LED RF-CONTROL RGB

ENGLISH
Operation Manual

Other languages can be downloaded from:
WWW.JB-SYSTEMS.EU

CE
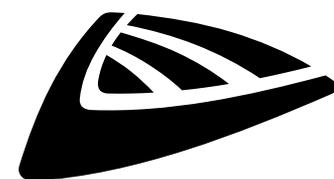
Version: 1.0

JBSYSTEMS
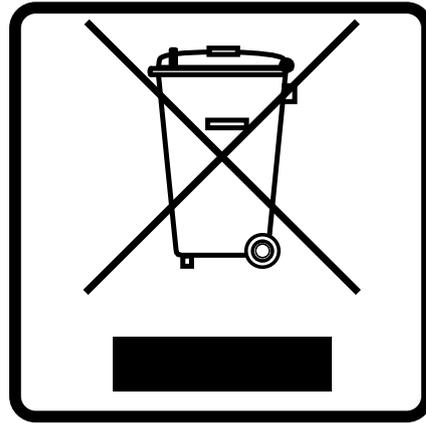
EN - DISPOSAL OF THE DEVICE

Dispose of the unit and used batteries in an environment friendly manner according to your country regulations.

FR - DÉCLASSER L'APPAREIL

Débarrassez-vous de l'appareil et des piles usagées de manière écologique Conformément aux dispositions légales de votre pays.

NL - VERWIJDEREN VAN HET APPARAAT

Verwijder het toestel en de gebruikte batterijen op een milieuvriendelijke manier conform de in uw land geldende voorschriften.

DU - ENTSORGUNG DES GERÄTS

Entsorgen Sie das Gerät und die Batterien auf umweltfreundliche Art und Weise gemäß den Vorschriften Ihres Landes.

ES - DESHACERSE DEL APARATO

Reciclar el aparato y pilas usadas de forma ecologica conforme a las disposiciones legales de su pais.

PT - COMO DESFAZER-SE DA UNIDADE

Tente reciclar a unidade e as pilhas usadas respeitando o ambiente e em conformidade com as normas vigentes no seu país.

OPERATION MANUAL

Thank you for buying this JB Systems® product. To take full advantage of all possibilities, please read these operating instructions very carefully.

FEATURES

- User-friendly 3channel controller for RGB LED-lighting (LED strips)
- The stylish RF-remote has very easy-to-use features:
    - Radio frequency (433,92MHz): you don't have to point it to the receiver!
    - Remote on/off
    - Delay off: light turns off after 30seconds
    - Seamless 0% - 100% dimming + 4 preset levels (10, 30, 70, 100%)
    - "Night light" button (adjustable output: 1% to 10%)
    - 3 working modes: static or blink / wave with adjustable speed
- Several controllers can work together in perfect sync.
- Each receiver can be programmed for use with up to 3 RF-remotes.
- PWM technology for smooth and flicker-free dimming from 0% to 100%
- Connects directly to RGB flexible LED-strips and other constant voltage LED-lights.
- Max. output power: 240Watt @12V *   480Watt @ 24V
- Perfect for use in LED installations for homes, shops, …

BEFORE USE

Check the contents:
Check that the carton contains the following items:
- LED RF-CONTROL RGB receiver
- RF-remote
- User manual

Some important instructions:
- Before you start using this unit, please check if there's no transportation damage. Should there be any, do not use the device and consult your dealer first.
- **Important:** This device left our factory in perfect condition and well packaged. It is absolutely necessary for the user to strictly follow the safety instructions and warnings in this user manual. Any damage caused by mishandling is not subject to warranty. The dealer will not accept responsibility for any resulting defects or problems caused by disregarding this user manual.
- Keep this booklet in a safe place for future consultation. If you sell the fixture, be sure to add this user manual.
- To protect the environment, please try to recycle the packing material as much as possible.

SAFETY INSTRUCTIONS:

This symbol means: indoor use only

This symbol means: Read instructions

This symbol means: Lamp Control Gear

The device is suitable for mounting on standard flammable surfaces. Standard flammable surfaces include building materials such as wood and wood-based materials more than 2mm thick.

- To prevent fire or shock hazard, do not expose this appliance to rain or moisture.
- To avoid condensation to be formed inside, allow the unit to adapt to the surrounding temperatures when bringing it into a warm room after transport. Condense sometimes prevents the unit from working at full performance or may even cause damages.
- This unit is for indoor use only.
- Don't place metal objects or spill liquid inside the unit. No objects filled with liquids, such as vases, shall be placed on this appliance. Electric shock or malfunction may result. If a foreign object enters the unit, immediately disconnect the mains power.
- No naked flame sources, such as lighted candles, should be placed on the appliance.
- Don't cover any ventilation openings as this may result in overheating.
- Prevent use in dusty environments and clean the unit regularly.
- Keep the unit away from children.
- Inexperienced persons should not operate this device.
- Maximum save ambient temperature is 40°C. Don't use this unit at higher ambient temperatures.
- Always unplug the unit when it is not used for a longer time or before you start servicing.
- The electrical installation should be carried out by qualified personal only, according to the regulations for electrical and mechanical safety in your country.
- Check that the available voltage is not higher than the one stated on the rear panel of the unit.
- Please use the original packing when the device is to be transported.
- Due to safety reasons it is prohibited to make unauthorized modifications to the unit.

MAINTENANCE

Clean by wiping with a polished cloth slightly dipped with water. Avoid getting water inside the unit. Do not use volatile liquids such as benzene or thinner which will damage the unit.

FUNCTIONS

1. **SYNC IN/OUT:** you can use standard CAT5-cable with RJ-45 connectors to connect several LED DMX-CONTROL units together to synchronize them.
   SLAVE UNIT: a unit that is connected using its SYNC input connecter will automatically act as a slave: the SIGNAL led blinks fast.
   MASTER UNIT: the unit where the SYNC input connecter is NOT used will automatically act as master: this is the unit that will receive the instructions from the RF-remote.
2. **LOAD OUTPUT:** connect the led strip(s) here, CH1=RED, CH2=GREEN, CH3=BLUE (check the polarity !)
3. **POWER INPUT:** connect the power supply (12Vdc or 24Vdc) here. (check the polarity !)
4. **SIGNAL LED:** lit when control signals are received:
   MASTER UNIT: lights up while RF-signals are received.
   SLAVE UNIT(S): blinks fast to indicate that it is synced with the master.
5. **SET BUTTON:** used to set up certain functions, like:
   - Match the RF-REMOTE with the receiver.
   - Program the brightness of the night light button (10).
6. **ON/OFF BUTTONS:** used to switch the output on/off

7. **SELECTS DYNAMIC PROGRAMS:** Press these buttons to select one of the dynamic programs: blinking in white color, fading in/out in white color, switching between 3 colors, switching between 7 colors, fading between 3 colors, fading between 7 colors, red/green cross fading, red/blue cross-fading, green/blue cross-fading.
8. **SELECT STATIC COLORS:** select one of the 8 preset static colors: red, green, blue, orange, yellow, purple, cyan, white.
9. **INSTANT WHITE:** press this button for instant white color.
10. **BRIGHTNESS BUTTON:** used to change the brightness of the static colors:
    - Press the extreme LEFT and RIGHT side to change the brightness of the STATIC COLORS.
    - Press in the MIDDLE of the button for instant 100% output.
    Remark: does NOT work for dynamic programs!
11. **SPEED BUTTONS:** press these buttons to adjust the speed of DYNAMIC PROGRAMS.
    Remark: does NOT work for static colors!
12. **DYNAMIC LOOP BUTTON:** press this button to automatically play all dynamic programs in a loop.
13. **BATTERY COMPARTMENT:** houses 2pcs 1.5V AAA-batteries.
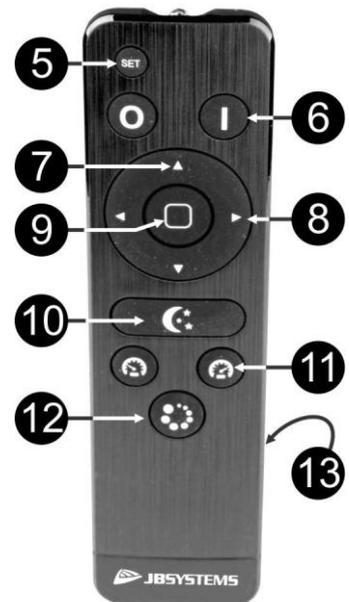
PAIRING THE RF-REMOTE

The set comes with an RF-remote that is already paired with the receiver. However the receiver can be used with up to 3 different RF-remotes. To work properly the extra remote(s) should first be paired to the receiver.
PS: When no RF-remotes are paired, the receiver will work with all RF-remotes.

Pairing the RF-remote (save RF-remote code to the receiver)
A. Switch the receiver off.
B. Keep the SET button (5) on the RF-remote pressed.
C. Switch the receiver on: output will be at ±50%
D. Release the SET button (5) on the RF-remote.
E. Now press the MODE button (9) <u>three times within 5seconds</u>: with each press the output will lower.
F. Done!

Erase RF-remote codes
This erases ALL 3 RF-remote codes from the receiver, the receiver will work with any RF-remote.
The procedure is identical to pairing the RF-remote but in step E you have to press the DELAY-OFF button (12) three times within 5 seconds.

ELECTRICAL INSTALLATION

CONNECTIONS FOR SMALLER POWER

This is the typical installation when the power of the connected flexible led strips does not exceed the maximum allowed power of the unit. (3x 80W for 12V applications or 3x 160W for 24V applications)
Follow these instructions:

- Calculate the total power of the led strips. The power of led strips is mostly given in watt/meter (W/m).
  - *Example: the power of your led strips = 9,6W/m and length = 3 strips x 4m*
  - *The total power = 9,6 W/m * 4m * 3 strips = 115W*
- Choose an adapted power supply based on the previous calculation. For long-term reliability we suggest to add about 20% power reserve and choose the nearest power supply exceeding this calculation.
  - *Example: in our example we need 115W. So we add 20%: 115W + 20% = ±138W*
  - *The nearest power supply in this case is our 150W / 24V power supply.*
- Connect the power supply output to the Power input of the unit. (don't mix-up the polarity of the wires!)
- Connect the 3 led strips to the 3 outputs of the dimmer. (don't mix-up the polarity of the wires!)
  - *Remark: don't connect more than 5m led strip in series, excessive current will damage the led strip. Instead you can connect the led strips in parallel.*
- Switch on the power supply AFTER you checked all connections.
- Use the RF-remote to check if everything works well!
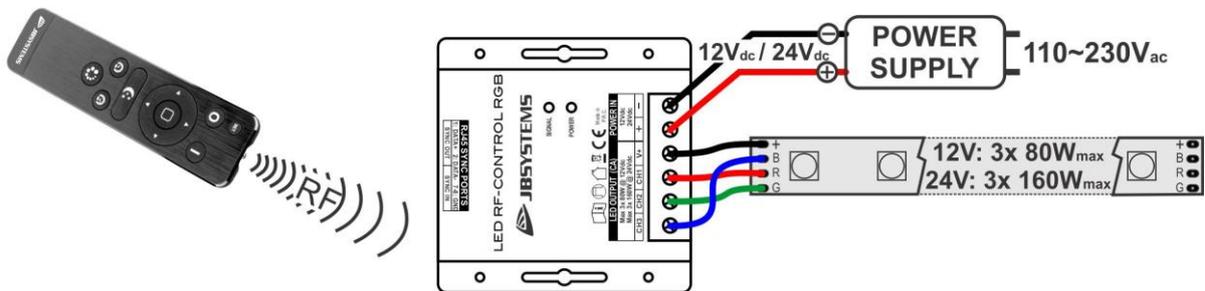
CONNECTIONS FOR BIGGER POWER

This is the typical installation when the power of the connected flexible led strip exceeds the maximum allowed power of the unit. (3x 80W for 12V applications or 3x 160W for 24V applications)
OPTION 1: Simply use several LED RF-CONTROL RGB receivers and use the RJ45 sync in/outputs to synchronize them:
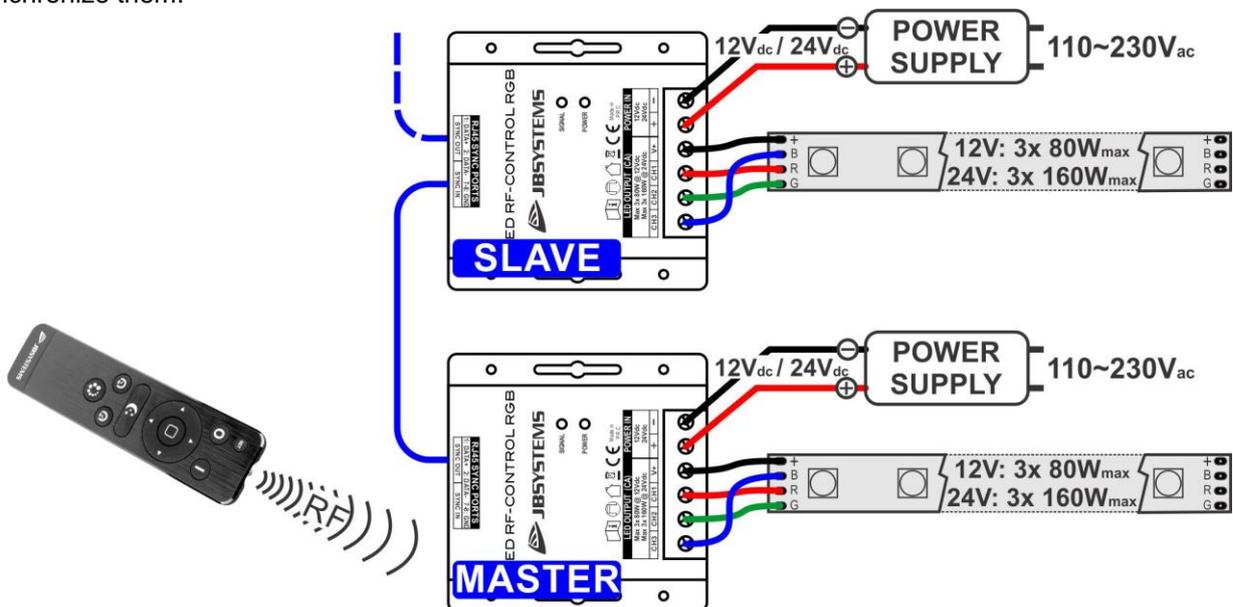
Remark: The master (controlled by the RF-remote) is the one where the SYNC IN port is empty.

OPTION 2: Use one or more LED-REPEATER units to extend the length of the connected led strips. Refer to the user manual of the LED-REPEATER units to see how this is done.

SOME GENERAL GUIDELINES

You can make any desired installation BUT you have to keep some important guidelines in mind:
- Calculate the total power of the led strips and add ±20% to determine the power of the power supplies.
- Never connect led strips together in lengths exceeding 5m, instead:
  - Connect the strips in parallel:
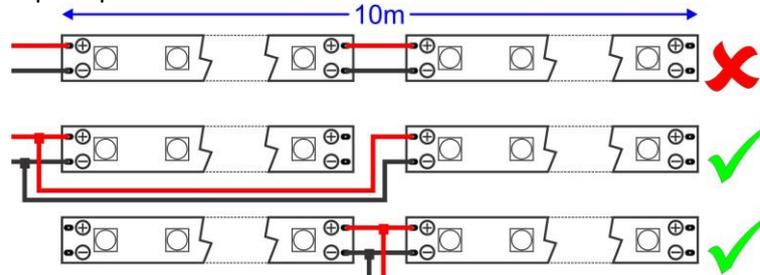
  - Use one or more LED-REPEATER + extra power supplies to extend the led strips.
- Use wires with a maximum cable section to reduce important voltage drops. Use at least 1,5mm² wires, for higher power and cable lengths we suggest 2,5mm². Even better is to calculate the voltage drop and use special charts to determine the perfect cable section.

SPECIFICATIONS

This unit is radio-interference suppressed. This product meets the requirements of the current European and national guidelines. Conformity has been established and the relevant statements and documents have been deposited by the manufacturer.

Power Input:	12Vdc or 24Vdc (depends on the voltage of the led strips)
Output:	common anode,
	3x80W = 240W @ 12Vdc
	3x160W = 480W @ 24Vdc
Dimensions (HxWxD):	90 x 90 x 24 mm (receiver)
	150 x 40 x 20 mm (RF-remote)
RF-frequency:	433,92 MHz
Battery IR-remote:	2x 1.5V AAA-battery
Weight:	250 g

Every information is subject to change without prior notice
You can download the latest version of this user manual on our website: www.jb-systems.eu
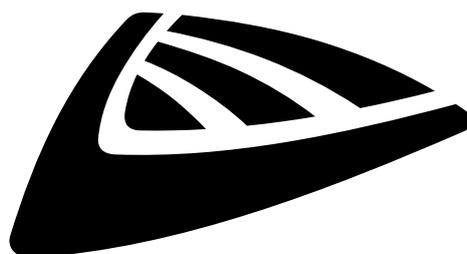
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