

GIDERWEL 12 Channel DMX Decoder

GIDERWEL 12 Channel DMX Decoder Instruction Manual

Model: 12 Channel DMX Decoder

Brand: GIDERWEL

1. INTRODUCTION

The GIDERWEL 12 Channel DMX Decoder is designed to convert standard DMX512/1990 digital control signals into analog control signals for LED lighting applications. This decoder is suitable for controlling general LED lighting, including RGB light strips and LED modules. It features 12 output channels, with each channel capable of achieving 256 control levels for 0-100% dimming output. The DMX address can be configured using DIP switches, and the device supports a wide voltage DC input range from DC5V to DC24V.

2. FEATURES

- Receives standard DMX-512 digital control signals and converts them into PWM signals for LED light adjustment.
- Provides 0-100% dimming output with 256 gray levels per channel.
- Each decoder occupies 12 DMX addresses.
- DMX address can be set via DIP switches.
- Compatible with DMX digital consoles for dimming functions.
- Supports easy use for 4 groups of RGB LED strips/modules or 12 groups of white LED lights.
- Works with standard DMX512 controllers commonly available in the market.

3. SPECIFICATIONS

| Specification | Value |
|---------------|------------------------|
| Brand | GIDERWEL |
| Model Number | 12 Channel DMX Decoder |

| Specification | Value |
|-----------------------|------------------------------------|
| Input Voltage | DC5V-24V |
| Output Current | 5A per channel (12 channels total) |
| Total Output Amperage | 60 Amps |
| Dimming Output | 0-100% |
| Gray Levels | 256 per channel |
| DMX Protocol | DMX512/1990 Compliant |
| Material | Plastic |
| Product Dimensions | 8"L x 4"W x 8"H (Approximate) |
| Item Weight | 13.1 ounces |

4. SETUP AND INSTALLATION

4.1 Product Overview

Familiarize yourself with the DMX decoder's layout, including power input, DMX input/output, and output terminals for LED connections.



Figure 4.1: GIDERWEL 12 Channel DMX Decoder front view with input/output ports and DIP switches.

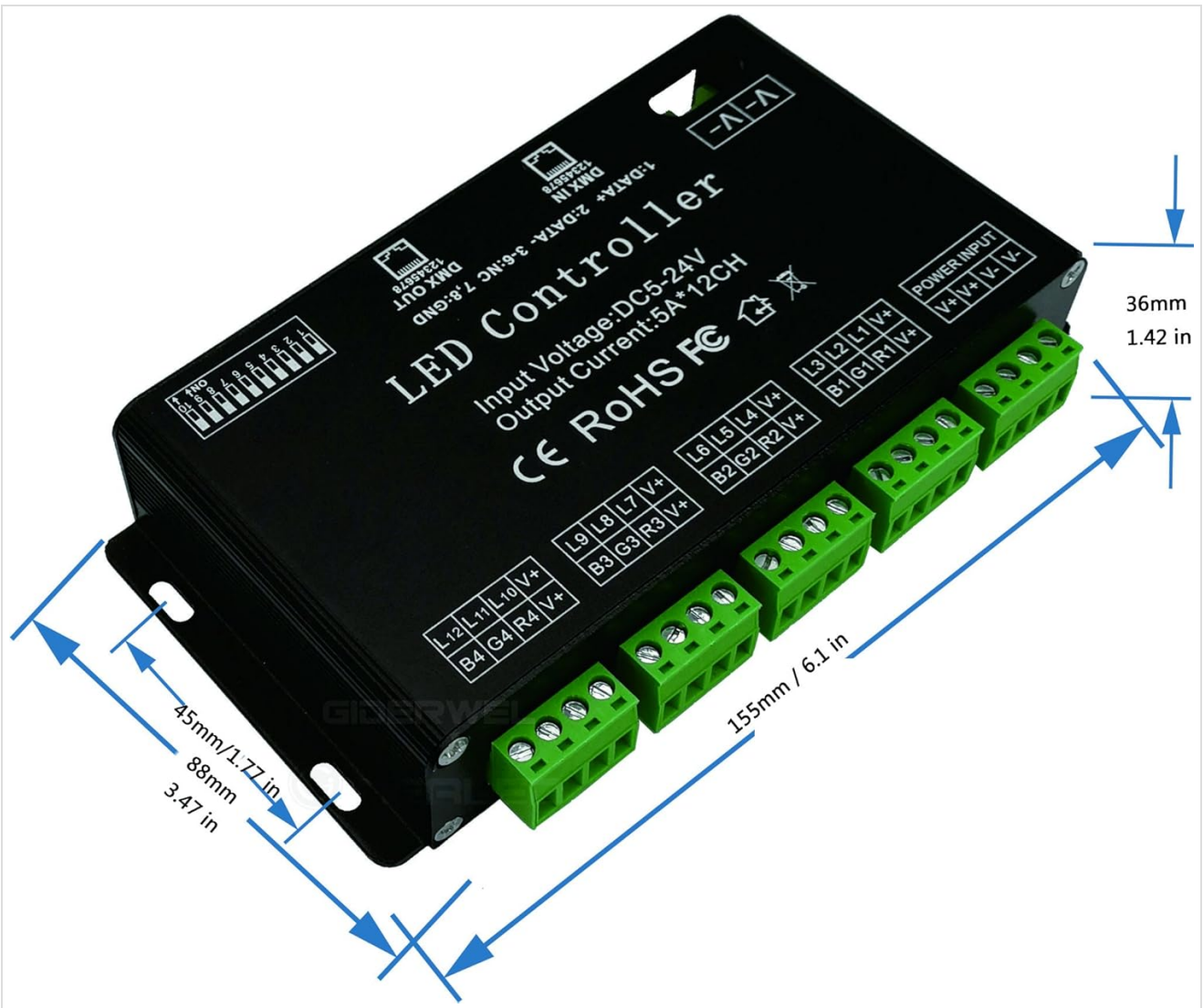


Figure 4.2: GIDERWEL 12 Channel DMX Decoder with dimensions labeled.

4.2 Power Connection

Connect a DC5V-24V power supply to the 'POWER INPUT' terminals. Ensure the voltage matches the requirements of your LED lights. The decoder can handle up to 60A total output (5A per channel).

4.3 DMX Signal Connection

Connect your DMX512 master controller to the 'DMX IN' port. If daisy-chaining multiple decoders, connect the 'DMX OUT' of the current decoder to the 'DMX IN' of the next. Ensure the 3-pin sequence of the DMX cable (GND, DATA-, DATA+) is consistent between the decoder and the console.

When connecting with a cable, The 3 Pin sequence of the Decoder must be consistent with the console.

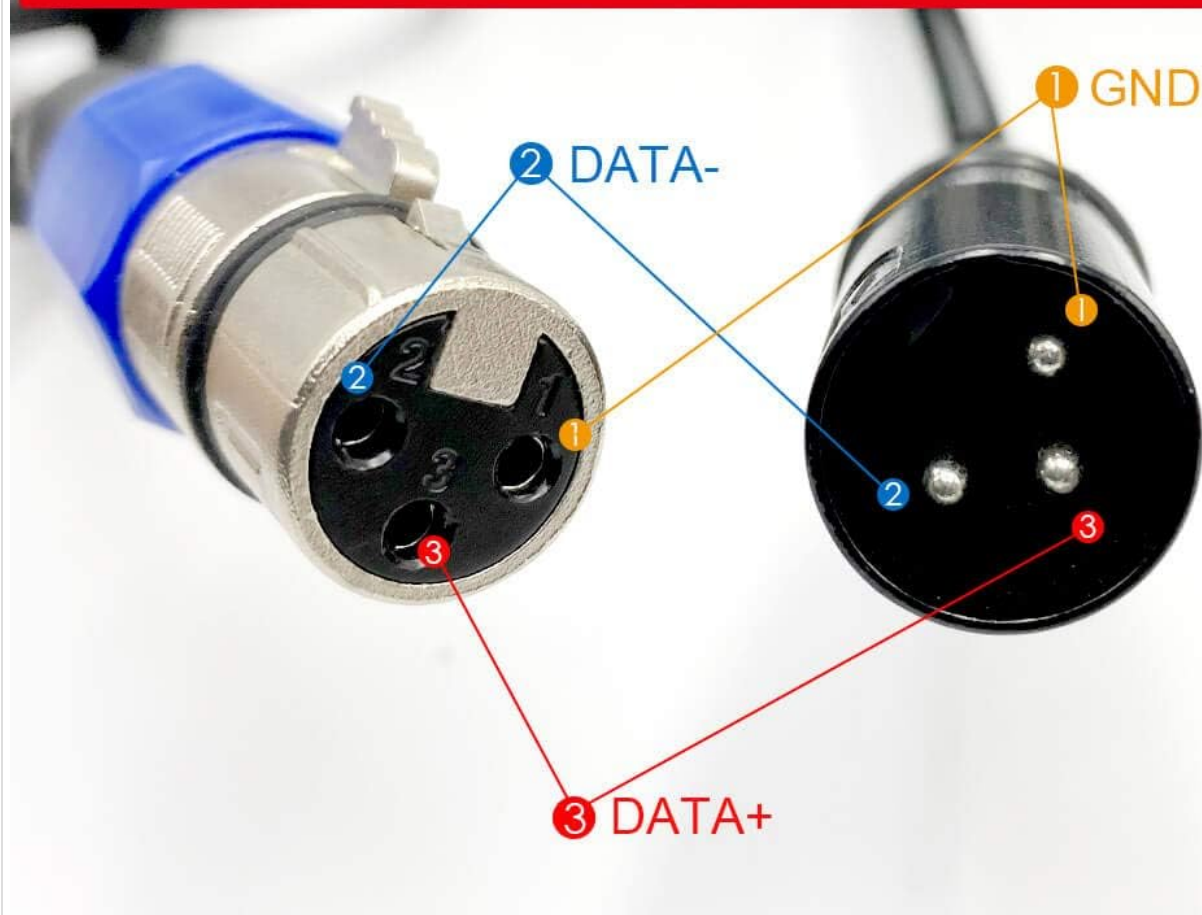


Figure 4.3: Diagram showing 3-pin DMX cable connection sequence (GND, DATA-, DATA+).

4.4 LED Output Connection

Connect your LED light strips or modules to the output terminals. The decoder supports 4 groups of RGB LED strips/modules or 12 groups of single-color LED lights. Refer to the wiring diagrams below for proper connection.

1.Control to 4 group RGB led strip /led module

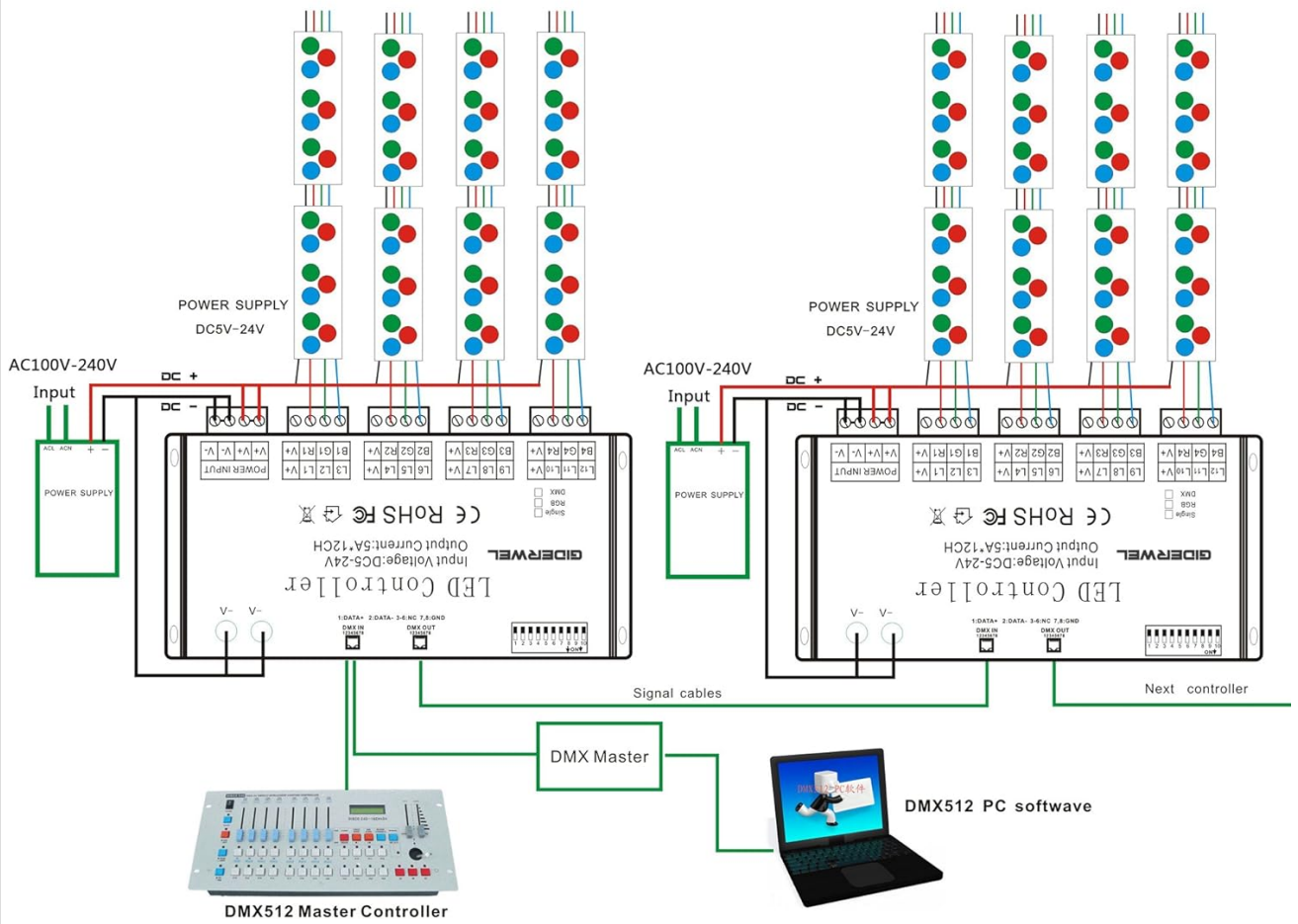


Figure 4.4: Wiring diagram for controlling 4 groups of RGB LED strips/modules.

2. Control to 12 group single color of the led strip /led module

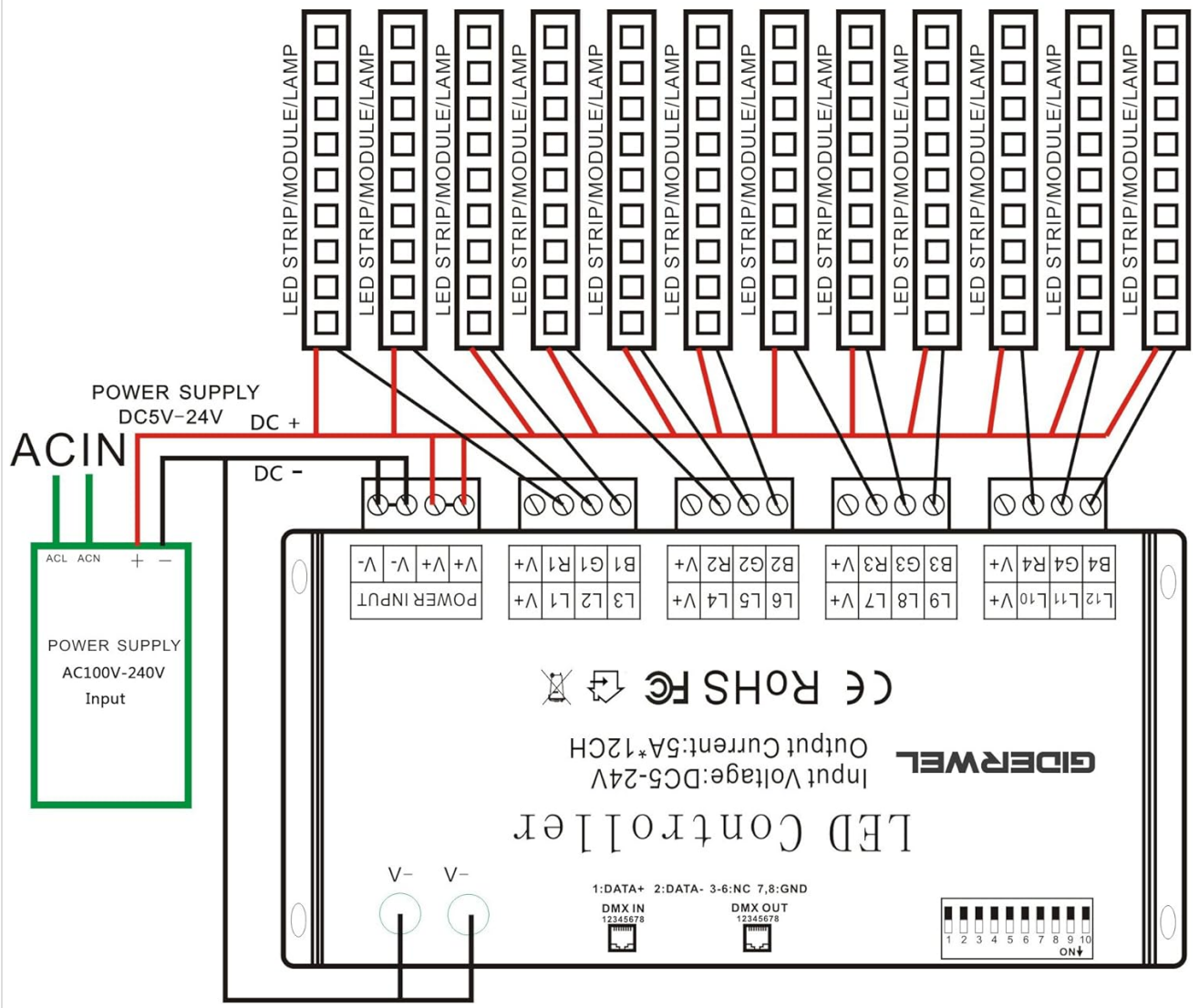


Figure 4.5: Wiring diagram for controlling 12 groups of single-color LED strips/modules.

4.5 DMX Address Setting

Use the DIP switches on the decoder to set the DMX address. Each decoder occupies 12 DMX addresses. Consult your DMX master controller's manual for specific address assignment procedures and ensure the decoder's address matches your controller's output.

5. OPERATING INSTRUCTIONS

Once properly installed and addressed, the GIDERWEL 12 Channel DMX Decoder operates by receiving DMX512 signals from a compatible master controller. The decoder translates these signals into PWM (Pulse Width Modulation) to control the brightness and color of connected LED lights.

- **Dimming Control:** The decoder provides 0-100% dimming capability across its 12 channels, with 256 gray levels for smooth transitions.
- **Color Control (for RGB):** For RGB LED setups, the decoder allows individual control of Red, Green, and Blue channels, enabling a wide spectrum of colors.
- **Master Controller:** Use a standard DMX512 master controller or DMX PC software to send commands to the decoder. Ensure the correct profile for the decoder is loaded on your master controller.

5.1 Typical Applications



Concert



KTV



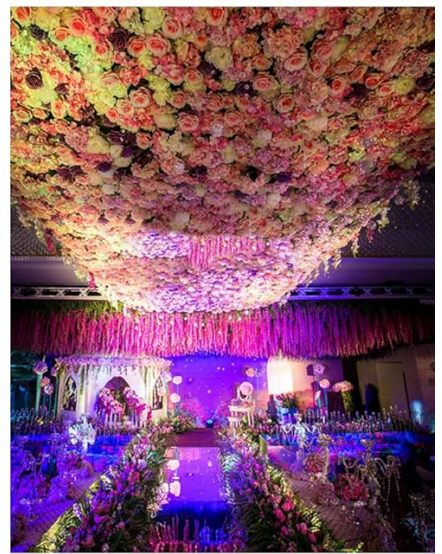
Celebration



Bar



Party



Wedding

Figure 5.1: The DMX decoder is suitable for various lighting applications.



Figure 5.2: Examples of professional and decorative lighting installations.

6. MAINTENANCE

To ensure optimal performance and longevity of your GIDERWEL DMX Decoder, follow these maintenance guidelines:

- **Cleaning:** Regularly clean the exterior of the decoder with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Ventilation:** Ensure the decoder is installed in a well-ventilated area to prevent overheating. Do not block ventilation openings.
- **Connections:** Periodically check all power and DMX connections to ensure they are secure and free from corrosion.
- **Environment:** Operate the decoder within its specified temperature and humidity ranges. Protect it from moisture, dust, and extreme temperatures.

7. TROUBLESHOOTING

If you encounter issues with your DMX decoder, refer to the following troubleshooting steps:

- **No Power:**

- Check the power supply connection to the decoder.
- Verify the power supply is providing the correct DC5V-24V voltage.
- Ensure the power supply is functional.

- **No Light Output / Incorrect Control:**

- Confirm that the DMX master controller is sending signals and is properly configured.
- Verify the DMX address set on the decoder via DIP switches matches the address assigned by your master controller.
- Check the DMX signal cable connections (DMX IN/OUT) for proper seating and correct pinout (GND, DATA-, DATA+).
- Ensure the LED lights are correctly wired to the decoder's output terminals and that their voltage matches the power supply.
- Confirm that the LED lights themselves are functional.
- **Important:** This DMX decoder is professional equipment. You need to download the correct profile for your specific DMX master controller. It is designed to work with standard DMX512 master controllers and may not be compatible with ETC controllers.

- **Flickering Lights:**

- Check for loose connections in both power and DMX lines.
- Ensure the power supply is adequate for the total load of the connected LEDs.
- Verify DMX signal integrity; try a shorter DMX cable or add a DMX terminator if using long runs or multiple devices.

8. WARRANTY AND SUPPORT

For warranty information or technical support, please contact GIDERWEL customer service or the retailer from whom you purchased the product. Keep your purchase receipt as proof of purchase.