

AZIMOM B07QX7ZY2N

AZIMOM DMX512 Decoder Controller User Manual

MODEL: B07QX7ZY2N (24 CHANNEL WITH DISPLAY)

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the AZIMOM 24 Channel DMX512 Decoder Controller. This device is designed to convert standard DMX-512 digital control signals into PWM signals for controlling LED lighting products. It features 24 output channels, a digital display for address setting, and multiple self-change modes.

Key features include:

- Universal standard DMX512 input protocol.
- 3-digit display for DMX address code.
- Wide working voltage range: DC5V-24V.
- 24 output channels with 4096 grey steps per channel.
- Multiple self-change modes with 10 speed levels.

2. Safety Information

Please read and understand all safety instructions before installation and operation. Failure to follow these instructions may result in electric shock, fire, or other hazards.

- **Power Supply:** Ensure the input voltage (DC5V-24V) matches the specifications of your power supply. Using an incorrect voltage can damage the device.
- **Wiring:** All wiring should be performed by a qualified professional. Ensure all connections are secure and properly insulated to prevent short circuits.
- **Environment:** Do not expose the device to moisture, rain, or extreme temperatures. Operate in a well-ventilated area.
- **Overload:** Do not exceed the maximum load current of 3A per channel (3A/CH×24). Overloading can cause damage to the decoder and connected LEDs.
- **Maintenance:** Disconnect power before performing any maintenance or cleaning.

3. Product Overview

The AZIMOM DMX512 Decoder Controller features a compact design with clearly labeled ports and a digital display for easy configuration.



Figure 3.1: Top view of the DMX512 Decoder. This image displays the top panel of the decoder, highlighting the eight green output terminal blocks (OUTPUT1 to OUTPUT8) and the digital display with control buttons (A.Address, H.Mode, S.Speed, SET).

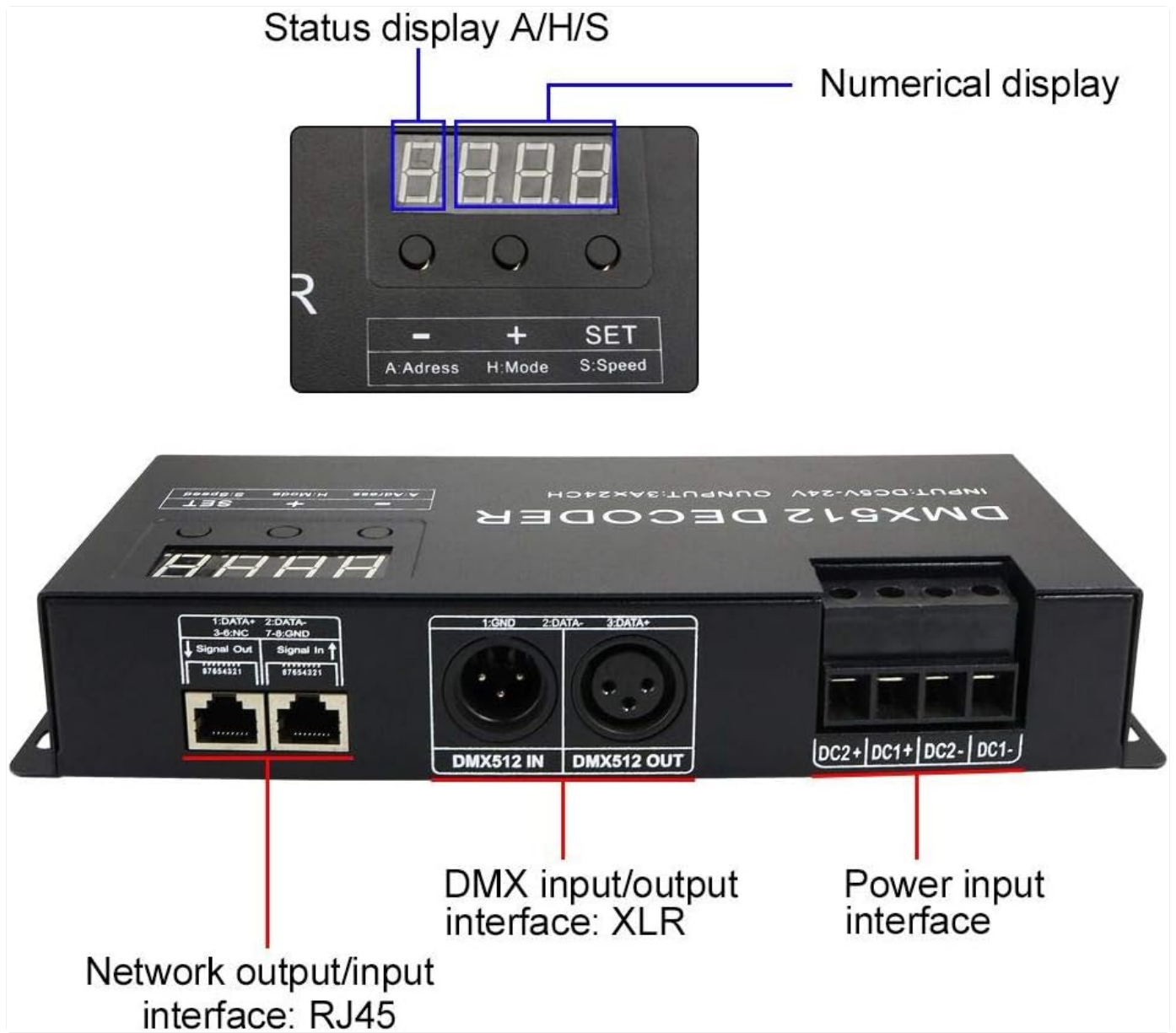


Figure 3.2: Rear view of the DMX512 Decoder with labeled interfaces. This image shows the rear panel, detailing the DMX IN and DMX OUT XLR interfaces, two RJ45 network input/output interfaces, and the DC power input terminals (DC2+, DC1+, DC2-, DC1-).



Figure 3.3: Decoder dimensions and application example. This image illustrates the physical dimensions of the decoder (260mm length, 110mm width, 43mm height) and includes an example of LED lighting applications.

4. Setup

Follow these steps to connect your DMX512 Decoder Controller to your DMX system and LED lighting.

4.1. Wiring Diagram



Figure 4.1: DMX512 system connection diagram. This diagram illustrates how to connect the DMX512 decoder to a DMX console or PC console, showing DMX data input, power input, and output connections to LED strips. It also highlights the use of two power supplies for different output groups.

4.2. Connection Steps

- 1. Power Connection:** Connect a DC5V-24V power supply to the DC power input terminals on the rear of the decoder. Ensure correct polarity (DC+ to + and DC- to -). The decoder supports two power inputs (DC1 and DC2) for flexible power distribution. For outputs 1-4, use Power Input 1. For outputs 5-8, use Power Input 2. If only one power supply is used, it can power all outputs if sufficient.
- 2. DMX Signal Input:** Connect your DMX512 controller (e.g., DMX console or PC DMX interface) to the DMX IN XLR port on the decoder. For daisy-chaining multiple decoders, connect the DMX OUT XLR port of the first decoder to the DMX IN of the next. RJ45 ports are also available for DMX signal input/output.
- 3. LED Output Connection:** Connect your LED lighting products (e.g., LED strips, modules) to the green output terminal blocks (OUTPUT1 to OUTPUT24). Each block supports multiple channels. Ensure correct polarity for your LED products. The decoder provides 24 channels, typically used for RGB or RGBW control (e.g., 3 channels per RGB segment).



Figure 4.2: Close-up of light strip input interfaces and DMX XLR connectors. This image provides a detailed view of the green output terminal blocks, labeled OUTPUT1 through OUTPUT8, and the DMX XLR input/output connectors.

5. Operating Instructions

The DMX512 Decoder Controller can operate in DMX mode or stand-alone mode with built-in programs.

5.1. Setting DMX Address

The digital display shows the current DMX start address. Use the buttons to set the address:

- **SET Button:** Press to enter the setting mode or confirm a selection.
- **A.Address (+):** Press to increase the DMX start address.
- **H.Mode (-):** Press to decrease the DMX start address.
- **S.Speed:** This button is typically used for adjusting speed in self-change modes, but may also be involved in navigating menus.

The digital display simplifies address setting, eliminating the need for complex DIP switch calculations. After setting the address, the decoder will respond to DMX signals on the assigned channels.

5.2. Stand-Alone Modes

The decoder includes multiple self-change modes. These modes can be accessed and adjusted without an external DMX controller.

- Use the **H.Mode** button to cycle through the available built-in programs.

- Use the **S.Speed** button to adjust the speed of the selected program (10 speed levels available).

The specific combination of button presses to switch between DMX mode and stand-alone mode, or to access certain menus, may require experimentation. Refer to the digital display for mode indicators.

6. Maintenance

To ensure optimal performance and longevity of your DMX512 Decoder Controller, follow these maintenance guidelines:

- **Cleaning:** Regularly clean the exterior of the device with a soft, dry cloth. Do not use liquid cleaners or solvents.
- **Ventilation:** Ensure the device has adequate ventilation to prevent overheating. Do not block ventilation openings.
- **Connections:** Periodically check all wiring connections for tightness and integrity. Loose connections can lead to intermittent operation or damage.
- **Solder Joints:** Be aware that solder joints on connectors, particularly DMX XLR ports, can be susceptible to stress. Avoid excessive force or strain on these connections, especially in mobile or frequently reconfigured setups. For permanent installations, ensure proper strain relief.

7. Troubleshooting

If you encounter issues with your DMX512 Decoder Controller, refer to the following common problems and solutions:

- **No LED Output:**
 - Check power supply connection and ensure correct voltage (DC5V-24V).
 - Verify LED strip connections for correct polarity and secure contact.
 - Ensure the DMX address is correctly set and matches your DMX controller's output.
 - Confirm the DMX signal cable is properly connected and functional.
 - If in stand-alone mode, check if a program is selected and speed is not set to zero.
- **Incorrect Color/Dimming:**
 - Verify the DMX address is correctly set for the specific channels controlling the affected LEDs.
 - Check the DMX controller's output settings for the correct channel assignments and values.
 - Ensure the LED product type (e.g., RGB, single color) is compatible with the decoder's output configuration.
- **Digital Display Not Working:**
 - Check power supply connection.
 - If the display is blank, the unit may not be receiving power.
- **Difficulty Setting Address/Mode:**
 - The menu navigation can sometimes be non-intuitive. Experiment with single and dual button presses (e.g., SET + A.Address or SET + H.Mode) to access different settings.
 - Ensure you are pressing the buttons firmly and deliberately.
- **Intermittent Operation:**
 - Check for loose wiring connections, especially at the DMX input/output and power terminals.
 - Ensure the power supply is stable and providing sufficient current for all connected LEDs.
 - Inspect DMX cables for damage.

8. Specifications

Feature	Specification
Input Voltage	DC5V-24V
Max Load Current	3A/CH × 24 Channels
Output Power	360W (at 5V), 860W (at 12V), 1720W (at 24V)
Output Scale Level	4096 levels per channel
Input Signal	DMX512/1990
Output DMX Channel	24 Channels (CV PWM)
Dimensions (L×W×H)	260mm × 110mm × 43mm (10.2in × 4.3in × 1.7in)
Weight (G.W)	920g (approx. 1.94 lbs)

9. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact AZIMOM customer service directly. Ensure you have your product model number (B07QX7ZY2N) and purchase details available when seeking support.

10. Applications

The AZIMOM DMX512 Decoder Controller is suitable for a wide range of professional and architectural lighting applications, including:

- Stage lighting and disco halls.
- Large-scale performance venues and gymnasiums.
- Temporary stage setups.
- City lighting systems and architectural illumination.
- TV stations, conference centers, and professional showplaces.
- Theme parks and bar lighting.



Figure 10.1: Examples of LED lighting applications. This image showcases various indoor settings, such as living rooms, kitchens, and bathrooms, demonstrating how LED strip lighting can be integrated for ambient and accent illumination.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question