

CopyCam®

Installation and Operation Guide



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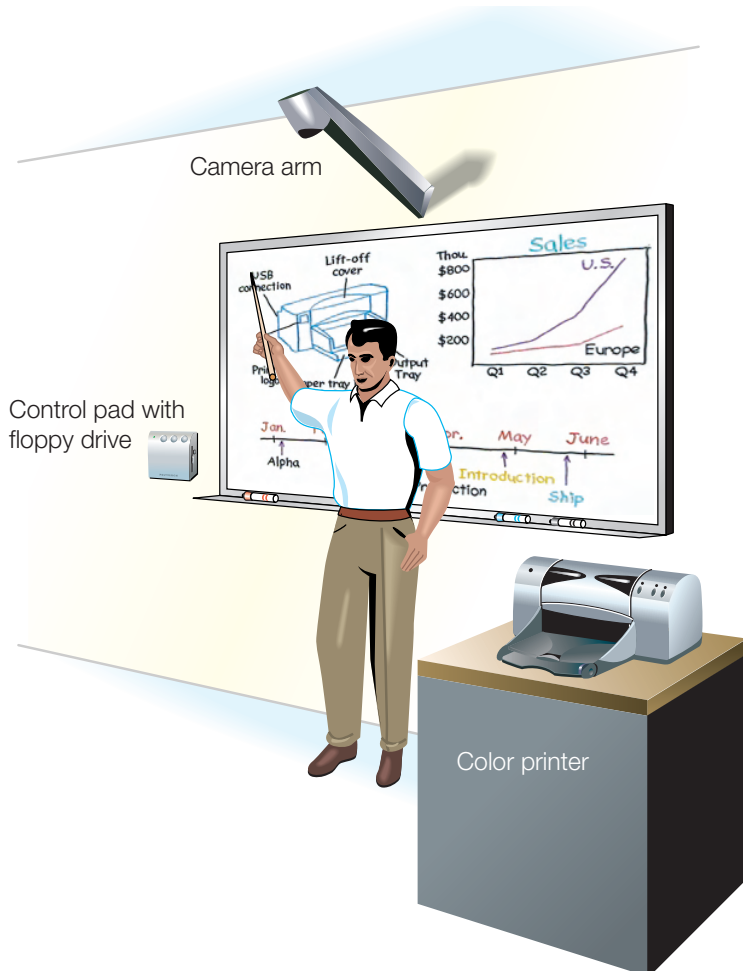
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WELCOME

Welcome to CopyCam®, your quick and easy tool to capture information from a whiteboard or chalkboard.

This manual provides instructions for installing and operating your CopyCam Pro or CopyCam E system. A typical CopyCam Pro setup is shown below.



ABOUT THIS MANUAL

This manual describes how to install and operate two models of CopyCam: CopyCam E and CopyCam Pro.

CopyCam E saves images from your whiteboard or chalkboard to the built-in CopyCam web server connected to your LAN.

CopyCam Pro provides three ways to capture and save images from your whiteboard or chalkboard: on a floppy diskette, printed from a Bluetooth-enabled or network printer, or to the built-in CopyCam web server connected to your LAN.

COPYCAM QUICK START

Step 1: Write on the board.

Step 2: Press a button on the control pad.

Step 3: You're done!

CopyCam captures the board and you can continue your presentation without interruption.

WHAT TO EXPECT

In good lighting conditions, CopyCam captures the board just five seconds after you press one of the control pad buttons. In poor light, it might take a few seconds longer.

NOTE:

To avoid shadows across the image, be sure you stand away from the board when you press the control pad button.

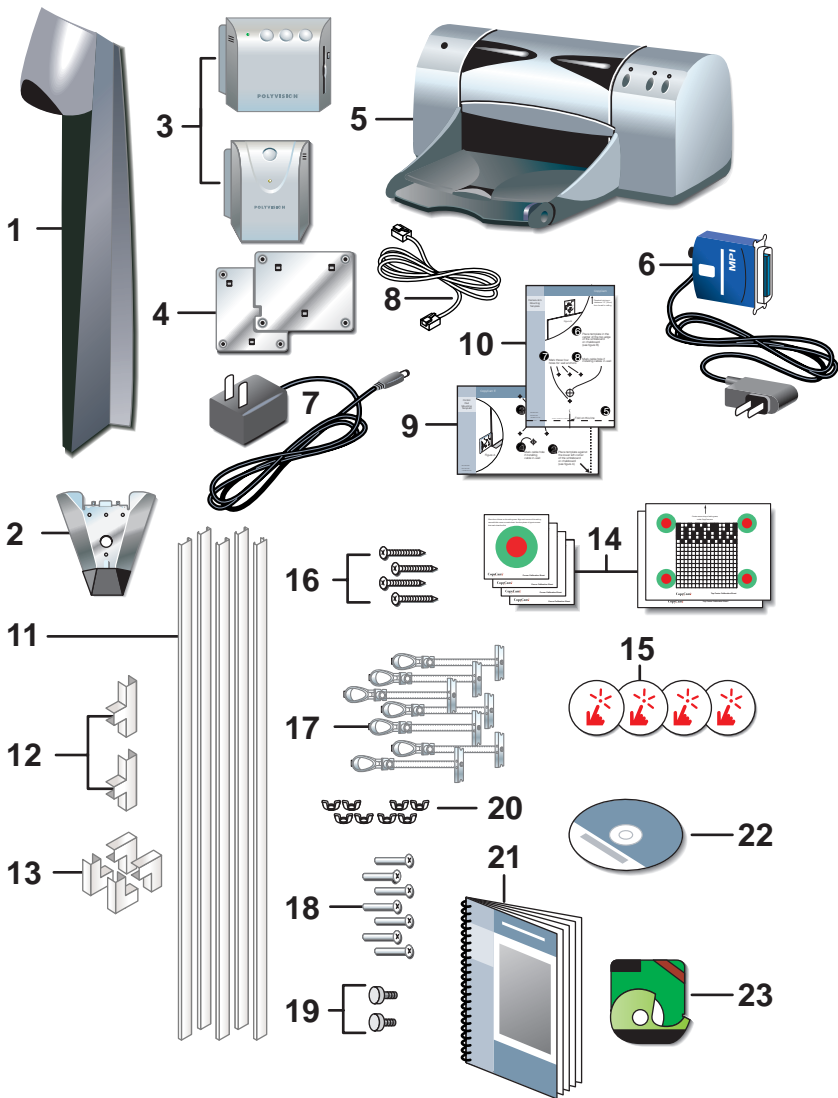
A voice message from the control pad quietly says “captured.” At the same time, the control pad LED changes from blinking yellow to solid yellow to indicate that you can erase the board and continue writing. Refer to “LED and Voice Status Messages” on page 62 for a summary of all status messages.

CopyCam Pro: When you use the printer, it can take up to 45 seconds before a copy starts printing, but you can continue with your presentation during that time. When you use the floppy diskette, it can take up to a minute to save the file, but you can continue with your presentation during that time as well.

COPYCAM INSTALLATION

WHAT COMES IN THE BOX

- 1 camera arm
- 2 camera arm mounting plate
- 3 CopyCam Pro or CopyCam E control pad
- 4 CopyCam Pro or CopyCam E control pad mounting plate
- 5 color printer with power cable and two starter ink cartridges (CopyCam Pro only)
- 6 Bluetooth wireless printer adapter (CopyCam Pro only)
- 7 power adapter and cord
- 8 RJ14 control pad cable (CopyCam E only)
- 9 camera arm positioning template
- 10 control pad positioning template
- 11 five 4' (1200mm) sections of cable raceway (for concealing cables)
- 12 two cable raceway tees
- 13 four cable raceway elbows
- 14 six calibration sheets (four corner sheets, one whiteboard, one blackboard sheet)
- 15 four border buttons
- 16 four #8 x 1.5" (38mm) drywall screws
- 17 seven toggle bolts
- 18 seven toggle bolt screws (10-24 x 1.25" [32mm])
- 19 two arm-securing thumb screws
- 20 eight wing nuts
- 21 Installation and Operation Guide (this guide)
- 22 configuration CD-ROM
- 23 adhesive tape



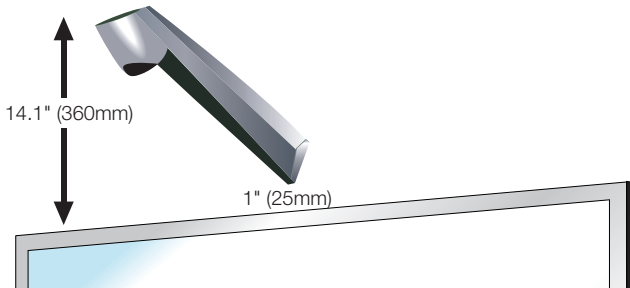
CAMERA ARM SPATIAL REQUIREMENTS

CopyCam components use space above the board and to the left of the board.

WARNING

A minimum of 14.1" (360mm) above the board is required for installation of the camera arm, as shown below. If you do not have at least 14.1" (360mm) of clearance, do not attempt to install CopyCam. Consider the possibility of moving your board down, or, with a false ceiling, of raising the ceiling.

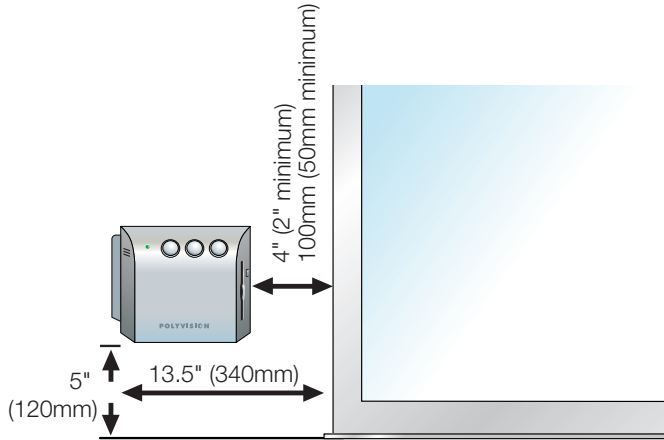
Remove projection screens, maps or other devices above the board that can interfere with the camera arm position. CopyCam must have a clear view of the entire board.



Your whiteboard cannot be recessed or stand away from the wall more than 4" (100mm) from the camera arm mounting bracket. The camera arm mounting bracket must meet the wall at a location that is within 4" (100mm) of the surface of the whiteboard in order to focus properly.

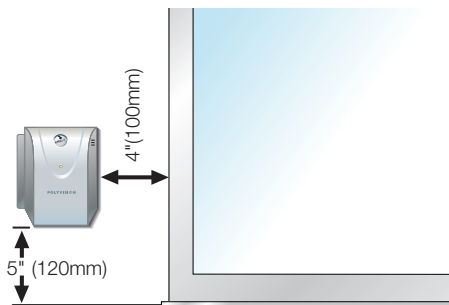
COPYCAM PRO CONTROL PAD SPATIAL REQUIREMENTS

The CopyCam Pro control pad includes a floppy diskette drive that the user accesses from the right. The preferred location for the control pad is four inches (100mm) to the left of the board, and about five inches (120mm) above the bottom of the board, as shown below.



COPYCAM E CONTROL PAD SPATIAL REQUIREMENTS

The preferred location for the CopyCam E control pad is four inches (100 mm) to the left of the board, and about five inches (120mm) above the bottom of the board, as shown below.

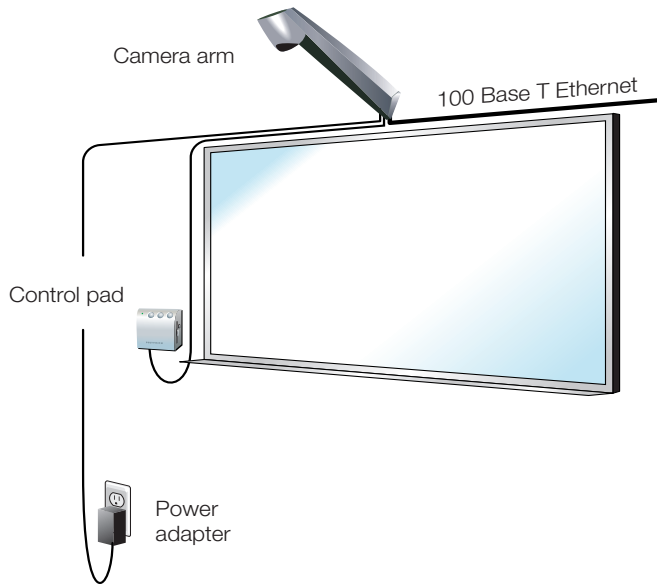


MOUNTING THE CONTROL PAD AND CAMERA ARM

Expect to spend about two hours on this installation.

Planning for Wiring

CopyCam has three cable connections that converge in the camera arm, as shown below for CopyCam Pro.



CopyCam wiring can be either:

- against a wall, the typical approach for adapting an existing facility, or
- within a wall, a potential for new construction or renovation

NOTE:

Use the positioning templates provided to assure proper location of the control pad and camera arm. Failure to do so may result in inhibited access to the floppy disk drive in the control pad, or in incomplete copies of the board.

Instructions below provide details for routing cables against the wall. Refer to "Routing Cables Within the Wall" on page 23 for differences when installing cables within a wall.

Preparing to Install the Control Pad

WARNING

You must fasten the brackets to the wall so they are secure. CopyCam mounts to any kind of wall construction. Instructions and wall fasteners are provided to help you install CopyCam when walls have metal or wood studs. Be sure to locate studs and use them to drive mounting screws whenever possible.

Locate and have ready to use:

- control pad positioning template
- control pad
- control pad mounting plate
- two #8 x 1.5" (38mm) drywall screws (provided)
- four toggle bolts (provided)
- four toggle bolt screws (provided)
- power drill with 1/2" (12mm) bit
- power screwdriver with phillips bit, or phillips screwdriver
- pencil
- tape measure (optional)

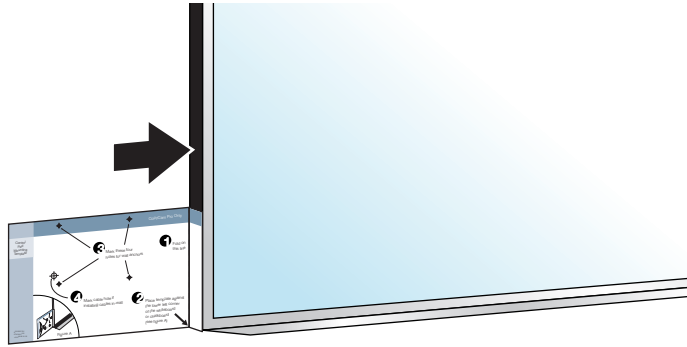
Installing the Control Pad Mounting Plate

These instructions guide you through installing CopyCam on a sheetrock wall. If your wall material is some other substance, such as concrete or brick, use these instructions as a guideline but install appropriate anchors to secure the unit to the wall.

To position the control pad mounting plate:

- 1 Identify which side of the control pad mounting template is appropriate for your installation: CopyCam Pro or CopyCam E.
- 2 Punch holes in the control pad positioning template at the locations of the four screws.

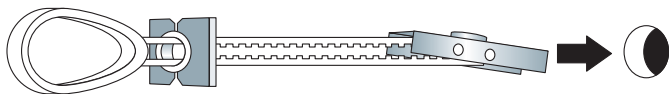
- 3 Fold the control pad positioning template along the dotted line to form a shelf, as shown.



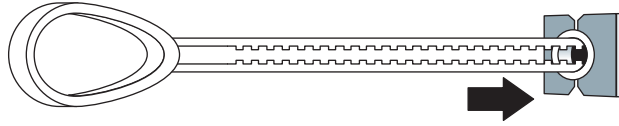
- 4 Position the folded control pad positioning template on the LEFT BOTTOM edge of the board, as shown. This indicates the ideal position and the minimum distance from the board.
- 5 If possible, locate a metal or wooden stud that is nearest this position.
- 6 Mark the four screw hole positions on the wall using an awl, a pencil, or marker so that at least one fastener will attach to the stud, if possible.
- 7 Remove the template.

To install the control pad mounting plate:

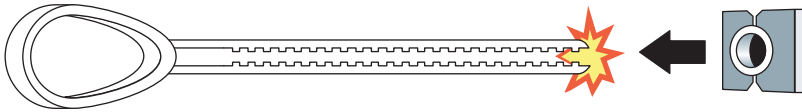
- 1 At positions that do NOT align with a stud, drill 1/2" (12mm) holes at the marked positions, using caution not to make the holes too large, and install a toggle bolt (provided) at each position as follows:
 - a Tilt the metal piece so it is flat against the long axis of the two plastic cords and push it through the 1/2" (12mm) hole, as shown below.



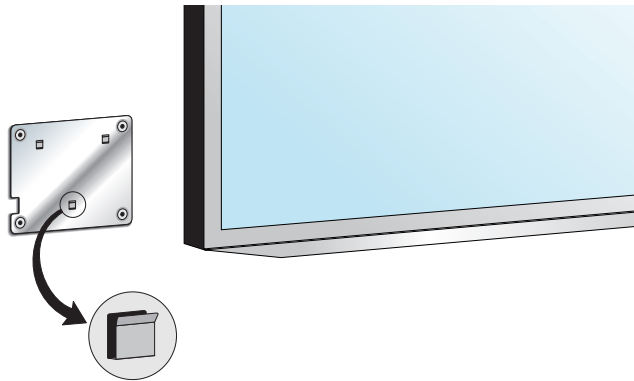
- b Pull back on the toggle bolt to pull the metal piece tight against the interior of the wall.
- c Slide the plastic cap tight against the exterior of the wall.



- d Snap off the finger hold and plastic cords flush with the wall.



- 2 Position the control pad mounting plate over the 4 mounting holes with the tabs pointing up, as shown below.



- 3 Drive the toggle bolt screws (provided) through the mounting plate and toggle bolt, and if a stud was located, drive a #8 x 1.5" (38mm) drywall screw (provided) through the mounting plate and wall into the stud.

NOTE:

The control pad mounting plate has feet that hold it slightly away from the wall.

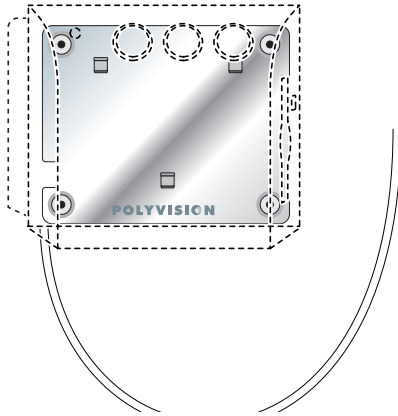
Connecting and Routing the Control Pad Cable

CopyCam Pro only:

The CopyCam Pro control pad has one cable:

- RJ14 cable to the camera arm

The cable grommet at the back of the control pad allows for routing the cable against the wall or through the wall. The cable is configured at the factory for routing against the wall or behind a writing surface, as shown below. For routing cables within the wall, refer to “Routing Cables Within the Wall” on page 23.



Allow the cable to hang from beneath the control pad until you are ready to route it to the camera arm.

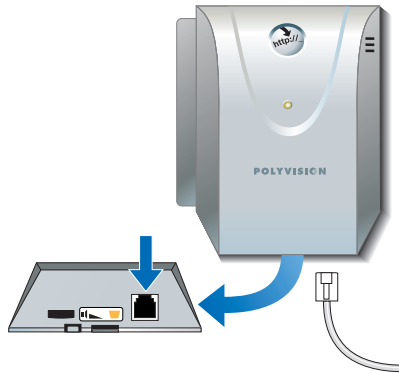
CopyCam E only:

The CopyCam E control pad has one cable:

- RJ14 cable to the camera arm

To connect the RJ14 cable to the control pad:

- 1 Locate the cable end with the orange tape near the connector.
- 2 Connect that end of the cable to the control pad on the left side of the control pad bottom.



Allow the cable to hang from beneath the control pad until you are ready to route it to the camera arm.

When routing cables within the wall, refer to "Routing Cables Within the Wall" on page 23.

Locking the Control Pad in Place

The control pad slides down onto its mounting plate and snaps into place.

To lock the control pad in place:

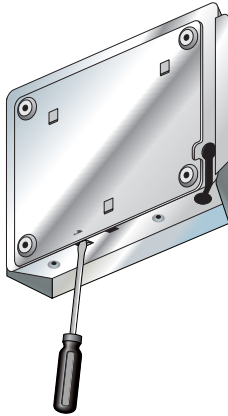
- 1 Lower the control pad onto the tabs on the mounting plate, as shown. The control pad will snap into place.



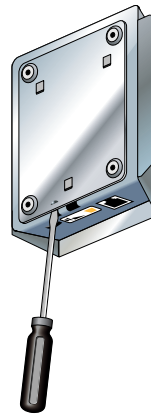
Removing the Control Pad From its Mounting Plate

If you want to remove the control pad from the mounting plate:

- 1 Locate the release latch at the bottom of the control pad, as shown.



CopyCam Pro



CopyCam E

- 2 Gently press up on the release latch with a small, flat blade screwdriver until the latch releases.
- 3 Slide the control pad up off the mounting plate.

Preparing to Install the Camera Arm

WARNING

You must fasten the brackets to the wall so they are secure. CopyCam mounts to any kind of wall construction. Instructions and wall fasteners are provided to help you install CopyCam when walls have metal or wood studs. Be sure to locate studs and use them to drive mounting screws if possible.

Locate and have ready to use:

- camera arm positioning template
- camera arm
- two #8 x 1.5" (38mm) drywall screws (provided)
- three toggle bolt screws (provided)
- two camera arm-securing thumb screws (provided)
- eight wing nuts (provided)
- power drill with 1/2" (12mm) bit
- power screwdriver with phillips bit or phillips screwdriver
- pencil
- tape measure
- ladder

Installing the Camera Arm Mounting Plate

These instructions guide you through installing CopyCam on a sheetrock wall. If your wall material is some other substance, such as concrete or brick, use these instructions as a guideline but install appropriate anchors to secure the unit to the wall.

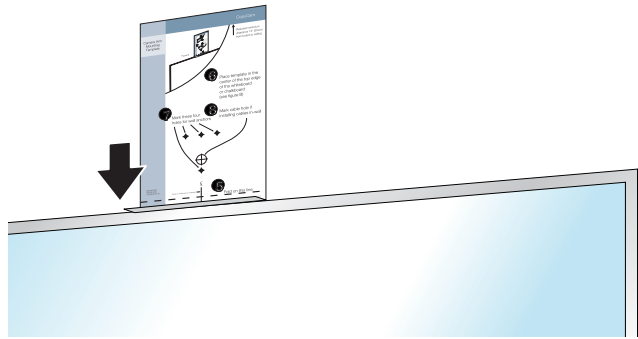
Install the camera arm mounting plate one inch (25mm) above the board.

NOTE:

The position of the camera arm is critical to the proper function of the CopyCam lens and camera. Use the camera arm positioning template during installation to ensure that the camera will properly focus on the full board (up to 4' x 8' [1200 mm x 2400 mm]). Refer to "Camera Arm Spatial Requirements" on page 6.

To position the camera arm mounting plate:

- 1 Measure and mark the top center of the horizontal dimension of the board or imaging area.
- 2 Locate metal or wooden studs in the wall nearest that location.
- 3 Punch holes in the camera arm positioning template at the positions of the four screw holes.
- 4 Fold the template along the dotted line to form a shelf, as shown.



- 5 Rest the folded camera arm positioning template on the top edge of the board, aligning the center line with the center line of your board.
- 6 Mark the four screw hole positions using an awl, a pencil, or marker.
- 7 Remove the template. Note if any of the screw positions align with a stud.

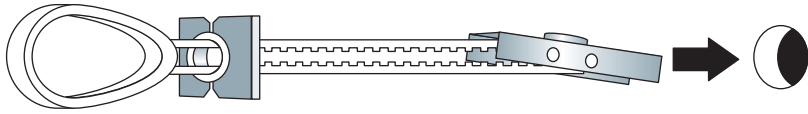
To install the camera arm mounting plate:

NOTE:

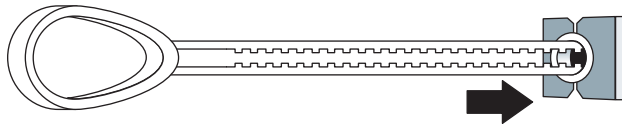
Three toggle bolts are included for installation of the camera arm. Use the outside three holes if you must use toggle bolts.

- 1 At positions that do NOT align with a stud, drill 1/2" (12mm) holes at the marked positions, using caution not to make the holes too large, and install a toggle bolt (provided) at each position as follows:

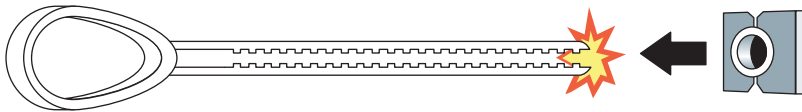
- a Tilt the metal piece so it is flat against the long axis of the two plastic cords and push it through the 1/2" (12mm) hole.



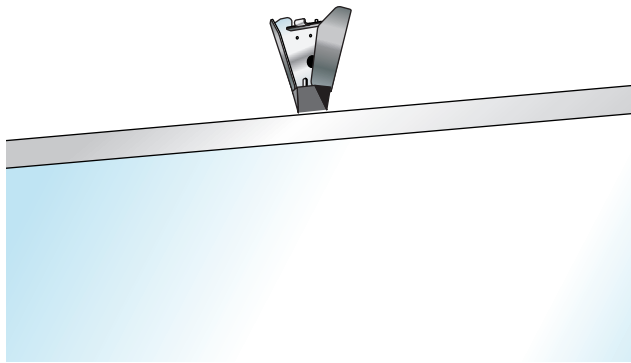
- b Pull back on the toggle bolt to hold the metal piece tight against the interior of the wall.
c Slide the plastic cap tight against the exterior of the wall.



- d Snap off the finger hold and plastic cords flush with the wall.



- 2 Position the camera arm mounting plate over the mounting holes.



- 3 Drive the toggle bolt screws (provided) through the mounting plate and toggle bolt, and if a stud was located, drive a #8 x 1.5" (38mm) drywall screw (provided) through the mounting plate and wall into the stud.

Cable Routing and Connections in the Camera Arm

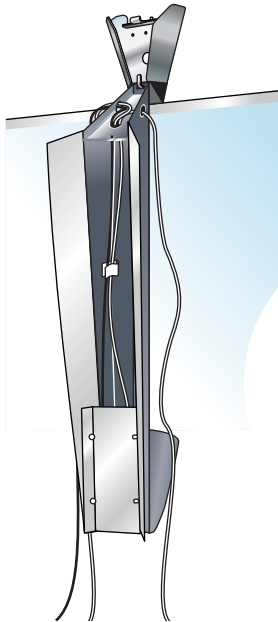
As illustrated in the section titled “Planning for Wiring” on page 8, the camera arm has three cable connections:

- RJ45 ethernet cable to Local Area Network (LAN) (optional)
- RJ14 cable from control pad
- power from power adapter

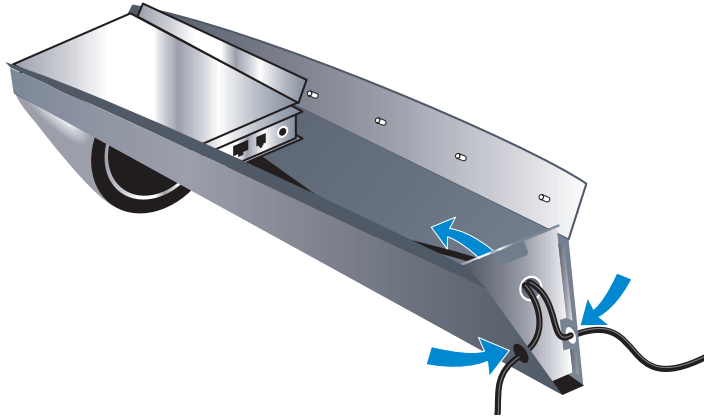
The camera arm allows for routing cables against the wall or through the wall. For routing cables within the wall, refer to “Routing Cables Within the Wall” on page 23.

To connect cables in the camera arm:

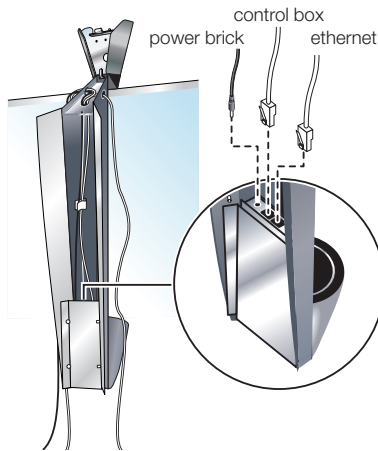
- 1 Hang the camera arm from the hook at the bottom of the mounting plate.



- 2 Locate the cable ends and route them through the exit holes in the end of the camera arm and up to the cable connectors. Cable exit holes are available on either side of the camera arm.

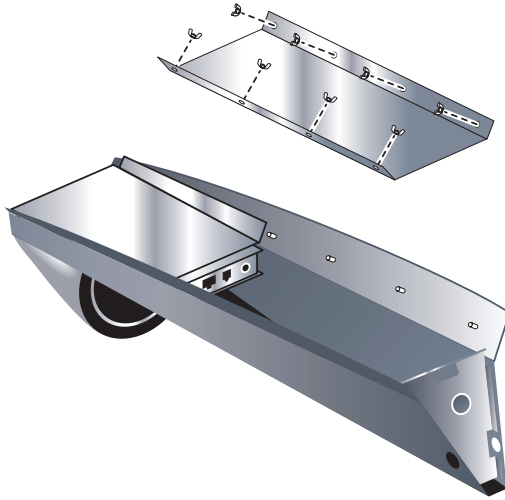


- 3 Plug cables into the cable connectors in the camera arm.



- 4 Secure the cables to the body of the camera arm (for strain relief) using the plastic clip provided inside the arm. For additional strain relief, add cable ties to the end of the arm closest to the wall mounting plate.

- 5 Secure the camera arm cover using the eight wing nuts provided. Note that the narrow end of the camera arm lid should be closest to the top of the arm.

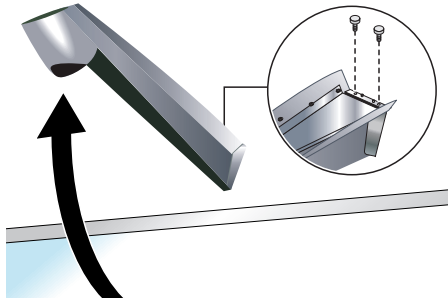


Locking the Camera Arm in Place

The camera arm tilts up and locks into position for fastening with two screws (provided).

To lock the camera arm in place:

- 1 Determine if there is excess cable, and if there is, push it into the camera arm cavity through the exit hole at the end of the arm.
- 2 Tilt up the arm, lifting it slightly so that it slides over the pins on the top of the mounting plate. It should support its own weight at this point. Be sure cables are not pinched between the arm and the mounting plate.



- 3 Fasten the arm in place using the two arm-securing thumb screws provided.

Concealing Cables that are Routed Against the Wall

A cable raceway is provided to conceal cables along one edge of the board.

To conceal cables:

- 1 Route cables tightly against the edge of the board.
- 2 Conceal cables using the cable raceway, elbows, and couplers provided.
- 3 If necessary, stow any excess cable in the camera arm cavity by removing the camera arm cover and pulling cable through the exit hole.

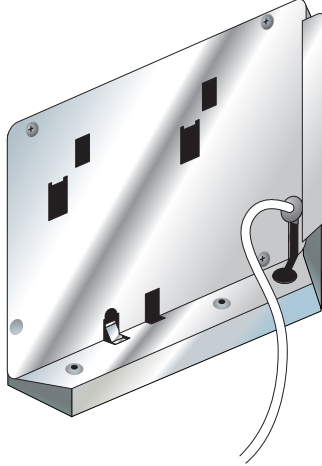
This completes the installation of CopyCam built-in components. If you are installing CopyCam Pro, turn to page 26 to install the printer. If you are installing CopyCam E, turn to “Calibrating CopyCam” on page 28.

Routing Cables Within the Wall

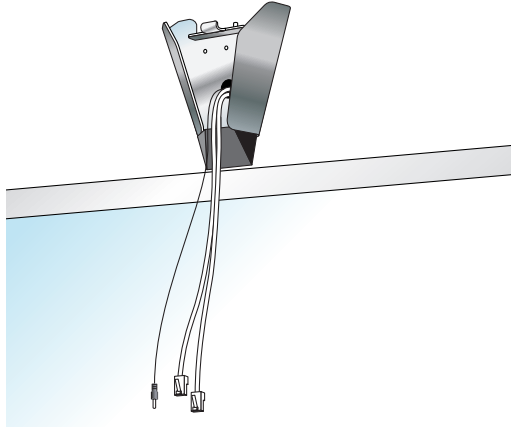
If you are routing CopyCam cables within the walls, the instructions for mounting the control pad and camera arm differ in the sequence that you perform steps. Refer to instructions provided in “Mounting the Control Pad and Camera Arm” on page 8, but proceed in the following sequence:

- 1 Position the control pad and camera arm positioning templates. Refer to “To position the control pad mounting plate:” on page 9 and “To position the camera arm mounting plate:” on page 17.
- 2 Mark the wall anchor positions and the cable exit hole positions on the wall.
- 3 Drill holes. (In some cases, adding conduit within the wall can help to route the RJ14 cable between the control pad and the camera arm mounting plate exit holes. Boxes are not recommended.)
- 4 Drill a hole in the wall for the power cord to exit near an outlet.
- 5 Install the control pad mounting plate and camera arm mounting plate. Refer to “To install the control pad mounting plate:” on page 10 and “To install the camera arm mounting plate:” on page 17.

- 6 On the back of the CopyCam Pro control pad, compress the rubber cable grommet and slide it up so the RJ14 cable exits toward the wall instead of toward the floor. This step is not necessary for CopyCam E.



- 7 Route the RJ14 cable from the back of the control pad into the wall and up to the camera arm mounting plate exit hole. If necessary use a fish tape to fish the cable end through the wall to the camera arm mounting plate exit hole.



- 8 Leave about 24 inches (500mm) of cable extending from the camera arm mounting plate exit hole for later connection to the camera arm, as shown.
- 9 Mount the control pad to its mounting plate. Refer to "Locking the Control Pad in Place" on page 14.
- 10 Route power and optional ethernet cables to the camera arm mounting plate exit hole.
- 11 Hang the camera arm from the hook on the mounting plate as pictured on page 19.
- 12 Route the cables through the center cable exit hole of the camera arm.
- 13 Connect the three cables in the camera arm and cable tie the cables in the cavity of the camera arm. Refer to "Cable Routing and Connections in the Camera Arm" on page 19.
- 14 Place the camera arm cover over the camera arm and secure using the eight wing nuts provided.
- 15 Tilt up and lock the camera arm in place, using the two arm-securing thumb screws provided. Refer to "Locking the Camera Arm in Place" on page 22.

COPYCAM PRO: INSTALLING AND TESTING THE PRINTER

About the Color Printer...

Each CopyCam Pro includes a color printer. The printer is shipped with a Bluetooth wireless adapter. The CopyCam Pro camera arm is configured at the factory to transmit a radio signal to the Bluetooth adapter that comes in the same box.

Bluetooth technology allows the printer to receive its signal anywhere in a 30 feet (10m) radius from the camera arm. The printer can be placed in a separate room if desired, although walls may slightly reduce the signal range. If you need to install a replacement printer, refer to “CopyCam Pro: Changing Printers” on page 46.

Installing the Printer

To install the printer:

- 1 Identify a location for the printer within 30 feet (10 m) of the CopyCam Pro camera arm and within a few feet (one meter) of a power outlet.
- 2 Plug the Bluetooth adapter into the printer and plug in the adapter's power cord.




- 3 Plug in the printer's power cord.
- 4 If it is not already on, power on the printer.
- 5 Add ink cartridges (provided with the printer).
- 6 Add paper.

Testing the Printer

NOTE:

If you have a blackboard (or any board that is not white), you need to calibrate CopyCam Pro so it can detect the edges of the board. Before testing the printer, follow the steps in "Calibrating CopyCam" on page 28.

To test the printer and the CopyCam Pro installation:

- 1 Turn on the printer and confirm that it has paper and ink cartridges.
- 2 Write something on the board.
- 3 Press the  button on the control pad. The voice message says "captured" and the printer starts printing within one minute.

Evaluating the Test Copy

CopyCam is designed to capture writing and line drawings in color under a variety of lighting conditions. Part of its function is to enhance the contrast to produce a sharp image every time. It automatically crops copies to the borders of the board, or to an area of up to 4' x 8' (1200mm x 2400mm).

The first copy you make will establish the borders of the board. If the voice message reports "calibration needed," CopyCam was unable to detect the borders. Refer to "Calibrating CopyCam" on page 28 for instructions. If the test copy never appears or results in other concerns, refer to "Troubleshooting" on page 60.

NOTE:

Your first use of CopyCam includes an automatic calibration. This calibration crops the bottom two inches (50mm) of the board image to eliminate the glare along the bottom edge caused by the eraser tray found on most boards. If you want to include the bottom two inches (50mm) of your board in captures, you will need to calibrate CopyCam using the procedure described in the next section.

CALIBRATING COPYCAM

WHEN TO CALIBRATE COPYCAM

Calibration is necessary in many CopyCam whiteboard installations. Blackboards (or any board that is not white) always require calibration.

Conditions that are likely to require calibration include:

- boards without easily discernible borders
- CopyCam mounted above an area with no borders
- CopyCam mounted to a board that is greater than 8' (2400mm) long or 4' (1200mm) high

You need to calibrate when:

- you have a blackboard (or any board that is not white)
- images are distorted
- the voice message (from the control pad) reports “calibration needed”

HOW TO CALIBRATE COPYCAM

Calibrating CopyCam involves showing it the corners of your board (or 4' x 8' [1200mm x 2400mm] limit) using five of the six calibration sheets provided.

Materials

Locate and have ready to use:

- tape measure
- adhesive tape (provided)
- six calibration sheets (provided)

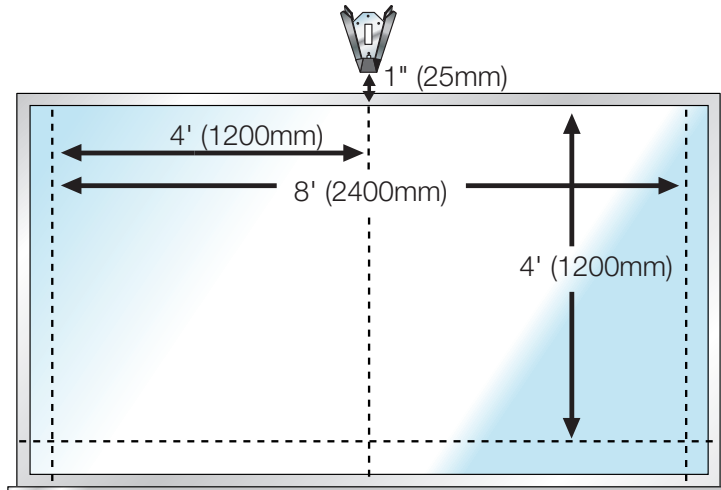
NOTE:

If you cannot locate your calibration sheets, you can download them from the PolyVision web site at: <http://www.polyvision.com>. You will need a color printer to print these sheets.

Calibrating CopyCam

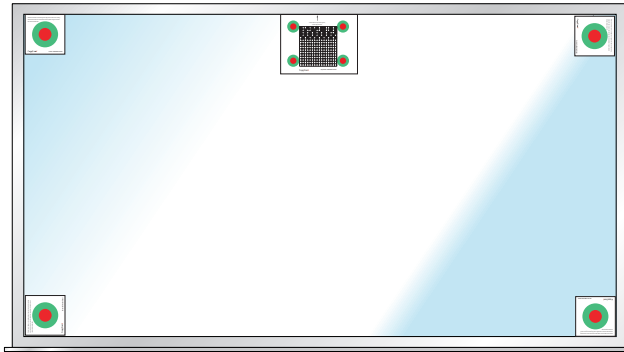
To calibrate CopyCam:

- 1 Measure an area 4' x 8' (1200mm x 2400mm) or less, with the top centered at least one inch (25mm) below the camera arm, as shown.

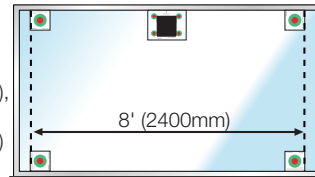


- 2 Position the four corner calibration sheets within the 4' x 8' (1200mm x 2400mm) limit as shown below. If your board is 4' x 8' (1200mm x 2400mm) or less, put the four matching calibrations sheets in the corners.

If your board is 4' x 8' (1200mm x 2400mm) or smaller, place the sheets in the corners.



If your board is larger than 4' x 8' (1200mm x 2400mm), place the sheets within the 4' x 8' (1200mm x 2400mm) limits.




NOTE:

To attach the sheets to the board, use low gloss tape or put tape on the *BACK* of each sheet. Be sure that all four corners are taped securely. reflective tape can prevent the camera from seeing the targets.

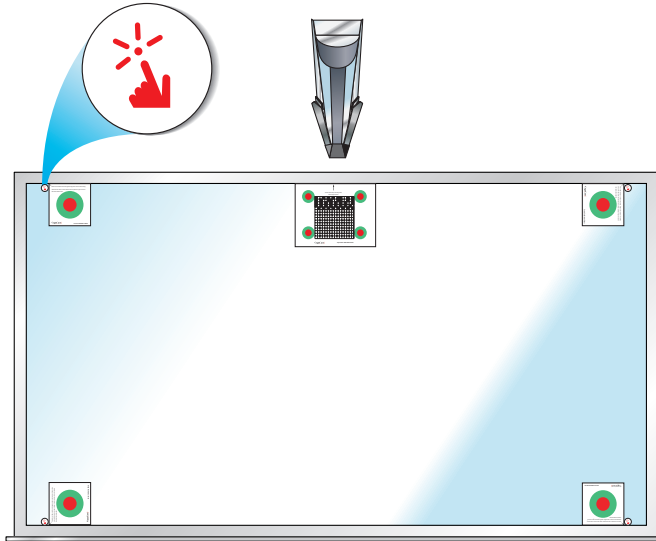
- 3 Choose one of the two larger calibration sheets based on the type of board: whiteboard or blackboard (or any other dark-colored board). The calibration sheets are clearly labeled. Position this fifth calibration sheet at the top center of the board, as shown.

NOTE:

If the top center calibration sheet is in a shadow, calibration may fail. (The CopyCam voice message says "Calibration needed.") To give CopyCam a better view of the calibration patten, change your lighting as needed to eliminate the shadow at the top of the board. If that is not possible, move the center target down from the top of the board slightly, being careful to keep it lined up with the center of the writing area.

- 4 Press the  button on the control pad. CopyCam recognizes the calibration sheets and performs an internal calibration based on the dimensions specified.

- 5 If your board is wider than 8' (2400mm) or taller than 4' (1200mm), apply the four self-adhesive border buttons provided to mark the boundary of CopyCam captures, as shown below. These buttons remind users what part of the board is captured by CopyCam.



- 6 Remove the calibration sheets and set them aside in a safe place, such as tucked into this manual.

NOTE:

If CopyCam is installed with a blackboard and if white chalk is normally used, or if printing exclusively to a black and white printer such as a network laser printer, consider setting CopyCam to capture in monochrome to optimize capture quality. Refer to "Using the Settings Tab" for information about capturing in color and monochrome.

WEB CONFIGURATION AND TESTING

COPYCAM WEB SERVER INTRODUCTION

CopyCam can save copies to the internal web server located in the camera arm. Users access copies over a Local Area Network (LAN) using any web browser.

For CopyCam Pro, using CopyCam's web server is optional. However, to change the CopyCam Pro advanced settings, you must access the CopyCam web server.

Although CopyCam does not require installing software on any end-user computer, a configuration CD-ROM is provided to help you locate the CopyCam IP address(es) on your Local Area Network.

If you misplace the CopyCam configuration CD-ROM, configuring the CopyCam web server requires Internet access to the PolyVision web site from a computer participating in the same LAN as the CopyCam installation. Find the CopyCam configuration utility under "Support/Downloads/CopyCam" at <http://www.polyvision.com>.

CONFIGURING THE COPYCAM WEB SERVER

Multiple CopyCam systems may be installed on the same LAN. Your LAN can use DHCP or fixed IP protocols. DHCP allows CopyCam to obtain its LAN address automatically. If you are unsure of whether to use DHCP, check with your system administrator.

NOTE:

CopyCam must be connected to the network within three minutes after power on in order to be visible on the network.

If your LAN uses DHCP, CopyCam initiates its own configuration when you power on the system. With DHCP, CopyCam asks the network for an available IP address and assigns it to itself. If, instead, your LAN uses fixed IP addresses, CopyCam listens on the ethernet network and performs "IP address squatting" to assign itself a temporary IP address. In order for you to learn the IP address it has acquired, you need access to a web page that you open from the configuration CD-ROM.

To configure CopyCam:

- 1 On a computer connected to the same LAN and subnet as the CopyCam installation, insert the CopyCam configuration CD-ROM.

NOTE:

When you use the software on this CD-ROM, you can find only CopyCam systems that are on the same network segment (subnet) as your computer. After the IP address of your new CopyCam has been located (in step 4, below), you can browse to that address from any computer in your local area network (LAN) regardless of which segment it is on.

- 2 Double-click the "setup" file.
- 3 For DHCP-based networks: Click "Start" to locate all CopyCam systems on your LAN and display their IP addresses.
For fixed-address networks: Click "Start" then click "Start" again to locate all CopyCam systems on your LAN and display their IP addresses.

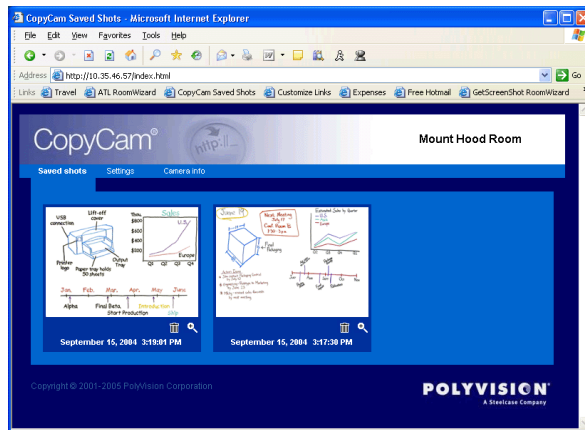
NOTE:

If you are not sure how your network is configured, ask your IT department or System Administrator.

NOTE:

If no CopyCams appear, close the window and once again double-click the "setup" file. (CopyCam performs IP address squatting only after the first time you click "Start.")

- Click the IP address link to the CopyCam web page. The CopyCam web page appears, as shown.



- If you have more than one CopyCam, verify that you have linked to the correct web server by saving a copy to the web as follows:
 - Go to the board and write something unique.
 - Press the  button.
 - Wait one minute.
 - Return to the computer.
 - Click the Refresh button on your browser.
 - Confirm that the copy appears on the web page.
- In your web browser, add the CopyCam web site to Favorites or create a shortcut. (In most browsers, you can drag the address to a "Links" area, and the browser will create a shortcut for you.) Rename the shortcut so CopyCam is easier to identify.

- 7 Click the “Settings” tab on the CopyCam web site. In the “Settings” tab, you can see and change the IP address, and other valuable information, as shown. (Refer to “Using the Settings Tab” on page 41 for a description of each item in the “Settings” tab.)

The screenshot shows the CopyCam web interface for a device named "Mount Hood Room". The "Settings" tab is active. The "Use DHCP" checkbox is checked. The IP address is 10.25.46.57, Subnet Mask is 255.255.255.0, and Gateway is 10.25.46.1. The Board Name is Mount Hood Room. The Capture Type is Monochrome (selected) and the Printer Type is Bluetooth (selected). The Bluetooth Printer Channel is 00:03:6E:20:CF:98-6. The Ethernet Printer Address is empty. The Control Pad Volume is Soft. The Date/Time is November 16, 2004 8:14:15 AM. The Low Light Warning checkbox is unchecked. The Firmware Update Server is 196.107.51.138/~/dearg/CopyCam. There are fields for New Password and Confirm Password, and a Submit Changes button at the bottom.

NOTE:

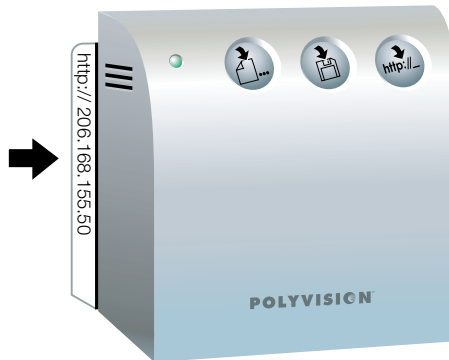
If your LAN does not support DHCP (uses fixed IP addressing), you MUST change the temporary IP address to a permanent one that your system administrator assigns. If your LAN uses DHCP, your system administrator may want you to assign a permanent IP address, but it is not usually required. If it is not required, go to step 9.

- 8 If you must change the IP address, proceed as follows:
 - a Click the checkbox beside “Use DHCP” to remove the check.

- b Change the IP address to a permanent IP address that has been selected by your system administrator.
- c Click the “Submit Changes” button. Settings are password protected. You see the Password dialog, shown below.

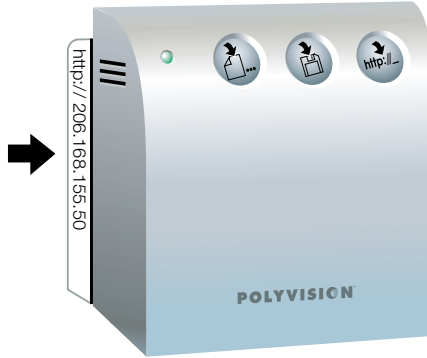


- d Enter your password. The factory default user name is blank and password is “admin.”
 - e Click “OK.”
- 9 Make a note of the IP address for safe keeping.
- 10 Also write the address in the space provided on the control pad, as shown below on CopyCam Pro, so any user can easily browse to the CopyCam web site.



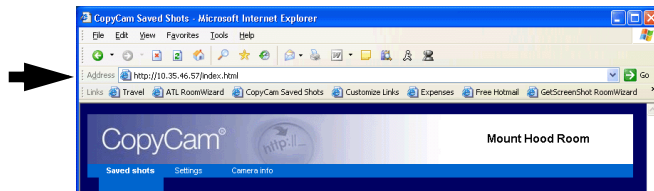
ACCESSING YOUR COPYCAM WEB SERVER

Each CopyCam has a unique web address that appears on the left edge of the control pad, as shown below. (This address should have been labeled by your installer. If it isn't, refer to "Configuring the CopyCam Web Server" on page 33 for instructions.)



To access CopyCam copies on the web:

- 1 Write down the CopyCam web address.
- 2 Turn on a computer that shares the same LAN as CopyCam.
- 3 Run a browser application, such as Internet Explorer or Netscape.
- 4 Enter the web address in the "Address" field and press Enter.



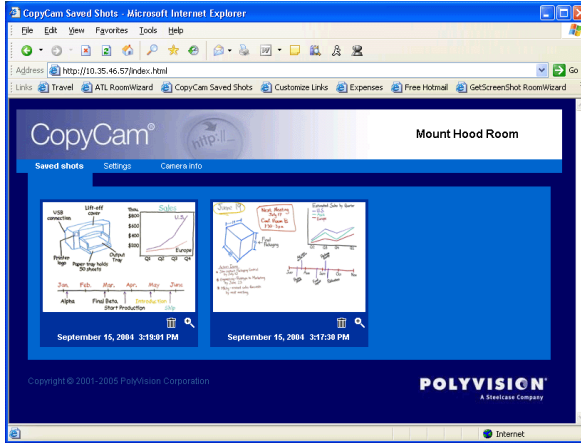
The CopyCam web site opens.

NOTE:

You can add the CopyCam web site to Favorites or create a shortcut. (In most browsers, you can drag the address to a "Links" area, and it will create a shortcut for you.) Rename the shortcut to make your CopyCam easier to identify.

USING THE SAVED SHOTS TAB

On the CopyCam web site, the “Saved Shots” tab, shown below, displays miniature images of each capture, including the date and time. These miniature images are called “thumbnails.”



Click a thumbnail to see the corresponding full-size image. The full-size image opens in a new window using whatever application is available on your computer to view .png files.

The .png format images on the “Saved Shots” tab can easily be printed, inserted in word processing documents, or sent in e-mail. If a copy on the web will be valuable in the future, preserve it by:

- saving it to your computer’s hard disk, or
- printing it from your web browser

Saving Copies to your Hard Disk

Copies that you save to your computer's hard disk can later be printed, used in documents, sent in e-mail, or edited.

To save a copy to your computer's hard disk:

- 1 Click a thumbnail to see the full-size image.
- 2 Choose "Save As" from the File menu.
- 3 Browse to the desired location on the hard disk and give the image a unique name.
- 4 Click "Save."

Printing From the Web

You can print one or more copies from the CopyCam web application at any time.

To print a copy from the web application with your default printer:

- 1 Click on a thumbnail to view the full-size image.
- 2 Choose "Print" from the File menu.
- 3 Select the number of copies to print.
- 4 Click "OK."

USING THE SETTINGS TAB

The web server “Settings” tab, shown below, provides a way for you to view and change important CopyCam web settings. A description of each field is presented below.

The screenshot shows the CopyCam web interface for the 'Mount Hood Room'. The 'Settings' tab is active, displaying various configuration options. At the top, there are tabs for 'Saved shots', 'Settings', and 'Camera info'. The 'Settings' section includes a 'Use DHCP' checkbox which is checked. Below this are input fields for 'IP address' (10.25.46.57), 'Subnet Mask' (255.255.255.0), and 'Gateway' (10.25.46.1). The 'Board Name' is set to 'Mount Hood Room'. There are radio buttons for 'Capture Type' (Monochrome and Color) and 'Printer Type' (Bluetooth and Ethernet). Below these are fields for 'Bluetooth Printer Channel' (00:03:EE:20:CF:90:6) and 'Ethernet Printer Address'. A 'Control Pad Volume' dropdown is set to 'Soft'. The 'Date/Time' is 'November 15, 2004 8:14:15 AM'. There is a 'Low Light Viewing' checkbox which is unchecked. At the bottom, there is a 'Firmware Update Server' field with the value '198.107.51.138/~dewag/CopyCam' and a 'Start Update' button. Below that are 'New Password' and 'Confirm Password' fields, and a 'Submit Changes' button at the very bottom.

Submit Changes

Click the “Submit Changes” button to implement changes to a setting. Settings are password protected. The first time you submit a change during an Internet browser session, the Password dialog appears, as shown below.

The screenshot shows a dialog box titled 'Enter Network Password'. It contains a key icon and the text 'Please type your user name and password.' Below this, there are labels for 'Site:' (172.26.1.166) and 'Realm:' (copycam (default password is admin)). There are two input fields: 'User Name' and 'Password'. Below the input fields is a checkbox labeled 'Save this password in your password list' which is unchecked. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

- 1 Enter your password. The user name is always blank and the factory default password is “admin.”
- 2 Click “OK.”

Use DHCP

Check this box if your LAN uses DHCP protocol. Remove the check mark if your LAN uses fixed IP addressing. Consult your system administrator if you are unsure.

IP Address

During configuration, the CopyCam web server IP address is determined automatically by DHCP or you may assign it here manually if the “Use DHCP” checkbox is not checked. (Refer to the *CopyCam Installation Guide* for information about how to configure CopyCam the first time.)

Subnet Mask

This network reference is determined automatically by DHCP or you may assign it manually here if the “Use DHCP” checkbox is not checked.

Gateway

CopyCam uses this gateway address only when updating firmware over the Internet. It is determined automatically through DHCP or you may assign it manually here if the “Use DHCP” checkbox is not checked.

Board Name

Enter a name that will help you identify the location of this CopyCam. This name appears at the top of the web page.

Capture Type

CopyCam normally captures images in color but it can also capture in monochrome. Changing to monochrome capture type can improve image quality when using a blackboard or when printing exclusively to black and white printers, such as network laser printers.

Printer Type (CopyCam Pro only)

CopyCam comes with its own color printer that uses wireless Bluetooth technology. However you can also print to some PCL-4 compatible printers sharing the same LAN. (Check with your dealer or PolyVision Technical Support to determine whether your printer is compatible with CopyCam.) Bluetooth is the default printer type. If you need to change printers, refer to “CopyCam Pro: Changing Printers” on page 46.

Bluetooth Printer Channel (CopyCam Pro only)

This field displays the Bluetooth device address of the wireless printer for this CopyCam. If you need to change printers, refer to “CopyCam Pro: Changing Printers” on page 46.

Ethernet Printer Address (CopyCam Pro only)

To print to a networked printer instead of the wireless printer that comes with CopyCam, enter the networked printer IP address in this field. If you need to change printers, refer to “CopyCam Pro: Changing Printers” on page 46.

Control Pad Volume

Choose the control pad voice message volume from five volume levels: off, soft, medium soft, medium loud, or loud.

Date/Time

Set the correct date and time. This information is associated with saved copies to help you identify when each copy was saved.

Low Light Warning

Remove the check to disable the control pad voice message that warns of low light conditions.

Firmware Update Server

Registered users receive information about free firmware updates. To update CopyCam firmware on a computer with Internet access:

- 1 Enter the IP address of the PolyVision firmware server, or leave “default” in this field. (This IP address might have changed since you purchased your CopyCam. If the update fails, go to “Support” at www.polyvision.com to find the appropriate IP address and enter it in this field.)
- 2 Click the “Start Update” button.

- 3 If this is the first change you have submitted during this Internet browser session, the Password dialog appears, as shown below.



- 4 Enter your password. The user name is blank and the factory default password is “admin.”
- 5 Click “OK.”
- 6 CopyCam automatically connects to the IP address, downloads the update, and then upgrades the firmware. Depending on the speed of the Internet connection, this may take up to two minutes.

The control pad LED provides feedback regarding the status of the upgrade. During the upgrade, the LED goes through a pattern of blinking yellow then green, then blinking yellow and green again. At the completion of a successful upgrade, the control pad voice message says “hello” and the LED stays green.

If the upgrade fails, the control pad LED flashes red. Press any control pad button to resume use with the original firmware version.

WARNING

Do not disconnect the power while the control pad LED is flashing. Permanent damage may result.

- 7 After the upgrade, click the browser’s “Back” button to return to the CopyCam web page. (Do NOT click the browser’s “Refresh” button, as this will initiate the upgrade again.)

NOTE:

You can also update CopyCam Pro firmware from a floppy diskette provided by PolyVision Corporation. Contact Technical Support if you need such a diskette.

New Password

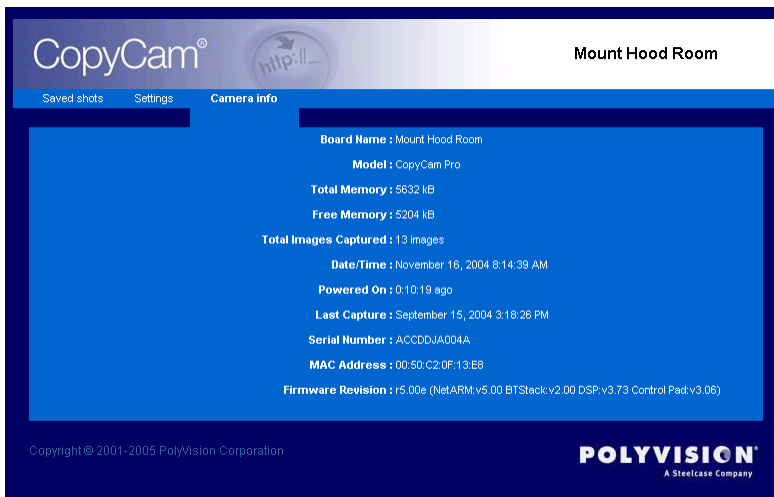
CopyCam settings are password protected. To change the password, enter a new password here, and enter it again in the next box.

Confirm Password

Enter your new password a second time here to confirm it.

USING THE CAMERA INFO TAB

The web server “Camera Info” tab provides a summary of information about CopyCam.



Board Name: The name, entered from the “Settings” tab, associated with this CopyCam.

Model: CopyCam E or CopyCam Pro.

Total Memory: The total memory in the CopyCam. This memory is used for storing copies of the board, plus the settings used to operate CopyCam.

Free Memory: The memory available to store new copies. When free memory becomes low, old copies are deleted as new copies are saved.

Total Images Captured: The total number of copies saved or printed from this CopyCam.

Date/Time: The current date and time, which can be adjusted on the “Settings” tab.

Powered On: The time of the last power on. Power on occurs when the CopyCam power adapter is plugged into a power outlet. (Images and settings are preserved during power outages.)

Last Capture: The time of the last use of CopyCam to save or print a copy of the board.

Serial Number: The CopyCam serial number. The serial number is also located on the top of the camera arm.

MAC Address: The unique ethernet hardware adapter address.

Firmware Revision: The version number of the CopyCam firmware.

COPYCAM PRO: CHANGING PRINTERS

The “Settings” tab on the web server includes provisions for changing the printer associated with a CopyCam Pro. You can change to a different wireless printer, or change settings so CopyCam Pro prints to a network printer on the LAN instead of a wireless printer. Refer to “Changing to a Network Printer” on page 49.

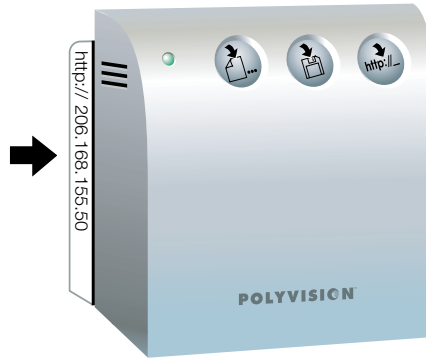
Changing Wireless Printers

If your CopyCam Pro is connected to a LAN and the wireless color printer needs to be changed (such as for a warranty replacement), follow the steps below.

To change the color printer:

- 1 Find your Bluetooth adapter’s device address. It can be obtained by pressing the small button on the adapter so the printer produces an information page that contains the address. Make a note of this number.

- 2 Locate the CopyCam Pro web address on the flange of the control pad and make a note of it.



- 3 On a computer connected to the same LAN as CopyCam Pro, open a web browser and enter the CopyCam Pro web address in the "Address" field. If the web server is not yet configured on the LAN, refer to "Configuring the CopyCam Web Server" on page 33.

NOTE:

Every CopyCam has its own web address which is uniquely associated with one CopyCam device. The "Settings" tab you see is for only one CopyCam, even though you may have several CopyCams installed as part of your LAN.

- 4 Click the “Settings” tab.

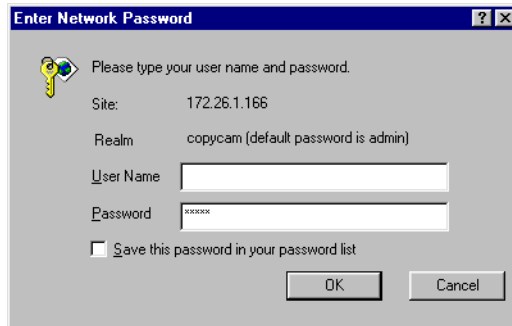
The screenshot displays the CopyCam web interface. At the top, there are three tabs: 'Saved shots', 'Settings', and 'Camera info'. The 'Settings' tab is active. The page title is 'Mount Hood Room'. The interface is divided into several sections:

- Network Settings:** Includes a checked 'Use DHCP' option, and input fields for 'IP address' (10.35.46.57), 'Subnet Mask' (255.255.255.0), and 'Gateway' (10.35.46.1).
- Board Name:** An input field containing 'Mount Hood Room'.
- Capture Type:** Radio buttons for 'Monochrome' and 'Color'.
- Printer Type:** Radio buttons for 'Bluetooth' (selected) and 'Ethernet'.
- Bluetooth Printer Channel:** An input field containing '00:03:6E:20:CF:98-6'.
- Ethernet Printer Address:** An empty input field.
- Control Pad Volume:** A dropdown menu set to 'Soft'.
- Date/Time:** A field showing 'November 16, 2004 8:14:13 AM' and a checked 'Low Light Warning' option.
- Firmware Update:** A field for 'Firmware Update Server' containing '198.107.51.138/~deang/CopyCam' and a 'Start Update' button.
- Passwords:** Input fields for 'New Password' and 'Confirm Password'.
- Submit Changes:** A button at the bottom of the form.

At the bottom of the page, there is a copyright notice: 'Copyright © 2001-2005 PolyVision Corporation' and the 'POLYVISION A Steelcase Company' logo.

- 5 Enter the printer’s Bluetooth device address in the field labeled “Bluetooth Printer Channel.”
- 6 Add “-1” to the serial number if the new printer is an HP Bluetooth wireless printer. Add “-6” to the serial number if the new printer uses a Bluetooth adapter.
- 7 Click the “Submit Changes” button to save the change.

- Settings are password protected. If this is the first change during this Internet session, you will see the Password dialog shown below.



- Enter your password. The user name is blank and the factory default password is "admin."
- Click "OK." CopyCam will now print copies from the new color printer.

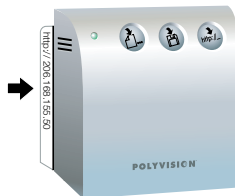
Changing to a Network Printer

CopyCam Pro can print to other printers on the same network if they are compatible with CopyCam. Check with your dealer or PolyVision Technical Support to determine if your printer is compatible. The network printer must:

- be connected on the same LAN as CopyCam Pro.
- have its own IP address.
- support PCL-4 or better.
- be compatible with CopyCam

To change to a network printer:

- 1 Locate the CopyCam Pro web address on the flange of the control pad, and make a note of it.



- 2 On a computer connected to the same LAN, run a web browser and enter the CopyCam web address in the “Address” field. If the web server is not yet configured on the LAN, refer to “Configuring the CopyCam Web Server” on page 33.

NOTE:

Every CopyCam has its own web address which is uniquely associated with one CopyCam device. The “Settings” tab you see is for only one CopyCam, even though you may have several CopyCams installed as part of your LAN.

- 3 Click the “Settings” tab.

The screenshot shows the CopyCam web interface. At the top, the 'CopyCam' logo is on the left, and 'Mount Hood Room' is on the right. Below the logo is a navigation bar with 'Saved shots', 'Settings', and 'Camera info'. The 'Settings' tab is active. The main content area has a blue background and contains the following fields and controls:

- Use DHCP
- IP address: 10.35.46.57
- Subnet Mask: 255.255.255.0
- Gateway: 10.35.46.1
- Board Name: Mount Hood Room
- Capture Type: Monochrome Color
- Printer Type: Bluetooth Ethernet
- Bluetooth Printer Channel: 00:03:EE:20:CF:98-6
- Ethernet Printer Address: [Empty field]
- Control Pad Volume: Soft (dropdown menu)
- Date/Time: November 16, 2004 9:14:19 AM
- Low Light Warning
- Firmware Update Server: 198.107.51.138/deang/CopyCam [Start Update](#)
- New Password: [Empty field]
- Confirm Password: [Empty field]
- [Submit Changes](#)

At the bottom left, it says 'Copyright © 2001-2005 PolyVision Corporation'. At the bottom right, it says 'POLYVISION A Steelcase Company'.

- 4 Click the “Ethernet” radio button beside “Printer Type.”
- 5 Enter the network printer’s IP address in the field labeled “Ethernet Printer Address.”
- 6 Click the “Submit Changes” button to save the change.

- 7 Settings are password protected. If this is the first change during this Internet session, you will see the Password dialog shown below.



- 8 Enter your password. The user name is blank and the factory default password is “admin.”
- 9 Click “OK.” CopyCam Pro will now print copies from the network printer.

COPYCAM OPERATION

POWERING ON THE SYSTEM

CopyCam powers on when you connect the power adapter to a wall outlet. The system initializes (reboots) in two minutes or less. CopyCam is ready to use when the power LED on the control pad turns green and the voice message says "Hello."

MAKING COPIES OF THE BOARD

CopyCam E makes copies of your whiteboard or chalkboard and saves them on the CopyCam web server on your local area network (LAN).

CopyCam Pro gives you a choice of three ways to make copies of your whiteboard or chalkboard:

- on the printer
- on a floppy diskette
- on the web

You can use any combination to save copies during a presentation. Refer to "CopyCam Pro: Copying in any Combination" on page 56.

What You Can Copy

CopyCam can copy writing and drawings in any color on whiteboards or chalkboards. You can use any chalk color or any marker color. You can even copy overhead projections if they use line art. CopyCam captures an area of up to 4' x 8' (1200mm x 2400mm) on a wall, whether or not there is a board there.

What You Can't Copy


CopyCam will not produce a clean image from large blocks of solid color, photos, or 3D objects.

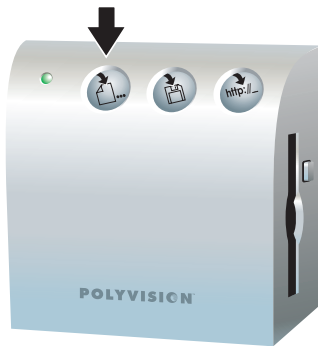
COPYCAM PRO: COPYING TO THE PRINTER

CopyCam Pro comes with its own color printer. The color printer receives its data using Bluetooth wireless technology. (You can also configure CopyCam to use some ethernet network printers. Refer to “CopyCam Pro: Changing Printers” on page 46.)

CopyCam Pro emits radio signals to the printer’s antenna, so no physical connection is required between them. The printer should be within 30 feet (10m) of the CopyCam camera arm, but it does not need to be in the same room. If a wall is between CopyCam Pro and the printer, the antenna range may be slightly reduced.

To print a copy of the board:

- 1 Be sure the printer is turned on, and has paper and ink.
- 2 When you are ready to capture, press the  button on the control pad once for each copy you want to print.



- 3 Continue your presentation after you hear the voice message say “captured” and the LED changes from blinking yellow to solid yellow.

COPYCAM PRO: COPYING TO A FLOPPY DISKETTE

You can save a copy of the board to a floppy diskette as an image file (.png). One floppy diskette holds 10 to 15 copies, depending on the complexity of the images. Files are named CCam0001.png, CCam0002.png, etc. Each copy that you save receives the next sequential number. After 1000 copies have been saved, the number wraps back to 0001. The date and time of capture are part of the file details.

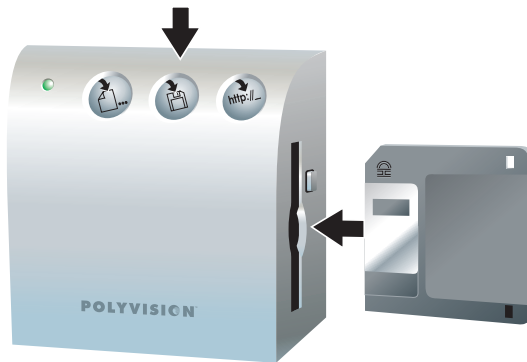
CopyCam Pro uses only formatted MS-DOS high-density 3.5" floppy diskettes. Formatted floppy diskettes are available from most office supply stores.


NOTE:

CopyCam Pro will not erase files on a diskette, so be sure that the diskette you use has sufficient space for your copies.

To copy to a floppy diskette:

- 1 Insert a formatted diskette in the control pad, as shown below.



- 2 When you are ready to capture, press  to save a copy of the board to the floppy diskette.
- 3 Continue your presentation after you hear the voice message say "captured" and the LED changes from blinking yellow to solid yellow. The disk drive begins to write after about 30 seconds. Writing to disk may take up to a minute.

NOTE:

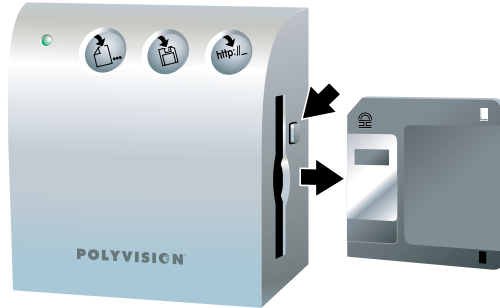
If the LED blinks red, one of the following may have occurred:

- *No diskette is inserted in the control pad.*
- *A bad or unformatted diskette is inserted in the control pad.*
- *The diskette is full.*

The voice message provides additional information.

To remove the floppy diskette from the control pad:

- 1 Wait until the LED changes to green or the voice message says “ready,” indicating that writing is complete.
- 2 Press the eject button on the control pad, as shown below.



NOTE:

Most computers can read the .png format images on the floppy diskette. Simply insert the diskette in your computer, browse to the floppy diskette drive and double-click the image file to view it. Images can easily be inserted in word processing documents or e-mail as well. To use only a portion of your board image, use any image editing application.

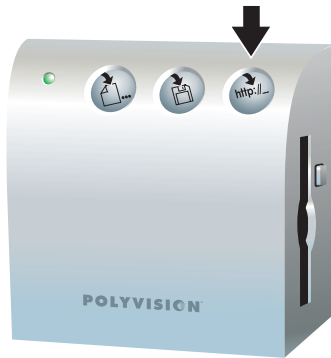
COPYCAM PRO AND COPYCAM E: COPYING TO THE WEB

You can copy the board as an image file (.png) to the built-in CopyCam web server. Access the copies with any computer sharing the same Local Area Network (LAN). The computer can be a Windows-based computer, a Macintosh, or any other computer with web access. All you need is a web browser such as Internet Explorer or Netscape. Refer to “Web Configuration and Testing” on page 33 for information about how to access the web server.

The web server can hold approximately 40 copies at a time, depending on their complexity. When the web server becomes full, the oldest copies disappear as new ones are added. Copies remain on the web server until they are replaced by newer ones or until you delete them, even if there is a power outage.

To copy to the web:

- 1 When you are ready to copy, press the  button to save a copy of the board to the web.



CopyCam Pro





CopyCam E

- 2 Continue your presentation after you hear the voice message say "captured" and the LED changes from blinking yellow to solid yellow. When the LED changes to green and the voice message says "ready," your copy is available on the web server.

WARNING

Copies that you save to the web can be seen (and deleted) by anyone in your organization who has access to the LAN, since the web page where copies are saved does not require a password to view. Save to the web only when you are willing to share the information. Print or save confidential information to a diskette to avoid public viewing.

COPYCAM PRO: COPYING IN ANY COMBINATION

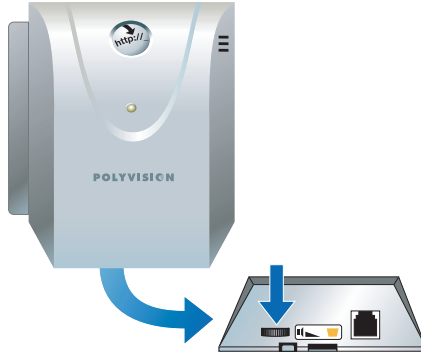
You can use the CopyCam Pro buttons in any order to print and save copies of the board. For example, if you want to print ten copies of the board during your presentation for the purpose of distributing them to your class, and you also want to save a copy on a floppy diskette to use in a word processing document, press the  button ten times, then press  once. CopyCam Pro captures the board once. The same image appears on both the diskette and the printed pages.

COPYCAM E: CONTROLLING THE VOLUME OF VOICE MESSAGES

CopyCam provides voice messages that give you the status of your captures. Refer to “Voice Messages” on page 63 for a summary of all status messages.

To control the volume of voice messages on CopyCam E:

- Turn the thumb wheel on the left side of the control pad bottom.



CAPTURING IN COLOR OR MONOCHROME

CopyCam normally captures images in color but it can also capture in monochrome. Changing to monochrome can improve image quality of captures when using a blackboard or when printing exclusively to black and white printers.

To toggle between color and monochrome captures:

- 1 Locate the Enable Monochrome Capture Sheet or Enable Color Capture Sheet.

NOTE:

If you cannot locate your monochrome or color target sheets, you can download them from the PolyVision web site at: <http://www.polyvision.com>.

- 2 Tape the monochrome or color sheet to the top center of the board, directly under the camera arm.
- 3 Press a control pad button.

NOTE:

If you have CopyCam Pro and if you press the control pad Print button, make sure the printer is turned on.

- 4 After the voice prompt says “scan done,” remove the target and you are ready to capture the board.

COPYCAM MAINTENANCE

CLEANING

Wipe the control pad and camera arm cover with a soft damp cloth. Use ONLY warm soapy water. Avoid harsh cleaners or detergents.

CAMERA ARM LENS

The camera arm houses a sensitive camera lens. As a rule, clean ONLY if necessary. Any contact with the critical optical surface risks damage to the surface. If in doubt, do not clean.

If necessary, use soft, abrasive-free lens paper or lens cloth to clean the lens. Never use spray cleaners or solvents, as they may harm the lens.


WEB SITE MAINTENANCE


Regularly save and delete image files that you save to the CopyCam web server to prevent them from being overwritten.


PRINTER (COPYCAM PRO ONLY)

Refer to the printer manual for maintenance information. (Printer manuals are also available on-line at the manufacturer's web site.)

TROUBLESHOOTING

ISSUE	RESOLUTION
The printed copy is unclear, off center, or crooked.	The system may require calibration. Refer to the Installation Guide for instructions.
Copy quality on a blackboard remains poor after calibration.	<ul style="list-style-type: none"> • Dusty blackboards can reduce contrast for CopyCam. Be sure that your board is cleaned thoroughly before writing. • If color is not important to you, you can dramatically improve contrast by changing capture type from color to monochrome. Refer to “Using the Settings Tab” on page 41.
Writing along the bottom edge of the printed copy is unclear or whited out.	Glare from the eraser tray along the bottom edge of the board is interfering with the capture. You may need to change the lighting near your board or calibrate CopyCam with the bottom calibration sheets two inches or so above the bottom of the board. For best results, lighting should not be directly over the board.
CopyCam cannot be located from a browser.	<ul style="list-style-type: none"> • Confirm that the CopyCam configuration has properly obtained the CopyCam address. Try performing the network configuration again as described in “Configuring the CopyCam Web Server” on page 33. • Check the ethernet cable connection in the camera arm. • If the ethernet cable is connected to a hub, confirm that the hub’s link indicator light is on. • CopyCam must be connected to the network within three minutes after power on in order to be visible on the network.
When the  button is pressed, the CopyCam Pro voice message says “printer problem.”	<ul style="list-style-type: none"> • Confirm that the printer is powered on and loaded with ink and paper. • CopyCam may be unable to find your printer. Move the printer closer to the CopyCam arm. • Check for interfering devices, such as microwave ovens, wireless telephones, and other network devices operating at 2.4 GHz.

ISSUE	RESOLUTION
<p>No CopyCam systems appear in the list when “Start” is pressed during configuration.</p>	<ul style="list-style-type: none"> • Confirm that you are configuring the CopyCam web server from a computer that shares the same LAN segment as the CopyCam system. • Double-click “setup.html” again and click “Start” again. CopyCam may be attempting to squat on an address. • Check the ethernet cable connection in the camera arm. • If the ethernet cable is connected to a hub, confirm that the hub’s link indicator light is on. • If an incorrect network address was entered, you may need to reset the system to factory settings, which results in the loss of all settings and stored images. To reset the system: <ol style="list-style-type: none"> 1 Remove the power adapter from the wall for 5 seconds. 2 Plug the power adapter back into the wall. The control pad LED will blink yellow. 3 Wait about one minute for the control pad LED to blink green once, then immediately: <ul style="list-style-type: none"> CopyCam Pro: simultaneously press all three control pad buttons and hold until the control pad LED turns red. CopyCam E: press the  button and hold until the control pad LED turns red. 4 Release the button(s). The voice message says “Hello” when CopyCam is finished resetting.
<p>The control pad LED is not lit.</p>	<ul style="list-style-type: none"> • Confirm that the power adapter is properly connected to the wall. • Confirm that the power adapter cable is properly connected in the camera arm. • Confirm that the control pad is properly connected in the camera arm. The larger jack is reserved for the ethernet cable. The control pad cable connector looks similar but is smaller. • Confirm that the power adapter is not on a switched outlet.
<p>The CopyCam Pro printer sometimes stops in the middle of a printout.</p>	<ul style="list-style-type: none"> • The printer may be too far away. Move the printer closer to the CopyCam arm. • Check for interfering devices, such as microwave ovens, wireless telephones, and other network devices operating at 2.4 GHz.

ISSUE	RESOLUTION
The password for the Setup tab has been lost or forgotten.	<ul style="list-style-type: none"> • Reset the system to factory settings, which results in the loss of all settings and stored images. To reset the system: <ol style="list-style-type: none"> 1 Remove the power adapter from the wall for 5 seconds. 2 Plug the power adapter back into the wall. 3 Wait about one minute for the control pad LED to blink green once, then immediately: <ul style="list-style-type: none"> CopyCam Pro: simultaneously press all three control pad buttons and hold until the control pad LED turns red. CopyCam E: press the  button and hold until the control pad LED turns red. 4 Release the button(s). The voice message says “Hello” when CopyCam is finished resetting.

LED AND VOICE STATUS MESSAGES

CopyCam gives you both LED and voice feedback to indicate the status of your capture. The LED is located on the control pad.

LED Status Indicators


The table below explains the LED status indicators.

LED INDICATOR	SYSTEM STATUS
No light	No power.
Solid green	Unit is idle and ready to copy.
Blinking yellow	Board capture in progress, unit is powering on, or firmware upgrade in progress. Stand away from the board during captures.
Solid yellow	Copy is being processed for the floppy disk drive, printer, or web server. You may continue writing on the board. The capture is complete.
Blinking red	System error such as missing or full diskette, printer out of paper or not powered on, or calibration required. (The voice message provides additional information.)




Voice Messages

Voice messages provide additional status feedback.

The table below is a summary of voice messages for both CopyCam Pro and CopyCam E.

VOICE MESSAGE	MEANING
"Hello"	Power restored
"Save web"	 button pressed
"Captured"	Board capture complete
"Ready"	Capture is complete
"Working"	Please wait while CopyCam writes a floppy diskette (CopyCam Pro only) or reboots
"Problem"	A problem occurred and CopyCam needs to reboot
"Web problem"	Web server not responding: contact Technical Support
"Low light"	Low light conditions result in longer capture time
"Hardware problem"	Hardware failure: contact Technical Support
"Calibration needed"	Cannot detect borders and calibration has not been performed. Refer to "How to Calibrate CopyCam" on page 28 for instructions to manually calibrate the system.
"Calibration problem"	Cannot detect borders and calibration has not been performed. Assure that there is adequate light and that the calibration sheets are visible to the camera. Refer to "How to Calibrate CopyCam" on page 28 for instructions to manually calibrate the system.
"Calibration done"	Calibration is complete and CopyCam is ready for use

The table below is a summary of voice messages heard only on CopyCam Pro.

COPYCAM PRO VOICE MESSAGE	MEANING
"One copy," "Two copies,"...	 button pressed
"Another copy"	 button pressed
"Save disk"	 button pressed
"Working"	Please wait while CopyCam writes a floppy diskette or reboots
"Full"	CopyCam Pro cannot capture because the printing buffer is full
"Printer problem"	Printer out of paper, printer out of ink, or printer unavailable
"No printer"	Printer is not on-line or could not be found
"No disk"	Floppy diskette missing
"Disk full"	Floppy diskette is full
"Disk problem"	Floppy diskette unformatted or bad

TECHNICAL SUPPORT

If reviewing the above sections fails to resolve your hardware or driver problem, contact PolyVision North America Technical Support:

- Phone: 1.800.620.POLY (7659) or 678.542.3100
- Fax: 678.542.3200
- E-mail: support@polyvision.com
- Internet: www.polyvision.com

Or, outside North America, contact PolyVision Europe/Asia Technical Support:

- Phone: +32 (0)89 32 31 30
- Fax: +32 (0)89 32 31 31
- E-mail: business.center@polyvision.com
- Internet: www.polyvision.com

FCC COMPLIANCE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Modification of this device in any manner not approved by PolyVision Corporation may void the user's authority to operate it.

CE DECLARATION OF CONFORMITY

Hereby, PolyVision Corporation declares that this Data Transmission Equipment Operating in the 2.4 GHz ISM Band and using Spread Spectrum Modulation Techniques is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

WARRANTY

PolyVision Corporation warrants to the original end-user purchaser that this product is free from defects in material and workmanship for a period of one year from the date of purchase. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or similar model) at our option, without charge for either parts or labor. Shipping costs will apply.

Please keep your original sales receipt or delivery invoice for proof of purchase. Without proof of the purchase date, your warranty will be defined as beginning on the date of manufacture, which is recorded by serial number at the factory.

This warranty applies only to the first end-user purchaser and only when the product is used in a country for which it is labeled for sale. Some factory-reconditioned parts may be used in the assembly of this product.

WHAT IS NOT COVERED

- 1 Any product that is sold or used outside of the region for which it was specifically labeled.
- 2 Any product on which the serial number has been defaced, modified, or removed.
- 3 Damage, deterioration, or malfunction resulting from, but not limited to:
 - Accident, misuse, abuse, neglect, fire, water, lightening or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
 - Use of abrasive cleaning materials on the enclosures or lens.
 - Any damage incurred in shipping.
 - Removal or installation of the product.
 - Excessive weight applied to the product.
 - Failure to mount the product securely in accordance with the written installation instructions.
 - Any other cause that does not relate to a product defect.
- 4 Cartons, carrying cases, or any accessories used in connection with the product.
- 5 Costs of installation and adjustment. These costs are the responsibility of the consumer.
- 6 Shipping charges to and from our factory or authorized repair depot.

HOW TO GET WARRANTY SERVICE

If you experience a problem with this product, contact PolyVision Technical Support 1.800.620.POLY or 678.542.3100 in North America to resolve the problem. Outside North America, call +32 (0)89 32 31 30.

If the product is diagnosed as being defective, you will be directed to return the product directly to PolyVision and will be provided with a Return Materials Authorization (RMA) number from PolyVision. All products returned to PolyVision must have an RMA number assigned, regardless of reason for return. The RMA number must be clearly marked on the outside of the shipping carton; any unit without an RMA number will be returned to the sender.

LIMITATION OF DAMAGES AND IMPLIED WARRANTIES

POLYVISION WARRANTS THAT THE PRODUCT WILL OPERATE SUBSTANTIALLY IN CONFORMITY TO THE POLYVISION DOCUMENTATION AND PUBLISHED SPECIFICATIONS FOR A PERIOD OF ONE YEAR AFTER CONSUMER PURCHASE, PROVIDED IT IS USED IN ACCORDANCE WITH POLYVISION'S USER INSTRUCTIONS. POLYVISION'S SOLE AND EXCLUSIVE LIABILITY, AND YOUR EXCLUSIVE REMEDY, FOR ANY BREACH OF THIS WARRANTY IS THAT, IF THE BREACH IS REPORTED TO POLYVISION IN WRITING WITHIN THE ONE-YEAR WARRANTY PERIOD, POLYVISION WILL CORRECT THE NONCONFORMITY, EITHER BY CORRECTING THE PRODUCT OR (WHERE APPROPRIATE) DOCUMENTATION; REPLACING THE PRODUCT; OR, WHERE POLYVISION DETERMINES THAT CORRECTION OR REPLACEMENT IS NOT FEASIBLE, REFUNDING THE FEE ACTUALLY PAID FOR THE PRODUCT. NO OTHER REMEDY SHALL BE AVAILABLE TO YOU.

EXCEPT AS EXPRESSLY SET FORTH HEREIN, POLYVISION MAKES NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. POLYVISION DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

POLYVISION SHALL HAVE NO LIABILITY BEYOND THE OBLIGATIONS SET FORTH ABOVE. IN NO EVENT SHALL POLYVISION BE LIABLE FOR ANY INDIRECT DAMAGES, WHETHER INCIDENTAL, CONSEQUENTIAL, OR OTHERWISE (AND EXPRESSLY INCLUDING LOST PROFITS AND LOSS OF DATA) OR FOR ANY DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THIS PRODUCT UNDER THIS OR RELATED AGREEMENTS, WHICH DAMAGES ARISE OUT OF THE USE OF THE HARDWARE, IRRESPECTIVE OF WHETHER POLYVISION SHALL HAVE BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES AND IRRESPECTIVE OF THE CAUSE OF DAMAGE, INCLUDING NEGLIGENCE. SOME STATES RESTRICT THE RIGHT TO EXCLUDE CERTAIN WARRANTIES. THEREFORE, THE ABOVE EXCLUSIONS MAY NOT APPLY TO YOU.

HOW STATE LAW RELATES TO THE WARRANTY

In the USA, this warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. PolyVision Corporation products are warranted in accordance with the terms of the applicable PolyVision Corporation limited warranty. Product performance is affected by system configuration. Software, the application, customer data, and operator control of products are considered to be compatible with many systems. The specific suitability of a product for a specific purpose or application must be determined by the customer and is not warranted by PolyVision Corporation.

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