information about the device:

If no signal is received, the display shows:

In this case, check the wiring and the correct fit of the connectors.

3. For more detailed information, use the jog wheel to select *'Para'*. Press the jog wheel.

⇨ The display shows:

4. The selectable parameters depend on the respective device, examples: *'Identify Device'*, *'Device Info'*, *'DMX Start Address'*.

5. To retrieve a parameter, select it with the jog wheel and press the jog wheel. Select *'Get Parameter'* and press the jog wheel.

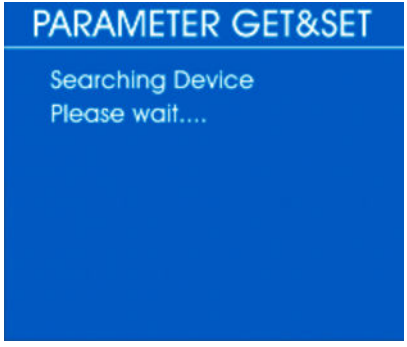
⇨ The display shows, for example:

6. Use the jog wheel to select *'More Info'* to access further parameters.

7. Use the jog wheel to select *'Fresh'* to refresh the displayed information, or *'EXIT'* to return to the parent menu. Press the jog wheel.

Changing RDM parameters

1. In the *'RDM DATA TEST'* submenu, select the item *'Get&Set RDM Parameter'*.
2. Press the jog wheel to open the respective submenu.
   ⇨ The display shows:



If the wiring is correct and an RDM-controlled device is found, the display shows real-time information about the device:

If no signal is received, the display shows:

In this case, check the wiring and the correct fit of the connectors.

3. To change individual parameters, use the jog wheel to select *'Para'*. Press the jog wheel.

⇨ The display shows:

4. The selectable parameters depend on the respective device, examples: *'Identify Device'*, *'Device Info'*, *'DMX Start Address'*.

5. To retrieve a parameter, select it with the jog wheel and press the jog wheel. Select *'Set Parameter'* and press the jog wheel.

⇨ The display shows, for example:

6. Use the jog wheel to select *'Start Identify'* to start or *'Stop Identify'* to stop the identification. Press the jog wheel.

7. To select which devices should be affected by the change, use the jog wheel to select *'Only self'* and press the jog wheel. Turn the jog wheel to select one of the following formats.

- *'Only Self'*: Change only affects the selected device
- *'Same mfrs'*: Change affects all devices from the same manufacturer as the selected device
- *'All Device'*: Change affects all connected devices

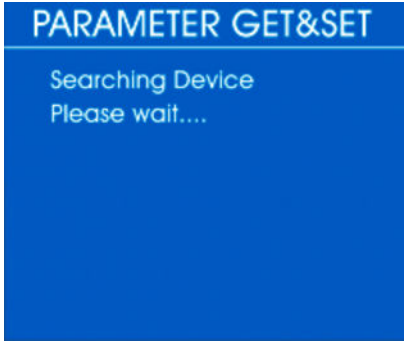
Press the jog wheel.

8. Use the jog wheel to select *'Ok&Save'* and press the jog wheel to save the change.

9. Use the jog wheel to select *'EXIT'* to return to the parent menu. Press the jog wheel.

Display or change of the DMX address of an RDM-controlled device

1. In the *'RDM DATA TEST'* submenu, select the item *'Get&Set RDM Parameter'*.
2. Press the jog wheel to open the respective submenu.
   ⇨ The display shows:



If the wiring is correct and an RDM-controlled device is found, the display shows real-time information about the device:

If no signal is received, the display shows:

In this case, check the wiring and the correct fit of the connectors.

3. To change individual parameters, use the jog wheel to select *'Para'*. Press the jog wheel.

⇨ The display shows:

4. Use the jog wheel to select *'Para: DMX Start Address'* and press the jog wheel.

5. To display the current DMX address, select *'Get Parameter'* and press the jog wheel.

⇨ The display shows, for example:

6. Use the jog wheel to select *'Fresh'* to refresh the displayed information, or *'EXIT'* to return to the parent menu. Press the jog wheel.

7. To change the DMX address, use the jog wheel to select *'Set Parameter'* and press the jog wheel.

⇨ The display shows, for example:

8. Use the jog wheel to select *'Channel:'* and press the jog wheel.

Set the desired value with the jog wheel. Press the jog wheel to confirm.

9. To select which devices should be affected by the change, use the jog wheel to select *'Only self'* and press the jog wheel. Turn the jog wheel to select one of the following formats.

- *'Only Self'*: Change only affects the selected device
- *'Same mfrs'*: Change affects all devices from the same manufacturer as the selected device
- *'All Device'*: Change affects all connected devices

Press the jog wheel.

10. Use the jog wheel to select *'Ok&Save'* and press the jog wheel to save the change.

11. Use the jog wheel to select *'EXIT'* to return to the parent menu. Press the jog wheel.

Software update of an RDM-controlled device

1. In the *'RDM DATA TEST'* submenu, select the item *'Update RMD device'*.
2. Press the jog wheel to open the respective submenu.

   ⇨ The display shows:

If the wiring is correct and an RDM-controlled device is found, the display shows real-time information about the device:

If no signal is received, the display shows:

In this case, check the wiring and the correct fit of the connectors.

3. Insert a micro SD card with the required software into the micro SD slot of the device.

4. Use the jog wheel to select *'Send: Single device'*. Press the jog wheel.

⇨ The display shows:

5. To retrieve a parameter, select it with the jog wheel and press the jog wheel. Select *'Single device'* (transmission to one device) or *'All devices'* (transmission to all devices) and press the jog wheel.

⇨ The software is transferred to the devices.

6. Use the jog wheel to select *'EXIT'* to return to the parent menu. Press the jog wheel.

6.4 MIDI-Test

This menu allows you to test the data of a MIDI-controlled device.

1. Connect a MIDI device to the MIDI input.
2. Select the item *'MIDI Receive'* from the main menu.

3. Press the jog wheel to open the respective submenu.

⇨ The display shows:

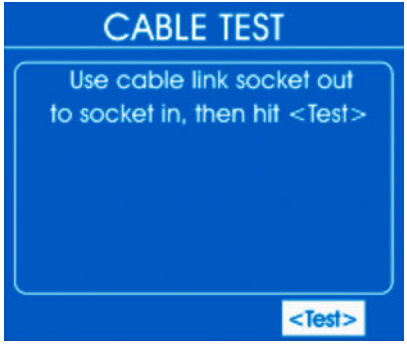
After a few seconds, the *'ACT'* indicator appears in the lower left corner of the display. Once the data have been received from a MIDI device, the display shows:

4. To return to the parent menu, select *'EXIT'* and press the jog wheel to confirm.

6.5 Cable test

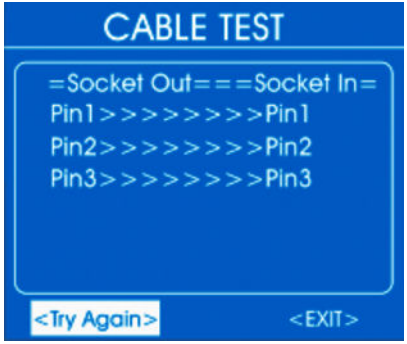
This menu allows you to test a DMX cable.

1. Connect the cable to be tested to the DMX input and the DMX output.
2. Select the item *'CABLE TEST'* from the main menu.
3. Press the jog wheel to open the respective submenu.
   ⇨ The display shows:



4. Use the jog wheel to select *'Test'* and press the jog wheel.

   ⇨ After a few seconds, the display shows the test result. If all wires are correctly connected, the display shows:



5. To repeat the test, select *'Try Again'* and press the jog wheel to confirm.
6. To return to the parent menu, select *'EXIT'* and press the jog wheel to confirm.

6.6 Device settings

In this menu, you can adjust device settings.

1. Select the *'SYSTEM Setup'* item from the main menu.
2. Press the jog wheel to open the respective submenu.
   ⇨ The display shows:

Turn the jog wheel to scroll down the list:

3. Use the jog wheel to select the setting to be changed and press the jog wheel. Turn the jog wheel to select or adjust a value. The following table shows the menu items and choices.

Menu item	Choices	Meaning
'TX Start Code'	*'0'* … *'255'*	Start value for the DMX data transmission.
'RX Start Code'	*'0'* … *'255'*, *'All'*	This code is required if you want several test devices to work as transmitters. In this case, all test devices must be set to the same code. If you select *'All'*, the device accepts all start codes.
'Auto Identify'	*'Auto'*	Automatic transmission of a request for identification to all connected devices if the menu item *'Get&Set RDM Parameter'* is selected.
	'OFF'	No automatic request for identification.
'16bit Format'	*'MSB first'*	In 16-bit mode: higher-value byte first
	'LSB first'	In 16-bit mode: higher-value byte last
'Format'	*'Decimal'*, *'Percents'*, *'BAR (square)'*, *'Hexadecimal'*	Selection of the display format for numerical values: decimal, percentage, as a bar or hexadecimal
'Contrast Level'	*'10'* … *'100'*	Display contrast setting
'Backlight Off'	*'30 sec'*, *'1 min'*, *'5 min'*, *'10 min'*, *'30 min'*	Setting the time after which the display turns off automatically.

Menu item	Choices	Meaning
'Auto Mask Device'	*'ON'*	A connected RDM-controlled device does not appear in the overview. If you set its DMX address, the other devices without DMX address appear in the overview.
	'OFF'	A connected RDM-controlled device appears in the overview.
'DMX Output When RDM'	*'ON'*	DMX signals can also be sent in RDM mode.
	'OFF'	No DMX signals are sent in RDM mode.
'DMX Output Level'	*'0'* … *'255'*	Maximum DMX output level if the option *'DMX Output When RDM'* is set to *'ON'*.

4. Select *'OK&Save'* and press the jog wheel to confirm.

⇨ The values are saved.

5. To return to the parent menu, select *'EXIT'* and press the jog wheel to confirm.

7 Technical specifications

Control protocols	DMX512, RDM, MIDI	
Input connections	DMX/RDM control	1 × XLR panel plug, 5-pin
	MIDI	1 × DIN socket, 5-pin
	Power supply	Hollow plug socket for the power adapter
	Data interface	1 × Micro-SD card slot
Output connections	DMX/RDM control	1 × XLR panel socket, 5-pin
Power supply	External power adapter, 100 - 240 V ~ 50/60 Hz	
Operating voltage	9 V…12 V ⎓ / 500 mA, centre positive	
Battery	Battery type	4 × Ni MH, AAA, rechargeable
	Voltage	1.2 V
	Capacity	1,100 mAh
	Operating time	10 h
	Charging time in the device	approx. 10 h
Dimensions (W × H × D)	170 mm × 100 mm × 40 mm	
Weight	0.28 kg	

Ambient conditions	Temperature range	0 °C…40 °C
	Relative humidity	20%…80% (non-condensing)

Further information

Accessory type	DMX tester

8 Plug and connection assignment

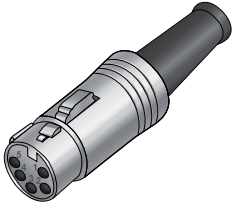
Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment so that a perfect light experience is guaranteed.

Please take our tips, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into a socket, the result of an incorrect connection may be a destroyed DMX controller, a short circuit or 'just' a not working light show!

DMX connections

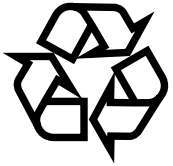
A five-pin XLR socket serves as DMX output, a five-pin XLR plug serves as DMX input. The drawing below and the table show the pin assignment of a matching coupling.



Pin	Assignment
1	Ground (shielding)
2	Signal inverted (DMX–, 'cold')
3	Signal (DMX+, 'hot')
4	unused / second connection (DMX–)
5	unused / second connection (DMX+)

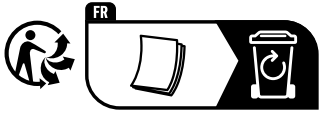
9 Protecting the environment

Disposal of the packing material



Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

Do not dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the instructions and markings on the packaging.



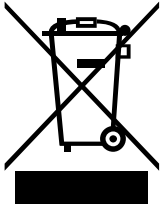
Observe the disposal note regarding documentation in France.

Disposal of batteries and rechargeable batteries

Do not dispose of batteries and rechargeable batteries with normal household waste, but in accordance with the local regulations for the disposal of hazardous waste. Use the available collection sites or contact your local waste disposal facility.

Before disposing of your old device, remove the batteries if this is possible without destroying it.

Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) as amended.

Do not dispose of your old device with your normal household waste; instead, deliver it for controlled disposal by an approved waste disposal firm or through your local waste facility. If in doubt, consult your local waste management facility. You can also return the device to a retailer if they offer to take the device back for free or if they are legally obliged to do so. When disposing of the device, comply with the rules and regulations that apply in your country. You can also return your old device to Thomann GmbH at no charge. Check the current conditions on *www.thomann.de*.

Proper disposal protects the environment as well as the health of your fellow human beings. This is because the proper handling of old devices negates the potential negative effects of hazardous substances, and because it conserves resources by recycling them.

Also note that waste avoidance is a valuable contribution to environmental protection. Repairing a device or passing it on to another user is an ecologically valuable alternative to disposal. For example, use the classified ads of Thomann GmbH.

If your old device contains personal data, delete those data before disposing of it.