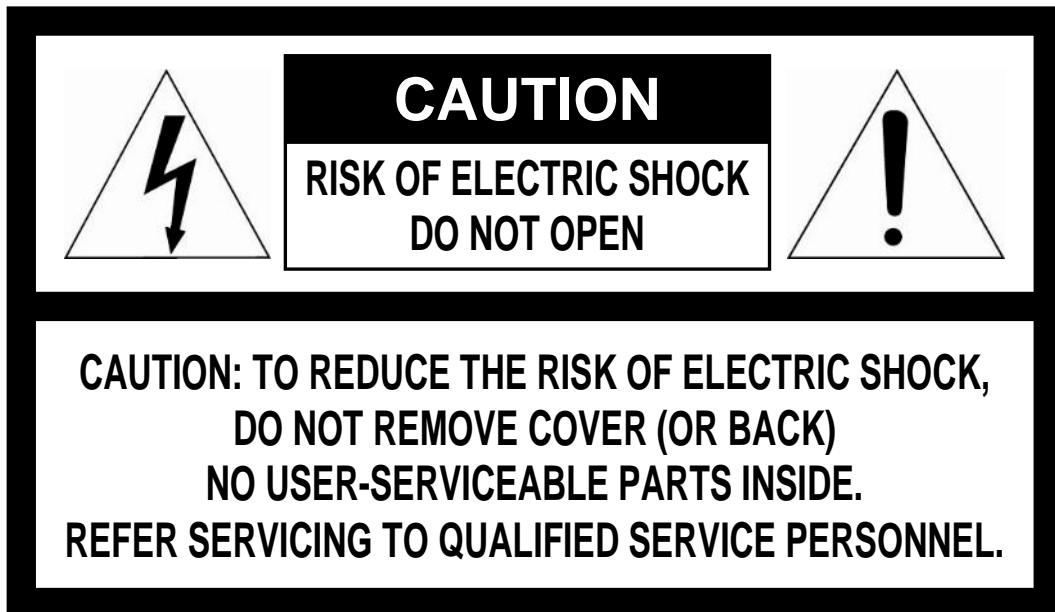# User Manual

1/2,8" HD Camera, Day&Night, 1920x1080, WDR, 30x AF Zoom, 4,3-129mm, Indoor
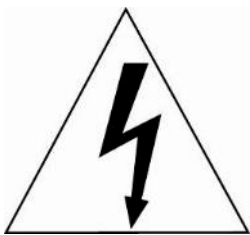
MPC-52A0030P0A

WARNING

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

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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 appliance.

FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC INFORMATION: 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 numérique de la classe A est conforme à la norme NMB-003 du Canada.

CE COMPLIANCE STATEMENT

WARNING
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.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. *CAUTION – THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.*

16. *Use satisfy clause 2.5 of IEC60950-1/UL60950-1 or Certified/Listed Class 2 power source only.*

Table of Contents

Chapter 1 — Introduction

1.1 Features

• Built-in optical power zoom camera with True Night Shot function

• 240 Preset positions with the individual camera AE setup

• 8 Tours consist of Presets

• 16 Privacy Zones

• 1 Alarm input, 1 Alarm output (5VTTL)

• Programmable user preferences (alarm, preset, title, etc.)

• Function Run menu using DVR without function key

• Built-in RS-485/422 receiver driver (Up to 3999 selectable camera addresses)

• 12VDC for Camera

• Use satisfy clause 2.5 of IEC60950-1/UL60950-1 or Certified/Listed Class 2 power source only.

Chapter 2 — Installation and Configuration

2.1 Package Contents

The package contains the following.

          * Dome Camera **1**
          * Instruction Manual (This Document) **1**

2.2 Setting Camera
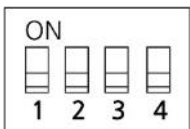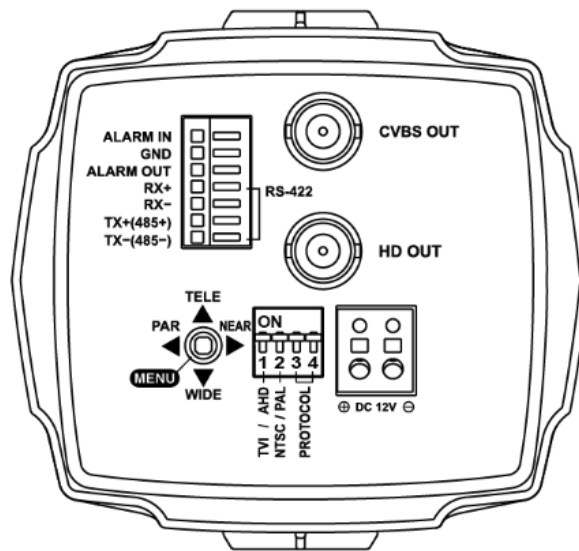
 SW905

You can set video signal with D1 and video type with D2 in SW905.

SW905-D1	Video Signal
OFF	HD-TVI OUTPUT
ON	AHD OUTPUT

SW905-D2	Video Type
OFF	NTSC
ON	PAL

You can set coaxitron protocol with D3 and D4 in SW905.

SW905-D3	SW905-D4	HD-TVI OUTPUT	AHD OUTPUT
OFF	OFF	Hikvision-C	ACP-PTZ
ON	OFF	Pelco-C	Reserved
OFF	**ON**	Reserved	Reserved
ON	**ON**	Reserved	Reserved

2.3 Connections

• Connecting to the RS-485/422

The camera can be controlled remotely by an external device or control system, such as a control keyboard, using RS-485 half-duplex, RS-422 full-duplex serial communications signals.

Connect Marked TX+(485+), TX-(485-) to TX+(RX+), TX-(RX-) of the RS-485 control system.

If control system is RS-422, connect TX+(485+), TX-(485-) and RX+, RX- of the camera to RX+, RX- and TX+, TX- of the control device respectively.

• Connecting HD Output connector

Connect the HD output (BNC) connector to the video input.

• Connecting CVBS Output connector

Connect the CVBS output (BNC) connector to the video input.

• Connecting Alarms

- ALARM IN

You can use external devices to signal the camera to react on events. Mechanical or electrical switches can be wired to the ALARM IN and GND connectors.

- GND (Ground)

Connect the ground side of the alarm input and/or alarm output to the GND connector.

- ALARM OUT (5VTTL)

The camera can activate external devices such as buzzers or lights. Connect the device to the ALARM OUT and GND connectors.

• Connecting the Power

Connect power of 12VDC for the camera.

When using a 12VDC adapter, connect the positive (+) pole to the '+' position and the negative (-) pole to the '-' position.

Use satisfy clause 2.5 of IEC60950-1/UL60950-1 or Certified/Listed Class 2 power source only.

2.4 Getting Started

Once installed apply power to the camera. The camera will start a configuration sequence.

FUNCTION TITLE ──► 001   AF AE ◄── STATUS of FOCUS and AE

INFORMATION DISPLAY ──►   EMPTY DATA

ALARM DISPLAY ──► ALARM: 1

                        CAM ID: 0001 ◄── CAMERA TITLE & ID

OSD Position

9
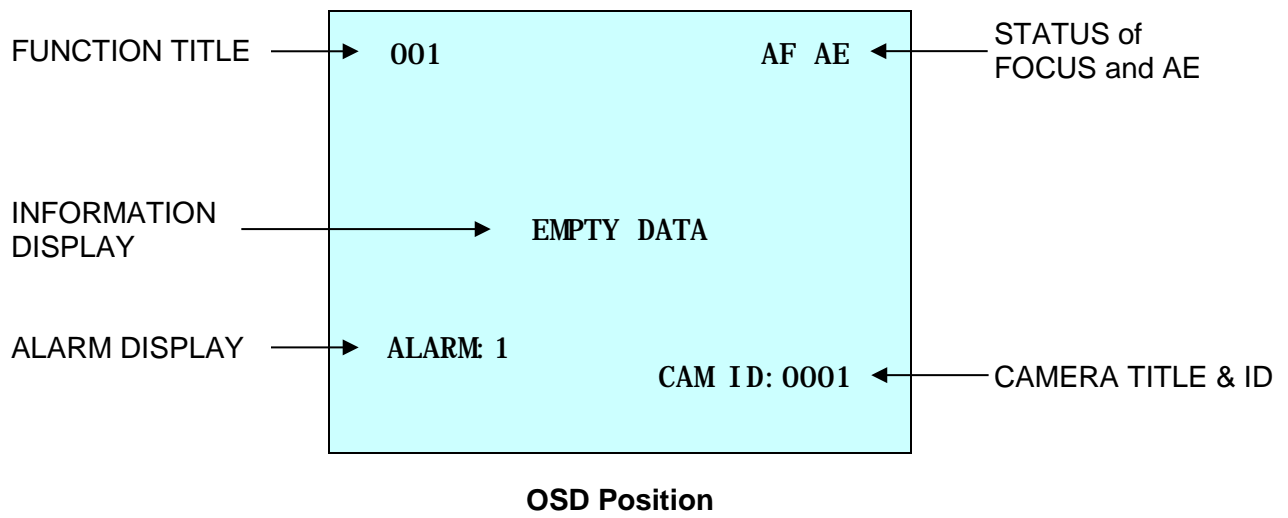
Chapter 3 — Program and Operation

3.1 Camera Selection

IF you use the keyboard, before you program or operate a camera, you must select the camera by pressing No. + CAM keys.

> **Example:** Pressing 1 , 0 + CAM keys sequentially will select camera 10. The selected camera ID will be displayed on the LCD monitor of the keyboard.

3.2 Accessing the On-Screen Menu Utility

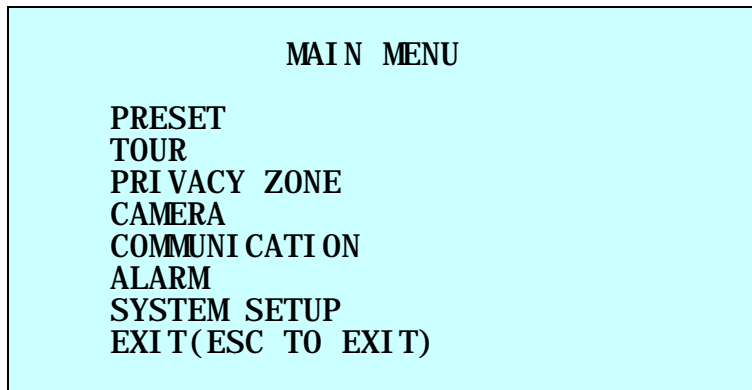You can call up the On-screen menu utility on your monitor by pressing the MENU key on the keyboard or DVR, the following On-screen menu utility will appear:

```
                    MAIN  MENU

            PRESET
            TOUR
            PRIVACY  ZONE
            CAMERA
            COMMUNICATION
            ALARM
            SYSTEM  SETUP
            EXIT(ESC  TO  EXIT)
```

3.3 How to control the On-Screen Menu Utility

Function	Button
Call the On-screen menu utility.	MENU
Navigate through the menu items.	Up or Down
Go into the sub-menu items.	Right, Left or IRIS Open
Change value. Enter the editing title mode.	Right, Left, Tele or Wide
Enter the changing angle mode.	IRIS Open
Exit the changing angle mode.	IRIS Close

3.4 Preset

If you need to view specific places routinely, you should program Presets. A Preset is a programmed video scene with automatic pan, tilt, zoom, focus, and AE settings. In addition, Presets may be assigned the "home" position for the camera. As many as 240 Presets, whose positions are saved in the camera's firmware, may be programmed.
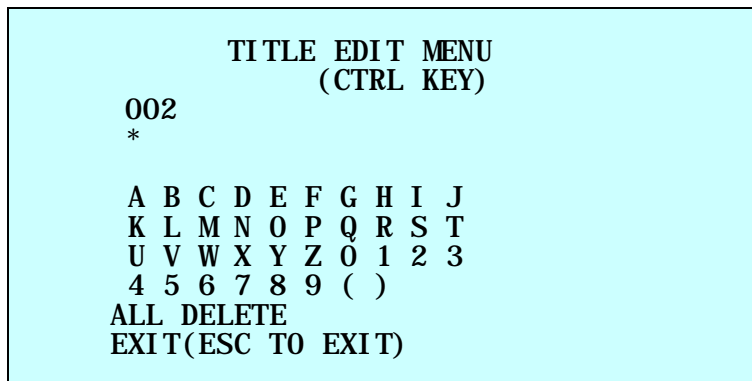
There are eight pages of Preset menu. Each page has 30 Presets. Pages can be scrolled by pressing the **Right** or **Left** key on the first or last No. of Preset.

```
                   PRESET  SETUP

          NUMBER        :  001
          TITLE         :  - - - - - -
          CAMERA  SET
          DWELL         :  - -  SEC
           1  2  3  4  5  6  7  8  9  0
           -  *  -  -  -  -  -  -  -  -
           -  -  -  -  -  -  -  -  -  -
           -  -  -  -  -  -  -  -  -  -
          NEXT  PAGE
          SAVE  AND  EXIT(ESC  TO  CANCEL)
```
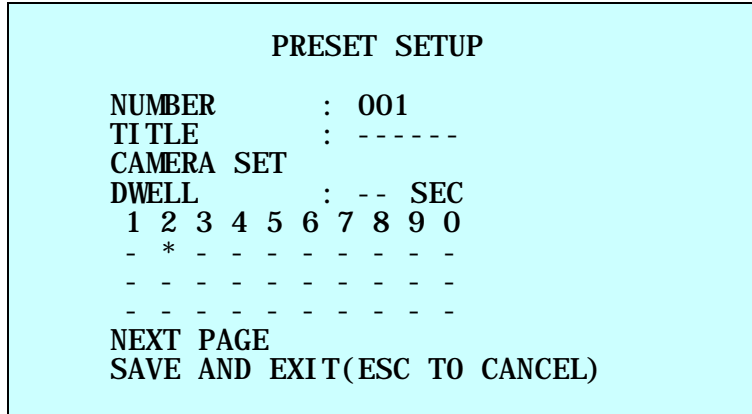
  -        Blank Preset position
  *   Position has the Preset
  !   Current cursor position

Follow steps below to store the Preset positions:

1. Press the **MENU** key to display the main menu on the monitor. Scroll to Preset and press the **Right** key.

2. Select the blank Preset position to be stored by pressing the **Up**, **Down**, **Right** or **Left** key.

3. After selecting a blank position, press the **IRIS Open** key. Use the **Up**, **Down**, **Right**, **Left**, **Tele** or **Wide** key to control the direction of the camera and lens.

4. After aiming the camera (view direction and lens control), press the **IRIS Close** key. The cursor will be on the "**TITLE**" after saving data then press the **Tele** or **Wide** key to edit the Preset title. Follow the procedure of the Auto Scan above to edit titles.

5. Press the **Tele** or **Wide** key to change the alphanumeric characters and move the next position by pressing the **Right** or **Left** key. Or move down to the character table and press the **IRIS Open** key at the desired character then the cursor position moves to the next position automatically. Press the **Right** or **Left** key at the "ALL DELETE" field to delete all characters. Press the **Right** or **Left** key at the "EXIT" field to finish title edit menu.

```
               TITLE  EDIT  MENU
                     (CTRL  KEY)
          002
          *

          A  B  C  D  E  F  G  H  I  J
          K  L  M  N  O  P  Q  R  S  T
          U  V  W  X  Y  Z  0  1  2  3
          4  5  6  7  8  9  (  )
          ALL  DELETE
          EXIT(ESC  TO  EXIT)
```

6. Select "**CAMERA SET**" and press the **Right** or **Left** key. Then the Preset camera setup displays.

```
              PRESET  CAMERA  SETUP

      FOCUS          :   AUTO
      MOTION         :   OFF
      MOTION  SETUP
      AE  SETUP
      SAVE  AND  EXIT(ESC  TO  CANCEL)
```

Set **FOCUS**	AUTO, MANUAL
Set **MOTION**	OFF, ON

Select "**MOTION SETUP**" and press the **Right** or **Left** key. Then the MOTION setup displays.

```
              MOTION  SETUP

      SENSITIVITY    :   10
      POSITION       :   ALL
      DELAY          :   00  SEC
      OUTPUT         :   OFF
      HOLD  TIME     :   03  SEC
      EXIT(ESC  TO  EXIT)
```

Set **SENSITIVITY**	00 ~ 20
Set **POSITION**	ALL, CENTER
Set **DELAY**	00 ~ 05 seconds
Set **OUTPUT**	OFF, OUT1
Set **HOLD TIME**	03 ~ 99 seconds

Select "**AE SETUP**" and press the **Right** or **Left** key. Then the AE setup displays. Refer to the AE SETUP in the camera setup.

7. Set "**DWELL time**". (03 ~ 99 seconds)

8. To select the next page of Presets, scroll the page by pressing the **Right** or **Left** key on the first or last columns of the menu.

9. Repeat step 2 through 8 for each additional Preset position.

10. Select "**SAVE AND EXIT**" and press the **Right** or **IRIS Open** key. Press the **IRIS Close** key to exit the program without saving.

3.5 Tour

There are 8 programmable Tours. Each Tour consists of up to 40 Preset positions, Patterns, Scans or other Tours (second-level). Using second-level Tours, it can be expanded to over 300 functions in a single Tour.

```
              TOUR  SETUP

    NUMBER            :  01
    TITLE             :  T01
    TOUR  FUNCTION
    SAVE  AND  EXIT(ESC  TO  CANCEL)
```

```
           TOUR  FUNCTION  SETUP
                 (CTRL  KEY)
    DWELL             :  --  SEC
    003 --- --- --- ---
    --- --- --- --- ---
    --- --- --- --- ---
    --- T02 --- --- ---
    --- --- --- --- ---
    --- --- --- --- ---
    --- --- --- --- ---
    --- --- --- --- ---
    EXIT(ESC  TO  EXIT)
```

- - -	Blank position
003	Preset (1 ~ 240)
T02	Tour (1 ~ 8)

Follow the steps below to program the Tours:

1. Press the **MENU** key to display the main menu on the monitor. Scroll to Tour and press the **Right** key to enter the Tour menu.

2. Select "**NUMBER**" and set the desired number by pressing the **Right** or **Left** key.

3. Select "**TOUR FUNCTION**" and press the **Right** key to enter the Tour Function Setup menu.

4. Choose a blank position to be programmed by pressing the **Up**, **Down**, **Right** or **Left** key.

5. To add a stored Preset, press the **Tele** or **Wide** key then the stored Preset number displays.

6. To place functions other than Preset, press the **IRIS Open** key to scroll for Tour.

7. You can also overwrite the programmed number and remove a stored number from the Tour, press the **IRIS Open** key until '- - -' is displaying in the position.

8. Repeat step 2 through 6 for each desired position. Each title will be displayed on top of the line.

9. To edit the "**TITLE**", follow the procedure of the Preset above to edit titles.

10. Select "**SAVE AND EXIT**" and press the **Right** or **IRIS Open** key. Press the **IRIS Close** key to exit the program without saving.

3.6 Privacy Zone

Hide up to 16 unwanted scenes in a camera.
There are four pages of Privacy Zone menu. Each page has 4 Privacy Zones.

```
          PRIVACY ZONE SETUP
               (CTRL KEY)
    NO        METHOD   COLOR
    01   ON   BLOCK    BLACK
    02   ON   BLOCK    BLACK
    03   OFF  - - - -  BLACK
    04   OFF  - - - -  BLACK
    NEXT PAGE
    SAVE AND EXIT(ESC TO CANCEL)
```

1. Place the cursor at the field.

2. Press the **IRIS Open** key then the privacy area menu displays.

   Move the desired position by pressing the **Right** or **Left** key on the "**UP**", "**DOWN**", "**LEFT**" or "**RIGHT**" columns of the menu.

   Adjust the size by pressing the **Right** or **Left** key on the "**+**" or "**-**" columns of the menu.

   Returns to the previous menu.

```
              PRIVACY AREA MENU




    UP
    DOWN
    LEFT
    RIGHT
    +
    -
    EXIT(ESC TO EXIT)
```
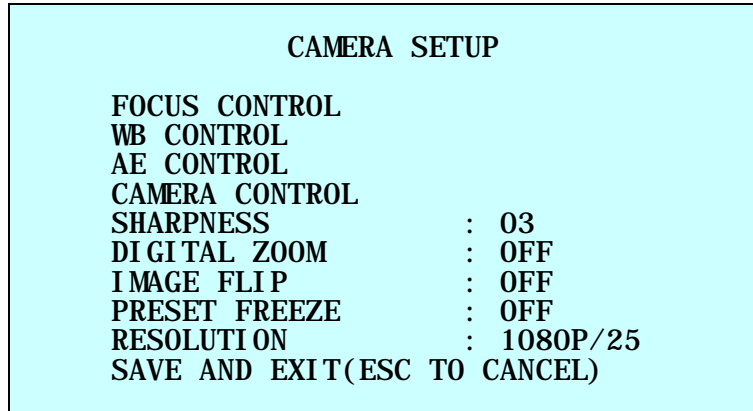
3. To turn the stored zone ON or OFF, press the **Tele** or **Wide** key.

4. Set the "**COLOR**": "BLACK", "WHITE", "YELLOW", "CYAN", "GREEN", "MAGENTA", "RED" or "BLUE".
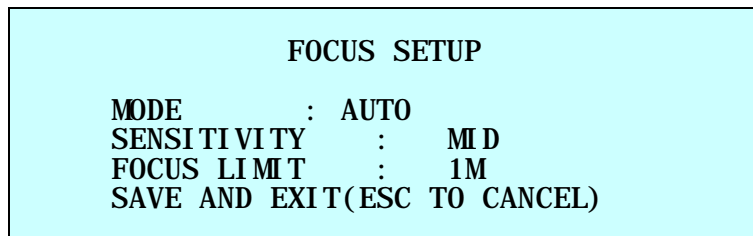
5. Select "**SAVE AND EXIT**" and press the **Right** or **IRIS Open** key. Press the **IRIS Close** key to exit the program without saving.

3.7 Camera Menu

```
              CAMERA SETUP

    FOCUS CONTROL
    WB CONTROL
    AE CONTROL
    CAMERA CONTROL
    SHARPNESS             :  03
    DIGITAL ZOOM          :  OFF
    IMAGE FLIP            :  OFF
    PRESET FREEZE         :  OFF
    RESOLUTION            :  1080P/25
    SAVE AND EXIT(ESC TO CANCEL)
```

SHARPNESS	The higher the value, the more edges in the picture will be enhanced. (0 ~ 10)
DIGITAL ZOOM	OFF: Zoom range is limited to the optical. 2X: Zoom is extendable up to 2X of digital range. 4X: Zoom is extendable up to 4X of digital range. 8X: Zoom is extendable up to 8X of digital range. MAX: Zoom is extendable Max digital zoom range.
IMAGE FLIP	This function turns the video output from the camera upside down and reverses it horizontally. **This option is helpful to install in the opposite side.**
PRESET FREEZE	ON: the image is frozen during calling Preset.
RESOLUTION	HD-TVI Output: 1080P/30, 1080P/25, 720P/60, 720P/50, 720P/30, 720P/25 AHD Output: 1080P/30, 1080P/25

• FOCUS CONTROL

```
              FOCUS SETUP

    MODE        :  AUTO
    SENSITIVITY  :    MID
    FOCUS LIMIT  :    1M
    SAVE AND EXIT(ESC TO CANCEL)
```

MODE	AUTO, MANUAL Use manual mode in normal use.
SENSITIVITY	LOW, LOW.MID, MID, MID.HIGH, HIGH
FOCUS LIMIT	This distance is approximate value and the focus operates from the setting value.

CAUTION: Avoid continuous, 24-hour use of the auto focus. This will shorten the lifespan of the lens.

• WB (White Balance) CONTROL

```
                    WB SETUP

      MODE            :  AUTO
      R GAIN          :  - - -
      B GAIN          :  - - -
      SAVE AND EXIT(ESC TO CANCEL)
```

MODE	AUTO, MANUAL, INCANDESCENT, FLUORESCENT, OUTDOOR
AUTO	Computes the white balance value output using color information from the entire screen automatically.
INCANDESCENT	Auto white balance mode that is compatible with incandescent lamps.
FLUORESCENT	Auto white balance mode that is compatible with fluorescent lamps.
OUTDOOR	Outdoor white balance mode
MANAUL	Manual mode, you can change R and B Gain manually.

R GAIN	0 ~ 255
B GAIN	0 ~ 255

R GAIN / B GAIN modes are controllable only in MANUAL Mode.

• AE CONTROL

```
                    AE SETUP

      MODE            :  AUTO
      DSS             :  OFF
      IRIS            :  AUTO
      SHUTTER         :  AUTO
      BRIGHT          :  10
      GAIN LIMIT      :  07
      NIGHT SHOT      :  AUTO
      ADDITIONAL AE
      SAVE AND EXIT(ESC TO CANCEL)
```

MODE	AUTO, MANUAL, I.PRIO, S.PRIO
AUTO	Auto exposure mode
MANUAL	Variable Iris, Shutter speed
I.PRIO	Variable Iris, Auto Shutter speed
S.PRIO	Variable Shutter speed, Auto Iris

DSS	OFF, x2 ~ x8
IRIS	F1.8 ~ F32
SHUTTER	1/25 (30) ~ 1/30000
BRIGHT	0 ~ 20
GAIN LIMIT	0 ~ 7
NIGHT SHOT	AUTO, ON, OFF, GLOBAL

NOTE: Values in ( ) are for NTSC Camera.

The NIGHT SHOT option removes the IR cutoff filter of the camera and makes the camera sensitive to near infrared.

AUTO   Camera goes in to B&W mode at low light.
GLOBAL   Controlled by the keyboard
            (NOTE: GLOBAL function operates F2E protocol only)
    The operator can enable NIGHT SHOT for all dome cameras at the same time.
    If the NIGHT SHOT mode is set to GLOBAL, "999" + **ENTER** will turn Off the NIGHT SHOT mode and "888" + **ENTER** will turn On the NIGHT SHOT mode.
ON   B/W mode
OFF   Color mode

NOTE: AUTO in NIGHT SHOT function is not applied in "MANUAL" mode of AE Control.

ADDITIONAL AE

```
          ADDITIONAL AE SETUP

    WDR                  :  OFF
    WDR WEIGHT           :  --
    BLC                  :  OFF
    HLC                  :  OFF
    HLC LEVEL            :  --
    HLC COLOR            :  ---
    DEFOG                :  OFF
    EXIT(ESC TO EXIT)
```

WDR	OFF, ON, NIGHT OFF **(NOTE: When ON, BLC will be disabled.)**
WDR WEIGHT	LOW, MID, HIGH
BLC	OFF, ON **(NOTE: When ON, WDR will be disabled.)**
HLC	OFF, ON
HLC LEVEL	0 ~ 20
HLC COLOR	BLACK, WHITE, YELLOW, CYAN, GREEN, MAGENTA, RED, BLUE
DEFOG	OFF, ON

• CAMERA CONTROL

```
          CAMERA CONROL

    D/N LEVEL            :  MID
    D/N DELAY            :  03 SEC
    CHROMA              :  08
    GAMMA               :  2
    DNR                 :  MID
    DIS                 :  OFF
    SAVE AND EXIT(ESC TO CANCEL)
```

D/N LEVEL	LOW, MID, HIGH
D/N DELAY	1 ~ 60 seconds
CHROMA	0 ~ 20
GAMMA	0 ~ 4
DNR	OFF, LOW, MID, HIGH
DIS	OFF, ON

3.8 Communication

To prevent damage, each camera must have a unique address (ID).
The factory default setting is 1.

```
                   COMMUNICATION

                              *
        MASTER ID      :  0001
                              *
        SLAVE ID       :  0001
        TYPE           :  SLAVE
        PORT           :  485
        MASTER PROTOCOL :  PELCO-D
        SLAVE PROTOCOL  :  PELCO-D
        BAUDRATE       :  9600
        PARITY         :  NONE
        TERMINATION    :  OFF
        ANSWER         :  OFF
        SAVE AND EXIT(ESC TO CANCEL)
```

|	
MASTER ID	1 ~ 3999
SLAVE ID	1 ~ 3999
TYPE	485: MASTER, SLAVE
	422: MASTER, SLAVE, MASTER/SLAVE
PORT	485, 422
MASTER PROTOCOL	PELCO-D, PELCO-P, F2E, F2, NONE
SLAVE PROTOCOL	PELCO-D, PELCO-P, F2E, F2, NONE
BAUDRATE	2400, 4800, 9600, 19200, 38400 bps
PARITY	NONE, EVEN, ODD
TERMINATION	ON, OFF

The device which is connected at end of line, whether it is the camera or keyboard, must have the cable for communication terminated by setting above. Without proper termination, there is potential for control signal errors. Total length of the cable for communication should not exceed 4000 ft (1.2 km).

ANSWER ON, OFF (no acknowledge command from the camera)

This option is helpful to escape the collision of the command using some DVR.
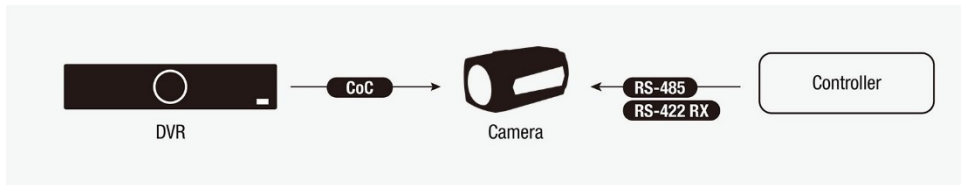
• Control Method

- MASTER:

By using RS-485 or RS-422 TX serial communication port, it allows you to control the external device (Pan & Tilt System) through CoC (Control over Coax) signal from DVR.
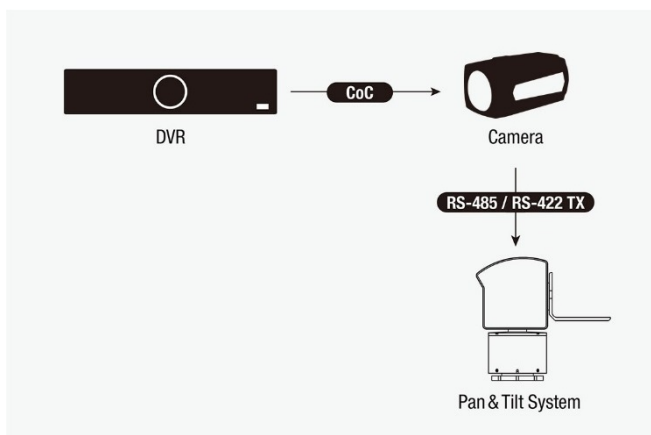
- SLAVE:

By using RS-485 or RS-422 RX serial communication port, it allows you to control the camera by controller or DVR.


- MASTER/SLAVE:

By using RS-422 TX serial communication port, it allows you to control the external device (Pan & Tilt System) through CoC (Control over Coax) signal from DVR.

By using RS-422 RX serial communication port, it allows you to control the external device (Pan & Tilt System) by controller or DVR.

If you want to control camera and external device (Pan & Tilt System) by controller and CoC (Control over Coax) signal from DVR at the same time, you must select TYPE and PORT as MASTER/SLAVE and 422.
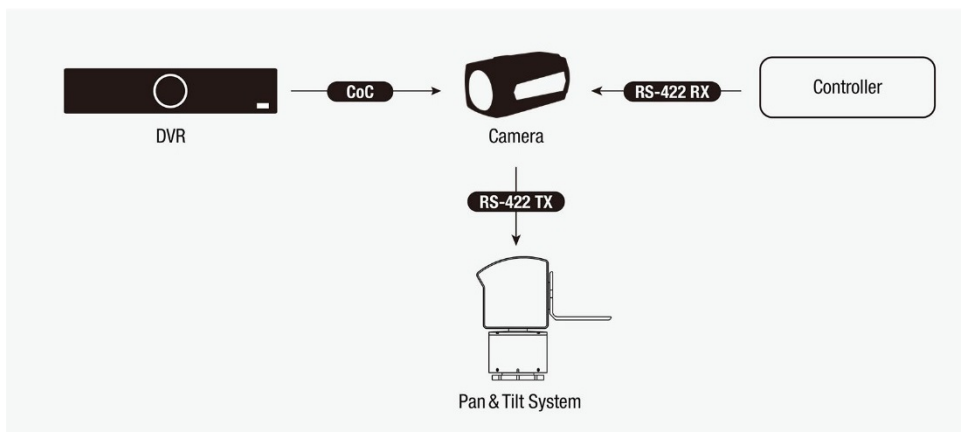
3.9 Alarm

```
                    ALARM SETUP
                     (CTRL KEY)
        NO   FUN IN    OUT   HOLD LATCH
        1    001 NO    OUT1 03    OFF




        SAVE AND EXIT(ESC TO CANCEL)
```

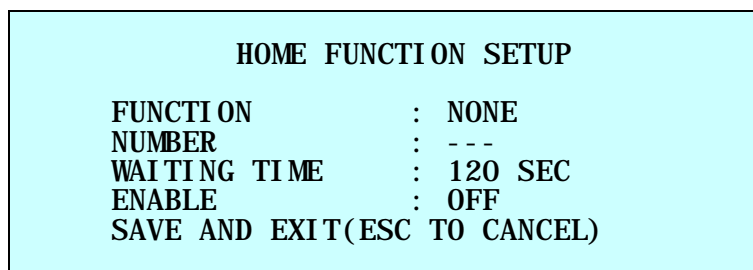|	
NO (Number)	Alarm input number
FUN (Function)	Stored function number to be called by alarm.
IN (Input)	NO/NC – normally open/closed, OFF – ignore
OUT (Output)	OUT1 – 5VTTL output, OFF – no output
HOLD	Alarm will be held for programmed time. (03 to 99 seconds)
LATCH	ON – Alarm message will remain on the screen even though alarm input is deactivated.
	OFF – Alarm message will disappear from the screen after programmed hold time when alarm input is deactivated.

3.10 System Setup

```
                    SYSTEM  SETUP

      HOME  FUNCTION  SETUP
      FACTORY  DEFAULT
      RESET
      OSD  DISPLAY
      ORIGIN  CHECK
      FUNCTION  RUN
      SYSTEM  INFORMATION
      PRESET  FOCUS  :  AUTO
      EXIT(ESC  TO  EXIT)
```

• HOME FUNCTION SETUP
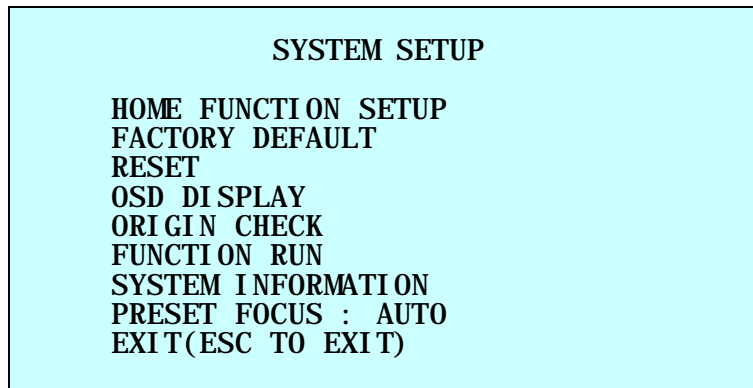
```
                HOME  FUNCTION  SETUP

      FUNCTION          :  NONE
      NUMBER            :  - - -
      WAITING  TIME     :  120  SEC
      ENABLE            :  OFF
      SAVE  AND  EXIT(ESC  TO  CANCEL)
```

FUNCTION	NONE, TOUR, PRESET
NUMBER	- - -
WAITING TIME	10 ~ 240 seconds
ENABLE	ON, OFF

The Home Function can be set so that the camera automatically goes to Tour or Preset after the keyboard or DVR has been idle for a specified amount of time.

For example, if the controller is idle for 120 seconds, the camera goes to Preset 1.

Follow these steps to program the Home position:

1. Select "**FUNCTION**" by pressing the **Right** or **Left** key to scroll through the None, Tour or Preset functions.

2. Select "**NUMBER**" and press the **Right** or **Left** key. The recorded function number will scroll.

3. Select "**WAITING TIME**" and press the **Right** or **Left** key to select from 10 to 240 seconds.

4. Select "**ENABLE**" and turn to ON or OFF by pressing the **Right** or **Left** key.

• FACTORY DEFAULT

Select "**FACTORY DEFAULT**" to initialize the data.

```
FACTORY  DEFAULT

ARE  YOU  SURE  ?

CANCEL
OK
```
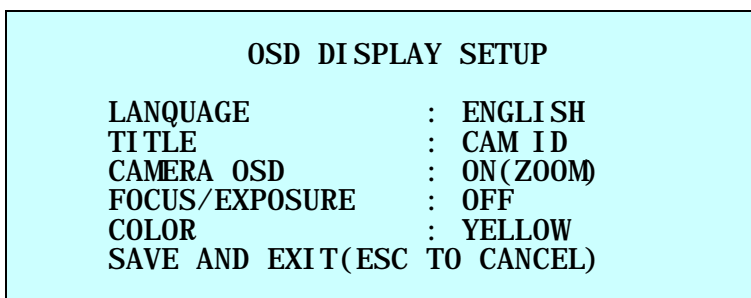
• RESET

```
RESET

ARE  YOU  SURE  ?

CANCEL
OK
```
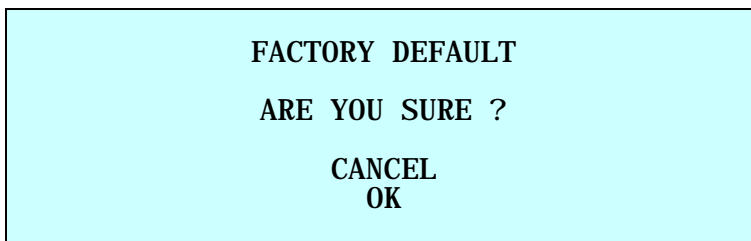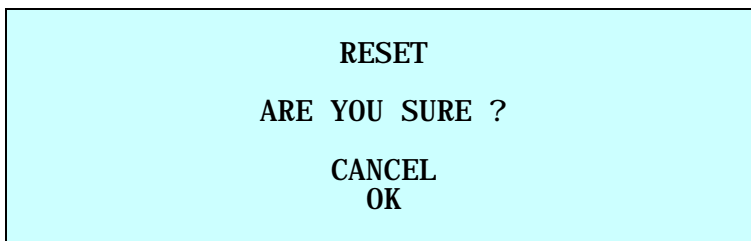
This feature is used to re-calibrate the orientation of a selected camera. Origin offset value is not affected by this function. (Offset is still valid after origin set.)

• OSD DISPLAY

```
OSD  DISPLAY  SETUP

LANQUAGE          :  ENGLISH
TITLE             :  CAM ID
CAMERA  OSD       :  ON(ZOOM)
FOCUS/EXPOSURE    :  OFF
COLOR             :  YELLOW
SAVE  AND  EXIT(ESC  TO  CANCEL)
```

LANGUAGE   Select the desired language.

**TITLE**   up to 6 characters

CAMERA OSD   ON, ON(ZOOM), ZOOM, OFF
   All display or title will disappear when CAMERA OSD DISPLAY is set to OFF.

FOCUS/EXPOSURE   ON, OFF
   ON: FOCUS and EXPOSURE displays. (AF AE)

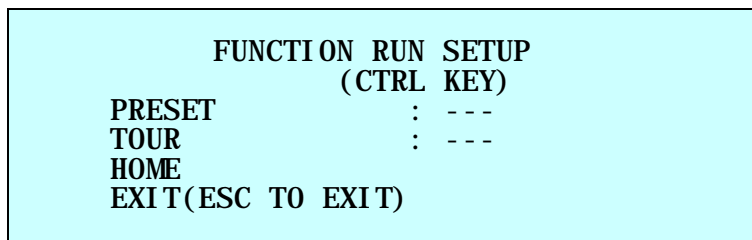**COLOR**   YELLOW, GRAY, BLUE

• ORIGIN CHECK

If you find the camera in the wrong zoom position during operation, execute this origin check and the camera will return to the right zoom position after the origin check operation.

```
            ORIGIN CHECK

          ARE YOU SURE ?

              CANCEL
                OK
```
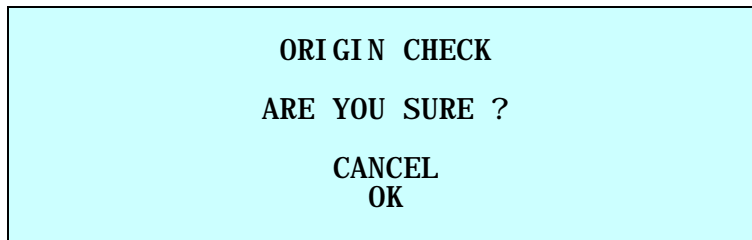
• FUNCTION RUN

This Function Run menu allows you to execute the function when you use the keyboard or DVR without the function keys (Preset and Tour).

```
              FUNCTION RUN SETUP
                   (CTRL KEY)
         PRESET              :  - - -
         TOUR                :  - - -
         HOME
         EXIT(ESC TO EXIT)
```

1. Select the desired Function by pressing the **Up** or **Down** key.

2. Select the number by pressing the **Tele** or **Wide** key in PRESET and TOUR.

3. Press the **IRIS Open** key to execute.

NOTE: To execute the function, you should save the function (PRESET and TOUR) first.

- **HOME**
Select "HOME" and press the **IRIS Open** key. The camera goes to the default position that it returns to after an assigned period of inactivity passes. The default position may be a Preset, Tour or no action.

• SYSTEM INFORMATION

```
                SYSTEM INFORMATION

    CAMERA TYPE     :  xxxx-Vx.xx
    H/W VERSION     :  Vx.xx-xxxx
    ROM VERSION     :  Vx.xxxxxx
    PROTOCOL        :  xxxx
    BAUDRATE        :  9600(NONE)

    HD B/D VERSION :  Vx.xx

    EXIT(ESC TO EXIT)
```

The system information provides essential information about the camera if service is required. This screen displays the camera type and ROM version. The information on this screen cannot be modified.

• PRESET FOCUS

PRESET FOCUS   AUTO, MANUAL
   This option set the default mode of the focus when you save the Preset.

Appendix A — Specifications

Model		HD Analog Camera
IMAGE		
Lens		Optical Zoom 30X 4.3mm ~ 129.0mm
Angle of View		61.8° (H) ~ 2.9° (H)
Image Sensor	Type	1/2.8" SONY STARVIS CMOS sensor
	Pixels	1945 (H) x 1097 (V)
Min. Illumination		Color : 0.35 Lux @ 50IRE BW : 0.013 Lux @ 50IRE
Scanning Mode		Progressive Scan
Wide Dynamic Range		True WDR
Day and Night Mode		True D/N (Auto, Day, Night)
Noise Reduction		3DNR
Digital Zoom		16X
Exposure Control		Auto, Manual, Shutter Priority, Iris Priority
White Balance Control		Auto, Manual, Incandescent, Fluorescent, Outdoor
Back Light Compensation		Yes
Image Effect		Flip (Digital)
Shutter Speed		25/30fps : Auto (1/30,000 ~ x8 sec.), Manual 50/60fps : Auto (1/50,000 ~ x8 sec.), Manual
DIS		Yes
Defog		Yes
VIDEO		
Resolution		HD-TVI : 1080p @ 25/30fps, 720p @ 25/30/50/60fps AHD : 1080p @ 25/30fps
Video Output		HD-TVI or AHD, Composite
Function		
Preset		240
Tour		8
Home Function		Yes
Privacy Mask Zone		16 Programmable Zones
EXTERNAL IN/OUT		
Video HD Output		BNC Jack
Video Composite Output		BNC Jack
Alarm		1 Input, 1 Output (Terminal Block)
Control		Coaxial Communication RS-485/422, Baud Rate: 2400 ~ 38400 bps (Default: 9600 bps)
ID (Camera Address)		1 ~ 3999
ETC		
Operating Humidity		0 ~ 90%RH (Non-condensing)
Operating Temperature		0°C ~ 50°C
Power Supply		12VDC
Power Consumption		550mA (6.6W)
Dimensions		See dimension drawing
Net Weight		Approx. 600g

* Specifications are subject to change without notice *

88.6

81

142   **11**

Unit : mm

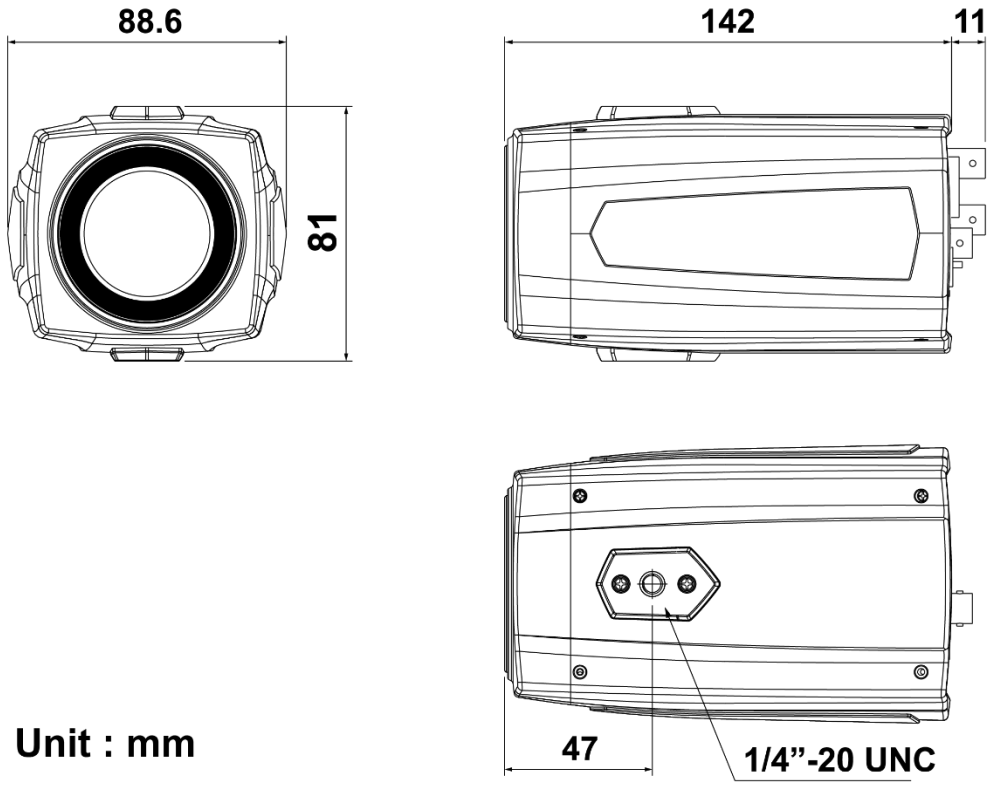**47**   **1/4"-20 UNC**

Figure – Dimension

Appendix B — Troubleshooting

If problems occur, verify the installation of the camera with the instructions in this manual and with other operating equipment. Isolate the problem to the specific piece of equipment in the system and refer to the equipment manual for further information.

Problem	Possible Solution
No video.	Verify that power is connected to all pieces of equipment in the system. Verify that the power switches are in the ON position. Check the video connections.
Poor video quality.	Check that the BNC connectors are inserted properly. Check the voltage level of the camera. Cable for video is shielded.