cctvmate.com

Part Code: LCD350

Handy CCTV Camera Test Monitor

with 3.5" colour LCD

In addition to its basic function as a camera test monitor, the CCTVmate has a number of built in test meters and is a professional troubleshooting kit for any CCTV engineer.

The CCTVmate test monitor is housed in a durable rubberised casing and supplied complete with wrist, neck and waist straps for secure one-handed or even hands-free control whilst being used up a ladder.

A built in speaker allows the audio output of a camera to be quickly and easily tested.

A built in video signal meter measures the camera's composite video signal and displays the reading over the camera's image on the LCD screen. A similar device can also measure the output of a connected microphone.

The CCTVmate also produces a 'Colour Bar' output to allow the checking and calibration of monitors.

A built in volt meter can test the AC or DC voltage on power cables as well as testing for a break in the cables.

For a truly professional edge, the CCTVmate has an RS485 connection to allow full directional and zoom control of a connected PTZ without the use of a separate keypad.

Getting Started

Before taking the CCTVmate out on its first job, please ensure that the unit is fully charged by using the charger supplied for 2-3 hours. This will allow up to 6 hours usage.

When the unit is charging the LED on the left above the LCD screen will display in RED. When the unit is powered up but not on charge, the LED will display in green.

The battery level is indicated in the top right of the LCD screen.

CCTVmate kit includes:

3.5" LCD Test Monitor

Protective Carry Case with Belt Loop

Plug in Charger

Battery Pack

Rubberised Shock Guard

Pair of DC Voltage Probes (red/black)

Video & Audio Cable

Terminal Strip Adaptors

Waist Belt

Neck Carry

Wrist Strap

Email Support: **support@cctvmate.com**

General Operation

Once fully charged, you can decide on your preferred method of carrying and using the CCTVmate. A popular method is using the wrist strap supplied.

Wrist strap for more convenient CCTV installation!

To switch on the LCD screen, select the 'ON' using the ON/OFF button on the top of the unit and press the POWER button and a blue screen will appear.

Connect the Video lead to the AV plug on the top of the LCD, this is now ready to connect your CCTV camera. Connect the video output of the camera to the yellow BNC socket of the lead. The picture from the CCTV camera should immediately be visible on the screen.

NB: When not in use turn off at the main ON/OFF button to retain battery charge.

ON/OFF Button

Video lead to CCTVmate

Video lead to the camera

Measure the video output of a CCTV camera

1. Power up the CCTVmate and press the "MODE" button until "VIDEO" is highlighted in the top left corner of the LCD display.

2. Connect the video output of the camera to the yellow input BNC socket of the video lead and connect the camera to a power supply.

3. The video output value will be displayed as shown in the picture below.

Video lead to CCTVmate

Audio

Video out

Video output value

Mode Button

Video lead to the camera

CCTVmate

Yellow (input) BNC socket to the video output of the camera

Camera

Power supply

The normal output from a camera should read 1.0 Vp-p or slightly higher. A reading below this would suggest a compromised signal, possibley due to signal drop over a long cable run or an issue with the composite source both of which will require further investigation.

Measuring the voltage on a cable

1. Press the "MODE" button until "AC" or "DC" is highlighted in the top left corner of the LCD display. The CCTVmate has 3 modes for checking voltages 150V AC ~ 250V AC, 20V AC ~ 15V AC and 0V DC ~ 45V DC.

   To gain an accurate reading ensure the correct voltage range is selected

2. Connect both probes into the positive and negative inputs on the side of the unit and measure the voltage.

   Caution: Ensure the probes are inserted into the CCTVmate with correct polarity (ie Red to Red, Black – Black)

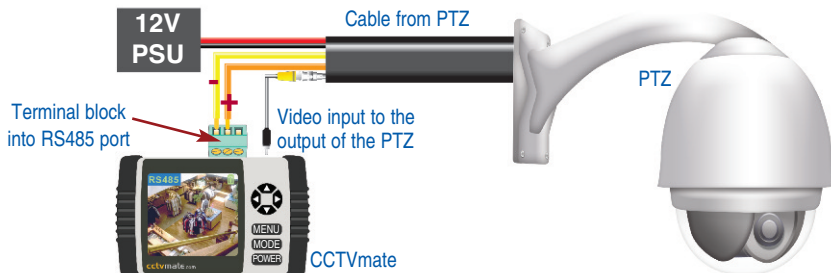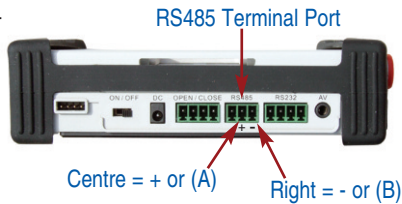3. The voltage will be displayed in the middle of the LCD as shown in the picture below.

A voltage reading can only be achieved when the probes are applied to a power supply output with matching polarity. No reading can indicate either 0 volts or cross polarisation. Therefore ensure that probes are applied in both polarities to check voltages and suspected cross polarity.

Saftey Note:
The testing of mains voltage must always be carried out by suitably qualified engineers.

Testing the set up of a PTZ camera locally

First ensure you have the details of the PTZ protocol setup before configuring the CCTVmate. Make the Protocol and Baud rate in the CCTVmate the same as the the PTZ and connect the PTZ camera to the CCTVmate via the RS485 terminal port on top of the unit.

RS485 Terminal Port

Centre = + or (A)   Right = - or (B)

12V PSU

Cable from PTZ

PTZ

Terminal block into RS485 port

Video input to the output of the PTZ

CCTVmate

1. Press the "MODE" button until "RS485" is highlighted in the top left corner of the LCD.

2. Press the "MENU" button and scroll down to the protocol setup menu by using the "down" direction button. Change the protocol settings to match your device by using the "direction" buttons to select the correct configuration. Pressing "MENU" again after will save the last change, to exit back to the main RS485 screen press "MODE".

Protocol setup menu

CAM ID	1
PELCO	P
Baud rate	9600
Sleep Time	OFF
Language	Eng
Recall	▶
Return	▶
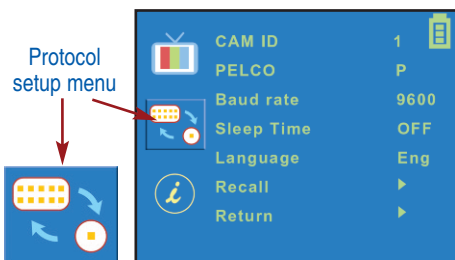
Example Protocol: ID = 1, PELCO = P, Baud rate = 9600

Protocol setting options:

Option	Value
CAM ID	0 - 255
PELCO	P or D
BAUD RATE	2400, 4800, 9600

Direction buttons

UP   ZOOM IN

LEFT   RIGHT

ZOOM OUT   DOWN

3. Once back to the "RS485" screen you can now control the direction of the PTZ camera by pressing the "direction" buttons. Press "Up + Right" to zoom in and press "Down + Left" to zoom out.
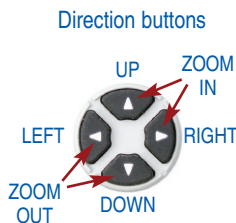
Testing for a cable break or continuity in a circuit

1. Press the "MODE" button until "CABLE TEST" is highlighted in the top left corner of the LCD.

2. Ensure one end of a cable has a circuit by twisting two wires together, *ie a positive (red) / a negative (black).* Connect the other two ends of the red/black cable into the terminal block and then into the CCTVmate via the "OPEN/CLOSE" terminal port on top of the unit. *See diagram below.*
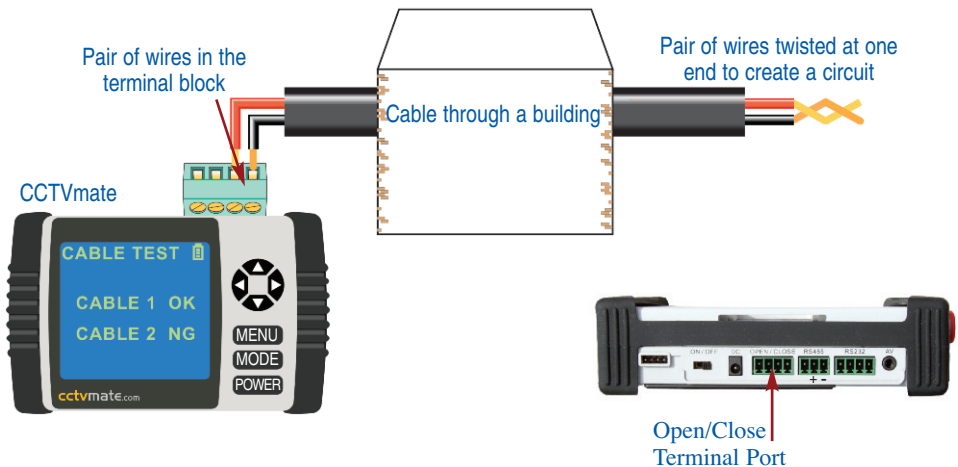
3. The outcome will be displayed as shown in the picture below, an "NG" reading means there is a break in the circuit with "OK" having continuity in the circuit.
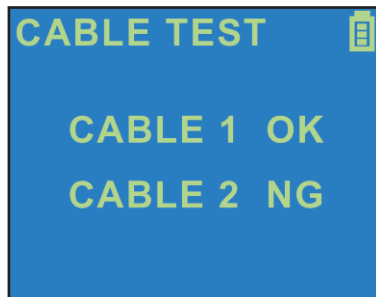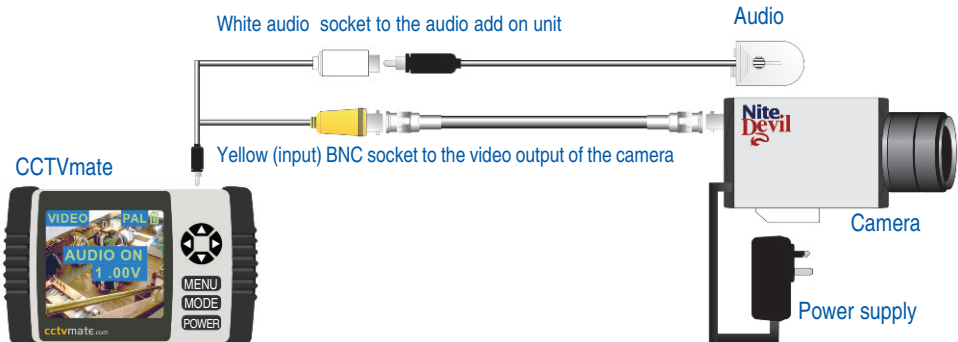
Testing the audio output of a camera

1. Power up the CCTVmate and press the "MODE" button until "VIDEO" is highlighted in the top left corner of the LCD display.

2. Press the "Up" or "Down" direction button to turn the audio speaker on or off, as displayed in the picture below. Once the audio is turned on, audio can then be heard from the CCTVmate speaker.

NB. The CCTVmate must be connected to a working camera to use this feature. The audio input must be of line level (pre-amplified) the audio feature will not test condenser microphones.
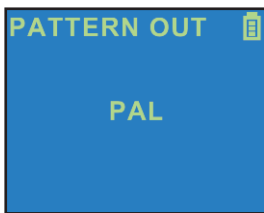
Video/audio lead to the CCTVmate

White audio socket to the audio add on unit

Audio

Yellow (input) BNC socket to the video output of the camera

CCTVmate

Camera

Power supply

VIDEO   PAL
AUDIO ON
1.00V

Monitor test output pattern

1. Press the "MODE" button until "PATTERN OUT" is highlighted in the top left corner of the LCD.

2. Connect a BNC lead from the video input of the monitor to the black BNC socket of the video lead to display an 8-colour bar standard pattern on the monitor as shown below.

3. You can change from NTSC to PAL format by pressing the "Up" or "Down" buttons. By switching the mode function back the video, the monitor can output the composite video input.

Screen Display

Video lead to
the CCTVmate

Black (output) BNC socket to video input of the monitor
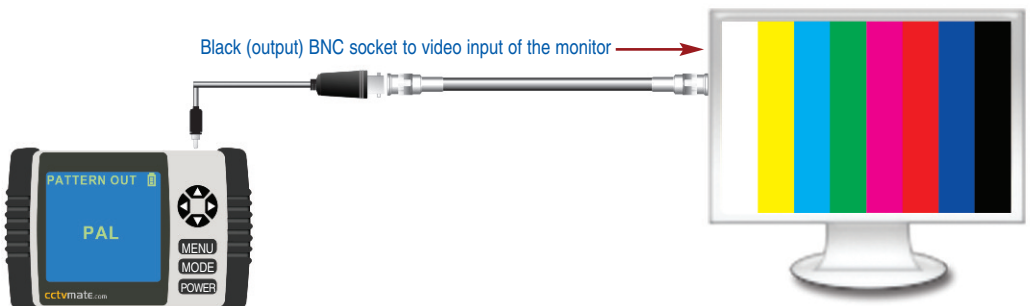
LCD Set up adjustments

| **1** LED | Green light : Power on |
	Red light : Charging
2 Direction Buttons	Navigate through on screen menus
3 MENU Button	Menu on/off
4 MODE Button	Switch function mode
5 POWER Button	Power switch - standby on/off
6 ISP Interface	Upgrade firmware interface
7 Main Power Switch	Power switch - master
8 DC Jack	Adaptor in 9V
9 Open/Close Port	Cable teat open/short circuit test X 2 sets
10 RS485 Port	PTZ protocol test for RS485 +/- port terminal
11 RS232 Port	Debug for engineer only
12 Video/Audio lead Port	Connect to video in, out and audio in cable
13 Negative Probe Input	- Probe for DC voltage measurement
14 Positive Probe Input	+ Probe for DC voltage measurement

Menu Settings

1. Press the "MENU" button to display the main menu. The top monitor icon is automatically selected as the picture below. Use the "direction" buttons to change the settings.

Main monitor menu

Brightness	65
Contrast	50
Saturation	50
Hue	50
Return	▶
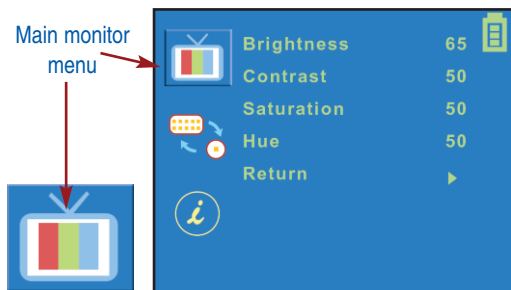
Menu setting options:

| Option	Value
Brightness	0 - 100
Contrast	0 - 100
Saturation	0 - 100
Hue	0 - 100
Return	Exit Screen

2. Press the "MENU" button and scroll down to the protocol setup menu by using the "down" direction button. Use the "direction" buttons to change the settings.

Protocol setup menu

CAM ID	1
PELCO	P
Baud rate	9600
Sleep Time	OFF
Language	Eng
Recall	▶
Return	▶
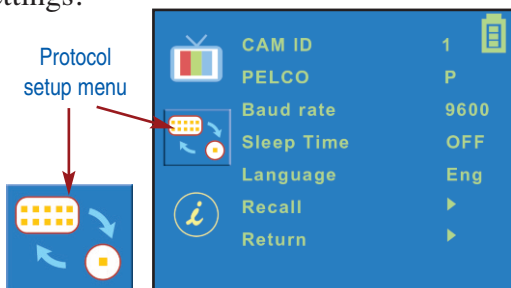
Protocol menu setting options:

Option	Value
CAM ID	0 - 255
PELCO	P or D
Baud rate	2400, 4800, 9600
Sleep Time	off, 5, 10, 30, 60min
Language	English / Chinese
Recall	Restore factory defaults
Return	Return to menu select

3. Press the "MENU" button and scroll down to the information menu by using the "down" direction button. This will display the software version.

Information menu

VER 1.4

EXIT

Direction buttons

UP ZOOM IN
LEFT RIGHT
ZOOM OUT DOWN
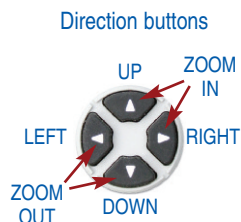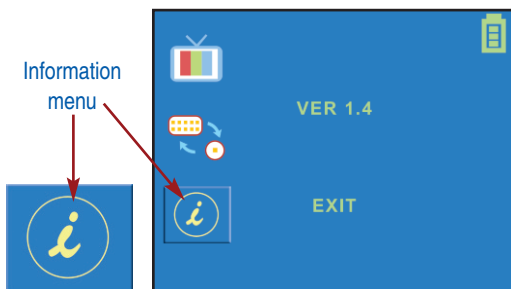
Specification

LCD350	3.5 " LCD CCTV Test Monitor
Display Size	3.5"
Panel backlight	LED type
Display Resolution	320 x 240
Charge voltage	4.2V +- 10%, about 400mA
Battery	2200mA, Lithium Polymer battery
Charge time	2~3 hours
Standby time	5~6 hours
Video level measurement	0~2Vpp (Voltage peak to peak value) NTSC/ PAL auto detection
Pattern out	8 Colour bar with 1V standard Vpp
PTZ protocol	PELCO P / D
Protocol Baud rate	2400 / 4800 / 9600 bps
AC voltage range	20V AC ~ 150V AC 150V AC ~ 240V AC
DC voltage range	0V DC ~ 40V DC
Audio test	Built-in speaker for testing (8Ω/1W)
Cable test	Break or Continuity in a circuit test X 2 sets
Weight	NW/GW:0.29kg / 1.07kg
Dimensions	156 x 90 X 38 mm with safeguard cover
Operating Temp	0 to 45° C (32 to 113° F)
Storage Temp	-20 to 45° C (-4 to 113° F)
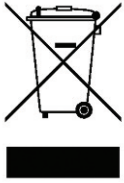
This symbol on the products and/or accompanying documents means that used electronic equipment must not be mixed with general household waste. For treatment, recovery and recycling please return this unit to your trade supplier or local designated collection point as defined be your local council.

WEE/CG0783SS

All specifications are approximate. CCTVmate.com reserves the right to change any product specification or features without notice. Whilst every effort is made to ensure that these instructions are complete and accurate, CCTVmate.com or any company associated with it, cannot be held responsible in any way for any losses, no matter how they arise, from errors or omissions in these instructions.

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