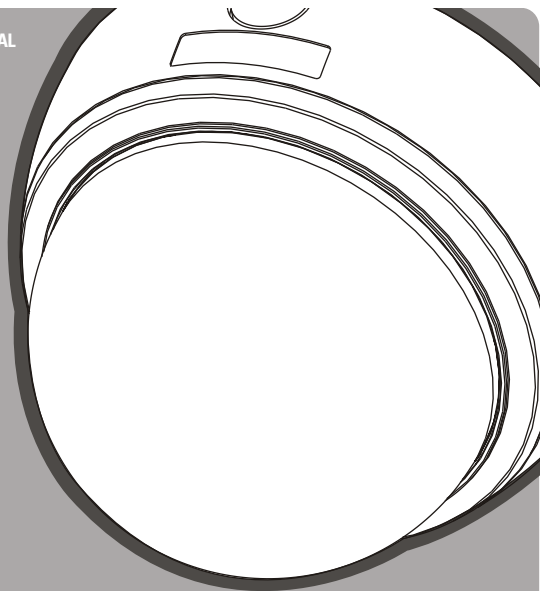


INSTRUCTION MANUAL



540TV Lines
SUPER HIGH RESOLUTION
COLOR CAMERA

ATV
FD540VA

Please read this manual thoroughly before use, and keep it handy for future reference.

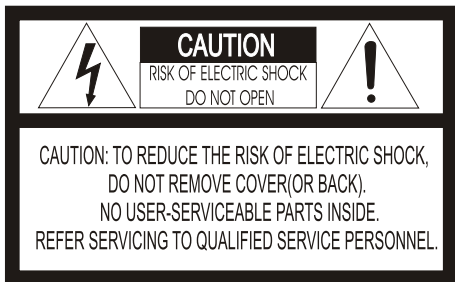
■ LIMITATION OF LIABILITY

THE INFORMATION IN THIS PUBLICATION IS BELIEVED TO BE ACCURATE IN ALL RESPECTS, HOWEVER, WE CANNOT ASSUME RESPONSIBILITY FOR ANY CONSEQUENCES RESULTING FROM THE USE THEREOF. THE INFORMATION CONTAINED HEREIN IS SUBJECT TO CHANGE WITHOUT NOTICE. REVISIONS OR NEW EDITIONS TO THIS PUBLICATION MAY BE ISSUED TO INCORPORATE SUCH CHANGES.

■ WARNINGS AND CAUTIONS:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

CAUTION:



■ EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

PRECAUTIONS

Safety -----

Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by the qualified personnel before operating it any further.

Unplug the unit from the wall outlet if it is not going to be used for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes. may block the ventilation holes.

Height and vertical linearity controls located at the rear panel are for special adjustments by qualified personnel only.

Installation -----

Do not install the unit in an extremely hot or humid place or in a place subject to excessive dust, mechanical vibration.

The unit is not designed to be waterproof. Exposure to rain or water may damage the unit.

Cleaning -----

Clean the unit with a slightly damp soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzene as they might damage the finish of the unit.

Retain the original carton and packing materials for safe transport of this unit in the future.

■ FCC COMPLIANCE STATEMENT

INFORMATION TO THE USER : THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES.

THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT.

THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS.

OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

CAUTION : CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS A DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

CET APPAREIL NUMERIQUE DE LA CLASSE A EST CONFORME A LA NORME NMB-003 DU CANADA.

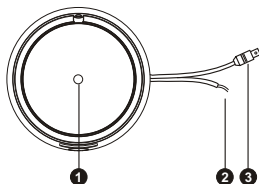
■ CE COMPLIANCE STATEMENT

THIS IS A CLASS A PRODUCT. IN A DOMESTIC ENVIRONMENT THIS PRODUCT MAY CAUSE RADIO INTERFERENCE IN WHICH CASE THE USER MAY BE REQUIRED TO TAKE ADEQUATE MEASURES.

FEATURES

- 1/3" Color CCD Image Sensor : Provides high quality imaging.
- Super high resolution(540TV Lines)
- Allows a large area to be monitored from a single camera.
EI, FF(Flicker Free), BLC, AGC, SYNC adjustment.(DC12V/AC24V model)
- Electronic Iris :
Automatically adjusts the camera for changes in lighting to ensure an optimal picture at all times.[1/60(1/50) ~ 1/100,000]
- Camera Mount : Camera mounts directly to the wall or ceiling.

CAMERA CONNECTIONS



DC12V/AC24V model



REMINDER:

Never aim the camera directly into the sun.

- 1 Lens** : 3.6mm / 4-9mm Vari-focal lens for wide area monitoring.
- 2 Power input** : Use certified / Listed class 2 power supply only.
- 3 Video output** : BNC video output connects to monitor or accessory equipment.
- 4** When a Camera's Video output is connected(BNC or RJ12) and the service jack cable is used (J3) with a spot monitor, the spot monitor's video input must be set to high impedance.

PACKAGE INSIDE

Unpack and identify the following parts from the shipping container :

- | | |
|-----------------------|--|
| A. Camera | B. Mounting screw |
| C. Instruction manual | D. Service jack cable with BNC connector |

BASE INSTALLATION

CAUTION : When installing the camera, the following instructions must be followed closely.

1. Loosen the bubble(①), the liner(②). (Fig. 1)
2. Drill three holes for the plastic anchors(⑤) using the bottom of the housing (③) as a template, insert the plastic anchors(⑤) into the holes, attach the housing(②) to the plastic anchors(⑤) using the mounting screws(④). (Fig. 2)

Note: Plastic anchors is not supplied.

3. Rest the liner(②) on a groove of the housing(③). (Fig. 3)
4. Fasten the bubble(①) to the housing(③).
5. Fasten the set screw(⑦) tightly.
6. Take off the protective nylon.

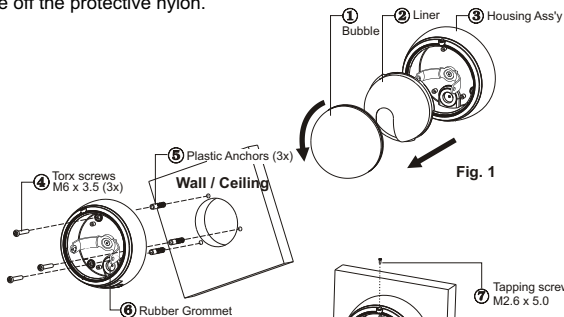
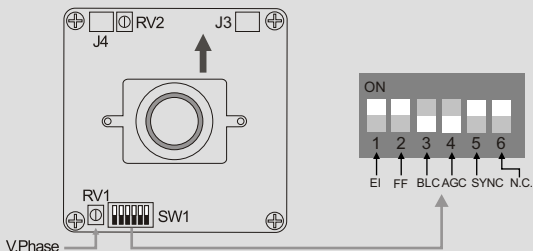


Fig. 2

Fig. 3

FUNCTION SWITCH continued

• DC12V/AC24V model : HCG-x51AxxA2



<Figure.A>

1. E/I (on/off)

When set to the ON position, the electronic iris switch automatically varies the camera's shutter to mimic auto-iris control, allowing fixed or manual iris lenses to be used in a wider range. When this switch is set to ON, turn the F/F switch OFF.

2. FF (on/off)

This function is used for removing flicker, when camera signal format does not coincide with power source frequency being used.

3. BLC (on/off)

This on/off switch controls backlight compensation. When set to ON, the camera will automatically try to maintain proper exposure in the specific area even if the lighting level changes.

4. AGC (off/on)

The auto gain control switch allows the video signals to maintain a constant level.

This switch is useful when using the camera at low-light levels and when lighting levels change over time. For best low light conditions, this switch should set to ON.

5. SYNC (INT/LL)

Use this switch to set the camera synchronization mode internal(ON) or Line-Lock(OFF)

6. N.C (no function)

LINE LOCK (only HCG-x51AxxA2)

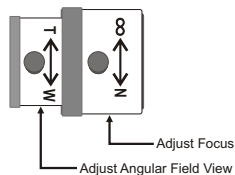
This mode is necessary for the operation of multi cameras because it synchronizes the camera phase by using the external signal.(AC signal)

Adjust the camera phase control with the volume RV1 (See Figure A) until there is no vertical flip or roll on the monitor white using an auto swcher.

LENS ADJUSTMENT (OPTIONAL VARIFOCAL LENS)

Field of view : Adjust setting from Telephoto (T) to wide (W) field of View.

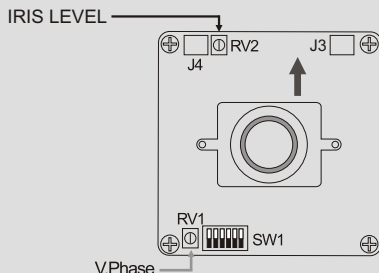
Focus : Adjust lens focus from near (N) to infinity (∞).



DC AUTO IRIS LENS

| | 4-9mm |
|-----------------------|--|
| Image Size | 1/3" CCD |
| Focal Length | 4.0-9.0mm $\pm 5\%$ |
| Aperture Ratio | 1 : 1.6~2.4 $\pm 5\%$ |
| Angular Field of View | DIAGONAL 4mm : 92.4° 9mm : 39.2° |

DC AUTO IRIS ADJUSTMENT



■ TROUBLESHOOTING

If you experience difficulties operating your camera, refer to the following. If the guidelines do not enable you to solve the problem, contact an authorized technician.

| PROBLEM | CHECK |
|---|---|
| Nothing appears on the screen. | <ul style="list-style-type: none">• Is the cable connected between the camera and monitor?• Is there power to the monitor? |
| The image on the screen is dim. | <ul style="list-style-type: none">• Is the lens dirty? If so, clean the lens with a soft, clean cloth. |
| The contrast on the screen is too weak. | <ul style="list-style-type: none">• Adjust the contrast feature of the monitor.• Is the camera exposed to strong light? If so, change the camera position. |
| The image on the screen flickers. | <ul style="list-style-type: none">• Does the camera face directly into the sun or fluorescent lighting? If so, reposition camera. |

■ PREVENTIVE MAINTENANCE

Following the preventive maintenance schedule allows detection and correction of minor faults before they become serious and cause equipment failure.

Every three months, perform the following:

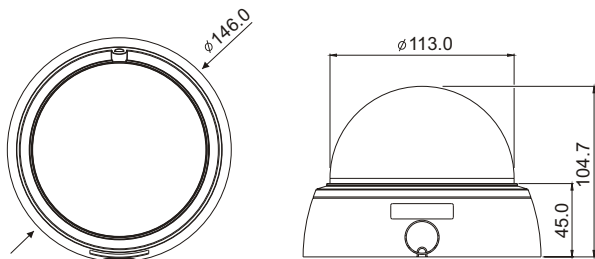
1. Inspect all connecting cables for deterioration or other damage.
2. Clean components with a clean damp cloth.
3. Verify that all the mounting hardware is secure.

SPECIFICATIONS

| MODEL | | NTSC | | |
|------------------|-----------------------|--|--------|------|
| Power | Power source | DC12V / AC24V ±10% | | |
| | Power consumption | 8.0 Watts | | |
| General | Image sensor | 1/3" SONY Super HAD CCD | | |
| | Total pixels | 811(H) x 508(V) : NTSC, 795(H) x 596(V) : PAL | | |
| | Scanning system | 2:1 interlace | | |
| | Scanning frequency | NTSC : 15.734KHz(H), 59.94Hz(V), PAL : 15.625KHz(H), 50Hz(V) | | |
| | Sync. system | Internal / Line lock | | |
| | Electronic shutter | NTSC : 1/60 ~ 1/100,000 sec. PAL : 1/50 ~ 1/100,000 sec. | | |
| | Resolution | 540 TV lines | | |
| | Min. illumination | 0.5 Lux @ F1.2, 50 IRE | | |
| | Video output | 1.0 Vp-p (75 ohm, composite) | | |
| | S/N ratio | More than 50dB (AGC OFF) | | |
| | Camera Control | Dip Switch | | |
| | FUNCTION | E/I | ON/OFF | |
| | | Flickerless | ON/OFF | |
| BLC | | ON/OFF | | |
| AGC | | ON/OFF | | |
| SYNC | | Internal / Line lock | | |
| White Balance | | ATW Fixed | | |
| Connector & etc. | Power input | 2-pin wire | | |
| | Video output | BNC connector / Spot Cable | | |
| | Lens mount | Fixed mount | | |
| | Lens | f4-9mm F1.6-2.4 Varifocal DC auto iris | | |
| | Operating temperature | -10°C ~ +40°C | | |
| | Operating humidity | 0 ~ 96% (non-condensing) | | |
| | External dimension | ø146.0 x 105.0 mm (Bubble Diameter ø113.0) | | |
| | Weight | 390g | 410g | 420g |

EXTERNAL DIMENSION

Dimensions



Unit: mm

| | |
|-------------------------------------|---|
| Maximum Camera and Lens Size | 2.6L x 1.65W x 1.65H in. (6.5L x 4.2W x 4.2H cm) |
| Window Size | 0.12 in. (3.0mm thick), Optically clear, impact resistant P.C 4.4 in. (11.3cm) diameter Optional tinted P.C |
| Cable Entry | One(1) opening hole($\phi 0.9$ in = $\phi 23.0$ mm) / One(1) conduit knockouts punched for $\phi 0.76$ in. ($\phi 19.4$ mm) |
| Weight - Unit: Shipping: | 0.76 lb. (0.34 kg) 1.03 lb. (0.47 kg) |



540TV Lines
Super High Resolution
Color Camera