Engineered for Elite Marathon Performance in Permanent or Temporary Installations

With immersive picture quality and practical features, potential application for Panasonic’s PT-RZ970 Series projectors extends from permanent installation in museums, theaters, and control rooms through roles in exhibition/rental and staging. Powered by the acclaimed SOLID SHINE Laser drive and latest 1-Chip DLP™ technology, these projectors exceed expectations with low-maintenance stability and vivid color performance maintained for longer than competitive products over years of dependable 24/7 operation. The PT-RZ970 Series: made by professionals, for professionals.

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* Measured according to strict international ISO 21118 standards. Note: PT-R2670/L / R2770/L / R2660L / RW930L / RW730L / RW620L / RX110L do not include a lens.
Harnessing Full-Spectrum Color with Up to 10,400 lm (Center)*2 Brightness

With next-generation DLP™ technology delivering high-resolution detail and dual laser modules outputting up to 10,400 lm (Center)*2 of brightness, the Panasonic SOLID SHINE Laser system produces scintillating images with unfailing reliability.

Superior White Balance and Color Reproduction

The Quartet Color Harmonizer wheel mechanism captures a wider color space than comparable projectors, which allows white to be reproduced realistically on screen. Some conventional projectors can't achieve an accurate white balance, so images can appear with a distracting greenish tint. Not the case with Panasonic SOLID SHINE Laser projectors.

SOLID SHINE Laser Maintains Picture Quality for Longer

Thanks to the long-lasting dual solid-state laser modules, there are no lamps to replace, and image color/brightness degrades very gradually in consistent, linear fashion. As well as reducing maintenance hassle, out-of-the-box picture quality is preserved longer.

See the Advantages of Panasonic’s Laser Technology

SOLID SHINE Laser and DLP™ Projection Balances Image Quality with 20,000-hour Maintenance-free*1 Endurance

*1 At this time the brightness will have decreased to approximately half of its original level (Dynamic Contrast Mode: 3, Image Mode: Dynamic). Panasonic recommends cleaning or checkup at point of purchase after about 20,000 hours. Light source lifetime may be reduced depending on environmental conditions. Replacement of parts other than the light source may be required in a shorter period.

*2 PT-RZ970/RW930 features 10,000 lm, PT-RZ770/RW730 7,200 lm, PT-RZ660/RW620 6,200 lm, and PT-RX110 10,400 lm of brightness (measured at center of screen).
Approx. 20,000 Hours*4 of Continuous Operation

In Normal Mode, the PT-RZ970 Series can operate continuously for about 20,000 hours*4. In Eco Mode, this is extended to around 24,000 hours*4 of continuous operation. These modes enhance suitability for education and signage applications.

Stable 24/7 Operation with Light-source Failover Protection

Dual Drive Laser Optical Engine groups laser diodes into two discrete modules. A failsafe redundancy circuit works to minimize brightness- and color-uniformity loss should a laser diode fail, making the PT-RZ970 Series ideal for mission-critical applications. Further, brightness decreases more gradually and consistently than lamp-based projectors over a 20,000-hour*4 maintenance-free projection period.

**With Dynamic Contrast Mode set to 3. **At this time the brightness will have decreased to approximately half of its original level (Dynamic Contrast Mode: 3, Image Mode: Dynamic). Panasonic recommends cleaning or checkup at point of purchase after about 20,000 hours. Light source lifetime may be reduced depending on environmental conditions. Replacement of parts other than the light source may be required in a shorter period.

**With Operating Mode set to Long Life 3. Long Life Mode is tested in a non-box projection environment, which is not compliant with ASHRAE. 24 hours/day x 365 days/year x 10 years = 87,600 hours. Replacement of parts other than the light source may be required in a shorter period.

System Daylight View 3 for Sharp and Vivid Images in Bright Environments

Panasonic’s premium System Daylight View 3 prevents images from washing out in well-lit environments and enhances brightness perception in multi-projector mapping applications by adjusting sharpness and gamma curves and correcting colors. The result is greater visual impact even in challenging conditions.

Selectable Operational Modes Maintain Image Quality Longer

**With Dynamic Contrast Mode set to 3. **At this time the brightness will have decreased to approximately half of its original level (Dynamic Contrast Mode: 3, Image Mode: Dynamic). Panasonic recommends cleaning or checkup at point of purchase after about 20,000 hours. Light source lifetime may be reduced depending on environmental conditions. Replacement of parts other than the light source may be required in a shorter period.

**With Operating Mode set to Long Life 3. Long Life Mode is tested in a non-box projection environment, which is not compliant with ASHRAE. 24 hours/day x 365 days/year x 10 years = 87,600 hours. Replacement of parts other than the light source may be required in a shorter period.
**Versatile Installation Flexibility**

**Unique Contrast Sync and Shutter Sync Function**

The PT-RZ970 Series is among the world’s first to feature Contrast Sync and Shutter Sync functions (Patent Pending) for multi-screen and mapping applications. Contrast Sync allows the projectors’ digitally modulated contrast function to be synchronized over the network for consistent picture quality across screens, while Shutter Sync incorporates a master/slave principle to synchronize shutter on/off timing between all networked projectors. It includes simultaneous fade-in and fade-out functions.

Note: Use of RS-232C straight cable is necessary for all connections. Consult your sales representative for further information.

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**Geometry Manager Pro Software (PT-RZ970/RZ770/RZ660 Only)**

Geometry Manager Pro software expands built-in functionality and makes complex adjustments easy. The free software package includes enhanced color matching and edge blending for multi-screen projection and adjustment of multiple screens over the network.

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**Optional ET-UK20 Upgrade Kit for Geometry Manager Pro (PT-RZ970/RZ770/RZ660 Only)**

An optional ET-UK20 Upgrade Kit for Geometry Manager Pro adds creative masking capability using four lines or bitmap data as well as uniformity correction and correction area expansion.

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**Optional ET-CUK10* Series Auto Screen Adjustment Upgrade Kit (PT-RZ970/RZ770/RZ660 Only)**

This optional kit activates the Auto Screen Adjustment plug-in software for Geometry Manager Pro, allowing you to set up multiple projectors automatically and simultaneously and save significant amounts of time and money. Performing multi-screen and curved-screen projection calibration in three quick steps using a camera*5 and PC connected to the projector network, this software encompasses geometric adjustment, edge blending, color matching, stacking, brightness, and black level.


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**Reduce Inventory Costs with Shared Lenses**

The PT-RZ970 Series shares optional lenses with the Panasonic 1-Chip DLP™ projector range, including the ET-DLE030 Ultra-Short-Throw Lens and ET-DLE085 Zoom Lens for long throw distances, reducing TCO for staging and event companies with large projector inventories. Lenses attach and detach with one-touch ease.
Easy System Flexibility

Single-Cable DIGITAL LINK Control and Video Connection

Upward HDBase™-compatible DIGITAL LINK supports transmission of uncompressed Full HD video and control commands through a single CAT 5e or higher STP cable for distances of up to 150 m (492 ft)*8. Add an optional DIGITAL LINK Switcher or Digital Interface Box to further simplify installation in large venues while reducing cost and improving reliability at the same time.

*8 150 m (492 ft) transmission available only in Long Reach Mode with optional ET-YFB200G DIGITAL LINK Switcher so the signals up to 1600x900 pixel clock frequency (148.5 MHz). Transmission distance is up to 150 m (492 ft) in other cases.

Free 360-degree Rotation

Projection is possible in any direction vertically and horizontally, and the unit can be rotated 360 degrees for installation at any angle.

Supports Art-Net DMX, Crestron Connected™, and PJLink™

The PT-RZ970 Series is compatible with Art-Net DMX protocol for lighting management. This allows the projector to be connected to a lighting console, opening the door to a range of added functionality and control options. The included LAN/DIGITAL LINK terminal also supports Crestron Connected™ and PJLink™ (Class 1) for easy integration of these projectors into an existing AV network utilizing multiple device brands.

Quick Start and Quick Off

The laser light-source doesn’t require any warm-up, so images appear almost instantly (in about 1 second*9) with PT-RZ970 Series projectors. There’s also no cool-down period needed when turning the power off at the mains—the projector can be turned on and off any time as necessary.

*9 With Quick Startup Mode set to ON. Quick Startup Mode resets to OFF after duration set in Available Period expires. When Quick Startup Mode is set to OFF, the projector continues to warm up, increasing power consumption. image appears in about 9 seconds on Normal Standby Mode and about 12 seconds on Eco Standby Mode.

Multi Monitoring & Control Software

This free Panasonic software offers monitoring and control of up to 2,048 devices over a LAN network from a single PC. For monitoring, status for individual devices can be listed in groups, with more detailed information shown separately. Control functions include power ON/OFF, input switching, scheduling, and command inputs.

Backup Input Setting Optimizes Performance

This feature allows smooth switching to a backup input signal should the primary signal be disrupted**, guaranteeing reliability for mission-critical control rooms, projection mapping, staging, and in other applications where image display must be maintained.

** Combination of primary/secondary input terminals is fixed. The Backup Input Setting is enabled only when the input signal to the primary and secondary terminals is the same.

Web Browser Control

These Panasonic SOLID SHINE Laser projectors can be easily operated remotely over a LAN network via a computer’s web browser. Projectors can be configured to alert the operator via email if an error has occurred.

Early Warning Software ET-SWA100 Series (Optional)

Early Warning Software monitors the status of projectors and displays connected to an intranet, and informs the operator when an abnormality is detected or predicted, or when there are symptoms of trouble. This minimizes downtime to provide more stable operation.

Other Valuable Features

• DICOM Simulation Mode offers easy-to-view X-ray photo reproduction*11
• Rec. 709 mode for HDTV projection to provide accurate colors
• Waveform Monitor for simple yet precise calibration
• Lens-centered design and a wide horizontal/vertical lens shift
• Shutter effect with fade in/fade out (configurable in 0.5-second intervals from 0.5 to 4.0 seconds, or to 5-, 7-, or 10-second intervals)
• PJLink™ compatibility
• P-in-P function*12
• Image rotation function
• On-screen menu rotatable in Portrait Mode

Quick Start and Quick Off

The laser light-source doesn’t require any warm-up, so images appear almost instantly (in about 1 second**3) with PT-RZ970 Series projectors. There’s also no cool-down period needed when turning the power off at the mains—the projector can be turned on and off any time as necessary.

**3 10-second intervals)

Terminals

Terminals for PT-RZ970/RZ770/RZ660 shown.

• Scheduling function
• 30 m (98 ft) long-range wireless remote control
• Anti-theft features including chain opening and security bar
• Customizable start-up logo
• ID assignment for up to 64 units
• Built-in test pattern
• Selectable 10-language on-screen menu
• English, German, French, Spanish, Italian, Portuguese, Russian, Japanese, Chinese, Korean
• RfHS Directive-compliant

*11 This product is not a medical instrument. Do not use for actual medical diagnosis. *12 The Picture-in-Picture function cannot be used with certain inputs and input signals.
### Projection Distances

#### Screen size (diagonal)

| Screen Size | Distance to screen (d) | PT-ÜK20 | PT-RZ700/RZ720/RZ660 | PT-RW600 | PT-UX600/RX600 | PT-DZ600 | PT-DW600 | PT-FB2008/20GK | PT-FB2000G
|-------------|------------------------|---------|----------------------|----------|-----------------|----------|----------|----------------|----------------|
| 100" (2.54) | 5.80 (147.3) | 177.0 (449.8) | 217.0 (550.8) | 205.0 (520.8) | 166.5 (422.9) | 158.5 (403.4) | 146.5 (371.8) | 117.0 (296.9) | 99.0 (251.4)
| 120" (3.05) | 6.88 (174.7) | 196.0 (497.8) | 236.0 (599.8) | 224.0 (569.8) | 185.5 (471.6) | 177.5 (451.2) | 165.5 (419.9) | 136.0 (340.4) | 118.0 (299.9)
| 140" (3.56) | 8.06 (204.7) | 215.0 (546.8) | 255.0 (647.8) | 243.0 (617.8) | 214.5 (545.6) | 206.5 (524.4) | 194.5 (494.9) | 165.0 (418.9) | 147.0 (373.4)
| 160" (4.06) | 9.24 (234.8) | 234.0 (593.8) | 274.0 (696.8) | 262.0 (666.8) | 233.5 (591.6) | 225.5 (572.4) | 213.5 (542.9) | 184.0 (466.9) | 166.0 (421.9)

#### Optional Accessories

- **ET-DLE085** Zoom Lens
- **ET-DLE350** Zoom Lens
- **ET-DLE450** Zoom Lens
- **ET-DL170** Zoom Lens
  - *US/Europe only. ET-DL170 is equivalent of supplied lens.
- **ET-DLE055** Focus-Fixed Lens
- **ET-DLE130** Zoom Lens
- **ET-DLE150** Zoom Lens
- **ET-DLE250** Zoom Lens

### Zoom Lenses

<table>
<thead>
<tr>
<th>Model</th>
<th>1.0x (CoS)</th>
<th>2.5x (CoS)</th>
<th>2.5x (Lens)</th>
<th>5.0x (Lens)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET-PKD120H</td>
<td>0.95 (24.7)</td>
<td>2.39 (59.2)</td>
<td>4.78 (120.6)</td>
<td>9.57 (241.3)</td>
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<tr>
<td>ET-PKD130H</td>
<td>0.94 (23.9)</td>
<td>2.37 (59.1)</td>
<td>4.74 (120.4)</td>
<td>9.47 (239.7)</td>
</tr>
</tbody>
</table>

### Focus-Fixed Lenses

<table>
<thead>
<tr>
<th>Model</th>
<th>1.0x (CoS)</th>
<th>2.5x (CoS)</th>
<th>2.5x (Lens)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET-PKD120H</td>
<td>1.00 (25.4)</td>
<td>2.50 (62.9)</td>
<td>5.00 (125.8)</td>
</tr>
<tr>
<td>ET-PKD130H</td>
<td>0.99 (24.3)</td>
<td>2.49 (62.1)</td>
<td>4.97 (124.3)</td>
</tr>
</tbody>
</table>

### Note

- Use ET-PKD120H, ET-PKD120S, and ET-PKD130H in combination with ET-PKD130B. ET-PKD130H is recommended when used with ET-DLE080.

### Dimension Definitions

- **Using lens other than the ET-DLE080**
- **Using the ET-DLE080**
### Specifications

#### PT-RZ970/RW930/RX110B

- **Power consumption**
  - PT-RZ970/RW930/RX110B: 150 W (Normal), 74.2 W (ECO), 61.7 W (ECO+), 41.0–58.8 W (Low), 35.9–56.8 W (Turbo), 90 W (PT-RZ970/RW930/RX110W); 825 W (Normal), 550 W (ECO), 528 W (Low), 395–557 W (Turbo), 98 W (PT-RZ970/RW930/RX110W).
  - **DLP1 chip**
    - Panel size: 17.0 mm (0.67 in) diagonal (16:10 aspect ratio).
  - **Display method**
    - DLP® chip x 1, DLP® projection optical lens.
  - **Plates**
    - 2.004 mm (0.08 in) x 1014 pieces.
  - **Lens**
    - Power zoom (three times, 1-3-4-7, 2.5-6.3-3.7 x).
  - **Light source**
    - Laser diodes: Laser Class 1 (Class 3R for US models).
  - **Screen size (diagonal)**
    - 1.27–10.5 m (4.1–34.4 ft) (with ET-DLE065–205 in 205 mm; with ET-DLE165–205 in 205 mm; 176 inch ratio except PT-RZ970W, 4:3 aspect ratio; PT-RW930W).
  - **Center-to-center uniformity**
    - N/A.
  - **Contrast**
    - 10,031:1 (Full ON/OFF, Dynamic Contrast Mode: 2).
  - **Resolution**
    - 1920 x 1200 pixels (with lens, 1920 x 1200 pixels).
  - **Brightness**
    - PT-RZ970: 10,500 lm (Center) / 9,490 lm (Zoom).
    - PT-RZ770/RW730: 7,200 lm (Center) / 7,000 lm (Zoom).
    - PT-RX110: 6,000 lm (Center) / 6,000 lm (Zoom).
    - PT-RW930: 10,500 lm (Center) / 9,490 lm (Zoom).
    - PT-RW730: 7,200 lm (Center) / 7,000 lm (Zoom).
    - PT-RZ970W: 10,500 lm (Center) / 9,490 lm (Zoom).
  - **Supplied accessories**
    - Power cord, wireless/wired remote control unit, batteries (R03/AAA type x 2), software CD-ROM (Logo Transfer Software, Multi Monitoring & Control Software), projection lens cover, lens cover (models with lens only).
  - **Applicable software**
    - Voltage: 200–240 V, 50/60 Hz
    - Weight: 10.4 kg (22.9 lbs.); 11.4 kg (25.2 lbs.)
    - Dimensions (W x H x D): 17.0 mm (0.67 in) diagonal (16:10 aspect ratio).

### Notes
- Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118:2012 international standards.
- Value is average of all products when shipped. May differ depending on actual unit.
- Only compatible with dot clock frequency of 27 MHz (pixel repetition signal).
- Optical axis shift is not supported on the ET-DLE055, and the optical axis shift*5 on the ET-DLE150/DLE250/supplied lens.
- Only compatible with dot clock frequency of 27 MHz (pixel repetition signal).
- All information included here is valid as of September 2016.