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KNOWLEDGE THROUGH VISION

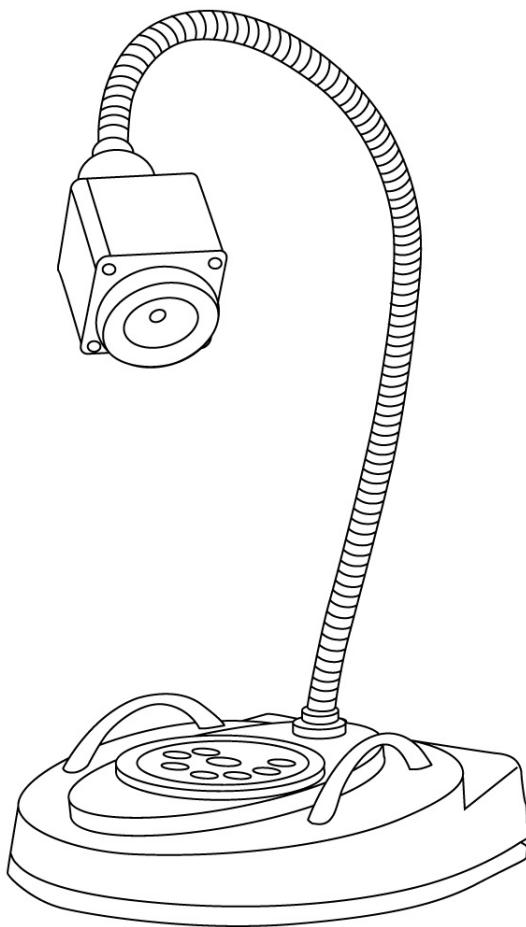
MVP

Instruction Manual

MVP-50

MVP-100

MVP-150



This Instruction Manual is for the Multi Video Product (MVP) series of Ken-A-Vision Cameras.

Macintosh Computer Users

Be aware of some special notes when using your computer with the MVP camera. When using a Macintosh computer, images and movies are captured using a Ken-A-Vision application entitled Ken-A-Vision Capture. Macintosh programs such as iPhoto and iMovie are suggested as optional applications for more advanced functions when capturing images and movies.

External Applications

Dependant upon the model you have purchased, your MVP camera has connections for a number of different External Applications.

	MVP-50	MVP-100	MVP-150
S-Video Out	Yes	Yes	Yes
External Microphone In (RCA)	Yes*	Yes*	Yes*
RCA Out Audio	Yes	Yes	Yes
Composite Video (RCA) Out	Yes	Yes	Yes
RJ-45 Network Out	No	Yes**	No
USB 2.0 Out	Yes	Yes	No
VGA In & Out	Yes	Yes	Yes
RS-232	No	No	Yes
Monitor Out Native Resolution	600 X 800	600 X 800	1024 X 768

*External condenser microphone. (Not supplied by Ken-A-Vision), may be connected to MVP, which has an internal amplifier. Audio output will need to be amplified to drive external speaker.

** Macintosh does NOT support use of the Network feature of the MVP-100.

Output Devices

Your MVP camera has a number of different Output Devices that it can connect to.

	MVP-50	MVP-100	MVP-150
Projectors-LCD	Yes	Yes	Yes
Projectors-DLP	Yes	Yes	Yes
Monitors-Video	Yes	Yes	Yes
Monitors-TV	Yes	Yes	Yes
Audio & Video Recording- Computer	Yes	Yes	Yes
Audio & Video Recording-VCR	Yes	Yes	Yes
Audio & Video Recording-DVD	Yes	Yes	Yes
Computer Devices- USB/Applied Vison Software	Yes	Yes	No
Computer Devices- Network***	No	Yes	No

***When 4 or more units are purchased, separate Network software is included in purchase.

Control Buttons

Your new MVP has a number of features controlled by buttons on the base of the unit which may be pressed and allow the user a quick switch between output devices during presentations. See control button operations in this manual.

	MVP-50	MVP-100	MVP-150
8x Digital Zoom	No	No	Yes
Split Screen	Yes	Yes	No
Video Output	Yes	Yes	Yes
Freeze Frame	Yes	Yes	No
Iris	Yes	Yes	No
Computer Output Control	Yes	Yes	Yes
Bright Dark	Yes	Yes	Yes
Mirror Switch	Yes	Yes	Toggle Flip
Flip	No	No	Toggle Flip
Pos./Neg. Image	Yes	Yes	Yes
Stores up to 9 images	No	No	Yes
Native Resolution in Pixels	600 X 800	600 X 800	1024 X 768

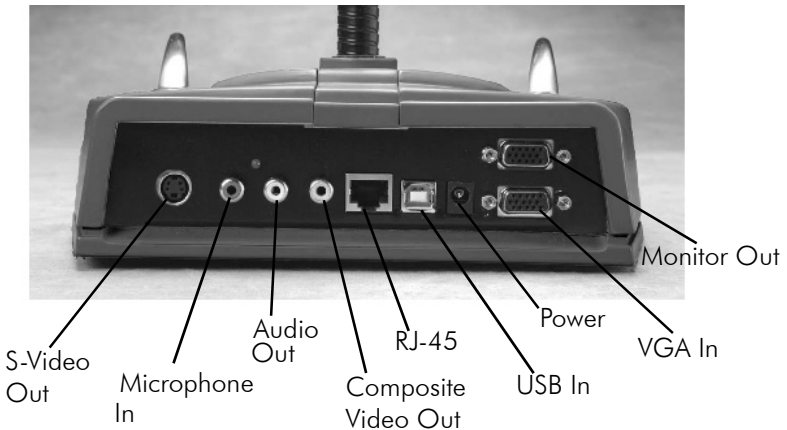
Cables Shipped with Product

Your MVP is shipped with the following cables to allow quick connection to Output Devices.

	MVP-50	MVP-100	MVP-150
VGA Cable (5'/1.5m)	Yes	Yes	Yes
Composite Video Audio Cable (12'/3.7m)	Yes	Yes	Yes
USB 2.0 Cable (6'/1.8m)	Yes	Yes	No

Connecting MVP to Various Output Devices

Your MVP is designed as a multi-media friendly camera which may be connected to a variety of output devices. (For the remainder of this booklet, Output Device = multi-media projector, video monitor, TV, computer, VCR or DVD recorder, or when available a local area network).



1. MVP to any Output Device which accepts a VGA input signal. (Projector, Video Monitor, TV, VCR or DVD Recorder).
 - Connect a VGA Cable between the MVP's MONITOR OUT plug (top) and the COMPUTER IN or VGA IN of the Output Device.
 - Turn Output Device on. Follow output device procedure for using VGA connection.
 - Push POWER button of MVP to turn the camera on.
 - Image should appear on screen after a few moments.
2. MVP to any device which accepts a Composite Video (RCA) Connector. (Video Monitor, Projector, TV, VCR or DVD Recorder).
 - Connect the yellow composite (RCA) plug to the yellow C-VID output plug on the MVP.
 - Connect the opposite end of the cable yellow composite (RCA) plug to the VIDEO IN female plug on the Output Device.
 - Turn Output Device on. Follow output device procedure for using video in connection.
 - Push POWER button of MVP to turn the camera on.
 - Image should appear on screen after a few moments.
3. MVP as an audio pass-through device to an Output Device.
 - Connect an external microphone (not provided by Ken-A-Vision), to the MIC-IN plug of the MVP. (Recommend using a condenser microphone only).
 - In order to broadcast or record any input audio signal, the A-OUT (White, RCA, Composite) post must be connected by a composite cable to the AUDIO IN (white, RCA, Composite) plug on the Output Device (e.g. a VCR or DVD Recorder, Computer with audio card).
 - Turn Output Device on. Follow output device procedure for using audio in connection.
 - If using external speakers, a power amplifier would be necessary for those speakers. (e.g. Amplifiers common to lecture halls, mixer boards etc.)
 - Push POWER button of MVP to turn the camera on.
4. Integrating computer (for Power Point, videos, or other digital files stored on a computer) into presentations. (Allows for the output device to switch between the MVP and a computer). Attaching a computer to the MVP for use with Ken-A-Vision Applied Vision Software, AND simultaneously displaying the same images and software on an Output Device.
 - Attach USB 2.0 cable (provided by Ken-A-Vision) from the MVP USB port to the USB port of the computer.
 - Push POWER button of MVP to turn the camera on.

- Turn the computer on and activate Applied Vision.
- Image from MVP will appear on computer monitor.
- Connect a VGA cable (D sub 15 pin plug) between the VGA-IN port of the MVP, and the VGA-OUT of the computer.
- Connect a second VGA cable between the MONITOR-OUT plug of the MVP and an Output Device such as a projector.
- Be sure correct button (Computer 1, 2 RGB etc.) on the output device is activated.
- Note - on some computers you must also reset the graphics display setting of the computer so that it is outputting to both the computer monitor and the external Output Device (such as a projector). On most computers this is an F-key function or can be done by right clicking the mouse while cursor is on any open space of the desk top.
- Press the Computer Button on the MVP and the image on the Output Device will alternate between the direct MVP image and any output of the computer directly, including Applied Vision Software.

5. Using the MVP's S-Video connection to an Output Device.

- Connect an S-Video cable from the S-VID connector on the MVP to the S-Video input of the Output Device. The MVP will provide a high resolution S-Video image.
- Push POWER button of MVP to turn the camera on.
- Turn Output Device on. Follow output device procedure for using S-Video connection.
- Image will appear on Output Device in a few seconds

6. Interfacing MVP (MVP-100 only) with Local Area Network

- Refer to the Network Setup Addenda Manual (separate book).
- Macintosh computers will NOT work with the RJ-45 Network connection, as Macintosh does not support Ken-A-Vision requirements in this mode.

Using the control buttons on your MVP

On the top of your MVP base is a series of green buttons. (Please note that Split, XGA, Freeze and Computer buttons will not be active with a composite (video) and S-Video connections). The following buttons are found on all MVP units:



Key pad of the MVP-50 & MVP-100

Computer - The computer button only operates when the output of a VGA product (computer or other camera) is plugged (using a VGA cable) into the VGA-IN button. In this configuration, the button will operate to switch the projected image between the MVP's camera live video, and whatever is on the VGA device. Pressing this button, results in the projected image alternating between the MVP live camera image and the VGA device image.

Note: Just having the USB connection of the computer connected to the MVP, will not result in activation of this Computer button, the VGA-IN connection is required. If there is no VGA connection between the computer and the Output Device, pressing the computer button results in the VGA input being alternately turned on and off.

Bright and Dark - These two buttons must be pressed and held down, in order to get a response. Holding down the Bright button, will cause the image to get brighter, while holding down the Dark button will darken the image.

Pos/Neg - (Positive/Negative) when pressed, this button alternates the image between the positive or normal image, and its negative.

Note: A positive image is the normal image. A negative image is a tonal inversion of a positive image, in which light areas appear dark and vice versa. A negative color image is additionally color reversed, with red areas appearing blue, greens appearing magenta and blues appearing yellow.

The following buttons are found on the MVP-50 and MVP-100, but NOT on the MVP-150:

Split - Split functions to divide the image visible on the Output Device

- Click 1 - image divides (splits) in half, with the right half a fixed image, and the left half a live image. (right/left is as you view the projected image) (H comp indicated on screen)
- Click 2 - image remains divided in half, but now the right half is a live image, and the left half is a fixed image. (H comp indicated on screen)
- Click 3 - Image splits into 2/3 live (right) and 1/3 a fixed (left) image. (H comp indicated on screen)
- Click 4 - Image splits into 5/6 live (right) and 1/6 a fixed (left) image. (H comp indicated on screen)
- Click 5 - Returns to a full screen live picture. (Off Comp indicated on screen)

XGA - The XGA button manages the MVP camera output resolution with the Output Device on which the image is going to be visualized. Clicking this button shifts the output resolution between settings of 800 x 600 resolution and 1024 x 768 resolution.

Freeze - The Freeze button causes the image to be fixed at the moment it is pressed and is indicated on screen by the term Frozen. A press of the button again, and the live image is restored and is indicated by the term Thaw on the Output Device.

Iris - The Iris button regulates the amount of light reaching the MVP camera, and when pressed may lighten or darken the projected image.

Mirror - Pressing on the Mirror button results in the projected image being changed into its mirror-image. Alternate pressing of this button, switches between mirror-image and its complementary normal image. (Mirror function on MVP-150 incorporated into Flip button)

Combinations of buttons - Some buttons may be used in combinations. For example, if the image is Split, and then Freeze is pressed, both halves of the split image will freeze. The image will have to be Thawed before the Split setting can be changed. When on Split, the iris will affect the live image, but not the fixed image. Similarly, when on Split, Bright/Dark and Mirror buttons will affect the live image, but not the fixed image. When the image is on Freeze, none of the other buttons change the image.

The following buttons are found on the MVP-150 only, and NOT on either the MVP-50 or MVP-100.

DZoom - Digital Zoom - Zooms images from 1X to 8X while button pressed.

Text - Makes resolution of text documents clearer.

Flip - Pressing on the Flip button results in the projected image being flipped horizontally, then vertically. Pressing this button also allows creation of the same effect as Mirror on the MVP-50 and MVP-100 units. Pressing this button allows user to electronically have paper oriented in desired direction.

Save - Saves up to 9 images on camera. Saved images will be lost if power is turned off, but may be downloaded to computer using USB.

Recall - Displays saved images one at a time. Images will be numbered.

Reset - Resets unit to default positions, does not erase saved images.

MVP Specifications

VGA connector	Mini sub D15 - or use with a VGA, SVGA, or XGA monitors or projectors. MONITOR IN, VGA-IN (cable provided)
Power Supply	(Ken-A-Vision Replacement Part Number - KAVSPS) Input - 100-240v, 0.7A, 50-60 Hz Output - 12 V, 2.5A
USB	Standard 2.0 (cable provided)
C-VID	Standard Composite -yellow (cable provided)
A-OUT	White plug - Pre-amplifier output A power amplifier will be needed to drive external speakers
MIC-In	Red plug - Condenser microphone only
S-VID	4-pin Mini-DIN connector - S-Video output
Indicator lights	Green, indicates Network Connection; Red, indicates Power on

Care and Maintenance of the MVP Camera

Follow normal practice for any high quality optical instrument:

- Immediately clean up any spills you might have on the MVP. Particularly any corrosive agents should be wiped off, and/or neutralized as necessary.
- Store the MVP covered.
- Clean the camera lens only with standard lens paper to prevent scratching.
- Do not use any liquids to clean the lens, except water. (dampen a piece of lens paper if oils or fingerprints are on the lens)
- Store in a clean, dry location away from corrosive agents and dust.

Accessories

If you are interested in purchasing accessories or replacement parts for your MVP, visit the Ken-A-Vision Web site, <http://store.kenavision.com/catalog/> or contact your local Ken-A-Vision Dealer.

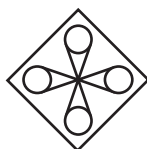
Information to the User:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



Ken-A-Vision reserves the right to make design improvements and other changes in accordance with the latest technology. There is no obligation to make changes in products already manufactured. Patents Pending
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