# LED Operator 4 Air

**ORDERCODE 50726**

**Congratulations!**

You have bought a great, innovative product from Showtec.

The Showtec LED Operator 4 Air brings excitement to any venue. Whether you want simple plug-&-play action or a sophisticated DMX show, this product provides the effect you need.

You can rely on Showtec, for more excellent lighting products.
We design and manufacture professional light equipment for the entertainment industry.
New products are being launched regularly. We work hard to keep you, our customer, satisfied.
For more information: iwant@showtec.info

You can get some of the best quality, best priced products on the market from Showtec.
So next time, turn to Showtec for more great lighting equipment.
Always get the best -- with Showtec !

Thank you!

# Showtec

## Showtec LED Operator 4 Air™ Product Guide

# Warning

## Unpacking Instructions

Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present, and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

**Your shipment includes:**
• LED Operator 4 Air
• Incl. Power adapter 1,75m
• User manual



**CAUTION!**
**Keep this device away from rain and moisture!**
**Unplug mains lead before opening the housing!**

## Safety Instructions

Every person involved with the installation, operation and maintenance of this device has to:
-     be qualified
-     follow the instructions of this manual

**CAUTION! Be careful with your operations.**
**With a dangerous voltage you can suffer**
**a dangerous electric shock when touching the wires!**

Before your initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

### *IMPORTANT:*

*The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.*

- Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Never leave any cables lying around.
- Do not open the device and do not modify the device.
- Do not insert objects into air vents.
- Do not connect this device to a dimmerpack.
- Do not switch the device on and off in short intervals, as this would reduce the device's life.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Only use device indoor, avoid contact with water or other liquids.
- Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.
- Only operate the device after having familiarized with its functions.
- Avoid flames and do not put close to flammable liquids or gases.
- Always allow free air space of at least 50 cm around the unit for ventilation.
- Always disconnect power from the mains, when device is not used or before cleaning! Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.
- Make sure that the device is not exposed to extreme heat, moisture or dust.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power-cord is never crimped or damaged. Check the device and the power-cord from time to time.
- If device is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- If your Showtec device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Showtec dealer for service.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- Repairs, servicing and electric connection must be carried out only by Showtec.
- WARRANTY: Till one year after date of purchase.

## Operating Determinations

- This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.
- The minimum distance between light-output and the illuminated surface must be more than 0.5 meter.
- The maximum ambient temperature $t_a$ = 45°C must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 45° C.
- If this device is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.
- Any other operation may lead to dangers like short-circuit, burns, electric shock, crash etc.

*You endanger your own safety and the safety of others!*

*Improper installation can cause serious damage to people and property !*

### Connection with the mains
Connect the device to the mains with the power-plug.
Always pay attention, that the right color cable is connected to the right place.

| International | EU Cable | UK Cable | US Cable | Pin |
|---|---|---|---|---|
| L | BROWN | RED | YELLOW/COPPER | FASE |
| N | BLUE | BLACK | SILVER | NUL |
| ⏚ | YELLOW/GREEN | GREEN | GREEN | EARTH |

Make sure that the device is always connected properly to the earth!

# ⚠️ Return Procedure ⚠️

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail aftersales@highlite.nl and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

**Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:**
1) Your name
2) Your address
3) Your phone number
4) A brief description of the symptoms

# Claims

The client has the obligation to check the delivered goods immediately upon delivery for any short-comings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.

It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.

Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless otherwise agreed in writing.

Complaints against us must be made known in writing or by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.

Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement of which the obligation is resulting.

# Description of the device

## Features
The LED Operator 4 Air is a compact DMX controller from Showtec and features:
- Battery operated (8 hours)
- Wireless DMX from Wireless solutions Sweden
- Preset RGB color and chases
- Control 4 x 4 channel fixtures
- The LED operator 4 Air has the same functionality as the popular LED operator 4 but with built-in wireless DMX module and battery operated.
- This solution is ideal for all 4 channel battery operated spots or bars and gives you the freedom to run an entire system in- and outdoor without using a power or DMX cable.
- easy to use with preset RGB colors and chases with adjustable fade, speed
- strobe control or can be activated by sound.
- Fixtures: 4
- Channels: 16 (4 each fixture)
- RGB Presets: 9
- Preset chases: 9
- DMX-512: XLR 3 pole
- Output connector: 3 pole Female XLR
- Battery: 7.4V 2200mA
- Operation time: 8 hours (full battery)
- Power supply: 7.8V DC 500mA
- Power consumption: 20 Watt
- Power connector: Adapter (included)
- Dimensions: 325 x 140 x 50 mm (LxWxH)
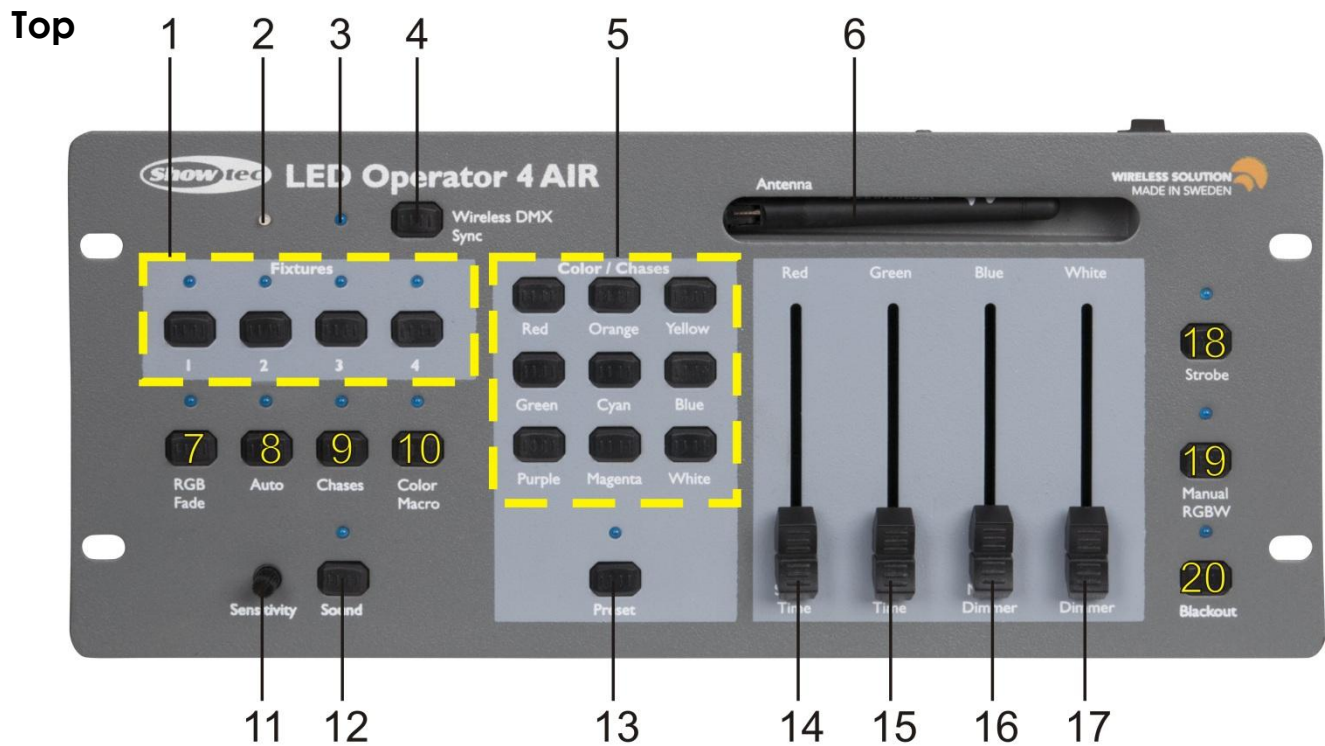- Weight: 1,54 kg

## Overview



Fig. 1

**Fig. 2**

1) Fixture buttons (1-8)
2) Battery Life LED
3) Wireless Sync LED
4) Wireless Sync button
5) Color Buttons (Red, Orange, Yellow, Green, Cyan, Blue, Purple, Magenta, White)
6) Antenna
7) RGB Fade button
8) Auto button
9) Chases button
10) Color Macro button
11) Audio Sensitivity control
12) Sound button
13) Preset button
14) Red / Speed Time fader
15) Green / Fade Time fader
16) Blue / Master Dimer
17) White / White Dimmer
18) Strobe button
19) Manual RGBW button
20) Blackout button
    Press the Blackout button to enable or disable relevant DMX output. When its LED is lit, that means the relevant DMX output is disabled. Press this button again the LED will be "off", that means the DMX output is reactivated.

## Backside



**Fig. 3**

**21)** ON/OFF
**22)** Power Input DC 12V
**23)** 3-pin DMX output connector

## Installation

Remove all packing materials from the LED Operator 4 Air. Check that all foam and plastic padding is removed. Connect all cables.
**Do not supply power before the whole system is set up and connected properly.**
**Always disconnect from electric mains power supply before cleaning or servicing.**
**Damages caused by non-observance are not subject to warranty.**

## Common Terms

The following are common terms used in intelligent light programming.

**Blackout** is a state where all lighting fixtures' light output are set to 0 or off, usually on a temporary basis.

**DMX-512** is an industry standard digital communication protocol used in entertainment lighting equipment.

**Fixture** refers to your lighting instrument or other device such as a fogger or dimmer which you can control.

**Fade** slider is used to adjust the fade time between scenes within a chase.

# Set Up and Operation

Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 230V power, or vice versa.
Remove all packing materials from the LED-Operator 4 Air. Check that all foam and plastic padding is removed.
**Always disconnect from electric mains power supply before cleaning or servicing.**
**Damages caused by non-observance are not subject to warranty.**

# Fixture Linking

You will need a serial data link to run light shows of one or more fixtures using a DMX-512 controller or to run synchronized shows on two or more fixtures set to a master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.

**Important:** Fixtures on a serial data link must be daisy chained in one single line. To comply with the EIA-485 standard no more than 30 devices should be connected on one data link. Connecting more than 30 fixtures on one serial data link without the use of a DMX optically isolated splitter may result in deterioration of the digital DMX signal.

Maximum recommended DMX data link distance: 100 meters
Maximum recommended number of light effects's on a DMX data link: 30 fixtures

# Data Cabling

To link fixtures together you must obtain data cables. You can purchase DAP Audio certified DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

**DAP Audio Certified DMX Data Cables**
- DAP Audio cable for allround use. bal. XLR/M 3 p. > XLR/F 3 p.
  **Ordercode** FL01150 (1,5m.), FL013 (3m.), FL016 (6m.), FL0110 (10m.), FL0115 (15m.), FL0120 (20m.).
- DAP Audio cable for the demanding user with exceptional audio-qualities and connector made by Neutrik®. **Ordercode** FL71150 (1,5m.), FL713 (3m.), FL716 (6m.), FL7110 (10m.).

# ⚠ Wifi Sync ⚠

Receiving products should be 3~10 ft (1~3 m) away from the LED Operator 4 Air while syncing.

## Using the Wireless Option
The LED Operator's integrated 2.4GHz module is a wireless transmitter with a range of up to 200 m (656 ft). To use the wireless option, press the Wireless Sync button (**4**) for 15 seconds or until the receiving product(s') signal light blinks rapidly.

## Controller Modes
The Operator 4 Air has 11 operating modes, accessible through the buttons on the front panel oft he LED Operator Air.

## ⚠ Attention ! ⚠
Never connect a product that is operating in any stand-alone mode (either Static, Automatic, or Sound) to a DMX string connected to a DMX controller.
Products in stand-alone mode may transmit DMX signals that could interfere with the DMX signals from the controller.

The Strobe-Override and Blackout modes will override all other modes and controls.
Make sure that they are **not** selected, before trying to operate the device in any other mode.

The **White Dimmer** (**17**) will not be affected in any mode except in Color Macro Mode. It operates independently from other operating modes.

Products with amber LEDs will show amber when the **White Dimmer** (**17**) is on, regardless of the mode. For example, when selecting the Cyan button for a Chase mode, amber LEDs will stay on during blackout. Be sure to set the **White Dimmer** (**17**) to the off position, to avoid showing amber when blackout is desired.

## Preset Colors
The 9 preset color buttons (**5**) (Red, Orange, Yellow, Green, Cyan, Blue, Purple, Magenta, White) can be used to assign a color to each addressed product.
**1)** Select one or more products by using the 4 Fixture buttons (**1**).
**2)** Press the Preset button (**13**), until the LED for the desired product(s) lights up.
**3)** Use the Fade Time fader (**15**) to set the fade time.
**4)** Use the Master Dimmer (**16**) to set the desired light intensity.
**5)** Select one of the 9 Preset Color buttons (**5**).

⚠ Sound-Active mode **will not** function in Preset mode. ⚠

## RGB Fade
This mode will fade all connected devices in unison as the colors change.
**1)** Select one or more products by using the 4 Fixture buttons (**1**).
**2)** Press the RGB Fade button (**7**) until the LED for the desired product lights.
**3)** Use the Speed Time fader (**14**) to set the color change speed.
**4)** Use the Fade Time fader (**15**) to set the transition time (fade time) between colors.
**5)** Use the Master Dimmer (**16**) to set the desired intensity of the light.

⚠ Sound-Active mode **will** function in Preset mode. ⚠

## Auto Mode

This mode uses built-in programs to change each device independently with random colors.
1) Select one or more products by using the 4 Fixture buttons (**1**).
2) Press the AUTO button (**8**) so the LED indicator lights up.
3) Use the Speed Time fader (**14**) to set the programspeed.
4) Use the Master Dimmer (**16**) to set the desired light intensity.
5) Select one of the 9 Preset Color buttons (**5**).

Each fixture (1~4) will show a different, random color in this Auto mode.

⚠ Sound-Active mode **will** function in Preset mode. ⚠

## Chase

These preset chases provide several color combinations and they will cycle the LEDs on and off so that the lights appear to be moving along a string.
1) Select one or more products by using the 4 Fixture buttons (**1**).
2) Press the Chases button (**9**) until the LED indicator lights up.
3) Use the Preset Colors/Chases buttons to select a chase:

| Color/Chase Button | Chase Function |
|---|---|
| Red | Red/Green |
| Orange | Green/Blue |
| Yellow | Red/Blue |
| Green | Red/Cyan |
| Cyan | Green/Magenta |
| Blue | Yellow/Blue |
| Purple | White/Blackout |
| Magenta | Color Cycle |
| White | Yellow/Magenta |

4) Use the Speed Time fader (**14**) to set the chasespeed.
5) Use the Fade Time fader (**15**) to set the transition time (fade time) between colors.
6) Use the Master Dimmer (**16**) to set the desired light intensity.

⚠ Sound-Active mode **will** function in Chase mode. ⚠

## RGB Offset

RGB Offest is a built-in color-fade program that will create a serial chase through fixtures 1~4.
1) Press the RGB Fade button (**7**) and the AUTO button (**8**) at the same time.
2) Use the Speed Time fader (**14**) to set the chasespeed.
3) Use the Fade Time fader (**15**) to set the transition time (fade time) between colors.
4) Use the Master Dimmer (**16**) to set the desired light intensity.

⚠ Sound-Active mode **will** function in RGB Offset mode. ⚠

## Color Macros

These preset color macros have varying intensities.
1) Select one or more products by using the 4 Fixture buttons (**1**).
2) Use the Speed Time fader (**14**) to select the desired color combination.
3) Use the Fade Time fader (**15**) to set the transition time (fade time) between colors.
4) Use the Master Dimmer (**16**) to set the desired light intensity.
5) Use the White Dimmer (**17**) to set the desired intensity of the white/amber LEDs.

Color Macros will apply the same color to each product.

⚠ Sound-Override mode **will not** function while the Color Macros are operating. ⚠

## Sound-Override

This feature will work in RGB Fade, Auto, Chase, and RGB Offset Mode and it creates a sound-activated show, using the selected auto mode.

Sound-Override can be triggered by using the microphone instead of the Speed Time fader (**14**) used for other multi-step modes:

1) Press the Sound button (**12**) until the LED indicator lights up.
2) Adjust the sound sensitivity using the Microphone Sensitivity Adjustment control (**11**).

The product will only respond to the music's low frequencies (bass and drums).

⚠ Sound-Override mode **will not** function in Preset mode. ⚠

## White or Amber

This all-white or all-amber operating mode can create a stable wash or spot, depending on your lighting needs. The only functions that will affect these modes are Strobe-Override and Blackout.

1) Press the Manual RGBW button (**19**) until the LED indicator lights up.
2) Use the White Dimmer (**17**) independently to get amber or use all faders to create white.

## Strobe-Override

This mode will produce flashes of light at regular intervals. These intervals are determined by moving the dimmer fader.

1) Select one or more products by using the 4 Fixture buttons (**1**).
   Note: Strobe-Override will only affect products that are selected.
2) Make sure that the color faders are at positions above 1% for the strobe to function.
3) Press the Strobe button (**18**) until the LED indicator lights up.
4) Use Speed Time fader (**14**) to select the speed of the strobe.
5) To cancel this mode for all products at once, double-tap the Strobe button (**18**) until the LED indicator turns off.
6) To cancel this mode for a single product, make sure the Strobe is activated and the Fade Time is set to fully down. Then press the Strobe button (**18**) until the LED indicator is off.

When in Strobe-Override Mode, the Led Operator's other operating modes will not function.

## Blackout

Darkens all products. The Blackout button (**20**) works in conjunction with the Fade Time fader (**15**) or as a stand-alone function.

To use fading blackout:

1) Select one or more products by using the 4 Fixture buttons (**1**).
2) Adjust the Fade Time fader (**15**) to your desired value,  to select how quickly the lights will fade out.
3) Press the Blackout button (**20**) until the LED indicator lights up.
4) To cancel this mode for a single product (series), make sure Blackout is activated and Fade Time is set set to 0.1 m (the highest value). Then press the Blackout button (**20**) until the LED indicator is off.

To achieve instant blackout:

1) Double-tap the Blackout button (**20**) to instantly blackout all products.

When in Blackout Mode, the LED Operator's other operating modes will not function.

Fading Blackout will not work, when the controller is in Manual RGBW/RGBA mode.
Pressing the Blackout button (**20**)  will cause all selected products to blackout immediately.

## Manual RGBW/RGBA

Set this mode to use a manually selected custom color combination, determined by the position of the Red, Green, Blue, and White faders.

**1)** Select one or more products by using the 4 Fixture buttons (**1**).

**2)** Press the Manual RGBW button (**19**)until the LED indicator lights up.

**3)** Adjust the red, green, blue, and white/amber faders to the desired level.

When in Manual RGBW mode, pressing the Blackout button (**20**)  will immediately blackout the fixtures.

Fading blackout operation does not function in Manual RGBW mode.
Speed/Fade Time functions do not functionin Manual RGBW mode.

# Maintenance

The operator has to make sure that safety-relating and machine-technical installations are to be inspected by an expert after every year in the course of an acceptance test.
The operator has to make sure that safety-relating and machine-technical installations are to be inspected by a skilled person once a year.
The following points have to be considered during the inspection:
1. All screws used for installing the device or parts of the device have to be tightly connected and must not be corroded.
2. There may not be any deformations on housings, fixations and installation spots.
3. Mechanically moving parts like axles, eyes and others may not show any traces of wearing.
4. The electric power supply cables must not show any damages or material fatigue.

The Showtec LED Operator 4 Air requires almost no maintenance. However, you should keep the unit clean.
Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Do not use alcohol or solvents.
Keep connections clean. Disconnect electric power, and then wipe the DMX and audio connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

# Troubleshooting

## No Light

This troubleshooting guide is meant to help solve simple problems.
If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.
If the LED Operator 4 Air does not operate properly, refer servicing to a technician.
Response: Suspect two potential problem areas: the power supply, the LEDs.
1. Power supply. Check that the unit is plugged into an appropriate power supply.
2. The LEDs. Return the LED Operator 4 Air to your Showtec dealer.
3. A led effect does not respond to the LED Operator 4 Air: Check the DMX-address of the fixture and the controller. Make sure they match. Make sure the connections are correct. Check if blackout is off.
4. If all of the above appears to be O.K., plug the unit in again.
5. If nothing happens after 30 seconds, unplug the device.
6. If you are unable to determine the cause of the problem, do not open the LED Operator 4 Air, as this may damage the unit and the warranty will become void.
7. Return the device to your Showtec dealer.

## No Response to DMX

Response: Suspect the DMX cable or connectors, a controller malfunction, a light effect DMX card malfunction.
1. Check the DMX setting. Make sure that DMX addresses are correct.
2. Check the DMX cable: Unplug the unit; change the DMX cable; then reconnect to electrical power. Try your DMX control again.
3. Determine whether the controller or light effect is at fault. Does the controller operate properly with other DMX products ? If not, take the controller in for repair. If so, take the DMX cable and the light effect to a qualified technician.

# Product Specification

Model: Showtec LED Operator 4 Air
- Battery operated (8 hours)
- Wireless DMX from Wireless solutions Sweden
- Preset RGB color and chases
- Control 4 x 4 channel fixtures
- The LED operator 4 Air has the same functionality as the popular LED operator 4 but with built-in wireless DMX module and battery operated.
- This solution is ideal for all 4 channel battery operated spots or bars and gives you the freedom to run an entire system in- and outdoor without using a power or DMX cable.
- easy to use with preset RGB colors and chases with adjustable fade, speed
- strobe control or can be activated by sound.
- Fixtures: 4
- Channels: 16 (4 each fixture)
- RGB Presets: 9
- Preset chases: 9
- DMX-512: XLR 3 pole
- Output connector: 3 pole Female XLR
- Battery: 7.4V 2200mA
- Operation time: 8 hours (full battery)
- Power supply: 7.8V DC 500mA
- Power consumption: 20 Watt
- Power connector: Adapter (included)
- Dimensions: 325 x 140 x 50 mm (LxWxH)
- Weight: 1,54 kg

Design and product specifications are subject to change without prior notice.

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