AMD-2500 General Examination Camera
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Introducing the AMD-2500 General Examination Camera

The AMD-2500 General Examination Camera can be used during video-conferencing to examine objects in fine detail. This hand-held camera is compact and lightweight, with all the controls located on the camera; no auxiliary remote control is required. The camera is multi-purpose, and can be used for many applications, including dermatology and dentistry. The small size and build-in controls allow for unobtrusive examination of various areas of the body.

- **Image Control Buttons**
- **Protective Lens**
- **Remote Control of Zoom**
  (optional footpedal required)
- **Connectors and Controls**
  (on the back of the camera)

For detailed information about the parts of the Examination camera, refer to “Sorting out the Details”

**Zoom Lens**

The AMD General Examination Camera has a 50x Zoom Lens. For more information about the Zoom Lens, refer to “Sorting Out the Details”.
Using the Camera

Setting up the Camera

If the Examination Camera is not set up:

1. If necessary, change the camera lens. For more information, refer to “Sorting out the details.”

2. On the back of the Examination Camera, make sure that the DC/VBS cable is secure.

3. Plug the following 3 cables into the AMD junction box:
   a. DC/VBS cable
   b. RCA video cable
   c. Power adapter cord

4. Plug the RCA connector of the video cable into the External Video – conference system.

5. Plug the power adapter cord into an outlet. The AMD-2500 must only be used with the power supply that ships with the product to ensure labeled safety standards are met. This power supply is manufactured by Jerome Industries, part #WA112M.
6. Move the power switch to ON, move the Light switch to ON and verify that the green power indicator light is on.

7. The AMD-2500 should be inspected for proper operation daily. The AMD-2500 should be cleaned/disinfected after each patient contact (at a minimum of daily).
Displaying an Object

1. Every time the Examination Camera is turned ON, adjust the White Balance.
   a) Turn ON the **Ring-Light**, using the switch on the back of the camera.
   b) Focus the camera on a white sheet of paper. Fill the screen completely with the image of the white sheet.
   c) Press the **WB** button on the back of the camera and hold still for three seconds.

   The colors are automatically rebalanced, for more information about White Balance, refer to “Sorting out the Details”.

2. Aim the Examination Camera at the object.

3. If necessary, adjust the image using the image control buttons on the top of the Examination Camera, as described in “Sorting out the Details”.

4. When you are finished using the Examination Camera:
   a. Turn the Examination Camera Power OFF and turn the Light OFF.

5. The AMD-2500 should be inspected for proper operation daily. The AMD-2500 should be cleaned/disinfected after each patient contact (at a minimum of daily)
Adjusting the Image

If the image is affected by glare...

If the image is affected by glare caused by light reflection off of the object, or if there is not much definition in the image:

1. Turn ON the **Ring-Light** using the switch on the back of the Examination Camera.

2. Press the **REF** button on the top of the Examination Camera to toggle the Reflection mode **ON** and **OFF**.

If the Image is to small...

1. Center the object in the image window.

2. Zoom in by pressing the **T button** on the top of the Examination Camera.

For more information about the Zoom Lens, refer to “Sorting out the Details”.

If the Image is too large...

1. Zoom out by pressing the **W button** on the top of the Examination Camera.
If the Image is shaky...

It may be difficult to maintain a still image on the screen due to the movement of the camera. To capture a freeze-frame of the image on the screen:

1. Press the **FRE button** on the top of the Examination Camera.

   To unfreeze the image shown on the monitor, press the **FRE button** again.

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If the Image is too dark...

1. Turn ON the Ring-Light using the switch on the back on the Examination Camera.

2. If the image is still to dark, make sure that the Examination Camera is using Automatic Iris control.

   The iris indicator light on the back of the Examination Camera should be **OFF**.

3. If the image is still to dark:
   
   a. Press the **IRIS SW** button to disable Automatic Iris Control.

   b. Turn the Manual Iris dial counter-clockwise to brighten the image.
If the image is to pale...

1. Turn **OFF** the *Ring-Light* using the switch on the back of the Examination Camera.

2. If the image is still to pale, make sure that the Examination Camera is using Automatic Iris Control.

   The iris indicator light on the back of the Examination Camera should be **OFF**.

3. If the image is still to pale:
   a. Press the *IRIS SW button* to disable Automatic Iris Control.

      The iris indicator light on the back of the Examination Camera should come **ON**.

   b. Turn the Manual Iris dial clockwise to darken the image.
1. If you are using the Zoom Lens, position the object at the end of the flexible rod.

2. Make sure that the Examination Camera is using Automatic Focus control.
   The Focus switch should be set to \textit{AF}.

3. If the image is still fuzzy:
   a. Move the Focus switch to MF to enable Manual Focus Control.
   b. To manually focus distant objects, press the \textit{FAR} button. To manually focus close objects, press the Near button.
Sorting out the Details

**Freeze Button**
- Toggles the Freeze mode ON and OFF. The Freeze mode freezes the image on the monitor. For the procedure for using this button, refer to the “If the image is shaky…” section.

**Wide Button**
- Zooms out from objects. For the procedure for using this button, refer to the “If the image is too big…” section.

**Tele Button**
- Zooms in on objects. For the procedure for using this button, refer to the “If the image is too small…” section.

**Reflection Button**
- Toggles the Reflection mode ON and OFF. The Reflection mode reduces glare caused by light reflecting off the viewed object. For the procedure for using this button, refer to the “If the image is affected by glare…” section.

**50X Lens (provided)**
- Allows for higher magnification viewing of image. Can be used with AMD-2505 Disposable Tip Cover to prevent contamination.

**Connectors and Controls**
- (on the back panel)
- For more details, refer to the next page.

**Remote Control of Zoom**
- (Optional foot pedal required)

**Protective Lens**
- For more details, refer to page Error! Bookmark not defined..

**Camera**
- Front view when the Protective Lens is removed.

**Ring-Light**

**Camera Lens**
1. **Power Indicator** is illuminated (the green light is ON) when the camera is ON.
2. **Power Switch** turns the camera ON and OFF. The camera should be turned OFF when it is not being used.
3. **Light Switch** turns the fluorescent ring-light on the front of the camera ON and OFF. For the procedure for using this switch, refer to the sections “If the image is too dark…” and “If the image is too pale…”.
4. **White Balance Button** automatically rebalances the primary video colors (red, blue, and green) to compensate for different lighting types. If your image has a reddish or bluish tint, you should correct the White Balance. For the procedure for using this button, refer to “Displaying an object”.
5. **Focus Switch** switches between Automatic Focus (AF) and Manual Focus (MF). When set to Automatic Focus, the camera focuses on objects automatically. When set to Manual Focus, the FAR and NEAR buttons are used to focus on objects.
6. **FAR** manually focuses the camera on distant objects.
7. **NEAR** manually focuses the camera on close objects.
8. **Manual Iris Indicator** is illuminated (the yellow light is ON) when Manual Iris Control is ON.
9. **Iris Button** switches between Automatic Iris Control and Manual Iris Control. When set to Automatic Control, the camera automatically controls the iris. When set to Manual Control, the Manual Iris Dial is used to control the iris.
10. **Manual Iris Dial** manually controls the iris, allowing you to adjust the brightness or darkness of the image. For the procedure for using this dial, refer to sections “If the image is too dark…” and “If the image is too pale…”.
11. **Y/C Port** is used with a videoconference system requiring an S-VHS input. (optional cable required)
12. **DC/VBS Port** supplies power to the camera and sends video signals from the camera to the videoconference system. For connection details, refer to “Cable Connections” on the next page.
13. **Serial number of product**: Unique number identification of product.
The AMD Examination Camera is attached with a **DC/VBS** cable to a **junction box**.

There are two connections from the junction box; the RCA cable plugs into the **External video Input** of the videoconference system, and the **power cord** plugs into an outlet.

For details on hooking up the cables, refer to the procedure outlined in “Setting up the Camera”.
The AMD General Examination Camera has two interchangeable lenses:

To remove a lens:

1. Place your fingers in the indent on the lower left corner of the lens.
2. Pop the lens off.

To attach a lens:

1. Position the lens on the front of the camera.
2. Snap the lens in place.

The 50x Zoom Lens provides 50x magnification for a closer look at objects. This lens has a flexible rod that indicates the focal length of the lens. When you use this lens, place the tip of the rod gently on the object to be viewed, and the camera will be at the correct viewing distance.

The AMD-2505 Disposable Tip Covers can be used to protect the flexible tip of the 50x lens against contamination. These tip covers should be replaced/ disposed of properly as local rules govern after each patient contact. These tip covers “roll out” condom-style for installation.

* Local rules may require these contaminated tip covers to be treated as hazardous waste.
## AMD-2500 Product Specifications

There are no user serviceable or repairable parts inside the unit. The unit must be returned to AMD for repair.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnification (14” screen)</td>
<td>Zoom, 1-50x (auto focus), 200x (optional)</td>
</tr>
<tr>
<td>Light Polarization</td>
<td>Yes</td>
</tr>
<tr>
<td>Pixels</td>
<td>½ inch; 410,000 pixels</td>
</tr>
<tr>
<td>Resolution (horizontal)</td>
<td>&gt;430 lines</td>
</tr>
<tr>
<td>Signal-to-Noise Ratio</td>
<td>&gt;48 db</td>
</tr>
<tr>
<td>Output format</td>
<td>NTSC</td>
</tr>
<tr>
<td>Output signal</td>
<td>Composite NTSC (BNC) &amp; S-VHS</td>
</tr>
<tr>
<td>On-board freeze</td>
<td>Yes</td>
</tr>
<tr>
<td>Color adjustments</td>
<td>Auto white balance</td>
</tr>
<tr>
<td>Auto Gain Control</td>
<td>Full iris control</td>
</tr>
<tr>
<td>Lighting</td>
<td>Built-in fluorescent</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0º-40º C</td>
</tr>
<tr>
<td>Operating humidity</td>
<td>&lt; 90%</td>
</tr>
<tr>
<td>Power Supply Output Power</td>
<td>12vdc 1.25 A.</td>
</tr>
<tr>
<td>Power Supply Input Voltage</td>
<td>100-240 VAC 50-60Hz, 40VA</td>
</tr>
<tr>
<td>Power Supply Rating</td>
<td>Approved to UL 544/2601.1, cUL(CSA)22.2#125/601.1, TUV EN60601.1 + CE LVD</td>
</tr>
<tr>
<td>Camera Dimensions (w x d x h)</td>
<td>2.2” x 3.7” x 2.9”/5.588cm x 9.398cm x 7.366cm</td>
</tr>
<tr>
<td>Camera Weight</td>
<td>0.5 lbs ./ .23kg</td>
</tr>
<tr>
<td>Camera Cleaning/Disinfection</td>
<td>Camera surface and lenses can be cleaned using a cloth moistened with a mild detergent, or a cloth dampened with Ethyl alcohol. The AMD-2505 Disposable Tip Covers can be used to protect the flexible tip of the 50X lens against contamination. These tip covers should be replaced/disposed* of properly after each patient contact. The tip covers “roll out” condom style for installation. There are no user serviceable or field repairable circuits.</td>
</tr>
<tr>
<td>Maintenance</td>
<td>return to factory for repair.</td>
</tr>
<tr>
<td>Optional Equipment</td>
<td>AMD-2510 200x Zoom lens attachment, clip-on style for use when higher magnification is required</td>
</tr>
<tr>
<td></td>
<td>AMD-2505 (500/box) Disposable tip cover (sheath) for 50x lens</td>
</tr>
<tr>
<td></td>
<td>AMD-2525 Tripod for fixation of camera</td>
</tr>
</tbody>
</table>

* Local rules may require that these contaminated tip covers be treated as hazardous waste.
Power Supply Safety Ratings

Type

Read all instructions provided

Class

Indoor