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## Portkeys BM7 II DS

# Portkeys BM7 II DS 7-inch Cinema Camera Monitor User Manual

Model: BM7 II DS

## 1. INTRODUCTION

Thank you for choosing the Portkeys BM7 II DS 7-inch Cinema Camera Monitor. This monitor is designed for professional video production, offering a 7-inch, 10-bit panel with 1920 x 1080 resolution, 2200nits brightness, and dual-screen monitoring capabilities. This manual provides essential information for the proper setup, operation, and maintenance of your device.



Image: The Portkeys BM7 II DS 7-inch Cinema Camera Monitor, showcasing its dual-screen monitoring feature.

## 2. PRODUCT OVERVIEW

## Key Features

- 7-inch, 10-bit panel with 1920 x 1080 resolution and 1000:1 contrast ratio.
- Daylight viewable with a maximum brightness of 2,200nits.
- Split screen monitoring for simultaneous display of two video inputs.
- 3D LUT monitoring and 3D LUT SDI output capabilities.
- Factory color-calibrated: 100% coverage of Rec.709 and 85% coverage of DCI-P3.
- Professional monitoring tools: Waveform, Vectorscope, Anamorphic, Peaking, ARRI False Color.
- Wireless camera control for RED Komodo, V-RAPTOR, and most Blackmagic Design cameras.
- Wired camera control for RED, Canon, Panasonic, BMD, and ZCAM E2.
- Built-in dual NP-F style battery plates.
- Industry-standard 2-pin LEMO and 5.5mm barrel connector 7.4V-24V power inputs.

## Interfaces and Controls

The monitor features various input and output ports, along with intuitive controls for navigation and settings adjustment.



Image: Detailed view of the monitor's interfaces, including SDI IN/OUT, HDMI IN/OUT, and power inputs, along with the scroll wheel and touch screen operation.

- **Video Input:** 2x 3G-SDI, 1x HDMI
- **Video Output:** 1x 3G-SDI, 1x HDMI
- **Audio Output:** 1x 3.5mm headphone jack
- **Power Input:** Dual NP-F battery plates, 2-pin LEMO, 5.5mm barrel connector (7.4V-24V)
- **Controls:** Touch screen, scroll wheel, user-assignable function buttons.

## 3. SETUP

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### 3.1 Powering the Monitor

The BM7 II DS monitor can be powered using NP-F style batteries or an external power source.

- **NP-F Batteries:** Insert two compatible NP-F batteries into the dual battery plates on the rear of the monitor.
- **External Power:** Connect a 7.4V-24V power supply to either the 2-pin LEMO port or the 5.5mm barrel connector. A D-Tap cable is included for convenience.

### 3.2 Connecting Video Sources

Connect your camera or video source to the monitor using the appropriate HDMI or SDI input ports.

- **HDMI Input:** Use an HDMI cable to connect your camera's HDMI output to the monitor's HDMI IN port.
- **SDI Input:** Use SDI cables to connect your camera's SDI output to either SDI IN 1 or SDI IN 2 ports.

### 3.3 Outputting Video

The monitor can output video to other devices such as recorders or larger displays.

- **HDMI Output:** Connect an HDMI cable from the monitor's HDMI OUT port to your desired display or recorder.
- **SDI Output:** Connect an SDI cable from the monitor's SDI OUT port to your desired display or recorder. The monitor features built-in signal conversion from HDMI to SDI, eliminating the need for an external converter.

## Factory Color Calibration-709 colour gamut with X-Rite 1D hardware

More accurate color calibration and more intuitive image monitoring

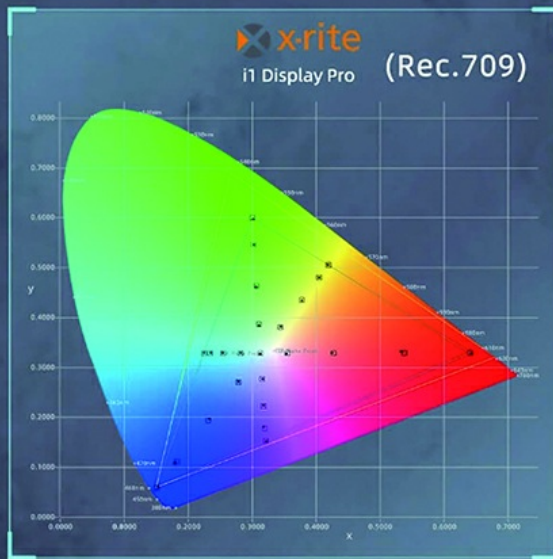


Image: Illustration of the HDMI to SDI output capability, highlighting the built-in signal conversion.

## 4. OPERATING INSTRUCTIONS

### 4.1 Basic Operation

The monitor can be operated using its touch screen or the scroll wheel and function buttons.

- **Touch Screen:** Navigate menus and adjust settings by tapping and swiping on the screen.
- **Scroll Wheel:** Rotate the scroll wheel to navigate menus and press to confirm selections.
- **Function Buttons:** Utilize the four user-assignable function buttons for quick access to frequently used features.

### 4.2 Split Screen Monitoring

The BM7 II DS allows you to monitor two video inputs simultaneously. You can configure the split screen layout to suit your needs.

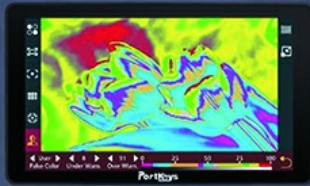
- Access the split screen settings through the monitor's menu.
- Select the desired layout: Dual Horizontal, Dual Vertical, Left Horizontal and Right Vertical, Left Vertical and Right Horizontal, or Left Horizontal and Right Vertical Cropping of the same source.
- Individual screens can be flipped and mirrored independently.

## False color and ARRI False color

Customisable overexposure and underexposure IRE scales



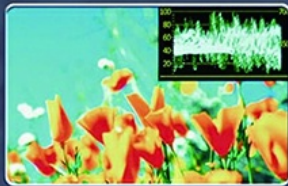
ARRI False color



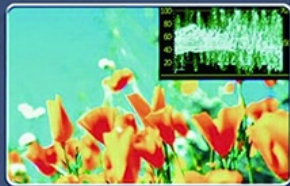
False color

## Brightness and RGB Signal Detection Before/After Loading 3D LUT

Loading 3D LUTs for better picture quality and more intuitive monitoring



Before loading lut



After loading lut

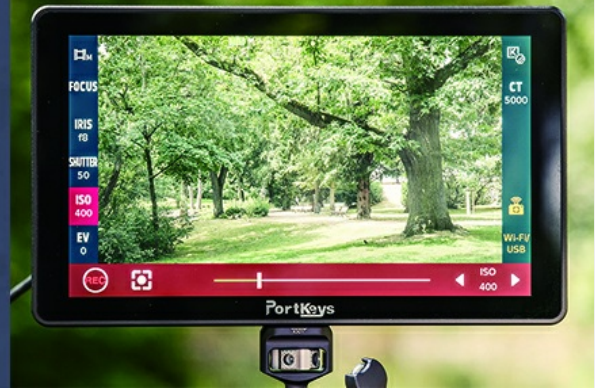


Image: Various split screen monitoring configurations, including dual horizontal, dual vertical, and mixed layouts.

## 4.3 Camera Control

The monitor supports both wireless and wired camera control for compatible camera models.

- **Wireless Control:** Connect via Wi-Fi to control RED Komodo, V-RAPTOR, and most Blackmagic Design cameras.
- **Wired Control:** Use appropriate cables to control RED, Canon, Panasonic, BMD, and ZCAM E2 cameras.

## Anamorphic Lens Calibration

Supported Ratio:  
1.00X/1.33X/1.42X/1.50X/1.60X/1.66X/1.85X/2.00X/2.35X  
User-defined adjustment range: 0.25X-4.00X



Before Calibration



After Calibration

## HDMI to SDI Output

Built-in signal conversion, no external signal conversion box required



Image: Display showing the wireless camera control feature with supported RED and Sony camera models.

## 5. ADVANCED FEATURES

### 5.1 3D LUT Monitoring

Load 3D LUTs to preview your footage with desired color grades. The monitor also supports 3D LUT SDI output.



Image: Comparison of brightness and RGB signal detection before and after loading a 3D LUT, demonstrating improved picture quality.

### 5.2 Anamorphic Lens Calibration

Adjust the display to correctly de-squeeze anamorphic footage.

- **Supported Ratios:** 1.00X, 1.33X, 1.42X, 1.50X, 1.60X, 1.66X, 1.85X, 2.00X, 2.35X.
- **User-defined Adjustment:** Range from 0.25X to 4.00X.

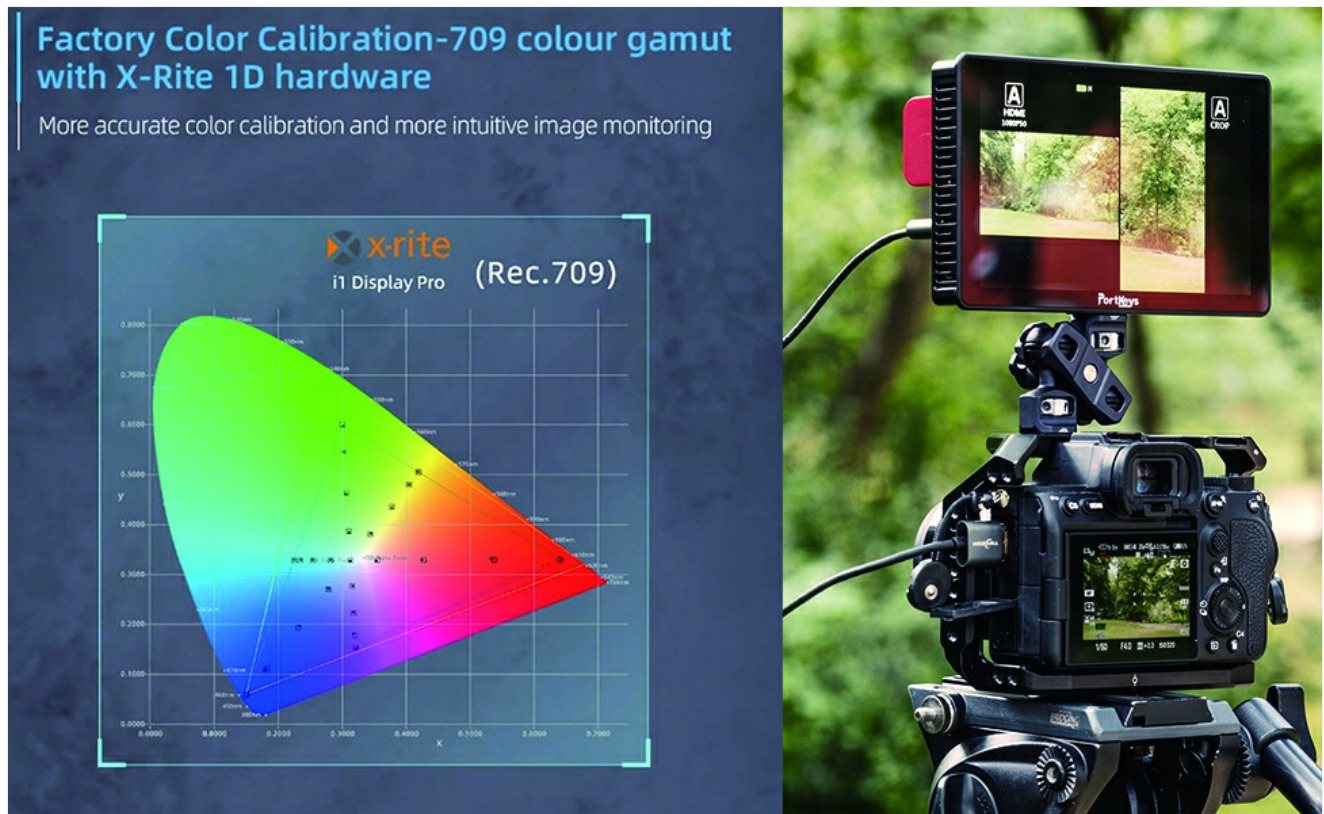


Image: Visual representation of anamorphic lens calibration, showing footage before and after de-squeeze.

### 5.3 False Color and ARRI False Color

Utilize false color modes to accurately assess exposure levels in your footage.

- **Customizable IRE Scales:** Adjust overexposure and underexposure thresholds.

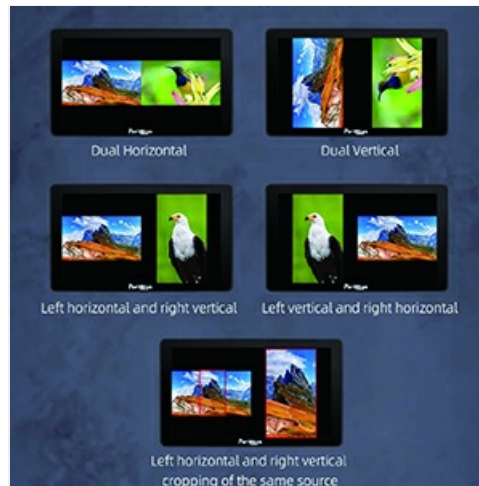


Image: Examples of ARRI False Color and standard False Color displays for exposure analysis.

## 5.4 Custom JPG Picture Freeze Frame

Capture an image and compare it with real-time video using a semi-transparent image superposition. This feature requires a 16:9 1920x1080 JPG image.

### Multiple Ways of Operating

Both button scroll wheel and touch screen, more flexibility in operation

Top scroll wheel toggle operation

Touchscreen point-and-click operation

### Various Interfaces

Video input 3G-SDI×2/HDMI×1, video output 3G-SDI×1/HDMI×1, 3.5mm headphone jack×1

Image: Demonstration of the custom JPG picture freeze frame feature, overlaying a still image onto live video.

## 6. MAINTENANCE

To ensure the longevity and optimal performance of your Portkeys BM7 II DS monitor, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the monitor's exterior. For the screen, use a specialized screen cleaning solution and a microfiber cloth. Avoid abrasive materials or harsh chemicals.
- **Storage:** When not in use, store the monitor in a cool, dry place, away from direct sunlight and extreme

temperatures. Use a protective case to prevent dust and physical damage.

- **Battery Care:** If using NP-F batteries, ensure they are charged regularly and stored properly. Remove batteries if the monitor will not be used for an extended period.
- **Firmware Updates:** Periodically check the official Portkeys website for firmware updates to ensure your monitor has the latest features and bug fixes.

## 7. TROUBLESHOOTING

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If you encounter issues with your Portkeys BM7 II DS monitor, refer to the following common troubleshooting steps:

- **No Power:**
  - Ensure batteries are fully charged and correctly inserted.
  - Verify external power supply is connected securely and providing the correct voltage (7.4V-24V).
  - Check power cables for damage.
- **No Video Signal:**
  - Confirm video cables (HDMI/SDI) are securely connected to both the camera and the monitor.
  - Check the camera's video output settings to ensure it is active and compatible with the monitor's input.
  - Try a different video cable or input port on the monitor.
- **Screen Flickering or Distortion:**
  - Ensure the video source resolution and frame rate are supported by the monitor.
  - Check for electromagnetic interference from other devices.
  - Perform a factory reset if the issue persists (refer to the menu for this option).
- **Touch Screen Unresponsive:**
  - Restart the monitor.
  - Ensure the screen is clean and free of debris.
  - If the issue persists, contact customer support.

For further assistance, please refer to the support section or contact Portkeys customer service.

## 8. SPECIFICATIONS

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Feature	Detail
Product Dimensions	8.27 x 5.12 x 2.36 inches
Item Weight	1.61 pounds
ASIN	B0CB8PF69W
Date First Available	July 6, 2023
Manufacturer	Portkeys
Display Size	7-inch

Feature	Detail
Resolution	1920 x 1080
Brightness	2200nits
Contrast Ratio	1000:1
Color Gamut	100% Rec.709, 85% DCI-P3
Video Inputs	2x 3G-SDI, 1x HDMI
Video Outputs	1x 3G-SDI, 1x HDMI
Audio Output	3.5mm Headphone Jack
Power Input	Dual NP-F Battery Plates, 2-pin LEMO, 5.5mm Barrel (7.4V-24V)

## 9. WARRANTY AND SUPPORT

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### 9.1 Warranty Information

Portkeys products typically come with a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Portkeys website. Keep your proof of purchase for warranty claims.

### 9.2 Customer Support

If you require technical assistance, have questions about your product, or need to report an issue, please contact Portkeys customer support:

- **Manufacturer:** Portkeys
- **Website:** [www.portkeys.com](http://www.portkeys.com) (Check for support contact details, FAQs, and firmware downloads)

Additional protection plans may be available for purchase, such as a 3-Year Protection Plan or Complete Protect + Norton 360, offering extended coverage. Please check with your retailer for details.