CA1062

Auto Shutter Camera

Instruction Manual

Model CA1062
for use with VP103 / A106A
rev.# 03 July 9, 1996 JWS/SLC

Contents

Features

- Automatically selects the correct exposure.
- Auto Shutter speeds from 1/60 sec. to 1/125,000 sec.
- 12 Video Pointer patterns
- Provides S-Video (YC) and NTSC Video signals
- High Resolution, Low Noise ½" HyperHAD™, Color CCD Image Sensor
- MicroImage Support

Unpacking Instructions

The MicroImage CA1062 Camera for NTSC/YC/B&W consists of:

MicroImage A106A Auto Exposure Camera
MicroImage VP103 Video Pointer
Camera (to Video Pointer) cable
6 foot BNC to BNC cable
Power Supply
This Instruction Manual

See the *Optional Items for use with this camera* section for other MicroImage products that may enhance video operations.

Unpack all items carefully. Check each item against contents list above.

Inspect Unit to make sure that there is not any shipping damage. If there was shipping damage, Call MicroImage Video Systems Immediately. Do NOT plug unit in to power if damaged. Further destruction and/or injury may result.

Connections

Connect the 9 pin (small connector) end of the camera cable to the camera module. Connect the 15 pin (large connector) end of the cable to the Video Pointer. Screws are provided to firmly secure the cable at the camera and Pointer. Do not connect camera cable while Pointer is on.

The MicroImage Model CA1062 Camera generates YC (S-Video) and NTSC Video. The NTSC output on the rear of the camera should not be used for normal operation with the Video Pointer.

The external input connectors (for NTSC and YC) are not used when the CAMERA connector is used. These are provided to connect to non-MicroImage cameras. DO NOT connect to these connectors if the CAMERA connector is being used. A degraded image will result.

NTSC

Connect a BNC cable from the NTSC connector on the Video Pointer to the VIDEO IN connector on the monitor. If this is the only monitor being used, place the TERM switch in the 75 Ω TERM position.

If a second monitor is being used, connect a BNC cable from the extra VIDEO INPUT jack in the first monitor to the VIDEO INPUT of the second monitor. Place the TERM switch in the high impedance position (not in the 75 Ω or TERM position) on the first monitor (the one with two cables connected to the video input). Place the TERM switch on the second monitor in the TERM or 75 Ω position. If more than two monitors are connected, only the last one connected should be placed in the 75 Ω or TERM position.

YC

Connect a YC (4 pin to 4 pin) cable from the YC connector on the Video Pointer to the YC IN (S-Video) connector on the monitor. If only one YC monitor is being used, place the YC TERM switch in TERM position.

If a second YC monitor is being used, connect a YC cable from the YC LOOP connector on the first YC monitor to the YC IN connector on the second YC monitor. Place the YC TERM switch on the first monitor (the one with two YC cables connected to it) in the high impedance position (Not the 75 or TERM position). Place the TERM switch on the second monitor in the TERM or 75 position. If more than two YC monitors are being used, only the last one connected (the one with only one YC cable) should be in the Term or 75 position

NOTE : If the monitor does not have a second connector for attaching another monitor, a Distribution Amplifier or DA will be required. Contact MicroImage Video Systems for suitable units.

Connection to a VCR

The NTSC and YC signals may be recorded on videotape. High resolution VCRs such as the S-VHS type will give much better recordings than standard VCRs. Use of the YC signal with these VCRs will provide the highest quality signal.

NTSC

Connect a cable from the NTSC connector of the Video Pointer to the VIDEO IN connector on the VCR. Note that adapters or special cables may be required.

Connect a cable from the VIDEO OUT connector of the VCR to the Video or NTSC INPUT connector of an NTSC monitor as described in the VCR instruction manual.

DO NOT connect the above signals to the Antenna or ANT connectors on the VCR.

YC

Connect a YC (S-Video) cable from the YC connector on the Video Pointer to the S-Video INPUT connector on the VCR. Note that a VCR with YC capability such as an S-VHS VCR must be used.

Connect a YC (S-Video) cable from the S-Video OUTPUT connector on the VCR to the YC or S-Video INPUT connector on a YC monitor as described in the VCR instruction manual.

If the VCR has a switch to select NTSC(Video) or S-Video, place the switch in the S-Video position. See the VCR operation manual for more information.

Operation with a VCR

For normal use, the Camera and the VCR may be left connected. However, both the Camera and the VCR (along with any other connected equipment) must have their power turned on in order to see a proper camera image on the video monitor.. If the VCR is connected properly, it should pass the camera image just like if the VCR was not connected while stopped. If PLAY is pressed on the VCR, then of course you should see the video tape picture instead of the current camera image.

The exact procedure for recording and playing tapes on a VCR varies between different models. It is impossible to describe all the methods here. Please refer to your VCR operation manual BEFORE calling MicroImage Video Systems. If calling MicroImage Video Systems for assistance on VCR connection problems, please have the VCR operation manual handy. Manuals for other equipment are also good to have at hand. Not all VCR related problems are the VCR.

Operating Instructions

Connect Unit as specified in the ***Connections*** section of this manual.

Plug power cord into POWER connector on rear of unit.

Plug power cord into 120 VAC 60Hz AC power.

Turn on power by moving the POWER switch up. Green power lamp should become illuminated. If the power indicator does not come on, see the *In Case of Difficulty* section of this manual.

Shutter Operation

Many operations can cause a change in light level to the video camera, the most common of which is changing the magnification of the optics. The change in light level usually results in loss of a usable picture. The Auto shutter in the CA1062 automatically changes the shutter speed after a preset light level change is detected. The system is designed to provide a fast response to light changes.

The auto shutter in MicroImage cameras is calibrated for maximum picture quality. When focusing or panning,

a jump in picture brightness may occur. The camera has detected that the current light level exceeds its quality range and it chose a better shutter speed. Most critical viewing will occur while viewing a static picture. We decided it was best to provide maximum picture quality at the expense of some occasional shutter change activity. If the shutter does change during a static picture, it will only be once in the first few seconds after the picture is displayed. This one "shutter update" may occur due to 60 Hz power noise from many light sources.

When the camera determines that picture quality will be compromised, it will change to a new shutter speed.

Pointer Controls

Power Switch	-	Provides power to both the MicroImage video pointer and camera. A green light in the power switch indicates power is on.
Color Bars	-	Two position switch which turns the color bar generator ON or OFF. In the ON position color bars will appear on the monitor screen. The switch must be in the OFF position to allow the camera image to appear on the screen.
Pointer	-	Two position switch which allows the video indicator (pointer) to be displayed on the monitor screen in the ON position. If the indicator is not needed the switch should be in the OFF position.
Flash	-	Two position switch which will flash the video indicator on and off in the ON position.
Large/Small	-	Two position switch which selects LARGE or SMALL sizes of the video indicator.
Intensity	-	Control which fades video indicator image from black to white or any level of gray in between.
Shape Selector	-	Rotary switch used to select desired video indicator. Six shapes including arrows (4), boxes and crosshairs may be selected.

Precautions

DO NOT touch the filter and image sensor when mounting the adapter.

DO NOT allow dust or moisture to enter camera.

DO NOT connect main unit to any other camera module. The signals are proprietary to this system and may result in damage to both units

DO NOT use the camera in a place with strong electric waves or magnetism if possible. Picture distortion may occur.

DO NOT allow water or moisture to enter unit. Injury and/or damage may result.

DO NOT stress cable or bend tightly at connectors. DO NOT pull cable by connectors. Avoid twisting the cable near connectors.

Connect Power Supply module only to 110-125 VAC 50/60Hz.

Clean with only a mild cleaner. Strong cleaners may damage the finish. When cleaning, dampen a soft cloth and then wipe unit. NEVER spray cleaner directly into any electronic product. Severe damage and/or a lethal or severe shock may result!

Please put all manuals for this system in a safe place where they are easily found if needed.

In case of difficulty

1 - No Picture:

1) Check all connections.

2) Make sure power is connected and unit is turned on. Power light should be illuminated. If power lamp does not come on and power is applied, call MicroImage Video Systems for assistance.

3) If other equipment is installed between camera and monitor, check the camera and monitor for proper operation by connecting camera (or pointer) directly to monitor.

2 - Picture Appears Bright and Washed Out:

1) Auto shutter may be at the end of the range. Try using a Neutral Density (ND) filter.

4) Check monitor BRIGHTNESS control.

3 - Picture Appears Dark:

1) There may not be enough light reaching the camera.

2) There may be a bright spot (such as a reflection) causing the auto shutter to increase. Note that the camera will sense a bright spot even at the very edge or beyond the edge of the monitor.

5 - Picture Appears to Flash While Focusing or Moving the Objective:

1) Focusing causes the light intensity to the camera to change. The auto shutter updates itself to provide the best possible image. Usually once focus is achieved, there will be no more updates during a static picture.

2) While moving the objective, there may be areas of different light levels. When the camera determines that the image will become clipped (too much level) or dark (too little level), it will change the shutter speed accordingly. We have tried to provide a balance between optimum picture and shutter update occurrences. Usually a static (non - moving) picture is what is used for critical work. A shutter update will not usually occur during a static picture however, that picture should be the best quality possible.

FOR TECHNICAL ASSISTANCE CONTACT:

WORLD VIDEO SALES CO., INC.
P.O. Box 331
Boyertown, PA 19512
Attention: Customer Service
Phone: (610) 754-6800

Specifications

Output Levels:	
NTSC	1.0 Vpp Composite, 75 Ω
YC	1.0 Vpp (Y),0.286 Vpp Burst Level (C), 75 Ω
Connectors:	
NTSC	BNC Female
YC	4 pin mini-DIN Female (Std. S-Video conn.)
Camera Connector:	
(on Video Pointer)	15 pin sub mini D type female
(on camera)	9 pin sub mini D type female
Horizontal Resolution	470 lines (Y channel)
Image Sensor	½" HyperHAD™ CCD, 768 (H) x 494 (V)
pixels	
Scanning System	2:1 interlace RS-170
Scanning Frequency	15.734 Khz (H), 59.94 Hz (V)
Chroma Frequency	3.579545 MHz
Sync System	Internal
Shutter System	Microprocessor based digital system
Shutter Response Time	0.35 sec. max response (C type)
Auto Shutter Range	Off - 1/24583 sec.
Auto Gain	0 to +16dB
White Balance	Auto: 2800°K to 6200°K
S/N Ratio	48 dB
Minimum Illumination	0.3 lux on image sensor surface (gain on)
Lens Mount	C-Mount
Camera Power Requirements	12 VDC +/- 10%, 420 mA typ.
Operating Range	-10° ~ +50° C, 95% RH max.
Video Pointer Power:	
Voltage	12 VAC 60 Hz
Consumption	24W max.
Dimensions:	
Video Pointer	292 (W) x 216 (D) x 82.5 (H) mm
	11.5 (W) x 8.5 (D) x 3.25 (H) inches
Camera	43 (H) x 50 (W) x 130 (L) mm
	1.7 (H) x 2.0 (W) x 5.125 (L) inches
Weight:	
Video Pointer	6.5 lbs.
Camera	12.4 oz.

HyperHAD™ is a trademark of Sony Corp.

Optional items for use with this system

MicroImage Timer /Titlers

MicroImage Split Screen Controllers & Video Faders

MicroImage Fixed Pattern Generators

MicroImage CrossLine Generators

MicroImage Video Distribution Amplifiers (VDA)

CABLES

CAB11003	3 ft BNC to BNC Cable
CAB11006	6 ft BNC to BNC Cable
CAB11012	12 ft BNC to BNC Cable
CAB11025	25 ft BNC to BNC Cable
CAB11050	50 ft BNC to BNC Cable
CAB12006	6 ft S-Video (YC) Cable
CAB12012	12 ft S-Video (YC) Cable
CAB12020	20 ft S-Video (YC) Cable
CAB12030	30 ft S-Video (YC) Cable

Other length camera cables also available. Contact MicroImage Video Systems for part numbers and availability.

MicroImage Video Systems offers many more cables than listed above including longer versions. Please contact MicroImage Video Systems to check availability of cables not listed.

All above items may be ordered from your MicroImage Video Systems dealer.

World Video Sales Co., Inc. warrants that each MicroImage CA1062 Camera System is free of defects due to faulty materials or improper workmanship. World Video Sales Co., Inc. further warrants that any part which proves defective in materials or workmanship within one year , will be replaced or repaired at no cost to the user. Labor to replace defective parts will be done without charge, provided the equipment is returned to World Video Sales Co., Inc. prepaid, insured and properly packaged. Prior return authorization must be obtained from World Video Sales Co., Inc.

NOTE

This warranty covers the MicroImage CA1062 Camera System only.

CONDITIONS

This warranty is void if the warranted part has been altered or subjected to abuse or misuse. Defective parts must be returned to World Video Sales Co., Inc.

SOLE WARRANTY

This Warranty is in lieu of all other warranties expressed or implied including, without limitation, any implied warranty or any implied warranty of fitness for a particular purpose. World Video Sales Co., Inc. shall have the final right to determination as to the existence and cause of any defect and its appropriate adjustment in accordance with the terms of this warranty. In no event shall World Video Sales Co., Inc. be liable for any consequential or collateral damages.

MicroImage Video Systems is a division of World Video Sales Co., Inc.

Please call for an RMA Number on all repairs.

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