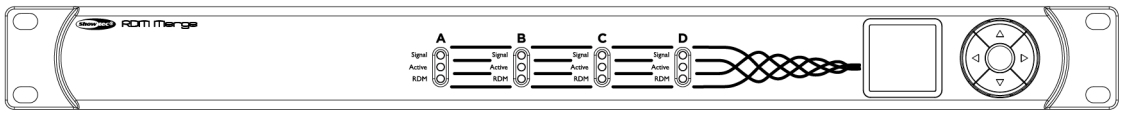
# USER MANUAL

ENGLISH

V1.0




# RDM Merge

Product code: 50101

4-to-2 DMX/RDM merge, 5-pin XLR

## Preface

Thank you for purchasing this Showtec product.

The purpose of this user manual is to provide instructions for the correct and safe use of this product.

Keep the user manual for future reference as it is an integral part of the product. The user manual shall be stored at an easily accessible location.

This user manual contains information concerning:

- Safety instructions
- Intended and non-intended use of the device
- Installation and operation of the device
- Maintenance procedures
- Troubleshooting
- Transport, storage and disposal of the device

Non-observance of the instructions in this user manual may result in serious injuries and damage of property.

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Highlite International B.V. – Vestastraat 2 – 6468 EX Kerkrade – the Netherlands

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# 1. Introduction

## 1.1. Before Using the Product

**Important**
**Read and follow the instructions in this user manual before installing, operating or servicing this product.**

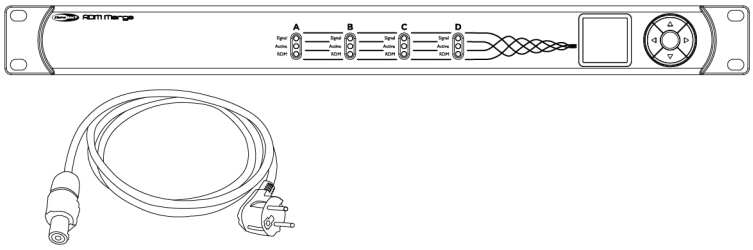
The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

After unpacking, check the contents of the box. If any parts are missing or damaged, contact your Highlite International dealer.

Your shipment includes:

- Showtec RDM Merge
- Schuko to Power Pro True cable (1,5 m)
- User manual

**Figure 1**



## 1.2. Intended Use

This device is intended for professional use as a DMX merger. It can be used only indoors. This device is not suitable for households.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

## 1.3. Product Lifespan

This device is not designed for permanent operation.

Disconnect the device from the electrical power supply when the device is not in operation. This will reduce wear and improve the lifespan of the device.

## 1.4. Text Conventions

Throughout the user manual the following text conventions are used:

- Buttons: All buttons are in bold lettering, for example "Press the **UP/DOWN** buttons"
- References: References to parts of the device are in bold lettering, for example: "turn the **adjustment handle (05)**". References to chapters are hyperlinked
- 0–255: Defines a range of values
- Notes: **Note:** (in bold lettering) is followed by useful information or tips

## 1.5. Symbols and Signal Words

Safety notes and warnings are indicated throughout the user manual by safety signs.

Always follow the instructions provided in this user manual.



**DANGER** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



**WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



**CAUTION** Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.



**Attention** Indicates important information for the correct operation and use of the product.



**Important** Read and observe the instructions in this document.



**Electrical hazard**



Provides important information about the disposal of this product.

## 1.6. Symbols on the Information Label

This product is provided with an information label. The information label is located on the side of the device.

The information label contains the following symbols:



This device is designed for indoor use.



This device shall not be treated as household waste.



This device falls under IEC protection class I.



Warning: Risk of electric shock. Do not open.

# 2. Safety



**Important**
**Read and follow the instructions in this user manual before installing, operating or servicing this product.**

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

## 2.1. Warnings and Safety Instructions



**DANGER**
**Danger for children**

For adult use only. The device must be installed beyond the reach of children.

- Do not leave any parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within the reach of children. Packaging material is a potential source of danger for children.



**DANGER**
**Electric shock caused by dangerous voltage inside**

There are areas inside the device where dangerous touch voltage may be present.

- Do not open the device or remove any covers.
- Do not operate the device if the covers or the housing are open. Before operation, check if the housing is firmly closed and all screws are tightly fastened.
- Disconnect the device from the electrical power supply before service and maintenance, and when the device is not in use.



**DANGER**
**Electric shock caused by short-circuit**

This device falls under IEC protection Class I.

- Make sure that the device is electrically connected to ground (earth). Connect the device only to a socket-outlet with a ground (earth) connection.
- Do not cover the ground (earth) connection.
- Do not bypass the thermostatic switch or fuses.
- Replace fuses only with the same type and rating.
- Do not let the power cable come into contact with other cables. Handle the power cable and all connections with the mains with caution.
- Do not modify, bend, mechanically strain, put pressure on, pull or heat up the power cable.
- Make sure that the power cable is not crimped or damaged. Examine the power cable periodically for any defects.
- Do not immerse the device in water or other liquids. Do not install the device in a location where flooding may occur.
- Do not use the device during thunderstorms. Disconnect the device from the electrical power supply immediately.

**Attention**
**Power supply**

- Before connecting the device to the power supply, make sure that the current, voltage and frequency match the input voltage, current and frequency specified on the information label on the device.
- Make sure that the cross-sectional area of the extension cords and power cables is sufficient for the required power consumption of the device.

**Attention**
**General safety**

- Do not block the ventilation openings. Without proper heat dissipation and air circulation, the internal components may overheat. This can result in product damage.
- Do not shake the device. Avoid brute force when installing or operating the device.
- If the device is dropped or struck, disconnect the device from the electrical power supply immediately.
- If the device is exposed to extreme temperature variations (e.g. after transportation), do not switch it on immediately. Let the device reach room temperature before switching it on, otherwise it may be damaged by the formed condensation.
- If the device fails to work properly, discontinue use immediately.

**Attention**
**For professional use only**
**This device must be used only for the purposes it is designed for.**

This device is designed to be used as a DMX merger. Any incorrect use may lead to hazardous situations and result in injuries and material damage.

- This device is not suitable for households.
- This device does not contain user-serviceable parts. Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.

**Attention**
**Do not expose the device to conditions that exceed the rated IP class conditions.**

This device is IP20 rated. IP (Ingress Protection) 20 class provides protection against solid objects greater than 12 mm, such as fingers, and no protection against harmful ingress of water.

## 2.2. Requirements for the User

This product may be used by ordinary persons. Maintenance may be carried out by ordinary persons. Installation and service shall be carried out only by instructed or skilled persons. Contact your Highlite International dealer for more information.

Instructed persons have been instructed and trained by a skilled person, or are supervised by a skilled person, for specific tasks and work activities associated with the installation, service and maintenance of this product, so that they can identify risks and take precautions to avoid them.

Skilled persons have training or experience, which enables them to recognize risks and avoid hazards associated with the installation, service and maintenance of this product.

Ordinary persons are all persons other than instructed persons and skilled persons. Ordinary persons include not only users of the product but also any other persons that may have access to the device or who may be in the vicinity of the device.

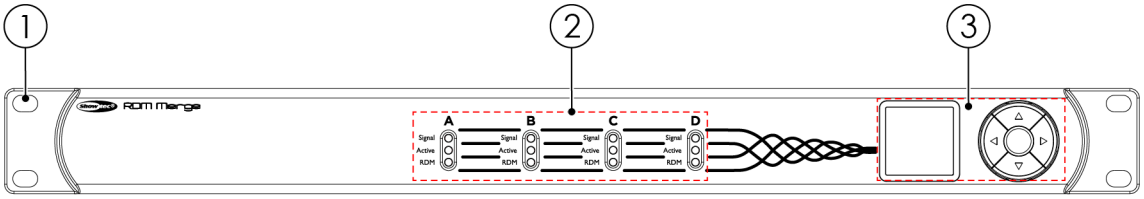
# 3. Description of the Device

The Showtec RDM Merge is a professional-grade 4-to-2 DMX merger with full RDM support, designed to offer flexible signal management in complex lighting setups. With 4 DMX inputs and 2 outputs, it allows users to patch and merge multiple sources into 1 or 2 outputs, depending on the needs of the installation. Each output can be configured to combine specific inputs, giving you full control over signal routing.

This unit supports a range of advanced merge modes, including HTP (Highest Takes Precedence), LTPC (Latest Takes Precedence by Channel), LTPIn (Latest Takes Precedence by Universe), Backup mode for automatic failover, and Append mode for splitting DMX channels between sources. These modes provide powerful options for managing signal priority, redundancy, and channel distribution, making the RDM Merge an essential tool for live events, fixed installations, and touring setups.

## 3.1. Front View

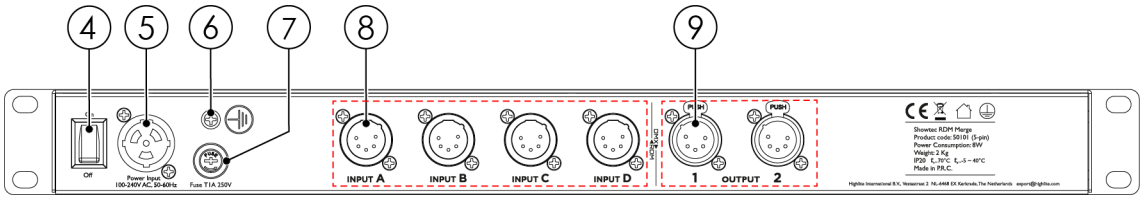
**Figure 2**




01) 4 x mounting opening
02) 12 x status LED indicator (Signal/Active/RDM, for INPUT A-D) (see 6.8. LED Statuses on page 24)
03) Control panel: LCD display and control buttons

## 3.2. Back View

**Figure 3**




04) Power switch (ON/OFF)
05) Power Pro True connector IN
06) Grounding screw
07) Fuse (T1A 250 V)
08) 4 x 5-pin DMX signal connector IN (INPUT A–INPUT D)
09) 2 x 5-pin DMX signal connector OUT (OUTPUT 1–OUTPUT 2)

## 3.3. Product Specifications

| | |
|---|---|
| Model: | RDM Merge |

| **Control and Programming:** | |
|---|---|
| Control mode | DMX / RDM |
| DMX channels | 1024 |
| Display | LCD |
| Universes | 2 |

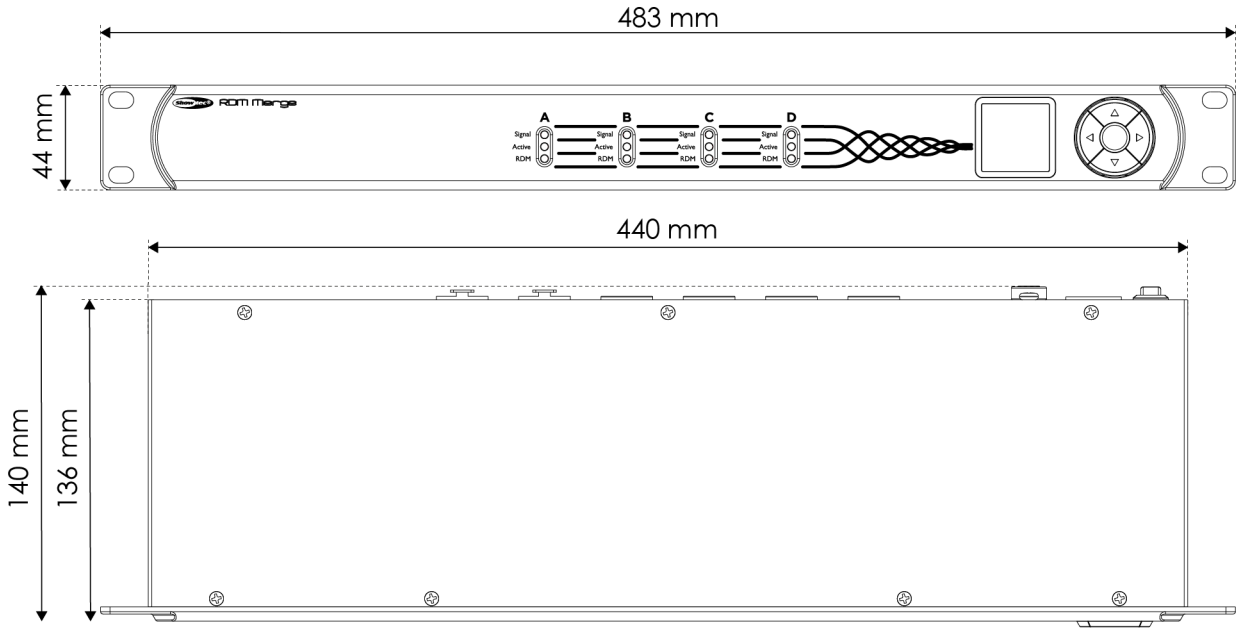
| **Electrical Specifications and Connections:** | |
|---|---|
| Power supply | 100–240 V AC 50/60 Hz |
| Power consumption | 8 W |
| Power connector IN | Power Pro True |
| DMX connector | XLR 5P IN/OUT |

| **Mechanical Specifications:** | |
|---|---|
| Length | 140 mm |
| Width | 483 mm |
| Height | 44 mm |
| Weight | 2 kg |
| IP rating | IP20 (indoor use only) |
| Housing | Aluminum / metal |
| Color | Black |

| **Thermal Specifications:** | |
|---|---|
| Maximum ambient temperature | 40 °C |
| Minimum ambient temperature | -10 °C |
| Minimum operating temperature | -10 °C |

## 3.4. Dimensions

**Figure 4**



# 4. Installation

## 4.1. Safety Instructions for Installation



**Attention**
**Make sure that there is enough space for ventilation around the device.**

- Do not block the ventilation openings. Without proper heat dissipation and air circulation, the internal components may overheat. This can result in product damage.
- Do not install near equipment that produces heat, for example amplifiers.

## 4.2. Installation Site Requirements

- The device can be used only indoors.
- The maximum ambient temperature $t_a$ = 40 °C must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 40 °C.

## 4.3. Rack Mounting

The RDM Merge can be placed on a stable, flat surface or mounted in a standard 19-inch rack. The device requires 1 rack unit (RU) of space.

Make sure that the rack is sufficiently secured to prevent it from becoming unstable or falling over.

To mount the device in a two-post rack, follow the steps below:

01) Insert 4 cage nuts in the openings on the rack posts where you want to mount the device.
02) Position the device in front of the rack posts so that the 4 **mounting openings (01)** on the flanges face the openings on the rack posts with cage nuts.
03) Use a screwdriver to mount the device to the rack posts with 4 screws.

## 4.4. Connecting to Power Supply



**DANGER**
**Electric shock caused by short-circuit**

The device accepts AC mains power at 100–240 V and 50/60 Hz. Do not supply power at any other voltage or frequency to the device.

This device falls under IEC protection class I. Make sure that the device is always electrically connected to the ground (earth).

Before connecting the device to the socket-outlet:
- Make sure that the power supply matches the input voltage specified on the information label on the device.
- Make sure that the socket-outlet has a ground (earth) connection.

Connect the device to the socket-outlet with the power plug.

# 5. Setup

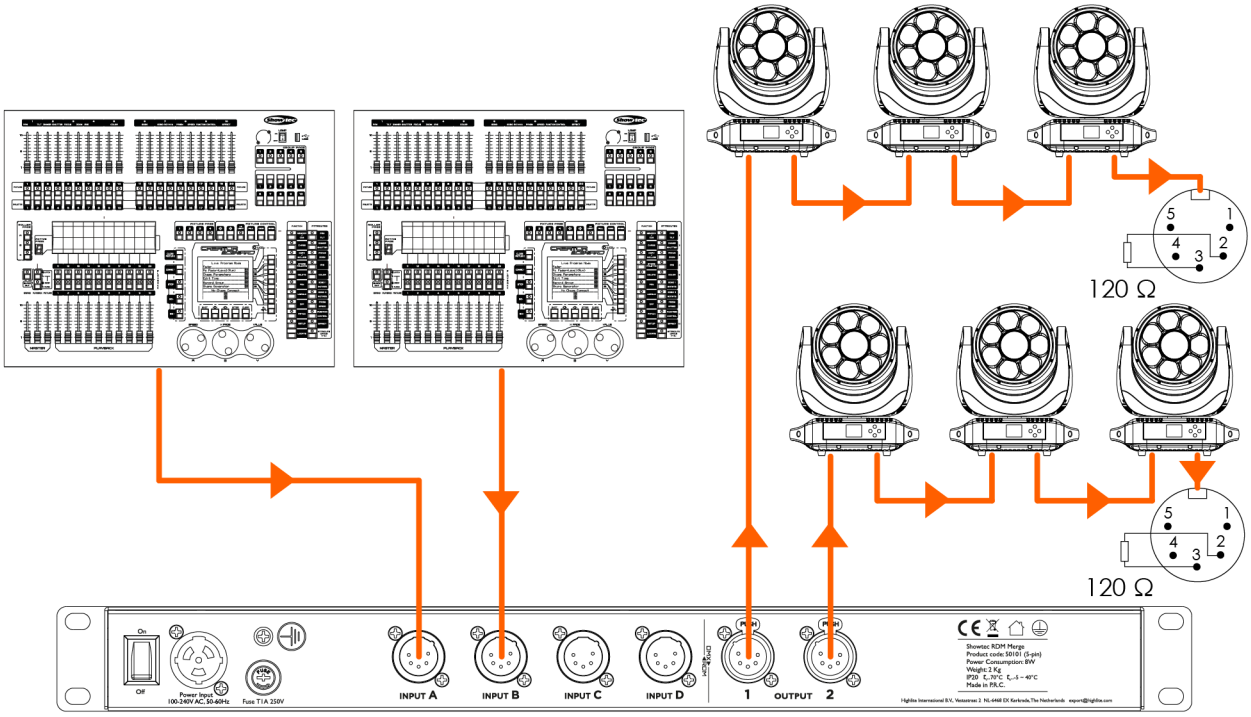
## 5.1. Warnings and Precautions

**Attention**
**Connect all data cables before supplying power.**
**Disconnect power supply before connecting or disconnecting data cables.**

## 5.2. Setup Example

The figure below shows a typical setup with 2 lighting controllers and 6 lighting fixtures.

**Figure 5**



## 5.3. DMX Connection

### 5.3.1. DMX-512 Protocol

The RDM Merge has 5-pin DMX signal IN and OUT connectors.

The pin assignment is as follows: pin 1 (ground), pin 2 (-), pin 3 (+), pin 4 (N/C), pin 5 (N/C).

Devices on a serial data link must be daisy-chained in a single line. The number of devices that you can control on one data link is limited by the combined number of the DMX channels of the connected devices and the 512 channels available in one DMX universe.

To comply with the TIA-485 standard, no more than 32 devices should be connected on one data link. In order to connect more than 32 devices on one data link, you must use a DMX optically isolated splitter/booster, otherwise this may result in deterioration of the DMX signal.

**Note:**

- Maximum recommended DMX data link distance: 300 m
- Maximum recommended number of devices on a DMX data link: 32 devices

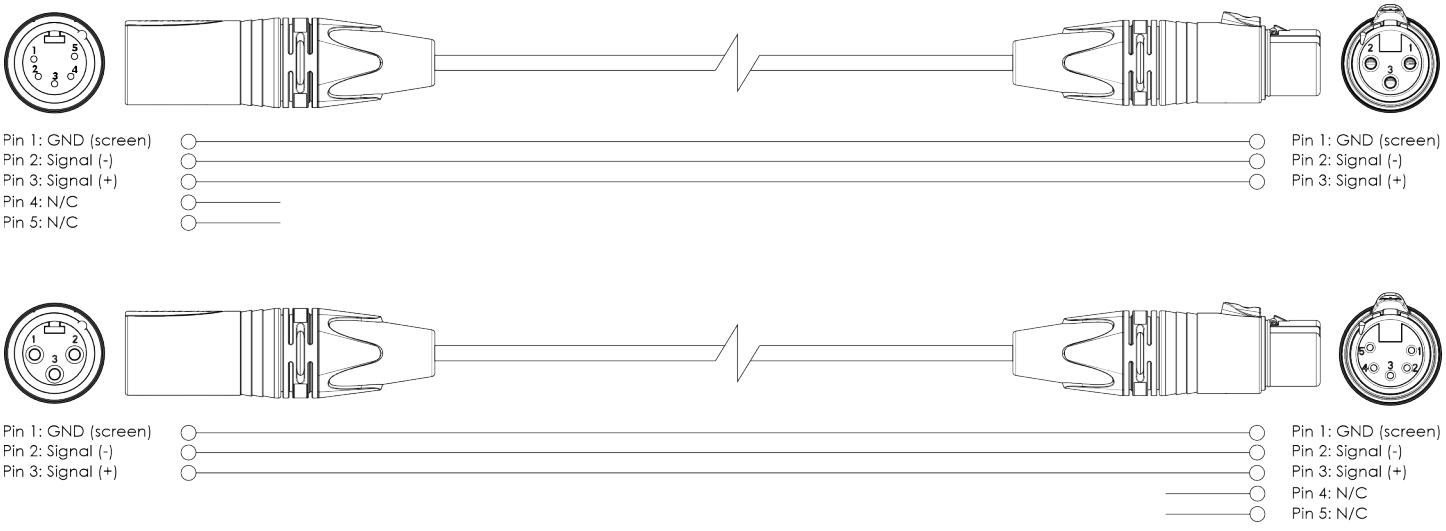
### 5.3.2. DMX Cables

Shielded twisted-pair cables with 5-pin XLR connectors must be used for reliable DMX connection. You can purchase DMX cables directly from your Highlite International dealer or make your own cables.

If you use XLR audio cables for DMX data transmission, this may lead to signal degradation and unreliable operation of the DMX network.

When you make your own DMX cables, make sure that you connect the pins and wires correctly as shown in the figure below.

**Figure 6**



# 6. Operation

## 6.1. Safety Instructions for Operation

**Attention**
**This device must be used only for the purposes it is designed for.**

This device is intended for professional use as a DMX merger. It can be used only indoors. This device is not suitable for households.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

**Attention**
**Power supply**

Before connecting the device to the power supply, make sure that the current, voltage and frequency match the input voltage, current and frequency specified on the information label on the device.

## 6.2. Switching On and Off

The device has a power switch.

- To switch the device on, press the **power switch (ON/OFF) (04)** in ON position.
- To switch the device off, press the **power switch (ON/OFF) (04)** in OFF position.

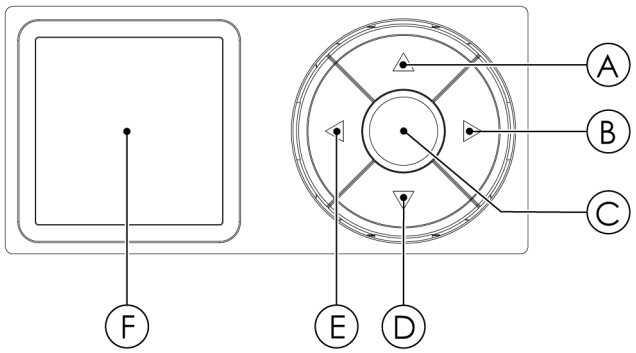
## 6.3. Menu Overview

| Level 1 | Level 2 | Level 3 | Level 4 |
|---|---|---|---|
| Output1 (see 6.7.1. Output1 & Output2 on page 19) | Merge Inputs | 1. InputA | Yes/No |
| | | 2. InputB | Yes/No |
| | | 3. InputC | Yes/No |
| | | 4. InputD | Yes/No |
| | Merge Mode | 1. HTP | |
| | | 2. LoTP | |
| | | 3. LTPc | |
| | | 4. LTPIn | |
| | | 5. Backup | |
| | | 6. Merge | |
| | RDM Filter | Yes/No | |
| | Frame Rate | 1. Follow | |
| | | 2. 10Hz | |
| | | 3. 20Hz | |
| | | 4. 25Hz | |
| | | 5. 30Hz | |
| | | 6. 35Hz | |
| | | 7. 40Hz | |
| | DMX Fail | 1. Last Hold | |
| | | 2. Blackout | |
| | DMX Offset | 1. InputA | 001–512 |
| | | 2. InputB | 001–512 |
| | | 3. InputC | 001–512 |
| | | 4. InputD | 001–512 |
| Output2 (see 6.7.1. Output1 & Output2 on page 19) | Merge Inputs | 1. InputA | Yes/No |
| | | 2. InputB | Yes/No |
| | | 3. InputC | Yes/No |
| | | 4. InputD | Yes/No |
| | Merge Mode | 1. HTP | |
| | | 2. LoTP | |
| | | 3. LTPc | |
| | | 4. LTPIn | |
| | | 5. Backup | |
| | | 6. Merge | |
| | RDM Filter | Yes/No | |
| | Frame Rate | 1. Follow | |
| | | 2. 10Hz | |
| | | 3. 20Hz | |
| | | 4. 25Hz | |
| | | 5. 30Hz | |
| | | 6. 35Hz | |
| | | 7. 40Hz | |

| Level 1 | Level 2 | Level 3 | Level 4 |
|---|---|---|---|
| | DMX Fail | 1. Last Hold | |
| | | 2. Blackout | |
| | DMX Offset | 1. InputA | 001–512 |
| | | 2. InputB | 001–512 |
| | | 3. InputC | 001–512 |
| | | 4. InputD | 001–512 |
| Display (see 6.7.2. Display on page 23) | 1. On | | |
| | 2. 10 Seconds | | |
| | 3. 30 Seconds | | |
| Firmware Version (see 6.7.3. Firmware Version on page 23) | | | |
| Factory Reset (see 6.7.4. Factory Reset on page 24) | NO/YES | | |

## 6.4. Control Panel

**Figure 7**




A) UP button
B) RIGHT button
C) HOME button
D) DOWN button
E) LEFT button
F) LCD display

- Use the **UP/DOWN** buttons to navigate through the menus or to increase/decrease numeric values.
- Use the **LEFT** button to exit a menu or cancel a selection.
- Use the **RIGHT** button to enter a menu, select a setting or confirm a setting.
- Use the **HOME** button to return to the start screens.

## 6.5. Start-up

Upon start-up, the display shows the RDM Merge home screen (see 6.6.1. Home Screen on page 17).

- Press the **UP** and **DOWN** buttons to navigate through the information screens for monitoring (see 6.6. Monitoring on page 17).
- Press the **RIGHT** button to open the main menu (see 6.7. Main Menu Options on page 19).

**Note:**

If no button is pressed, after 10 s the display returns to the home screen.

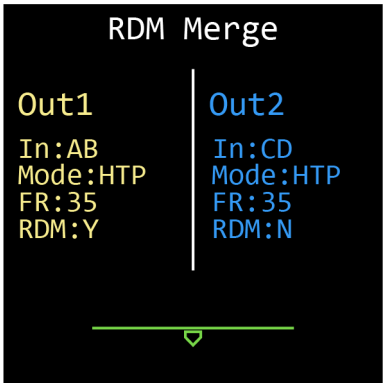
## 6.6. Monitoring

The device has 4 inputs and 2 outputs. The active settings for the 2 **5-pin DMX signal connectors OUT (09)** are shown on the home screen (see 6.6.1. Home Screen). The output and input screens (see 6.6.2. Output and Input Screens) show DMX information and frame rates for the 4 **5-pin DMX signal connectors IN (08)** and the 2 **5-pin DMX signal connectors OUT (09)**.

### 6.6.1. Home Screen

The home screen provides side by side information about the active settings for the 2 **5-pin DMX signal connectors OUT (09)**.

In the home screen you can view the following settings for output 1 (Out1) and output 2 (Out2):



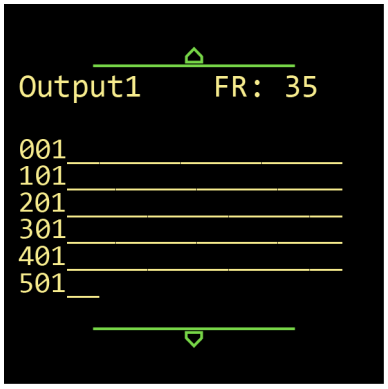

- In: Shows the inputs that are merged to the output (see 6.7.1.1. Merge Inputs on page 20)
- Mode: Shows the merge mode that is active on the output (see 6.7.1.2. Merge Mode on page 20)
- FR: Shows the frame rate setting for the output (see 6.7.1.4. Frame Rate on page 21)
- RDM: Shows the RDM filter setting for the output (see 6.7.1.3. RDM Filter on page 21)

Press the **UP/DOWN** buttons to cycle through the output and input screens (see 6.6.2. Output and Input Screens on page 18) or press the **RIGHT** button to open the main menu (see 6.7. Main Menu Options on page 19).

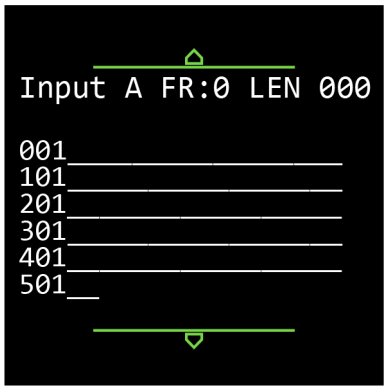
### 6.6.2. Output and Input Screens

The RDM Merge has 2 output information screens and 4 input information screens.

In the output information screens you can view the frame rate setting for the output and the active DMX channels on the output:



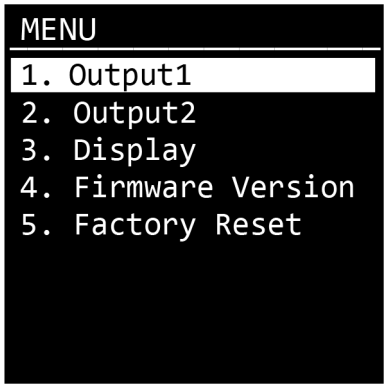

In the input information screens you can view the frame rate of the input signal, the length of the DMX signal and the active DMX channels on the input:




Press the **UP/DOWN** buttons to cycle through the output and input screens or go back to the home screen (see 6.6.1. Home Screen on page 17), or press the **RIGHT** button to open the main menu (see 6.7. Main Menu Options on page 19).

## 6.7. Main Menu Options

The main menu has the following options:



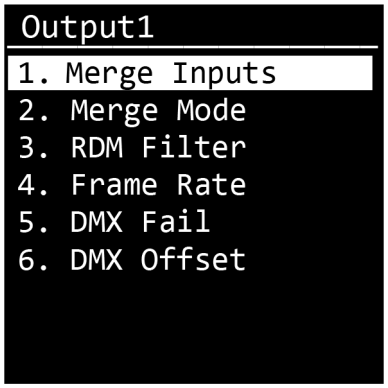

Output 1
Output 2
Display
Firmware Version
Factory Reset

- Press the **UP/DOWN** buttons to navigate through the menu.
- Press the **RIGHT** button to open submenus.
- Press the **HOME** or **LEFT** button to return to the start screen.

### 6.7.1. Output1 & Output2

In the menus for Output1 and Output2 you can change the merge settings, RDM settings, frame rate settings and DMX settings for the respective output.

01) Press the **UP/DOWN** buttons to select one of the 6 options:



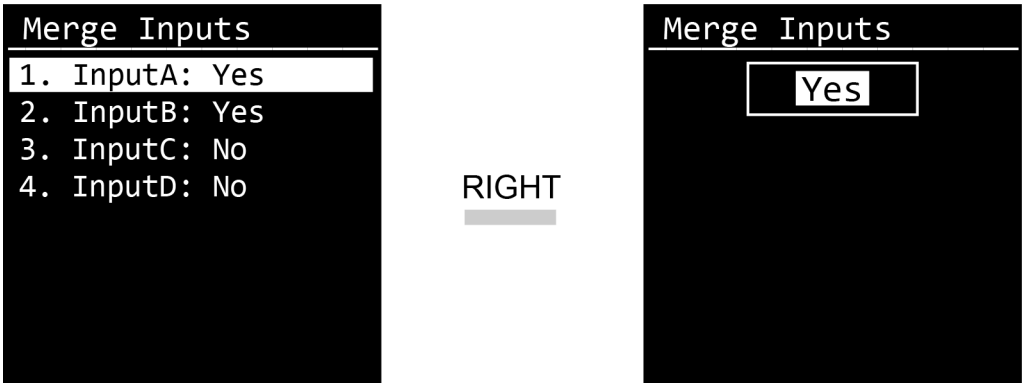

- Merge Inputs (see 6.7.1.1. Merge Inputs)
- Merge Mode (see 6.7.1.2. Merge Mode)
- RDM Filter (see 6.7.1.3. RDM Filter)
- Frame Rate (see 6.7.1.4. Frame Rate)
- DMX Fail (see 6.7.1.5. DMX Fail)
- DMX Offset (see 6.7.1.6. DMX Offset)

02) Press the **RIGHT** button to confirm the selection.

#### 6.7.1.1. Merge Inputs

In this submenu you can set which inputs are sent to the output.

01) Press the **UP/DOWN** buttons to select one of the 4 inputs (1. InputA–4. InputD).



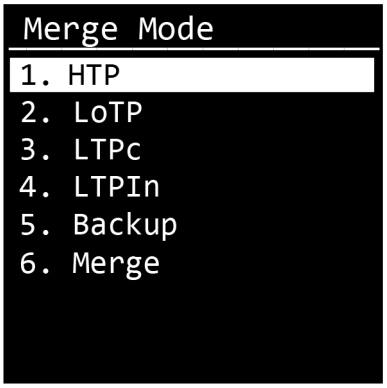

02) Press the **RIGHT** button to confirm the selection.
03) Press the **UP/DOWN** buttons to select if the input should be merged to the output (Yes/No).
04) Press the **RIGHT** button to confirm the selection.

#### 6.7.1.2. Merge Mode

In this submenu you can set the merge mode that is applied to the input signals for the output.

When merging DMX signals, the device compares the DMX packets received at each input. The merge mode determines which DMX packet is sent to the output.

01) Press the **UP/DOWN** buttons to select one of the 6 options:




- HTP: Set the output to Highest Takes Precedence. The DMX packet with the highest value is sent to the output
- LoTP: Set the output to Lowest Takes Precedence. The DMX packet with the lowest value is sent to the output
- LTPc: Set the output to Latest Takes Precedence by Channel. The latest DMX packet received to any input is sent to the output
- LTPIn: Set the output to Latest Takes Precedence by Universe. The universe where the latest DMX packet is received, determines the complete output signal for all channels in that universe
- Backup: Set the output to Backup merge mode. The device always sends the DMX packet from the primary input. If the primary input fails, it switches to the secondary input. The priority goes from Input A to input D
- Merge: Set the output to Merge mode, also known as Append mode. The device combines the inputs and sends all DMX packets to the output. Make sure that the available DMX channels are correctly assigned to each input and that there is no overlap

02) Press the **RIGHT** button to confirm the selection.

#### 6.7.1.3. RDM Filter

In this submenu you can block the RDM signal at the output. This is useful for non-RDM-compliant fixtures, where RDM may cause flickering or erratic behavior.

01) Press the **RIGHT** button to enter the selection mode.

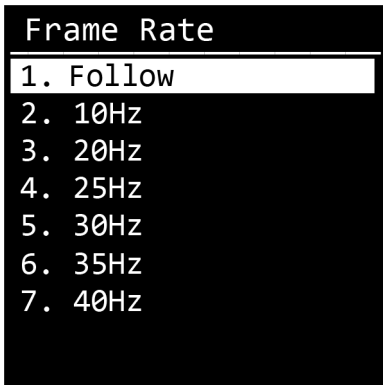



02) Press the **UP/DOWN** buttons to activate or deactivate the RDM filter (Yes/No).
03) Press the **RIGHT** button to confirm the selection.

#### 6.7.1.4. Frame Rate

In this submenu you can adjust the output frame rate.

01) Press the **UP/DOWN** buttons to select one of the 7 options:




- Follow: Set the frame rate for the output to follow the frame rate of the input
- 10Hz: Set the frame rate for the output to 10 frames per second
- 20Hz: Set the frame rate for the output to 20 frames per second
- 25Hz: Set the frame rate for the output to 25 frames per second
- 30Hz: Set the frame rate for the output to 30 frames per second
- 35Hz: Set the frame rate for the output to 35 frames per second
- 40Hz: Set the frame rate for the output to 40 frames per second

02) Press the **RIGHT** button to confirm the selection.

**Note:**

If the input signals have different frame rates, it is recommended to set the frame rate of the output equal to the input with the highest frame rate.

#### 6.7.1.5. DMX Fail

In this submenu you can set the behavior of the device in case of a DMX failure.

01) Press the **UP/DOWN** buttons to select one of the 2 options:



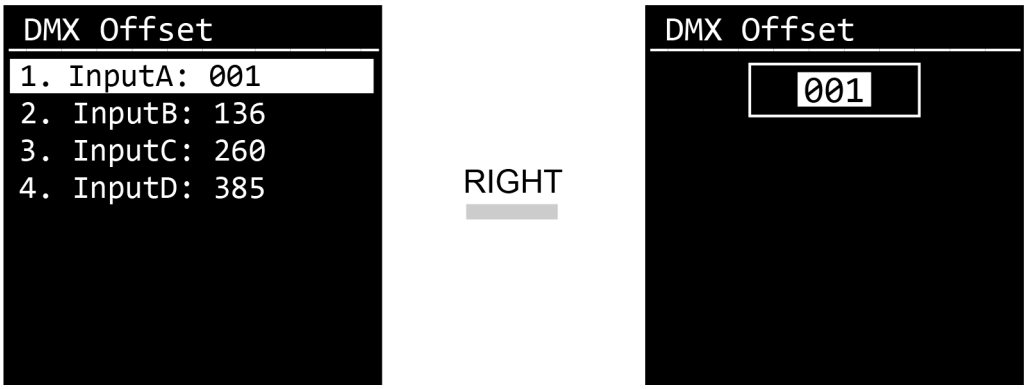

- Last Hold: The output will send the last DMX signal correctly received
- Blackout: The device will black out the output signal

02) Press the **RIGHT** button to confirm the selection.

#### 6.7.1.6. DMX Offset

In this submenu you can apply a DMX offset to the DMX starting address of each input. This prevents overlap between the channels on each input.

01) Press the **UP/DOWN** buttons to select one of the 4 inputs (InputA–InputD):

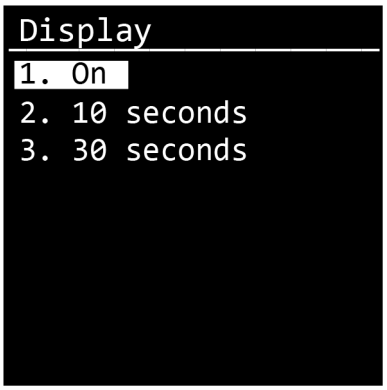



02) Press the **RIGHT** button to confirm the selection.
03) Press the **UP/DOWN** buttons to adjust the offset value for the input (001–512).
04) Press the **RIGHT** button to confirm the selection.

### 6.7.2. Display

In this menu you can adjust the behavior of the display backlight.

01) Press the **UP/DOWN** buttons to select one of the 3 options:

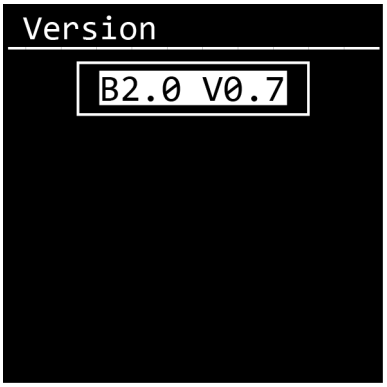



- On: The backlight of the display always stays on
- 10 seconds: The backlight of the display turns off after 10 seconds of inactivity
- 30 seconds: The backlight of the display turns off after 30 seconds of inactivity

02) Press the **RIGHT** button to confirm the selection.

### 6.7.3. Firmware Version

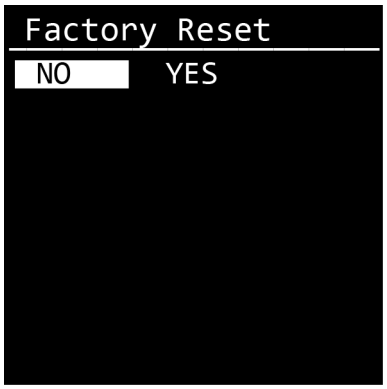
In this menu you can view the firmware version of the device.



### 6.7.4. Factory Reset

In this menu you can reset the settings of the device to the default factory settings.

01) Press the **UP/DOWN** buttons to select one of the 2 options:

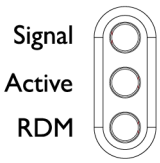



- NO: Keep the current settings of the device
- YES: Reset the device to the default factory settings

02) Press the **RIGHT** button to confirm the selection.

## 6.8. LED Statuses

The device has 12 **status LED indicators (02)**, 3 for each of the 4 **5-pin DMX signal connectors IN (08)**. The LED indicators have the following statuses:




Signal: Illuminates green when the input is receiving a good DMX signal

Active: Illuminates white when the DMX input signal is changing

RDM: Illuminates orange when there is RDM activity on the **5-pin DMX signal connectors IN (08)**

# 7. Troubleshooting

This troubleshooting guide contains solutions to problems which can be carried out by an ordinary person. The device does not contain user-serviceable parts.

Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.

Refer servicing to instructed or skilled persons. Contact your Highlite International dealer in case the solution is not described in the table.

| Problem | Probable cause(s) | Solution |
|---|---|---|
| The device does not function at all | No power to the device | • Make sure that the device is connected to the power supply and the cables are plugged in |
| | The main fuse is blown | • Replace the fuse (see 8.3.1. Replacing the Fuse on page 27) |
| The device responds erratically | The factory settings of the device are changed | • Reset the device to its factory settings (see 6.7.4. Factory Reset on page 24) |
| Incorrect DMX data transfer to the output devices | No controller is connected | • Connect a controller |
| | The controller is defective | • Replace the controller |
| | Bad data link connection | • Examine connections and cables. Correct poor connections. Repair or replace damaged cables |
| | The signal is reversed. The 5-pin DMX OUT of the controller does not match the DMX IN of the device | • Install a phase-reversing cable between the controller and the device |
| | Incorrect merge mode | • Make sure that the device is set to the correct merge mode for the setup (see 6.7.1.2. Merge Mode on page 20) |
| | Overlap in the DMX channels | • Make sure that there is no overlap in the DMX channels of the different inputs<br>• Apply a DMX offset to the inputs where necessary (see 6.7.1.6. DMX Offset on page 22) |

# 8. Maintenance

## 8.1. Safety Instructions for Maintenance



**DANGER**
**Electric shock caused by dangerous voltage inside**

Disconnect power supply before servicing or cleaning.

## 8.2. Preventive Maintenance



**Attention**
**Before each use, examine the device visually for any defects.**

Make sure that:

- All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
- There are no deformations on housings, fixings and installation points.
- The power cables are not damaged and do not show any material fatigue.

### 8.2.1. Basic Cleaning Instructions

To clean the device, follow the steps below:

01) Disconnect the device from the electrical power supply.
02) Allow the device to cool down for at least 5 minutes.
03) Clean the device with a soft, lint-free cloth.



**Attention**

- Do not immerse the device in liquid.
- Do not use alcohol or solvents.

## 8.3. Corrective Maintenance

The device does not contain user-serviceable parts. Do not open the device and do not modify the device.

Refer repairs and servicing to instructed or skilled persons. Contact your Highlite International dealer for more information.

### 8.3.1. Replacing the Fuse



**DANGER**
**Electric shock caused by short-circuit**

- Do not bypass the thermostatic switch or fuses.
- Replace fuses only with the same type and rating.

Power surges, short-circuit or incorrect electrical power supply may cause a fuse to burn out. If the fuse burns out, the device will not function anymore. If this happens, follow the steps below:

01) Disconnect the device from the electrical power supply.
02) Allow the device to cool down for at least 15 minutes.
03) Loosen the fuse cover with a screwdriver and remove the fuse holder.
04) If the fuse is brown or unclear, it is burned out. Remove the old fuse.
05) Insert a new fuse in the fuse holder. Make sure that the type and the rating of the replacement fuse are the same as the ones specified on the information label of the product.
06) Replace the fuse holder in the opening and tighten the fuse cover.

## 9. Deinstallation, Transportation and Storage

- Use the original packaging to transport the device, if possible.
- Clean the device before storing (see 8.2.1. Basic Cleaning Instructions on page 26).
- Store the device in the original packaging, if possible.

## 10. Disposal



**Correct disposal of this product**

Waste Electrical and Electronic Equipment

This symbol on the product, its packaging or documents indicates that the product shall not be treated as household waste. Dispose of this product by handing it to the respective collection point for recycling of electrical and electronic equipment. This is to avoid environmental damage or personal injury due to uncontrolled waste disposal. For more detailed information about recycling of this product contact the local authorities or the authorized dealer.

## 11. Approval

CE

Check the respective product page on the website of Highlite International (www.highlite.com) for an available declaration of conformity.