

**INSTRUCTION
MANUAL**

**3D-DNR
TRUE DAY/NIGHT IR CAMERA**

MODEL HDC150



CLOVER
Electronics USA

Copyright © 2009 Clover Electronics U.S.A. All Rights Reserved.

PRECAUTIONS

- To avoid electrical shock, do not open the case of this product.
- Operate this product using only the supplied AC Power supply.
- Do not overload electrical outlets or extension cords; this can result in fire or electric shock.
- Keep this product away from strong magnetic fields.
- Do not expose this product in direct sunlight or strong reflected rays.
- Refer servicing to qualified personnel only.
- Do not change or modify this product, the warranty will be voided.

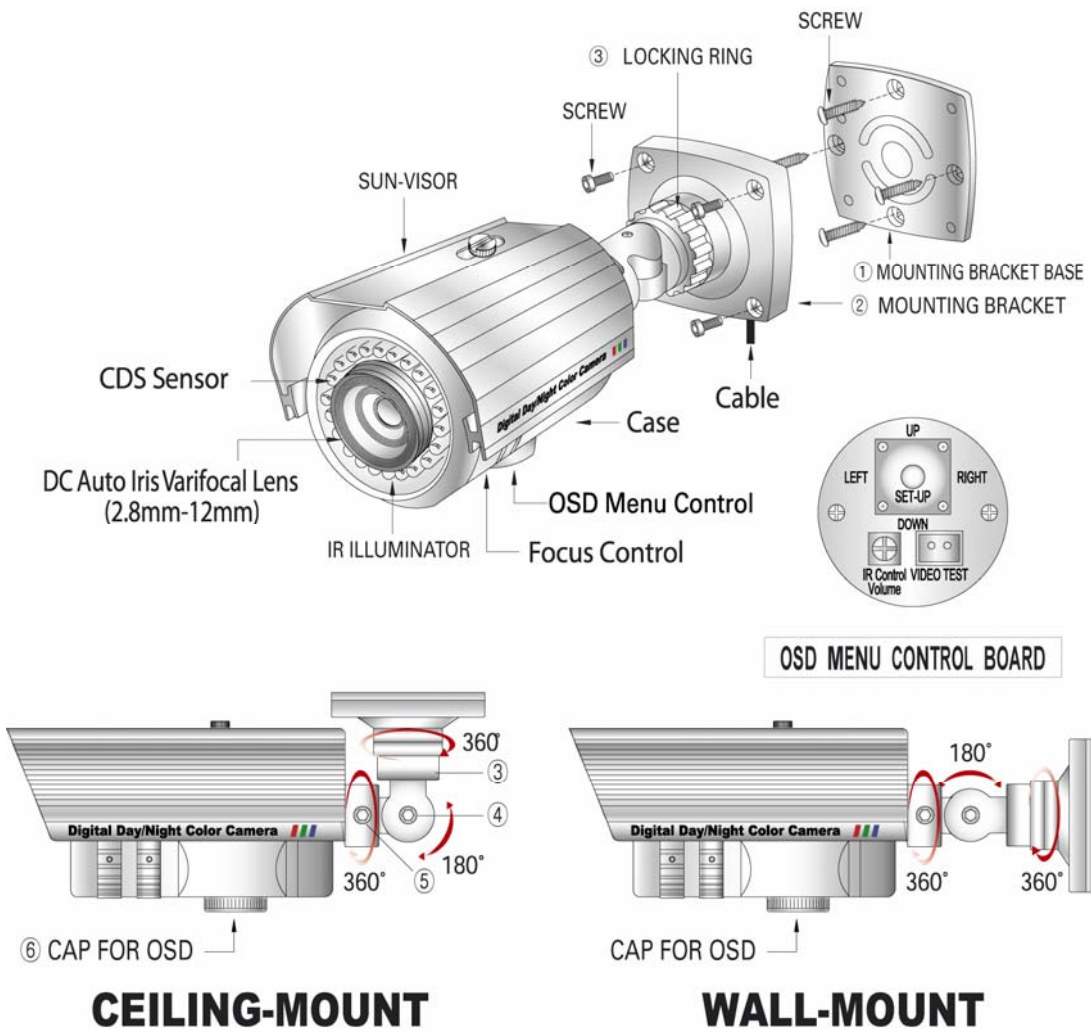
FEATURES

- Weatherproof (IP67)
- 1/3" Sony Super HAD CCD
- High Resolution 550 TV Lines (Color), 600 TV Lines (B/W)
- Rugged Steel Construction
- On Screen Display (OSD)
- True Day/Night (Built-in ICR: IR Cut Filter Removal)
- 3D DNR (Digital Noise Reduction) with 3D filter
- D-WDR (Digital Wide Dynamic Range)
- Total 42 Infrared LEDs with a CDS sensor
- Up to 130' IR range (depends on scene reflection)
- DC Auto Iris Vari-focal Lens (2.8-12mm)
- Attached Universal Mounting Bracket and 100' cable
- Dual Voltage(AC 24V/DC 12V)

INSTALLATION

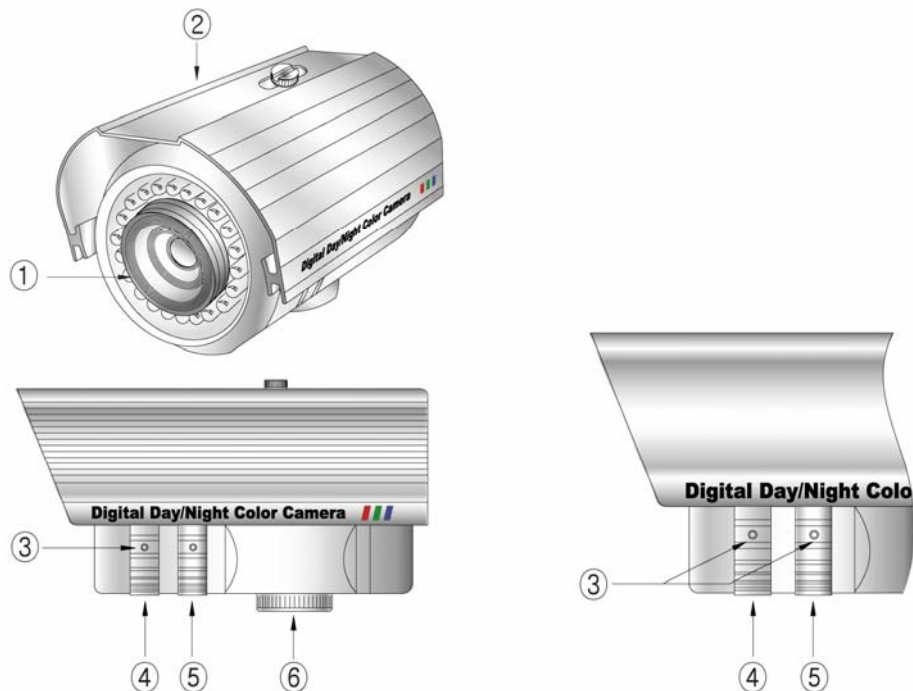
1. Attach the mounting bracket base① to the wall or ceiling, wherever you want to install the camera. Locate a wall stud or ceiling joist and secure the bracket base① using the supplied screws. Attach the mounting bracket② to the base① and secure them using the supplied screws.
2. Lock the mounting bracket with the locking ring③.
3. Turn the pivot locking screw④ with the provided hex-head wrench counter-clockwise to set the desired angle of camera toward objects and turn it clockwise to secure. It can be used for wall-mount or ceiling-mount application depending on setting this pivot locking screw.
4. Loosen the locking screw⑤ with the provided hex-head wrench and turn the camera clockwise or counter-clockwise to upright images on the screen and turn it clockwise to secure.

5. If necessary, change the settings to get the best images depending on your application by using the button on the bottom of the camera.
 - Get rid of the cap⑥ for the OSD button by turning counter-clockwise and then change the settings (refer to the included instruction manual for OSD Control).
 - Turn the cap⑥ clockwise to secure after changing the settings.
6. Connect the one end of 100' cable (supplied) to the BNC (F) of 5' cable attached to the camera and the other end (BNC) of cable to the video devices such as DVR, monitor/TV. Plug the provided AC power supply to the DC jack (red) on the end of 100' cable.



HOW TO ADJUST ANGLE OF VIEW

1. Vari-focal lens①
Easily changeable angle of view: 2.8 to 12mm
2. Remove the sun-visor② and turn the locking screws on the knobs③ with the provided hex-head wrench counter-clockwise to make easier adjustment for angle of view. Do not stamp your fingerprint on the lens and the window, which may affect picture quality.
3. T↔W (Tele ↔ Wide)⑤
Turn this adjustment ring⑤ clockwise or counter-clockwise to set the focal length.
4. ∞↔N④
Turn this adjustment ring④ clockwise or counter-clockwise to set the focus.
5. After setting the focus and focal length, the locking screws on the knobs③ should be securely fastened.



Note:

- **Apply the provided AC Power supply only.**
- **The total length of cable must not exceed 200' including extension cable.**

TROUBLE SHOOTING

If the camera does not function properly, check the following points before contacting the service center.

Troubles	Remedies
No video	Check the AC adapter and video cable between the camera and a monitor
The image on the screen is dark	Check the brightness control on the monitor
The image on the screen is dim	Check if the lens is stained. If dirty, clean it with soft and clean cloth
The camera is not working properly, and the surface of the camera case is hot	Check if you have connected the provided AC adapter
The contrast on the screen is too weak	Adjust the contrast feature of the monitor. If the camera is exposed under too strong light, change the position
The image on the screen flickers	Does the camera face to directly to the sunlight or fluorescent light? Change the camera position
Picture rolls and jumps, scrambled picture	Improper V-hold control. Setting on your monitor
Picture smaller than screen	House current may be too low

SPECIFICATIONS

- Image sensor 1/3" SONY Super HAD CCD
- Total pixels 811(H) x 508(V)
- Effective Pixels 768(H) x 494(V)
- Scanning system 2:1 Interlace
- Synchronization Internal/Line Lock
- O.S.D Available

- Backlight Off / HSBLC / BLC selectable
- Resolution 550TV Lines(color),600TV Lines(B/W)
- S/N (Y signal) 52dB (AGC Off, Weight On)
- Min.illumination 0.00006Lux @F1.2 (sens-up:x258, IR LED: ON)
- White Balance ATW / AWB / Manual / AWC→SET
- Sense-up Off / Auto / (Selectable limit x2 ~ x258)
- 3 DNR Off / On (1~50 level adjustable)
- D-WDR Indoor / Outdoor / Off
- D&N selection Color / BW / Auto
- Digital zoom On(x32) / Off
- Voltage AC 24V / DC 12V(Dual voltage)
- Current consumption LED On: 650 mA, LED Off: 180 mA
- Lens DC Auto Iris Varifocal Lens (2.8mm-12mm)
- Operating temperature/Humidity -10°C ~ +50°C. RH 95% Max.
- Storage temperature/Humidity -20°C ~ +60°C. RH 95% Max.
- Dimensions 88 (W) x 105 (H) x 222 (D)mm
- Weight 3.2 Lbs

LIMITED 2 YEAR WARRANTY

This warranty gives the original purchaser specific legal rights and you may also have other rights, which vary from state to state. If our products do not function because of any defect in material or workmanship, we will repair free of charges for 2 years on parts and labor from the date of original purchase. This warranty does not cover modification, abuse, incidental or consequential damages unless the state of owner's residence specially prohibits limitations on incidental or consequential damages.

HOW TO OBTAIN FACTORY SERVICE

1. Original purchaser must fill out a warranty card and mail it to the factory with model number, serial number and the date of purchase.
2. We will repair or replace, and return to the owner the system under this limited warranty.
3. Please pack the system carefully and securely using the original packing materials, and send it prepaid and insured to: 13073 E. 166th St, Cerritos, CA 90703.
4. Please include a check for \$20.00 to cover the cost of return postage and handling. If the system is returned within the warranty period, please include a proof of purchase. If the system is out of warranty, you will receive an estimate of the repair cost for your approval before repair work will be begun.

AVAILABLE ACCESSORIES

CDR0460	Stand-alone 4 CH Digital Video Recorder (DVR)
CDR4450	Stand-alone 4 CH Digital Video Recorder (DVR)
CDR0860	Stand-alone 8 CH Digital Video Recorder (DVR)
CDR1660	Stand-alone 16 CH Digital Video Recorder (DVR)
CDR0850	Stand-alone 8 CH Digital Video Recorder (DVR)
CDR1650	Stand-alone 16 CH Digital Video Recorder (DVR)
CA100BP	100' BNC/Power to BNC/Power Extension cable and coupler

PACKAGE INCLUDES

- 1-True Day & Night Color Camera
- 1-Universal Mounting Bracket & 100' BNC/Power to BNC/Power cable
- 1-UL Approved AC Power Supply
- 1-Hardware Accessories Kit
- 1-Instruction Manual
- 1-Instruction Manual for OSD Control
- 1-Warranty Registration Card