

D I G I T A L
C C D C A M E R A

User Manual



Please read this manual before installing and using this camera and always follow instructions for proper use. Please file this manual away for future reference.



Warning!

- 1 To prevent the risk of fire or shock hazard, do not expose this camera to water .
- 2 Installation of this unit should be carried out by a qualified personnel and should conform to the local codes.
- 3 To reduce the risk of electric shock ,do not remove cover (or back).No user serviceable parts inside .Refer servicing to qualified service personnel.
- 4 Do not use the camera if fumes ,smoke or a strange odor is emitted from the unit ,or if it seems to not function correctly .Disconnect the power source immediately and consult your supplier.

Precautions

1. Do not drop or shake the carton severely.
The box cannot give perfect protection against heavy shocks.
2. Do not touch the CCD glass by hand, as this may give a blurred picture.
3. Do not expose the camera to water or other liquids. It can cause fire or electric shock. If water liquids contaminate the unit, dry it quickly as it can corrode the electrical components inside.
4. Do not install the camera in the wet area or area of high humidity without adequate protection. Moisture can corrode the electrical components inside.
5. Do not turn the camera to face strong light. Direct sunlight or strong reflected light can cause blooming or smearing of the picture.
6. Do not install or use the camera in an environment of extreme temperature. In temperatures of below -10°C use an external housing with heater built in. In a temperatures of over $+60^{\circ}\text{C}$ cool the camera with ventilation apparatus.
7. Always follow the instructions in the installation guide when applying power. Fire and equipment damage can occur if power is applied incorrectly. For the correct power supply, refer to the specification sheet.

8. Do not install or operate in small, unventilated areas. Heat build up can significantly reduce the performance and operating life of the product and may cause a fire.
9. Do not drop the camera or subject it to strong shock or vibration.
To prevent damage.
10. If installed close to a TV, radio transmitter, magnet, electric motor transformer or audio speakers the magnetic field generated may interfere with or distort the image.
11. Keep work area clean and well lit.
cluttered or dark areas invite accidents.
12. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
13. Keep children and bystanders away while operating a power tool.
Distractions can cause you to lose control.

Installation

1.1 What's in the box

The camera package contains:

Camera assembly

Instruction manual

Hardware kit, including four 1" screws and four wall inserts

1.2 Tools you need

To install the camera, you will need:

Phillips #2 screwdriver

Small blade screwdriver (for adjusting VF model cameras)

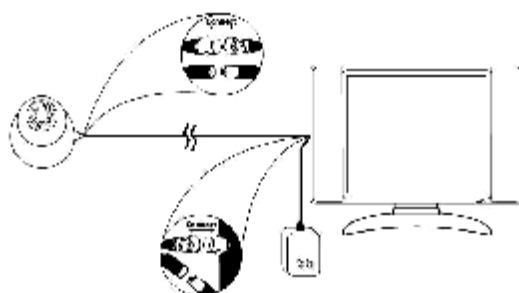
Depending on how the camera is mounted, you may also need:

Hammer

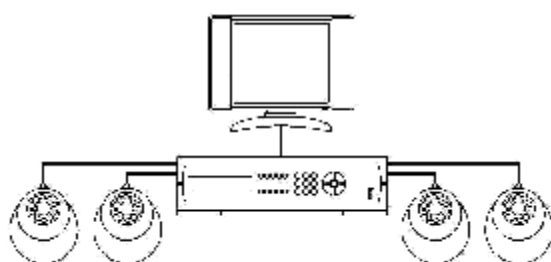
Drill with 3/32" and 3/16" drill bits

3/4" hole saw

1.2 Camera connections

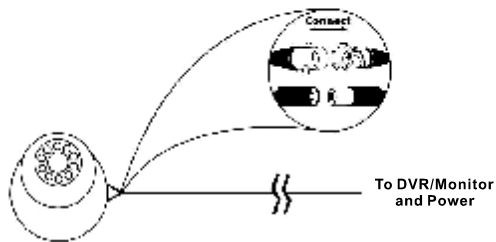


single camera with monitor(above);
Multiple camera system with DVR and monitor (below)





Notice that power connectors on the BNC video/power cable are different at each end!



Cleaning

Clean the camera lens and IR lamp shield with an approved glass cleaning solution and a lint free cloth.

Dust can be removed from the unit by wiping it with a soft damp cloth. To remove stains, gently rub the surface with a soft cloth moistened with a mild detergent solution, then rinse and dry it with a soft cloth.

Remove all foreign particles, such as plastic or rubber materials, attached to the camera housing. These may cause damage to the surface over time.



Do not use benzene, thinner or other chemical products on the camera assembly; these may dissolve the paint and promote damage of the surface. Before using any chemical product, read the accompanying instructions carefully.

Specification:

| Image Device | | Number of Pixel | |
|------------------------|-------|----------------------------|--------------------|
| 1/3 coms 600 TV lines | | NTSC:811X558;PAL:795X656 | |
| 1/3 coms 700 TV lines | | NTSC:976X558;PAL:976X656 | |
| 1/3 coms 900 TV lines | | NTSC:1028X558;PAL:1024X696 | |
| 1/3 coms 1000 TV lines | | NTSC:1028X756;PAL:1024X760 | |
| 1/3 coms 1200 TV lines | | NTSC:1280X956;PAL:1024X960 | |
| 1/3 CCD 650 TV lines | | NTSC:811x558;PAL:795x656 | |
| 1/3 CCD 700 TV lines | | NTSC:976X558;PAL:976X656 | |
| 1/3 CCD 800 TV lines | | NTSC:960x480;PAL:960x520 | |
| HD CVI/AHD/TVI CAMERA | | | |
| CVI | 720P | PC3100+DH9801 | NTSC/PAL:1280*720 |
| | 1080P | EN773E+IMX322+DH9801 | NTSC/PAL:1920*1080 |
| | | FH8530C+IMX322 | |
| | | FH8530C+OV2710 | |
| AHD | 720P | NVP2431H+OV9712 | NTSC/PAL:1280*720 |
| | | HDI8901+H42 | |
| | | NVP2431H+AR0130 | |
| | | NVP2431H+IMX225 | |
| | 1080P | NVP2440H+IMX322 | NTSC/PAL:1920*1080 |
| | | NVP2441H+IMX322 | |
| | | NVP2441H+OV2710 | |
| TVI | 720P | Aptina8060+AR0130 | NTSC/PAL:1280*720 |
| | 1080P | Techpoint2801+PC3100 | NTSC/PAL:1280*720 |
| | | FH8531+OV2710 | |
| | | NVP2421H+IMX322 | NTSC/PAL:1920*1080 |

Trouble Shooting Guide

Before sending the camera for repair ,please check below to make sure that the camera is installed correctly, If it still does not perform adequately the camera is installed correctly .please consult your supplier .

1. No picture on the monitor screen.

- a. Check that all connected devices are powered on .
- b. Confirm that the voltage is correct .
- c. Confirm that the power supply provides enough current to power the camera .
- d. Ckeck that all video cables are correctly connected.

2.The picture is not clear.

- a. Check that your monitor is correctly adjusted .
- b. Confirm that the glass in front of the lens is clean , the image quality will be affected .To clean the glass use a soft , dry and Non-abrasive cloth or a commercially available lens cleaning set .
- c. Correctly adjust the focus (varifocal models only)

3.The picture has interference .

- a. The camera may be close to a high voltage source ,such as a power generator.
- b. The BNC cable is not terminated properly .
- c. The video cables are not connected properly.

If the unit continues to be fault the following adjustments please contact your dealer.

When the picture is not displayed on the monitor

Please check if the AC-DC power unit is plugged into the AC power outlet firmly

Please check if there are any misconnections in the cabling.

Please check if the IRIS mode select switch is set to the correct position i.e. to the DC mode for the DC driven auto iris lens or VI mode for the Video driven auto iris lens.

When the picture is blurred

Please check if the lens is contaminate. Please clean the lens surface (on both sides) gently with a soft cloth or tissue

Please check if the lens is focused properly.
When you use a manual iris lens, the iris select switch should be positioned to the ES mode.
Please check if the monitor is set to brightly.
Adjust the brightness or contrast level on the monitor correctly

When the color displayed on the monitor is not correct (for Color)

Please check if the White Balance switch is set to WBM position.
White balance is controlled automatically under the WBA mode for most situation. When the camera is used under special lighting conditions, please refer to page 7 in this manual.
Please check if the monitor's color adjustment is set correctly.

When the picture is too dark

Please check if the monitor's contrast is set too dark.
Please check if the Gamma select switch is set to 1.0 on the 6" pin of the DIP switch. If it is please move it to the 0.45 position. Gamma 1.0 position is recommended for use with a LCD monitor.

Please check if the camera is positioned toward a door or window.

Please set BLC ON in these conditions.

When the picture is too bright

Please check if the monitor's brightness control is set too high.

Please check if the camera is set to BLC ON under normal lighting conditions. (.i.e. when the camera is not pointed towards a brightly lit area)

Please move the BLC select switch to the BLC OFF position

When there is noise on the picture in dark illumination conditions

The camera picture becomes noisy under AGC MAX mode in order to increase the video gain in poor lighting conditions. Please move the AGC switch to OFF position if it is not required.

*When the picture is not clear **on the monitor***

Please check if the monitor is set up correctly.

Please check if the camera is point towards an area where too much light comes in. Adjust the direction of the camera in this case.
Please check if the back focus of the lens is set correctly.

When the picture is flickering

Please check if the camera is pointed at fluorescent lighting or bright sunlight. Use a visor or adjust the direction of the camera in this case.

Please check if the Auto iris lens is selected correctly on the IRIS mode select switch. Please move the Iris mode switch to DC position when you use a DC type auto lens or move it to the VI position when you use a Video type auto iris lens.

When you don't use an auto iris lens, please move the iris select switch to the ES position.

When the picture is distorted

Please check if the lens is defective and replace the lens in this case.

Please check if the camera is PAL/CCIR(50Hz) in an NTSC/EIA(60Hz) area or vice versa.

SETUP

LENS-----BRIGHTNESS 0-255/ MANUAL/SAVE&END
DC-----BRIGHTNESS 0-255/ IRIS SPEED 0-15/ RETURN RET/SAVE&END
VIDEO-----BRIGHTNESS 0-255/ IRIS SPEED 0-15/ RETURN RET/SAVE&END

EXPOSURE **SHUTTER**----FLK/AUTO/1-50/1-250/1-500/1-1000/1-2000/1-4000/1-5000/1-10000/1-100000
BRIGHTNESS---1-255
AGC-----LOW/MIDDLE/HIGH/OFF
DWDR-----ON----LEVEL ----1-63/ RETURN---RET/END&SAVE
OFF
RETURN-----RET/END&SAVE

WHITE BAL. **ATW/ATWB**
AWC SET/ANTI.CRL
MANUAL-----COLOR TEMP MANUAL/INDOOR/OUTDOOR
BLUE----1-255 (ONLY CAN ADJUST ON MANUAL STATUS)
RED----1-255 (ONLY CAN ADJUST ON MANUAL STATUS)
RETURN-----RET/END&SAVE

BACKLIGHT **HLC**----LEVEL 1-255
MODE ALL DAY/NIGHT ONLY
MASK SKIP ON HEIGHT/WIDTH/LEFT/RIGHT/TOP/BOTTOM/RETURN
OFF
RETURN RET/END&SAVE
BLC---AREA SEL/
AREA STATE ON/OFF
DAY & NIGHT **AUTO**---D-N LEVEL 1-240
D-N DELAY 1/3/5/10/15/20/25/30 SEC
N-D LEVEL 1-230
N-D DELAY 1/3/5/10/15/20/25/30 SEC
RETURN RET/END&SAVE
EXT
COLOR
BW---BURST ON/OFF
IR LEVEL ON/OFF
IR SMART ON----4R GAIN 1-255/HEIGHT 1-15/WEIGHT 1-15/
LEFT/RIGHT 1-15/TOP/BOTTOM 1-15/RETURN---RET/END
OFF
RETURN RET/END&SAVE

DPC START-----COVER THE LENS THEN PRESS ENTER KEY
DPC VIEW-----ON/OFF
LS VALUE-----1-63
DIFF-----ON/OFF
AREA HS-----0-255/AREA HE---0-255/AREA VS---0-255/AREA VE---0-255/AREA VE---0-255
RETURN-----RET/END&SAVE

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SPECIAL CAM TITLE-----ON/OFF
MOTION-----ON   AREA SEL-----AREA1/2/3/4
                  AREA STATE-----ON/OFF
                  HEIGHT/ WIDTH/ LEFT/RIGHT/ TOP/ BOTTOM / DEGREE
                  VIEW -----ON/OFF
                  RETURN-----RET/END&SAVE
OFF
PRIVACY-----ON   AREA SEL-----AREA1/2/3/4/5/6/7/8
                  AREA STATE-----ON/OFF
                  HEIGHT/ WIDTH/ LEFT/RIGHT/ TOP/BOTTOM/ COLOR -----0-15
                  RETURN-----RET/END&SAVE
OFF
PARK.LINE-----ON  LT 1-255/ LB 1-255/ RT 1-255/ RB 1-255/ F 1-255/ N 1-255/ T 1-255/
                  RETURN-----RET/END&SAVE
OFF
IMAGE ADJ-----LENS SHAD-----ON -----LEVEL-----1-255
                  H-CENTER---1-255
                  V-CENTER---1-255
                  RETURN
OFF
2DNR-----ON-----LEVEL-----1-255
                  RETURN
OFF
MIRROR-----ON/OFF
FONI COLOR-----FONT---1-15/ ID&T-----ITLE-----1-15/ RETRN
CONTRAST-----1-255
SHARPNESS-----1-255
DISPLAY CRT-----PED LEVEL-----0-63
                  COLOR GAIN  0-255/ COLOR GAIN--0-255/ RETURN
                  LCD  GAMMA  0.3-1/ PED LEVEL-----0-63/COLOR GAIN 0-255
                  COLOR GAIN  0-255/ RETURN
                  USER GAMMA  0.3-1/PED LEVEL-----0-63/ COLOR GAIN 0-255
                  COLOR GAIN  0-255/ RETURN
NEG.IMAGE-----ON/OFF
RETURN-----RET/END
COMM  ADJ.-----CAM ID---001-999
                  BAUP R ATE-----2400/4800/9600/19200/38400/57600
                  PROTO COL-----PELCO--D/PELCO-P/NEXTCHIP
                  DISPLAY ID-----ON/OFF
                  IDPOS
                  RETURN-----RET/END&SAVE
LANGUAGE-----ENGLISH/简体中文/русский/ espana/DEUTSCH/PORTUGUES/
                  FRANCAIS/日本語/繁体中文
VEKSION-----12  07  27
RETURN-----RET/END&SAVE
EXIT  SAVE/NOT SAVE/RESET

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SETUP

| | | | |
|------------|-----------------|--|--|
| LENS | MANUAL/DC/VIDEO | | |
| EXPOSURE | SHUTTER | FLK/AUTO/1-50/1-250/1-500/1-1000/ 1-2000/1-4000/1-5000/1-10000/1-100000 | |
| | BRIGHTNESS | 1-255 | |
| | AGC | LOW/MIDDLE/HIGH/OFF | |
| | DWDR | ON | LEVEL 1-63 |
| | | RETURN | RET/END |
| | | OFF | |
| WHITE BAL. | RETURN | RET/END | |
| | ATW1 | | |
| | ATW2 | | |
| | AWC→SET | | |
| | MANUAL | COLOR TEMP | MANUAL/INDOOR/OUTDOOR |
| | | BLUE | 1-255 (ONLY CAN ADJUST ON MANUAL STATUS) |
| BACKLIGHT | | RED | 1-255 (ONLY CAN ADJUST ON MANUAL STATUS) |
| | RETURN | RET/END | |
| | HLC | LEVEL | 1-255 |
| | MODE | ALL DAY/NIGHT ONLY | |
| | RETURN | RET/END | |
| | BLC | AREA SEL. | AREA1/AREA2 |
| | | AREA STATE | ON |
| | | GAIN | 1-255 |
| | | HEIGHT | 1-15 |
| | | WIDTH | 1-15 |
| | | LEFT/RIGHT | 1-15 |
| | | TOP/BOTTOM | 1-15 |
| DAY& NIGHT | | RETURN | RET/END |
| | OFF | | |
| | AUTO | D→N LEVEL | 1-240 |
| | | D→N DELAY | 1/3/5/10/15/20/25/30 SEC |
| | | N→D LEVEL | 1-230 |
| | | N→D DELAY | 1/3/5/10/15/20/25/30 SEC |
| | | RETURN | RET/END |
| | EXT | | |
| | COLOR | | |
| | B/W | IR SMART | ON/OFF |
| | | IR SMART | ON |
| | | IR GAIN | 1-255 |
| | | HEIGHT | 1-15 |
| | | WEIGHT | 1-15 |
| | | LEFT/RIGHT | 1-15 |

EXIT