

Pknight CR011R-3pin

Pknight CR011R-3pin ArtNet DMX Ethernet Lighting Controller Interface User Manual

Model: CR011R-3pin

1. INTRODUCTION

This manual provides comprehensive instructions for the setup, operation, and maintenance of your Pknight CR011R-3pin ArtNet DMX Ethernet Lighting Controller Interface. This device facilitates bi-directional conversion between Art-Net and DMX512 protocols, offering a robust solution for professional lighting control applications.

2. PRODUCT OVERVIEW

The Pknight CR011R-3pin is a compact and durable ArtNet DMX node designed for reliable performance in various lighting environments. It features an OLED display for direct configuration and supports versatile power options.

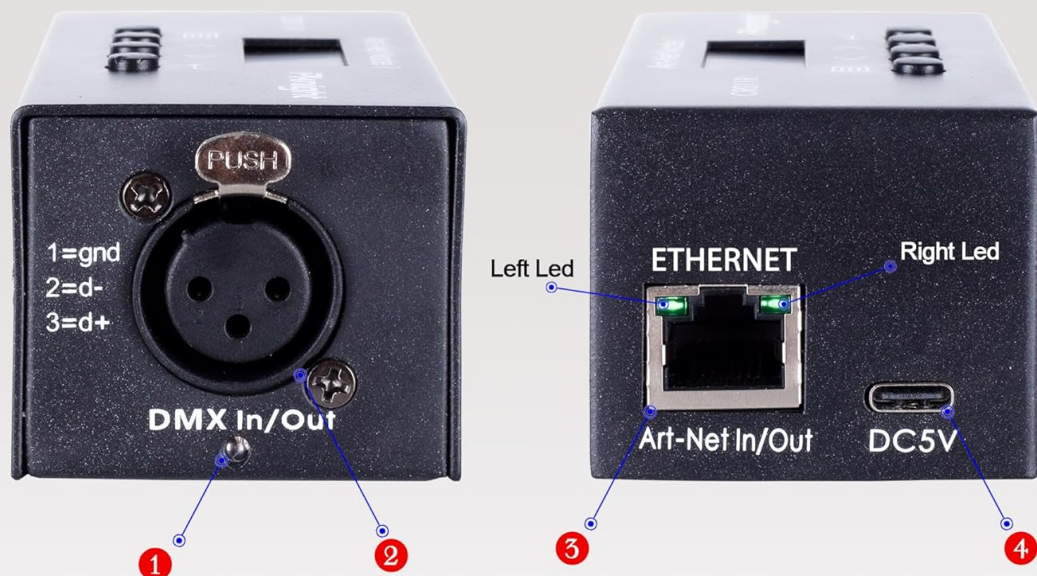


Figure 1: Pknight CR011R-3pin ArtNet DMX Ethernet Lighting Controller Interface.

2.1 Key Features

- **Bi-directional ArtNet/DMX Conversion:** Supports both Art-Net to DMX and DMX to Art-Net modes.
- **OLED Control System:** Onboard display and buttons for direct device configuration.
- **Versatile Power Solution:** Compatible with 5V DC input and USB Power Delivery (PD) via USB-C.
- **Remote Configuration:** Settings can be adjusted remotely using DMX Workshop software.
- **Durable Construction:** Housed in a sturdy all-metal casing.

2.2 Device Components



❶ Blue LED Indicator

- Stays off always: Standby mode, waiting to operate in dmx-(in/out)
- Stays on always (no blinking): signifies dmx-out mode, now the unit will convert Artnet to DMX output
- Blinks continuously: signifies dmx-in mode, now the unit will convert DMX input to Artnet

❷ Female XLR Port (3 Pin)

❸ RJ45 Port (ArtNet In/Out)

- Green LED on the left : link LED
- Green LED on the right : Activity LED
Blink Fast~There is activity on this port
Off~NO Data

❹ Power Port (Typ-c)

- Power Supply: 5V DC
- Can be powered by 5v adapter, pc usb and power bank via USB to Typ-c cable(cable included)
- Compatible with PD power delivery and supports third-party USB-C to USB-C cables

Figure 2: Rear view of the CR011R-3pin showing DMX In/Out, Ethernet, and DC5V ports.

1. Blue LED Indicator:

- Stays off: Standby mode, waiting for DMX (in/out).
- Stays on (no blinking): DMX-out mode, converts ArtNet to DMX output.
- Blinks continuously: DMX-in mode, converts DMX input to ArtNet.

2. Female XLR Port (3-Pin): DMX input/output connection.

3. RJ45 Port (ArtNet In/Out): Ethernet connection for Art-Net data.

- Green LED (left): Link LED.
- Green LED (right): Activity LED (blinks fast for data activity, off for no data).

4. Power Port (Type-C): 5V DC power input. Compatible with USB PD and third-party USB-C cables.

3. SETUP

3.1 Power Connection

Connect the device to a 5V DC power source using the provided USB-C cable. The device supports USB Power Delivery (PD) and can be powered by 5V adapters, PC USB ports, or power banks.

Versatile Power Solution

with Type-C Port



Supports PD Charging

Works with Any USB-C Cable

Figure 3: Powering the CR011R-3pin via its USB-C port.

3.2 Network Connection

Connect the RJ45 Ethernet port to your network switch or directly to a computer using a standard Ethernet cable. Ensure your network settings are configured to allow Art-Net communication.

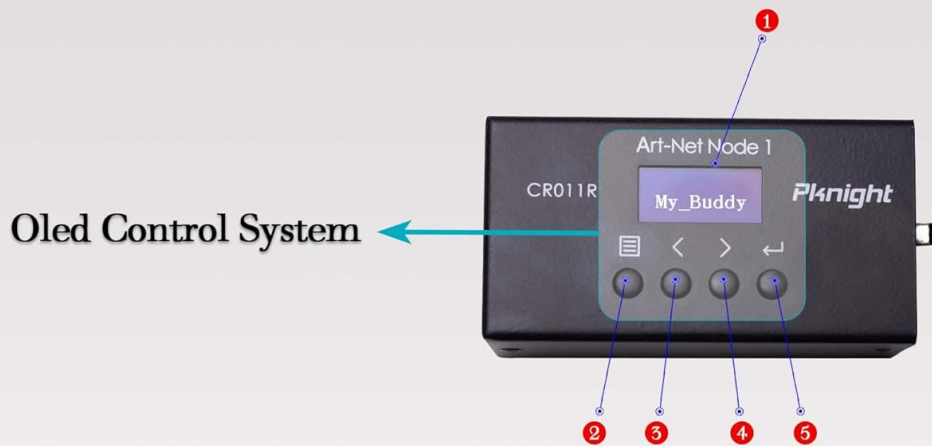
3.3 DMX Connection

Connect your DMX lighting fixtures or DMX controller to the 3-pin XLR DMX In/Out port. The device will automatically detect the DMX signal direction based on its configured transmit mode.

4. CONFIGURATION (OLED CONTROL SYSTEM)

The CR011R-3pin features an OLED display and four function buttons for direct configuration without external software.

Quick Configuration



1 Oled Screen

2 Menu Button

Click to switch the menu option

3 Backward or Minus Button

To go backward or minus in the selected function or parameter

4 Forwardward or Plus Button

To go forward or plus in the selected function or parameter

5 Enter Button

- Click to choose function or parameter
- Press and hold for 3 seconds to submit



Figure 4: OLED display and control buttons.

1. **OLED Screen:** Displays current settings and menu options.
2. **Menu Button:** Used to switch between menu options.
3. **Backward or Minus Button:** Navigates backward or decreases a selected parameter.
4. **Forward or Plus Button:** Navigates forward or increases a selected parameter.
5. **Enter Button:** Clicks to choose a function or parameter. Press and hold for 3 seconds to submit changes.

4.1 Remote Configuration and Naming

You can remotely configure network parameters (IP address, subnet mask, net address, subnet address, port universe) and customize the startup display text using the DMX Workshop application.

Name Your buddy

NAME YOUR BUDDY



Customize the text of startup display via application (DMX-Work shop)



Figure 5: Customizing the device name using DMX Workshop.

DMX to ArtNet

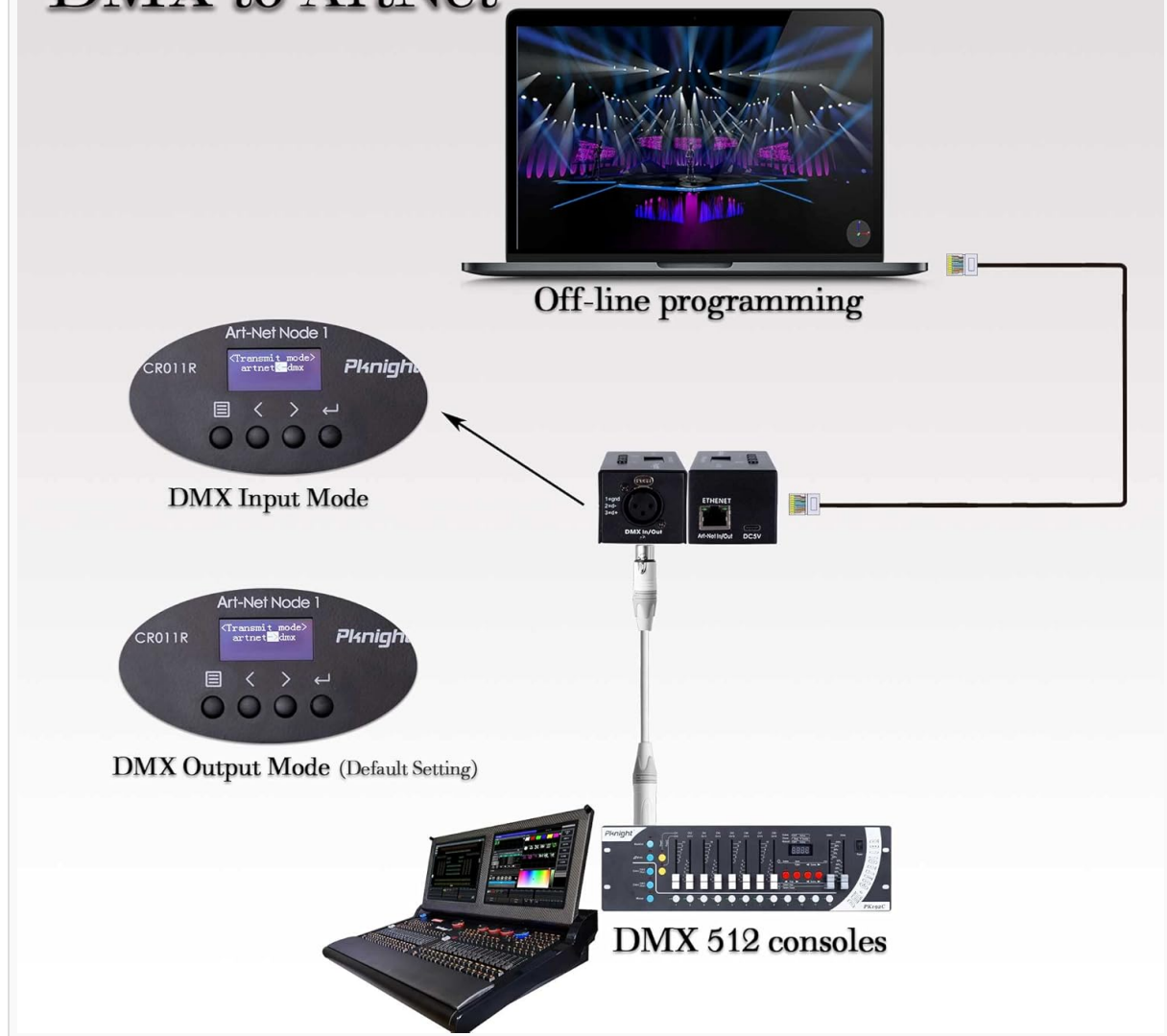


Figure 6: Diagram illustrating the configuration flow for network and Art-Net parameters.

5. OPERATING MODES

The CR011R-3pin supports bi-directional operation, allowing it to function as both an ArtNet to DMX converter and a DMX to ArtNet converter.

5.1 ArtNet to DMX (DMX Output Mode)

In this mode, the device receives Art-Net data over Ethernet and converts it into DMX512 signals, which are then output through the 3-pin XLR port to control DMX-compatible lighting fixtures. The blue LED indicator will stay on (no blinking).

5.2 DMX to ArtNet (DMX Input Mode)

When configured for DMX input, the device receives DMX512 signals from a DMX controller via the 3-pin XLR port and converts them into Art-Net data, which is then transmitted over Ethernet. This allows DMX consoles to control Art-Net compatible software or devices. The blue LED indicator will blink continuously. To switch to DMX input mode, set the 'Transmit mode' to 'artnet <- dmx' via the OLED display or DMX Workshop.



Figure 7: Diagram illustrating DMX input mode, converting DMX to ArtNet for software control.

6. APPLICATIONS

The Pknight CR011R-3pin is suitable for a variety of professional lighting applications, including:

- Stage lighting control
- Pixel LED installations
- Architectural decoration lighting
- Fixed lighting installations



Figure 8: Visual examples of the CR011R-3pin in various lighting applications.

7. SPECIFICATIONS

| Feature | Specification |
|--------------------|-------------------------------------|
| Model Number | CR011R-3pin |
| Item Weight | 13.4 ounces |
| Product Dimensions | 4.53 x 2.76 x 2.36 inches |
| DMX Ports | 1 (3-pin XLR, bi-directional) |
| Ethernet Ports | 1 (RJ45, ArtNet In/Out) |
| Power Input | 5V DC via USB-C (supports USB PD) |
| Control Interface | OLED display and 4 function buttons |
| Housing Material | All-metal |

8. TROUBLESHOOTING

- **No DMX Output/Input:**

- Verify the 'Transmit mode' setting on the device or via DMX Workshop. Ensure it matches your intended operation (ArtNet to DMX or DMX to ArtNet).
- Check DMX cable connections and ensure they are secure.
- Confirm that the DMX universe setting on the device matches your lighting control software. Note that some software may label the first universe as '1' while the device may internally refer to it as '0'. Adjust accordingly.

- **No Network Connectivity:**

- Ensure the Ethernet cable is properly connected and the green Link LED on the RJ45 port is illuminated.
- Check the IP address, subnet mask, and other network parameters configured on the device and your computer/network. Art-Net typically uses a specific IP range (e.g., 2.x.x.x or 10.x.x.x) and subnet mask (e.g., 255.0.0.0).
- If connecting directly to a computer, manually configure your computer's network adapter to be in the same IP range as the device.
- Confirm that your network allows UDP traffic on Art-Net's default port (6454).

- **Device Not Powering On:**

- Ensure the USB-C power cable is securely connected to both the device and a functional 5V power source.
- Try a different USB-C cable and power adapter to rule out faulty accessories.

9. MAINTENANCE





To ensure the longevity and optimal performance of your Pknight CR011R-3pin, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Avoid using liquid cleaners or solvents, as they may damage the finish or internal components.
- **Storage:** When not in use, store the device in a cool, dry place away from direct sunlight and extreme temperatures.
- **Cable Management:** Ensure all cables are routed properly to prevent strain on the connectors and accidental disconnections.
- **Firmware Updates:** Periodically check the manufacturer's website for any available firmware updates to ensure the device has the latest features and bug fixes.

10. WARRANTY AND SUPPORT

Pknight products are designed for reliability and performance. For specific warranty information, please refer to the warranty card included with your product or visit the official Pknight website. If you encounter any issues or require technical assistance, please contact Pknight customer support through their official channels.

Related Documents - CR011R-3pin

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|--|---|
|  <p>Pknigh Art-Net <-> DMX512 Network Converter CR011R Art-Net™ Designed by Paul Gillingham, aka the Common Wavelengths Ltd</p> | <p>Pknigh CR011R Art-Net to DMX512 Network Converter User Manual</p> <p>User manual for the Pknigh CR011R, a bi-directional Art-Net to DMX512 network converter. Details technical specifications, setup, settings, troubleshooting, and features like 'Name Your Buddy' for professional lighting control.</p> |
|  <p>Pknigh Art-Net <-> DMX512 Network Converter CR011R Art-Net™ Designed by Paul Gillingham, aka the Common Wavelengths Ltd</p> | <p>Pknigh CR011R Art-Net to DMX512 Network Converter User Manual</p> <p>Comprehensive user manual for the Pknigh CR011R, a bi-directional Art-Net to DMX512 network converter. Learn about setup, technical specifications, OLED control, front/rear panel features, settings, network parameters, and troubleshooting.</p> |
|  <p>Pknigh WIFI-DMX EASYNODE 5pin & 3pin USER MANUAL</p> | <p>Pknigh WIFI-DMX EasyNode User Manual: Wireless DMX Control</p> <p>Comprehensive user manual for the Pknigh WIFI-DMX EasyNode, detailing setup, operation, modes (Easylink, Router), and troubleshooting for wireless DMX lighting control.</p> |
|  <p>CP0401DA Intelligent Dimmer User Manual</p> | <p>Pknigh CP0401DA Intelligent Dimmer User Manual</p> <p>User manual for the Pknigh CP0401DA 4-channel intelligent dimmer, detailing its features, technical parameters, operation modes (Manual, CHASE, RDM&DMX), and settings for lighting control applications.</p> |