CrossLine 4

Instruction Manual

CL340 & CL740

Contents

Features

! CL340 processes YC or NTSC or B&W signals

! CL740 processes RGB,YC and NTSC or B&W signals.

! Intelligent logic determines which signals are used - no switches to set

! Very high quality, sealed 10-turn controls used for accurate positioning and long life

! Linear intensity control varies lines from black to white

! Individual lines may be turned off as needed

! Lines may be independently be selected as solid or serrated

Unpacking Instructions

The MicroImage CrossLine 4 consists of:

> MicroImage CL340 or CL740 CrossLine 4 Unit
> Detachable 3 wire power cord
> This Instruction Manual

Unpack all items carefully.

Inspect Unit to make sure that there was not any shipping damage. If there was shipping damage, Call MicroImage Video Systems <u>Immediately</u>. Do NOT plug unit in to power if damaged.

Installations

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. The green power light should become illuminated.

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

Video Connections

The MicroImage Model CrossLine 4 is capable of processing either NTSC, or B&W video. The CL340 processes YC (S-Video) in addition to NTSC or B&W. The model CL740 can process RGB, YC (S-Video) and NTSC or B&W. The unit will automatically configure itself to use the timing information from the appropriate source. There are no switches to set for signal or sync type. However, all signals must be from the same Sync source (i.e. the same camera).

NTSC

Connect a BNC cable from the video source (i.e. Video Camera) NTSC or VIDEO output connector to the NTSC IN connector on the CrossLine 4.

Connect a BNC cable from the NTSC OUT connector on the CrossLine 4 to the VIDEO IN connector on the monitor. If this is the only monitor being used, place the TERM switch in TERM or 75Ω position.

If a second monitor is being used, please consult the monitor manual for proper looping and termination procedures. Not all monitors terminate the same way. Some monitors do not have looping capability, in this case a Video Distribution Amplifier will be required. An improperly terminated monitor will result in a degraded picture.

B&W

Connections are the same as for NTSC above except connect to the Black/White or Monochrome output of the camera instead.

YC

Connect a YC (S-Video) cable from the video source (i.e. Video Camera) YC or S-Video output connector to the YC IN connector on the CrossLine 4. A special YC adapter cable may be required for some cameras.

Connect a YC (4 pin to 4 pin) cable from the YC OUT connector on the CrossLine 4 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 or 75Ω position.

If a second YC monitor is being used, please consult the monitor manual for proper looping and termination procedures. Not all monitors terminate the same way. Many monitors do not have looping YC capability, in this case a YC Distribution Amplifier will be required. An improperly terminated monitor will result in a degraded picture.

RGB (CL740 only)

Connect Red, Green, Blue and if required, Sync Cables from the video source (i.e. Video Camera) RGB output to the RED IN, GREEN IN, BLUE IN and if required, SYNC IN connectors of the CrossLine 4.

Connect RED, GREEN, BLUE and if required SYNC cables from the RED, GREEN, BLUE and SYNC OUT connectors on the CrossLine 4 to the appropriate connectors on the monitor. If only one RGB monitor is being used, place the RGB and SYNC TERM switches in TERM or 75Ω position.

If a second RGB monitor is being used, please consult the monitor manual for proper looping and termination procedures. Not all monitors terminate the same way. Many monitors do not have looping RGB capability, in this case a RGB Distribution Amplifier will be required. An improperly terminated monitor will result in a degraded picture.

The NTSC and YC signals may be recorded on videotape. High resolution VCRs such as the S-VHS type will give higher quality recordings than standard VCRs. Use of the YC signal with these VCRs will provide the highest resolution. The combination of RGB for real time display and YC for recording is the optimum way to obtain best picture quality.

NTSC

Connect an appropriate cable from the camera or other video source to the NTSC IN connector on the CrossLine 4.

Connect a cable from the NTSC OUT connector of the CrossLine 4 to the <u>VIDEO IN</u> connector on the VCR. Note that adapters or special cables may be required.

Connect a cable from the <u>VIDEO OUT</u> 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 camera or other video source to the YC INPUT connector on the CrossLine 4. Note that a special adapter cable may be required for some cameras. MicroImage Video Systems offers optional cables for YC connection to MicroImage cameras. Contact MicroImage Video Systems for more information.

Connect a YC (S-Video) cable from the YC OUT connector on the CrossLine 4 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.

NOTE: The above VCR connections are for recording the CrossLine 4 image on the video tape.

VCR Operation

For normal use, the CrossLine 4 and the VCR may be left connected. However, both the CrossLine 4 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. For camera operation without the CrossLine 4 image, press the display switch to turn off the CrossLine 4 display. A recording can then be made without the CrossLine 4 image. If the VCR is connected properly, it should pass the camera (and CrossLine 4 image) just like if the VCR was not connected. If PLAY is pressed on the VCR, then of course you would 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

X1 / X2 - These controls move the *horizontal* lines from the top to the bottom of the screen. The control is called X because it moves the line in the vertical direction. Counter-clockwise is the top of the screen.

Y1 / Y2 - These controls move the *vertical* lines from the left side to the right side of the screen. The control is called Y because it moves the line in the horizontal direction. Counter-clockwise is the left side of the screen.

Intensity -On/Off - This control varies the intensity or brightness of the lines. The control is linear, meaning that it can be set to different shades of gray between the black and white settings. Counter-clockwise is black while clockwise is white.
Turning the intensity control fully counter-clockwise (until it clicks) will turn off the display of all lines without affecting their position.

Notes: The position controls can move the lines over approximately the 90% center area of the screen. Depending on the monitor, the lines may not go all the way to the edges.

The Intensity control will not approach a very bright white. This was designed to help protect the phosphors on color monitors. Very bright, thin lines may cause the line image to "burn" into the face of the tube.

Line Settings

The MicroImage CrossLine 4 has several internal adjustments as follows.

1. Switches to turn individual lines on or off.
2. Switches to make lines solid or serrated.
3. A line width adjustment for the Vertical lines.

To adjust these settings requires removing the top cover from the unit. The procedure is as follows:

Top cover removal

WARNING: This unit has dangerous voltages inside while it is connected to the 120VAC power source. The unit should be disconnected from the power source when removing the top cover and while working inside. Failure to follow this warning could result in lethal shock!

Remove the top cover by removing the two Philips head screws on each side of the unit (4 total). Do not remove any screws on the front or rear panel. The top cover should lift off.
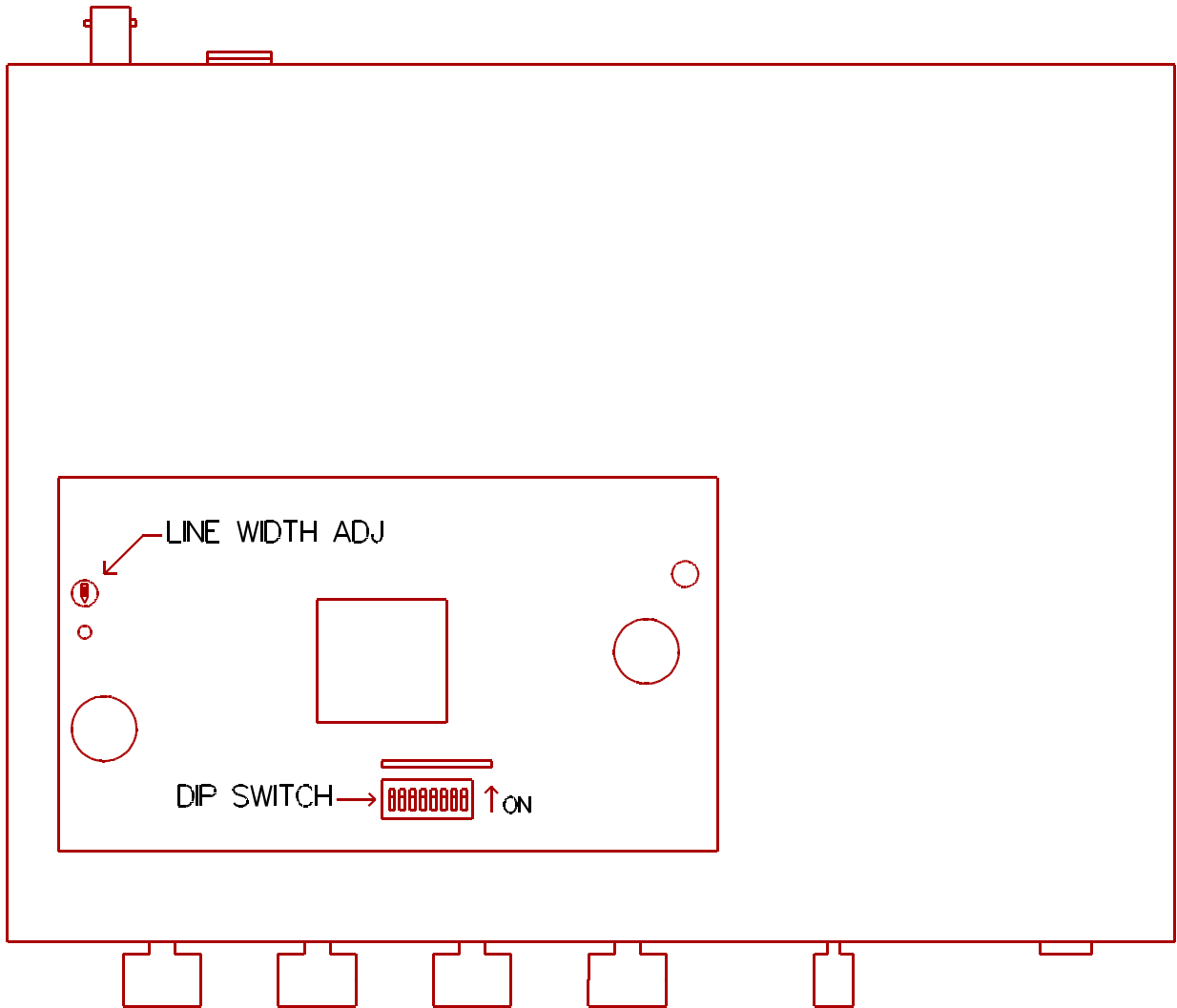
Figure 1 DIP switch and line width adjustment settings

Line Width adjustment

A line width adjustment is provided for the vertical lines. Some monitors will tend to alter the size of these lines and this control is provided for correction. Normally this control will only need to adjusted once.

To adjust the vertical line width, locate the Line Width Adj control inside the unit. Use figure 1 as a guide. Using a small flat blade screwdriver, turn the control to the desired line width. DO NOT turn any other controls. If other controls are adjusted, a factory setup will be required at users expense.

WARNING: Avoid the right side of the unit (side near power switch and power cord). This side of the unit contains high voltages and can cause a severe or lethal shock. MicroImage Video Systems has covered most exposed wires, but caution should still be observed.
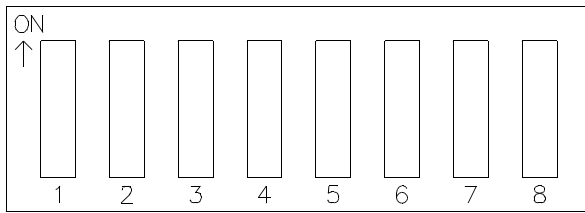
1. X2 ON/OFF
2. X2 SOLID
3. X1 ON/OFF
4. X1 SOLID
5. Y2 ON/OFF
6. Y2 SOLID
7. Y1 ON/OFF
8. Y1 SOLID

Figure 2 DIP switch

Line On/Off

Individual lines can be displayed or hidden by setting the appropriate DIP switch on or off. This allows various combinations of lines to be displayed to suit the users needs. See figure 2 for the correct switch settings.

Line Solid/Serrated

Individual lines may also be selected as solid or serrated (dashed) lines. When two lines in the same direction are selected as serrated, they will have different patterns for easy identification. See figure 2 for switch settings.

Top cover installation

The top cover is installed just the opposite from removal. Unplug power from unit when installing the top cover. Remember to install all 4 screws.

Precautions

DO NOT open unit. Lethal voltages are present inside. Refer servicing to authorized personnel.

DO NOT try to turn controls past the ends of rotation. Damage and or loss of precision or control life may result.

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

Connect unit only to 110-125 VAC 50/60Hz.

Clean unit 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. A lethal or severe shock may result!

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

1 - No Picture:

1) Check all connections. Make sure video in and out are not reversed.

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, return the unit to MicroImage Video Systems for repair. (Call for RMA number first)

3) Check camera and monitor for proper operation by connecting camera directly to monitor.

2 - Camera Picture on screen but no CrossLine image:

1) Turn Intensity control. The display may be turned off (control fully counter-clockwise) or the lines may be "lost" in a background of similar intensity.

2) Double check all connections. Make sure the CrossLine 4 is connected properly.

FOR TECHNICAL ASSISTANCE CONTACT:

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

Input Levels:
      NTSC   1.0 Vpp Composite, 75 Ω
      YC   1.0 Vpp (Y), 75 Ω
                                        0.286 Vpp Burst Level (C), 75 Ω
      RGB   0.714Vpp, 75 Ω
      Sync   0.3 to 4Vpp, 75 Ω

Output Levels: Same as respective inputs ±5% into 75 Ω

Connectors:
      NTSC   BNC Female
      YC   4 pin mini-DIN Female (Std. S-Video conn.)
      RGBS   BNC Female

Matte Levels   approx. 5% (Black) and 90% (White)

Bandwidth   Greater than 10Mhz

Temperature:
      Operating   0° ~ 40° C (32° ~ 104° F)
      Storage   -40° ~ 60° C (-40° ~ 140° F)

Humidity:
      Operating   10% ~ 90% (noncondensing)
      Storage   0% ~ 95% (noncondensing)

Power:
      Voltage   110 ~ 125 VAC 50/60 Hz
      Consumption   25W max.

      Size   11.6 (W) x 10.2 (D) x 2.5 (H)
                                        295mm (W) x 259mm (D) x 63.5mm (H)
      Weight   7 lbs. 13 oz.

Optional Items

MicroImage Video Camera Systems

MicroImage Video Pointers

MicroImage Video Timer / Titlers

MicroImage Fixed Pattern Generators

MicroImage Video Distribution Amplifiers (VDA)

MicroImage Split Screen Controllers

MicroImage Video Passive Switch Boxes

CABLES

CAB11001   1 ft BNC to BNC Cable
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

CAB12001   1 ft S-Video (YC) Cable
CAB12006   6 ft S-Video (YC) Cable
CAB12012   12 ft S-Video (YC) Cable
CAB12025   25 ft S-Video (YC) Cable

CAB13006   6 ft BNC x 4 cable bundle

MicroImage Camera adapter cables. Call MicroImage Video Systems for information regarding part specific part numbers for different MicroImage cameras.

Call MicroImage Video Systems to check availability of cables not listed above.

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

World Video Sales Co., Inc. warrants that each MicroImage CrossLine 4 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 CrossLine 4 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.

Please call for a RMA Number before returning any product.

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625 Hoffmansville Road
Suite 3
Bechtelsville, PA 19512
Attention: <RMA#>
Phone: (610) 754-6800

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