INSTRUCTION MANUAL

REVO ELITE 36x IR
SPEED DOME CAMERA
Model#: RESPTZ36-3

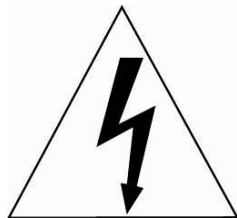*Please read this manual thoroughly before use and keep it handy for future reference.*

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 products 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.

I

FCC COMPLIANCE STATEMENT

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

The dome camera and the keyboard controller make up the building blocks for any surveillance/security system. Using multiple Keyboard Controllers and multiple dome cameras, no place is too large for monitoring. Extensible and flexible architecture facilitates remote control functions for a variety of external switching devices such as multiplexers and DVRs.

- Built-in optical power zoom camera with True Night Shot function.
- Built-in Synchronized IR LED & Fixed IR LED:

   The camera is equipped with two built-in IR LEDs, fixed one for wide view and zoom synchronized adjustable one for distant view.

- 240 Preset positions
- 8 Tours consist of Preset, Pattern, Auto-Scan and other Tours can be programmed with over 300

   functions and Preset location. While moving, each Preset scan can be watched in smooth **Vector Scan**

   mode.

- 16 Auto Scans with the normal, the vector, and the **random** mode and the Endless Auto-Pan with 13

   speed steps.

- 8 Patterns (up to 500 second) and 8 Privacy zones
- 16 Area Titles
- 4 Alarm inputs, 1 TTL Alarm output, 1 Relay Alarm output (NC & NO)
- Variable speed from 0.1°/sec to 380°/sec

   Three Variable speed (SLOW, NORMAL, TURBO)

   Turbo speed is Max 250°/sec with Ctrl key pressed.

- Pan / Tilt speed is inversely proportional to the zoom ratio with the option.
- Maximum speed is 380°/sec when preset command.
- Tilt range is -10° to 90°
- Programmable user preferences (alarm, preset, title, etc.)
- 90° Auto Flip
- Up to 999 selectable camera addresses (3999 by software setting).
- Multi-language Menu Display, Password Confirmation
- Function Run menu using DVR without function key (Pattern, SCAN, õ)
- Built-in RS-485 receiver driver
- 12VDC for dome
- 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
2P screw type Connector 1
5P screw type Connector 2
12VDC Adaptor 1

2.2 Installation

You need one optional mount kit of the wall mount and the ceiling mount to install.

The wall or ceiling mount must be attached to a structural object such as hard wood, concrete that will support the weight of the mount and dome camera.

The use of a solid backboard is recommended when attaching to gypsum walls.

1. Remove the Protection pad and the tape from attached the dome camera.

2. Attach the mounting base to wall using the supplied M8 tapping screw and plastic bushing. (Ceiling using the supplied M6 tapping screw and bushing)

3. Wind the both thread of the pipe end with Teflon tape about 20 times for sealing. Then use a silicone rubber sealant to seal the area where the wall (ceiling) mount and the pipe meet.

4. Place a bead of silicone sealant around the wall and ceiling mount mounting flange, press it to the surface and line up the flange hole with drilled holes.

CAUTION 1: A silicone rubber sealant must be applied to seal the housing to secure waterproofing.

CAUTION 2: When installing, a bracket must be applied.

2.1.1 Installation - Wall Mount

The wall mounting plate must be attached to a structural object such as concrete that will support the weight of the mount and Dome Camera.
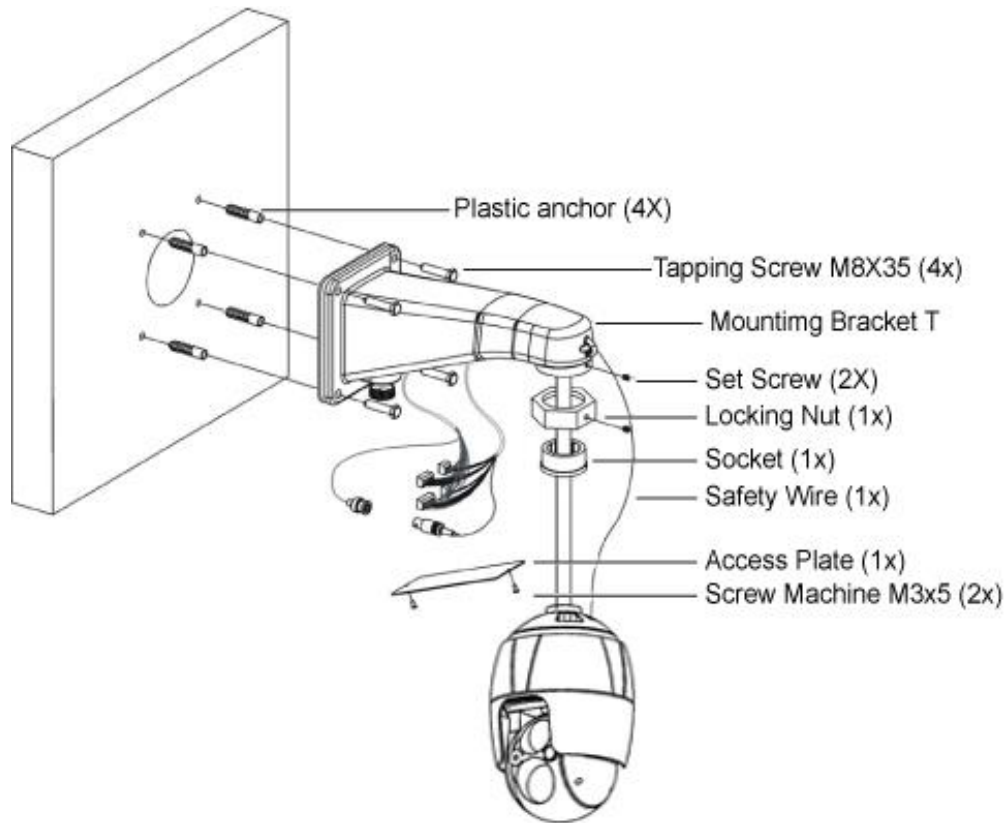
1. Select a suitable mounting location and verify there is sufficient cable to reach the middle of the Wall Mount.
2. Mark and drill mounting holes in the surface using the Wall Mount Flange.
3. Pull out cables required to connect to the dome camera from the wall or route cables through a section of 0.75 in. (19 mm) conduit pipe.
4. Remove the access plate from the wall mount bracket.
5. Attach the wall mount bracket using screws routing cables through the access plate₅ hole.
6. Attach the housing₅ safety wire to the wall mount₅ latch.
7. Fix the housing to the wall mount bracket using the locking nut after routing cables through the wall mount bracket and tighten the housing set screw with the supplied wrench.
8. After connecting cables, attach the access plate.

2.1.2 Installation - Ceiling Mount

The ceiling mounting plate must be attached to a structural object such as concrete that will support the weight of the mount and Dome Camera.

Plastic anchor (3x)

Ceiling Mount

Tapping Screw M6x35 (3x)

Set Screw (2x)

Locking Nut (1x)

Socket (1x)

Safety Wire (1x)

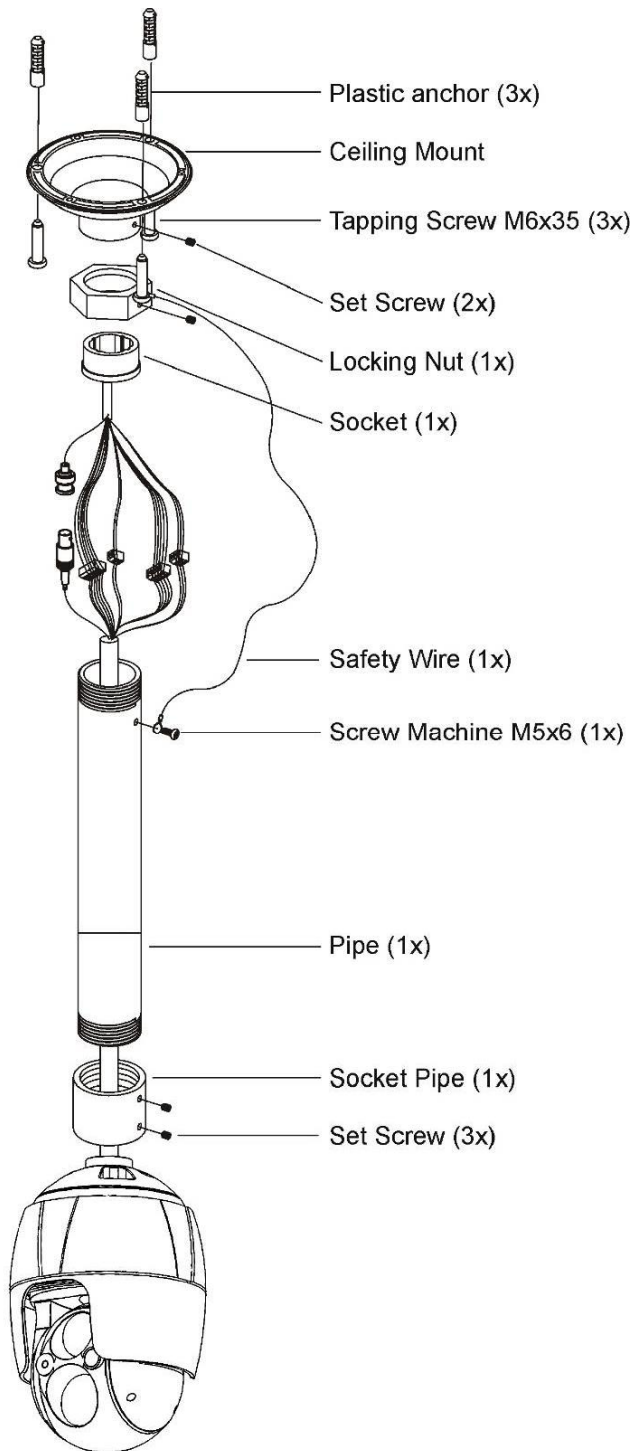Screw Machine M5x6 (1x)

Pipe (1x)

Socket Pipe (1x)

Set Screw (3x)

1. Select a suitable mounting location and verify there is sufficient cable to connect with cables from the housing.

2. Mark and drill mounting holes in the surface using the ceiling mount flange.

3. Pull out cables required to connect to the dome camera from the ceiling.

4. Attach the ceiling mount bracket using screws routing cables through the locking nut.

5. Tighten the housing with the pipe using the socket after routing cables through the pipe.

6. Attach the housing's safety wire to the ceiling mount's m6X35 tapping screw.

7. After connecting cables, fix the pipe to the ceiling mount using the locking nut.

8. Tighten set screws of the socket and locking nut with the supplied wrench.

Seal using silicone rubber around the circle
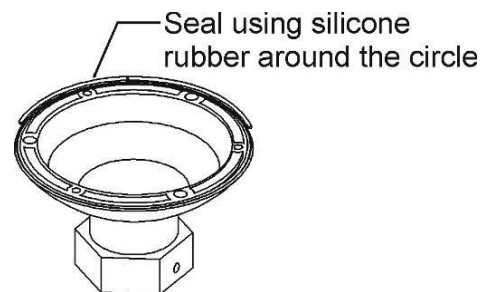
2.3 Basic Configuration of Camera System
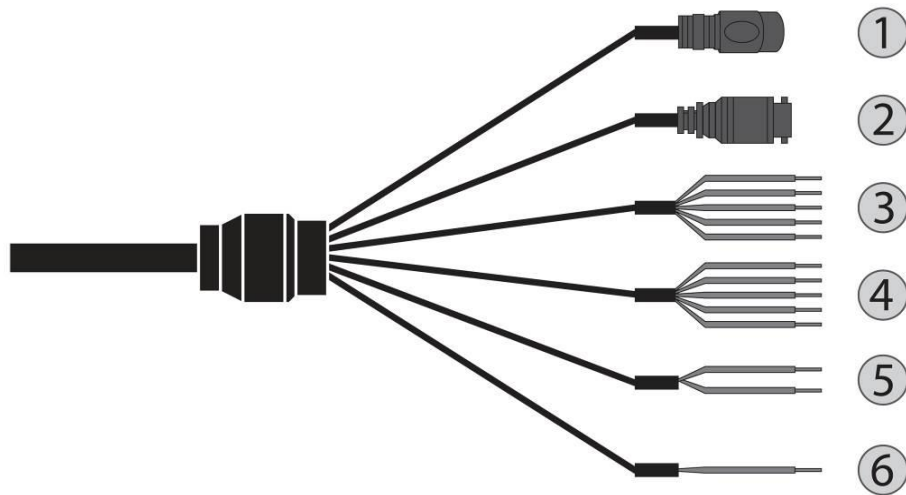
No.	CONNECTOR	COLOR	DESCRIPTION
1	DC JACK	BLACK	12VDC
2	BNC Cable	BLACK	VIDEO OUTPUT
3	5P Cable	RED	ALARM INPUT 1
		ORANGE/WHITE	ALARM INPUT 2
		ORANGE	ALARM INPUT 3
		GREEN/WHITE	ALARM INPUT 4
		BLACK	GND
4	5P Cable	BLUE	ALARM OUTPUT
		GRAY	GND
		GREEN	COM (RELAY)
		VIOLET	NO (RELAY)
		PINK	NC (RELAY)
5	2P Cable	BROWN	RS485+(A)
		BROWN/WHITE	RS485-(B)
6	1P Cable	YELLOW/GREEN	F_GND

The camera must be installed by qualified service personnel in accordance with all local and federal electrical and building codes.

2.4 Setting Dome Camera Address (ID)

When the **COMMUNICATION MODE is set to S/W**
Dome camera address (ID) and Protocol can be used by selecting from the MENU.

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

```
          DOME MENU

     AUTO SCAN
     PRESET
     TOUR
     PATTERN
     ALARM
     AREA TITLE
     PRIVACY ZONE
     CAMERA
     DOME SETUP
     DOME COMMUNICATIOM
     FUNCTION RUN
     EXIT(ESC TO EXIT)
```
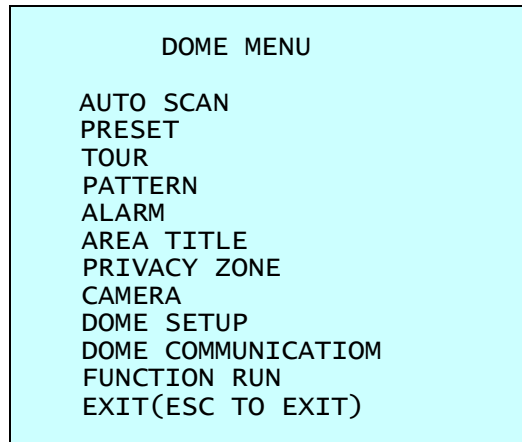
Select the+DOME COMMUNICATION+and set the desired idem by twist the Joystick

```
  DOME COMMUNICATION SETUP

  COMMUNICATION MODE : S/W

     DOME ID    0001
     PROTOCOL   AUTO
     BAUDRATE   9600
     PARITY     NONE

  SAVE AND EXIT(ESC TO CANCEL)
```

See Chapter 3 · Program and Operation for DOME COMMUNICATION.

If you want to set the address more than 999, you should contact the service provider.

NOTE: COMMUNICATION MODE is set to S/W, the Hardware (H/W) setting is ignored.

When the **COMMUNICATION MODE is set to H/W**
Dome camera address (ID) and Protocol can be used by selecting from the Hardware.

To prevent damage, each dome camera must have a unique address (ID). When installing multiple dome cameras using a multiplexer, it is suggested that the dome camera address match the multiplexer port number.

If you want to set the address more than 999, you should contact the service provider.

Example: Port 1 = Dome 1, Port 2 = Dome 2 õ   Port 16 = Dome 16. If more than 16 dome cameras are installed using two or more multiplexers, ID of the dome camera should be ID of MUX x No. of camera IN. (e.g. multiplexer ID= n, Camera IN= m then ID of Dome =16x
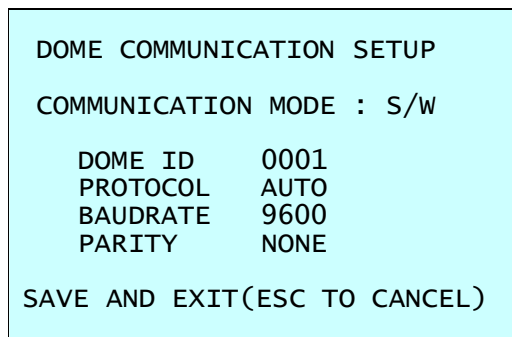(n-1)+m)

Refer to Figures 1-2 for setting the dome camera address (ID) and protocol selection.

DOME ID	S3	S2	S1
1	0	0	1
2	0	0	2
.	.	.	.
999	9	9	9

Figure 1 – Setting Dome Camera Address (ID)
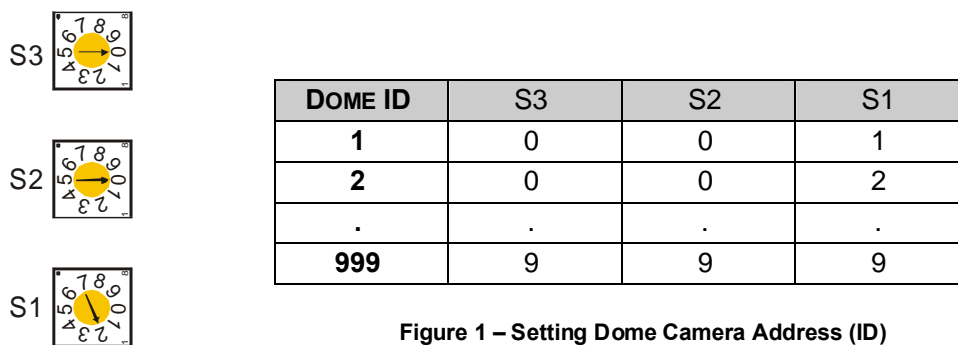
2.5 Setting Dome Camera Protocol

If a dome camera is to be installed with a Fastrax keyboard controller,
select the default protocol.

Consult service personnel if a dome camera is installed with device other than a keyboard controller.

NTSC   PAL
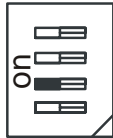
S/W		On	Off	FUNCTION
D1	S4-1	Enable	Disable	Alarm
D2	S4-2	PAL	NTSC	NTSC/PAL
D3	S4-3			Reserved
D4	S4-4	On	Off	Termination

D5	D6	D7	D12	PROTOCOL
S5-1	S5-2	S5-3	S6-4	
Off	Off	Off	Off	F2,F2E,Pelco-D,Pelco-P:**default**
Off	Off	On	Off	F2,F2E
Off	On	Off	Off	Sensormatic RS422
Off	On	On	Off	Pelco-D, Pelco-P
On	Off	Off	Off	Vicon
On	Off	On	Off	Ernitec
On	On	Off	Off	Reserved
On	On	On	Off	F2
Off	Off	Off	On	Philips(Bosch)
Off	Off	On	On	Reserved
Off	On	Off	On	Dynacolor
Off	On	On	On	Reserved

D8	D9	D10	BAUD RATE
S5-4	S6-1	S6-2	
Off	Off	Off	2400 bps
Off	Off	On	4800 bps
Off	On	Off	9600 bps (Default)
Off	On	On	19200 bps
On	Off	Off	38400 bps

D11	PARITY BIT
S6-3	
Off	None
On	Even

Figure 2 – Protocol Selection Switches

2.6 Connections Setting Dome Camera Termination

The device which is connected at end of line, whether it be a dome camera or keyboard controller, must have the cable for communication terminated by setting the appropriate DIP switch. Without proper termination, there is potential for control signal errors. Total length of the cable for communication should not exceed 4000ft (1.2km).
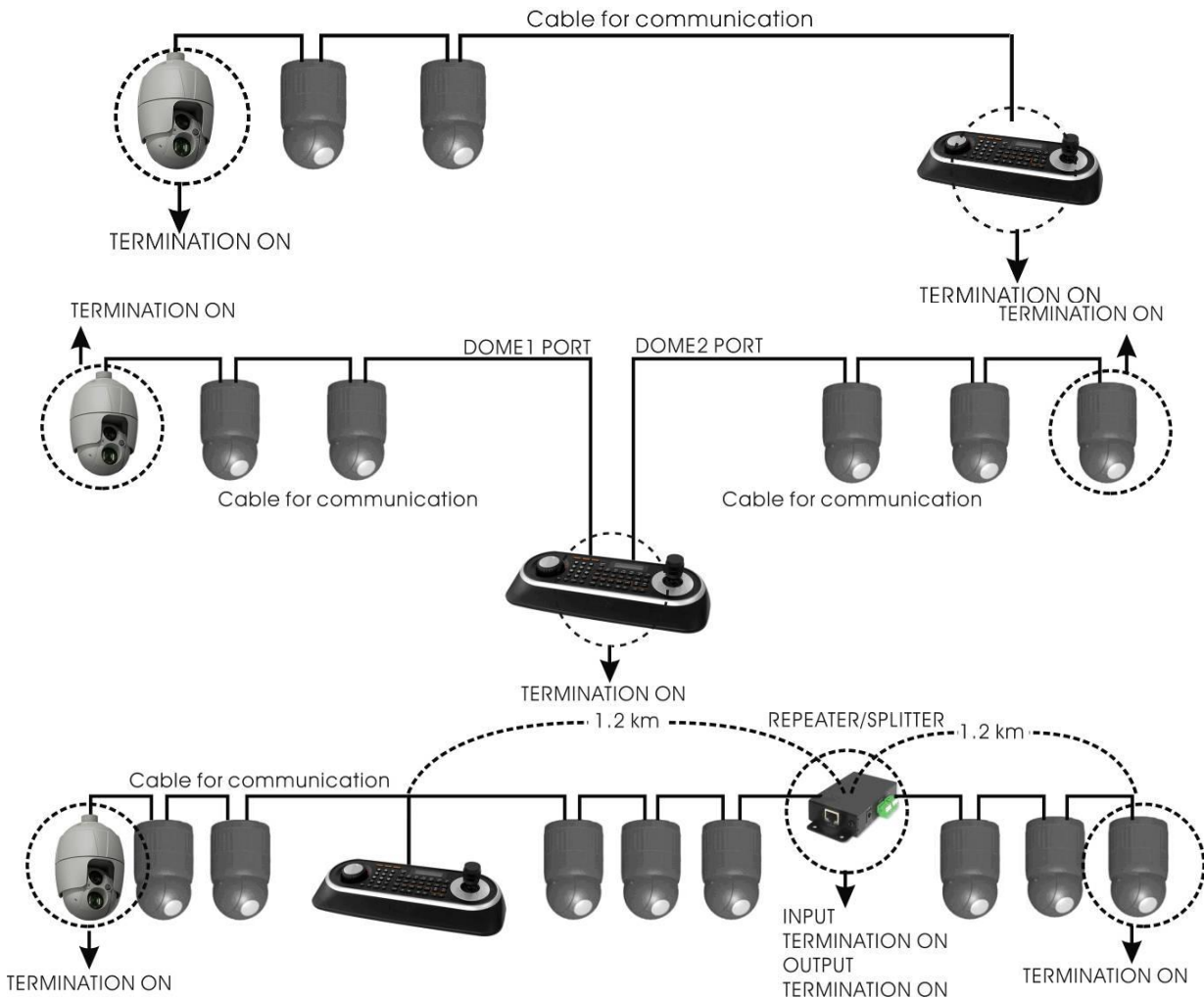
Figure 3- Termination Diagram

2.7 Connections

• Connecting to the RS485

The dome camera can be controlled remotely by an external device or control system,
such as a control keyboard, using RS485 half-duplex. Connect Marked RS_485+(A), RS_485-(B) of the
RS485 control system.

• Connecting Video output connector

Connect the video output (BNC) connector to the monitor or video input.

• Connecting Alarms

AL1 to 4 (Alarm Input)

You can use external devices to signal the dome camera to react on events. Mechanical or electrical
switches can be wired to the AL (Alarm Input) and GND (Ground) connectors.

See Chapter 3 ·   Program and Operation for configuring alarm input.

GND (Ground)

NOTE: All the connectors marked GND are common.

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

TTL Out 1, Relay Out 1 (TTL : 5V Output, Relay : Normal Close or Normal Open)

The dome camera can activate external devices such as buzzers or lights. Connect the device to the
Alarm out and GND or the NC(NO) (Alarm Out) and COM (Common) connectors.

See Chapter 3 ·   Program and Operation for configuring alarm output.

Connecting the Power

Connect the power of 12VDC 5A to the dome camera.

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

2.8 Getting Started

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

PRESET TITLE
AREA TITLE

FUNCTION
UNDER RUNNING

INFORMATION
DISPLAY

STATUS of
FOCUS and AE

CAMERA TITLE

CAMERA ID

PAN & TILT ANGLE

ALARM DISPLAY

VIEW DIRECTION

```
001                         AF AE



              EMPTY DATA




                       DOMEID:0001
ALARM:1              w→360.0,090.0
```
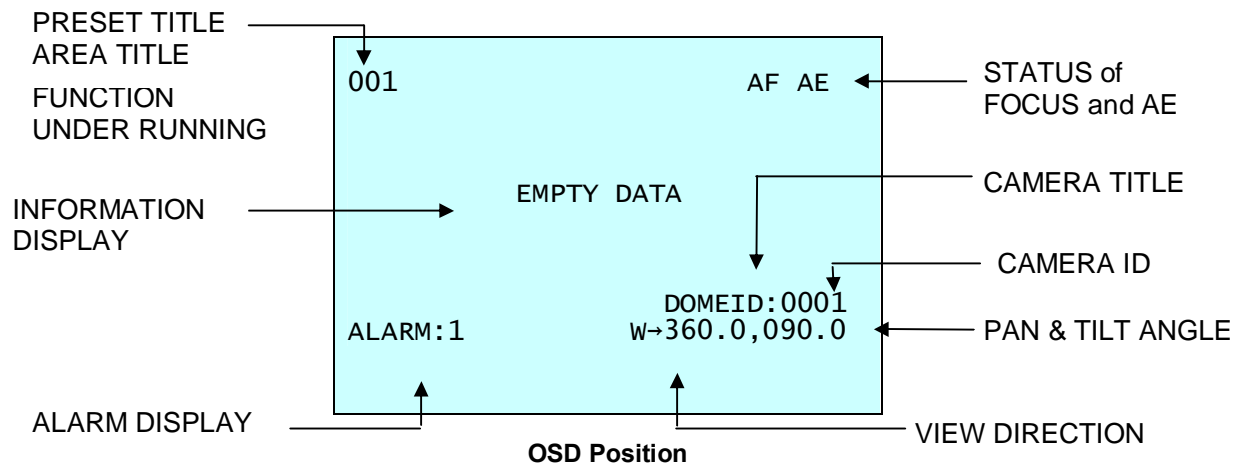
OSD Position

The dome can move the OSD position in the OSD position setup.

```
(AREA TITLE)          (AF AE)
(FUNC TITLE  )




      (CTRL KEY TO MOVE)
 SAVE AND EXIT(ESC TO CANCEL)



(ALARM MESSAGE)    (DOME ID…)
                   (ANGLE…)
```

OSD Position Setup
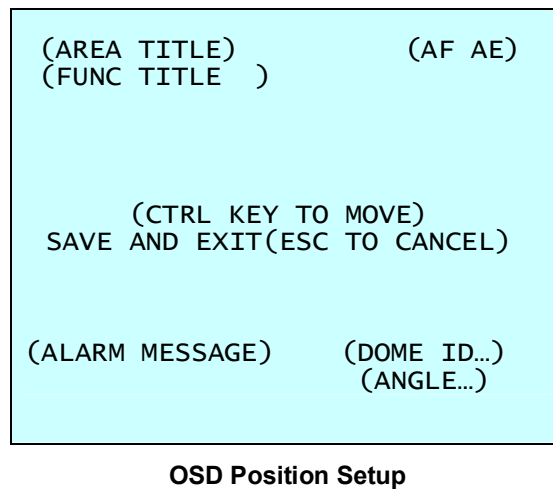
Chapter 3 — Program and Operation

3.1 Dome Camera Selection

Before you program or operate a dome camera, you must select the dome camera by pressing the dome camera No. + CAM

Example: Pressing 1 , 0 and CAM key sequentially will select dome camera 10. The selected dome camera ID will be displayed on the LCD monitor of the keyboard controller.

3.2 Accessing the On-Screen Menu Utility

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

```
            DOME MENU

    AUTO SCAN
    PRESET
    TOUR
    PATTERN
    ALARM
    AREA TITLE
    PRIVACY ZONE
    CAMERA
    DOME SETUP
    FUNCTION RUN
    EXIT(ESC TO EXIT)
```
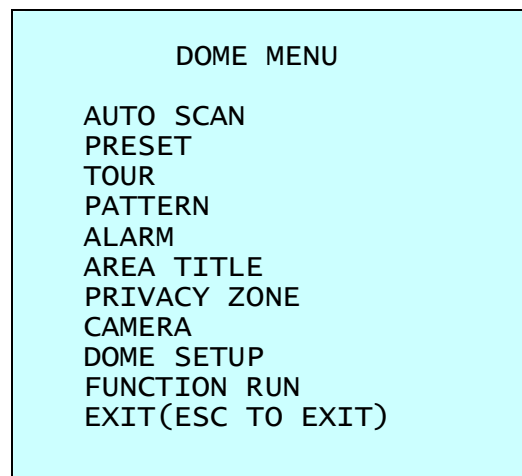
3.3 How to control the On-Screen Menu Utility

Function	Button
Call the On-screen menu utility	MENU
Navigate through the menu items.	Joystick up or down
Go into the sub-menu items.	Joystick left or right or IRIS Open
Change value. Enter the editing title mode.	Joystick left or right or Zoom handle twist or Tele , Wide
Change value of angle	CTRL + Joystick
Enter the changing angle mode.	IRIS Open
Exit the changing angle mode.	IRIS Close
Escape (EXIT)	ESC

3.4 Auto Scan (Shortcut: `SCAN`)

The Auto scan supports up to 17 programmed angles at user-programmable speeds. Follow these steps to program Auto Scan:

```
            AUTO SCAN SETUP

   NUMBER       : 01
   TITLE        : A01
   MODE         : NORMAL
   SPEED        :  5 STEP
   START ANGLE  : ----- -----
   END ANGLE    : ----- -----
   SCAN DIR     : CCW
   SWAP         : OFF
   DWELL        : 03 SEC
   SAVE AND EXIT(ESC TO CANCEL)
```

NUMBER   :01 -08, 10-17, **09**:AUTO PAN mode
TITLE   :up to 12 characters.
MODE   :NORMAL, VECTOR, RANDOM (AUTO PAN mode :NORMAL, RANDOM only)
NORMAL: Move from start point to end point in panning only.
VECTOR: Move from start point to end point including tilt and zoom simultaneously and
              linearly. In some model, the zoom is fixed at wider angle and the zoom magnification
              information is not displayed.
RANDOM: Move randomly between the start point and the end point.

SPEED   : 1 - 13 step, the lower number means the slower speed.
SCAN DIR   : Set the scan direction, CCW(Counter Clock Wise), CW(Clock Wise)
SWAP   : Swap the start point for the end point.
DWELL   : Set the dwell time at the both end, 01 . 99 seconds

1. Press the `SCAN` key to enter the auto scan menu directly. Or press the `MENU` key to display the main menu on the monitor. Scroll to Auto Scan and push the `Joystick` to the right.

2. Select the+NUMBER+and set the desired number by pushing the `Joystick` left or right.

3. Select the %TITLE+and twist the `Joystick` to enter the title edit mode.

4. Twist the `Joystick` by changing the alphanumeric characters and move the next position. Or move down to the character table and press `CTRL` or `IRIS OPEN` at the desired character then the cursor position moves to the next position automatically. Push the `Joystick` left or right at the %ALL DELETE+ field to delete all characters. Push the `Joystick` left or right at the %EXIT+field to finish title edit menu.

```
      TITLE EDIT MENU

  A01
  *
  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)
```

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5. Select "MODE" and "SPEED".

6. Select "START ANGLE". Hold down the **CTRL** key while selecting the start position using the **Joystick**. Current panning position will be displayed. Release **CTRL** key to complete the selection of the start position. Or Press **IRIS Open** then the "CTRL" displays. Move the desired position and the zoom position. Press **IRIS Close** then the "CTRL" disappears. To adjust at the 0.1 degree interval, twist the **Joystick** at the pan field and the tilt field. To adjust at the one zoom interval, twist the **Joystick** at the zoom field.

7. Select "END ANGLE." Hold down the **CTRL** key while moving the Joystick to select the end position. The end position angle should be larger than start position. Release the **CTRL** key to complete the selection of the end position. Or Press **IRIS Open** then the "CTRL" displays. Move the desired position and the zoom position. Press **IRIS Close** then the "CTRL" disappears. To adjust at the 0.1 degree interval, twist the **Joystick** at the pan field and the tilt field. To adjust at the one zoom interval, twist the **Joystick** at the zoom field.

8. Set "SCAN DIR" to CCW or CW.

9. Select "SWAP". Set to ON, to exchange the start angle and the end angle.

10. Set "DWELL TIME".

11. Select Save and Exit and push the **Joystick** to the right or press **IRIS Open**. Press **ESC** or **IRIS Close** to exit the program without saving.

Pressing the **HOME** key delete stored data at the angle field.

To set the position using the preset position:

a. Before entering the Auto Scan menu, select a preset position as a starting point for Auto Scan.

Example: **2** + **PRST** and do step 1 to 4. In step 5, just press the **Ctrl** key at the start angle position, the current position will be displayed as a start position.

b. Save and exit from the menu.

c. In normal mode, call a preset to be the end point of scan. Press **3** + **PRST** then press **Scan** key to enter the Auto Scan menu. Move the cursor position to END ANGLE. Just press **CTRL** key at the end angle position. Save and exit from the menu.

Press **SCAN** key on the angle field to display with the small OSD. Then the screen will show as below.

```
AUTO SCAN AREA SETUP
                    (CTRL KEY)




NUMBER01
START: ----- ----- ---
END  : ----- ----- ---
EXIT(ESC TO EXIT)
```
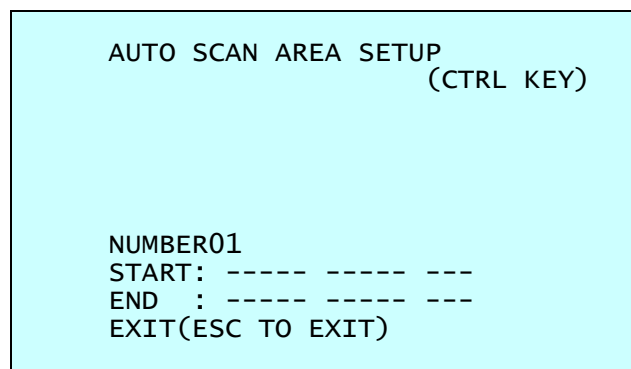
The setting procedure is the same as above.

NOTE: 09:AUTO-PAN mode(Endless panning)

3.5 Preset (Shortcut: PRST)

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. Once programmed, placing the number position and pressing a PRST button on your controller calls up that preset automatically. In addition, presets may be assigned to alarm actions or
as the "home" position for the dome camera. As many as 240 presets, whose positions are saved in the dome's firmware, may be programmed.

There are three pages of preset menu. Each page has 80 presets. Pages can be scrolled
by pushing the Joystick to the Left or Right on the first or last No. of Preset.

```
          PRESET SETUP
    NUMBER   : 001
    TITLE    : ---
    CAMERA SET
    SPEED    : 2 STEP
    DWELL    : --- SEC
       12345678901234567890
    00 ■**----------------
    02 --------------------
    04 --------------------
    06 --------------------
   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 PRST key to enter the preset menu directly. Or press the MENU key to display the main menu on the monitor. Scroll to preset and push the Joystick to the right.

2. Select the blank preset position to be stored by pushing the Joystick up, down, right, or left.

3. After selecting a blank position, press and hold CTRL, Use the Joystick to control the direction of the camera and lens.

4. After aiming the camera (view direction and lens control), release CTRL. The cursor will be on the Title then twist the Joystick handle or Press Tele or Wide Key to edit the preset title. Follow the procedure of the auto scan above to edit titles.

5. Select "CAMERA SET" and pushing the Joystick left or right. 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, ONE PUSH
        Set MOTION: OFF, ON

   Select "MOTION SETUP" and pushing the Joystick left or right. Then the MOTION setup displays.

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```
          MOTION SETUP

          SENSITIVITY : 6
          POSITION    : ALL
          DELAY       : 00 SEC
          OUTPUT      : OFF
          HOLD TIME   : 03 SEC
          EXIT(ESC TO EXIT)
```

Set SENSITIVITY: 1~10
Set POSITION: ALL, CENTER
Set DELAY: 0~5 SEC
Set OUTPUT: OFF,OUT, RELAY
Set HOLD TIME: 3~99 SEC

Select "AE SETUP" and pushing the **Joystick** left or right. Then the AE setup displays. Refer to the AE SETUP in the camera setup.

6. Set Preset Pan/Tilt Motor Speed (1~8 Step)

7. Set "DWELL TIME" (03-99second)

8. To select the next page of presets, scroll the page by pushing the **Joystick** to the Left on the first and last columns of the menu.

9. Repeat steps 2 through 7 for each additional preset position.

10. Select Save and Exit by pushing the Joystick to the right. Press ESC to exit the Preset menu without saving.

NOTE: Press the HOME key at programmed preset position(*) to delete a programmed preset view.

The position, which is marked with ∗, already has the preset view assigned. To review the stored preset, press **PRST** key on the ∗,   The camera will show the stored preset scene.

```
          PRESET AREA SETUP
                         (CTRL KEY)




          NUMBER 001
          PAN     TILT
          000.0  000.0
          EXIT(ESC TO EXIT)
```

Hold down the **CTRL** key while selecting the desired scene using the **Joystick**. Current position will be displayed. Release **CTRL** key to complete. Or Press **IRIS Open** then the "CTRL" displays. Move the desired position and the zoom position. Press **IRIS Close** then the "CTRL" disappears. Select Exit and push the **Joystick** to the right.

3.6 Shortcut of Preset Program

After selecting the desired scene, press No. (**1** to **240**), and press CTRL and PRST subsequently. The current view will be stored to the selected preset number if the preset number is empty. If selected preset number is not empty, "OVER WRITE" message will be displayed on the monitor and select the "OK" and push the Joystick to the right to overwrite.

Example: 1 , 0 , 1 + CTRL + PRST will store current view as preset No. **101**. In this case, focus will be programmed as Auto, dwell time will be set to 3 second, and the current AE mode will be programmed.

3.7 Tour (Shortcut: TOUR)

There are 8 programmable Tours. Each Tour consists of up to 42 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
   SCAN TYPE  :  NORMAL
   SPEED      :   5 STEP
   DWELL      :  -- SEC
     003 A08 --- --- --- --- ---
     --- --- --- --- --- --- ---
     --- --- P01 --- --- --- ---
     --- T02 --- --- --- --- ---
     --- --- --- --- --- --- ---
     --- --- --- --- --- --- ---
   SAVE AND EXIT(ESC TO CANCEL)
```

---	: blank position
SCAN TYPE	: NORMAL/ VECTOR
DWELL	: 03-99 Sec
003	: Preset (1~240)
A08	: Auto Scan (1~8,10~17)
P01	: Pattern (1~8)
T02	: Tour (1~8)

Follow the steps below to program the Tours:

1. Press MENU to display the main menu on the monitor. Scroll to Tour and push the Joystick to the right to enter the Tour menu. Or just press the TOUR key on the keyboard.

2. Select the "NUMBER" and set the desired number by pushing the Joystick left or right.

3. Choose a blank position to be programmed by pushing the Joystick up, down, right, or left.

4. To add a stored preset, twist the Joystick then the stored preset number displays.

5. To place functions other than preset, press TOUR , PTRN , or SCAN for Tour, Pattern or Auto Scan respectively.

6. You can also overwrite the programmed number and to remove a stored number from the Tour, press the HOME key on the stored number, a blank position mark (---) will be displayed.

7. Repeat Step 2 through 5 for each desired position. Each title will be displayed on top
   of the line.
8. To edit the title, follow the procedure of the auto scan above to edit titles

9. Select Save and Exit and push the **Joystick** to the right. Press **ESC** to exit the program without
   saving.

You can expand the Tour sequence by calling other programmed tours.

NOTE: The speed applies in the vector mode only.
NOTE: In the Tour mode, in conjunction with preset and Auto Scan, you can make the camera travel from a preset position to another preset position at a specific speed.

Example: Preset 001>002>003>004>005>006, Auto Scan 01 starts at preset 002, ends at preset 003, Auto Scan 02 starts at preset 005, ends at preset 006; Tour 001, 002, A01, 004,   A02.
<div align="center">

1 ➔ 2   2~3 ➔ 4 ➔ 5~6, repeat
where   ➔ : Quick move, ~ : Programmed speed
</div>

To change the dwell time of the preset in the tour:
Use the **Joystick** to move the cursor to a stored preset position. By pressing **PRST** key, the camera will move to the stored Preset view and the cursor moves to the dwell time field. After changing the dwell time, press **PRST** key and the cursor moves to the preset number.

To assign the functions other than preset in the tour when the function key is not existed:
Use the **Joystick** to move the cursor to a stored preset position. Pressing **CTRL** key or
IRIS OPEN key will change the preset number to other function (auto scan, pattern, tour, preset) with the first programmed number. To change the number, twist the joystick or press **Tele** or **Wide** key.

3.8 Pattern (Shortcut: **PTRN**)

The Pattern feature records user control of the selected dome camera. Up to four 8 patterns can be stored and played back by pressing No.+ **PTRN** keys subsequently.

```
              PATTERN SETUP
                          (CTRL KEY)
    NO        TITLE       SEC    PERCENT
    01 :   P01            000     00.0%
    02 :   P02            000     00.0%
    03 :   P03            000     00.0%
    04 :   P04            000     00.0%
    05 :   P05            000     00.0%
    06 :   P06            000     00.0%
    07 :   P07            000     00.0%
    08 :   P08            000     00.0%
    TOTAL               0000     00.0%
    SAVE AND EXIT(ESC TO CANCEL)
```

Follow steps below to program the Pattern:

1. Press **MENU** to display the main menu on the monitor. Scroll to Pattern and push the **Joystick** to the
   right to enter the pattern menu. Or just press the **PTRN** key on the keyboard.

2. Select the desired pattern to be programmed by pushing the **Joystick** Up or Down. If the pattern is
   not 000, a pattern has already been recorded. Patterns can be overwritten.
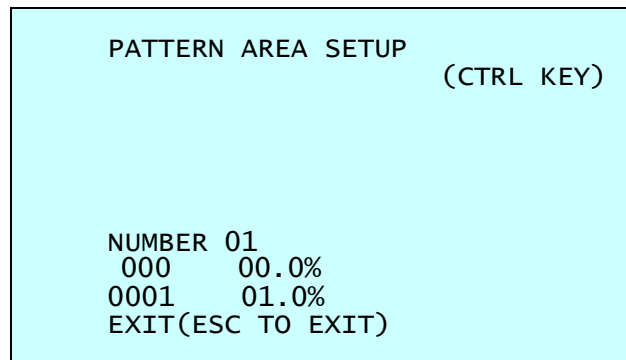
3. Press and hold down the CTRL key while controlling the camera direction and zoom with the Joystick. The dome will be automatically recorded until you release the CTRL key. Or Press IRIS Open then the %CTRL+displays. Move the position and the zoom position. Press IRIS Close then the %CTRL+disappears.

4. Select Save and Exit and push the Joystick to the right. Press ESC to exit the program without saving.

5. To edit the title, follow the procedure of the auto scan above to edit titles.

NOTE: Press the HOME key at any programmed position to delete the pattern.

NOTE: If total recording time reaches 500 seconds, it will automatically stop for a moment.

Press PTRN key on the title field to display with the small OSD. Then the screen will show as below.

```
         PATTERN AREA SETUP
                          (CTRL KEY)




         NUMBER 01
          000     00.0%
         0001     01.0%
         EXIT(ESC TO EXIT)
```

The setting procedure is the same as above.

3.9 Alarm

```
              ALARM SETUP

      NO PRI FUN IN   OUT   HLD LATCH
      01  1  001 NC   OFF    03  OFF
      02  2  A01 NO   OUT    03  OFF
      03  1  --- OFF RELAY 03  OFF
      04  1  --- OFF OUT    03  OFF
      DWELL   :  03
      ALARM OUT SETUP
      SAVE AND EXIT(ESC TO CANCEL)
```
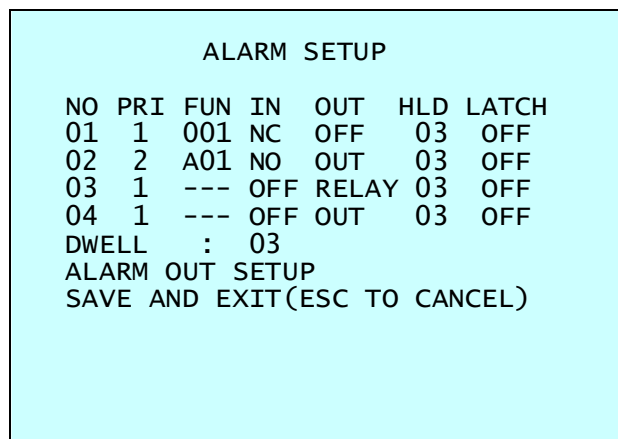
NO   : Alarm input number
PRI(Priority)   : The lower number has higher priority. (0-8)
FUN(function) : Stored function number to be called by alarm.
IN   : NO/NC - normally open /Closed OFF - ignore
OUT   : OUT, RELAY, OFF - No output.
HLD(HOLD)   : Alarm will be held for programmed time (03 to 99 seconds)
LATCH   : ON - Shows all alarms including past alarm.
                   OFF - Shows activated alarms only.
DWELL   :means the dwell time during multiple alarms, 03 to 99 seconds.

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The ALARM OUT setup is helpful when the outdoor housing is used with the dome.
Ex.) When you connect the relay output of the dome to the heater connector of the outdoor housing, the relay output can operate during the setting time only.

```
          ALARM OUT SETUP


     OUT    : ALARM
     RELAY  : 1 MIN
     EXIT(ESC TO EXIT)
```
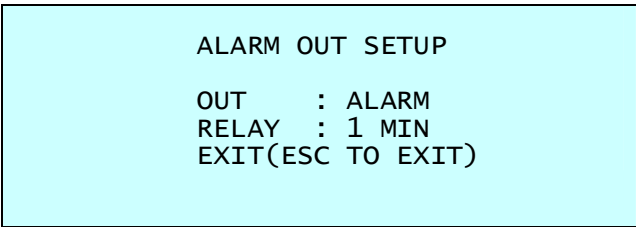
ALARM: the relay output is operated during an alarm operation or by the short key of our keyboard.
1-5 MIN(minute): the relay output is operated during this setting time only by the function run of the dome menu or the short key of our keyboard.
NOTE: This **1-5 MIN** setting is not operated by an alarm.

NOTE: If you disable Alarm by dip switch, Alarm menu will be displayed following screen.

```
           ALARM SETUP



        ALARM DISABLED
      CHECK THE DIP SWITCH

    EXIT(ESC TO EXIT)
```
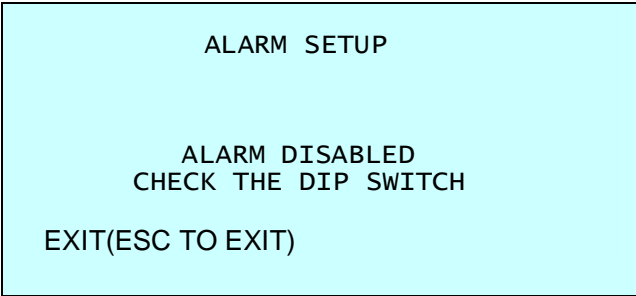
There are 9 levels of priority. The function can be selected by Preset, Auto scan, Pattern or Tour and %+is the highest priority. Lower priority alarms wont be serviced until the higher priority alarm is completed. Equal priority alarms will be serviced repeatedly with the dwell time.

3.10 Area Title

Enter a specific name on programmed angle between START and END. For the screen below, when the camera points at an angle between 124.3° (PAN), 30.7° (TILT) to 359.5° (PAN), 45.4° (TILT), ABC will be displayed on the screen.

```
        AREA TITLE SETUP

    NUMBER      : 01
    TITLE       : ABC
    START ANGLE : 124.3  30.7
    END ANGLE   : 359.5  45.4
    SWAP        : OFF
    SAVE AND EXIT(ESC TO CANCEL)
```
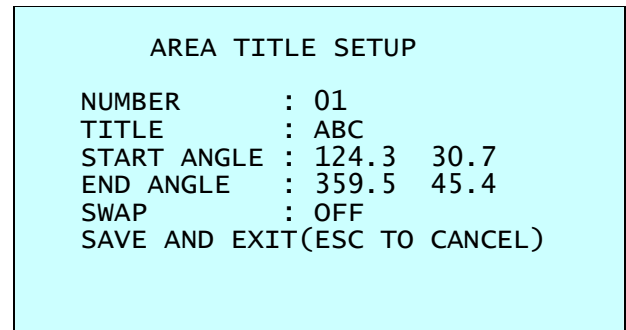
NUMBER   :01 - 16
TITLE   :up to 12 characters.
SWAP   : Swap the start point for the end point.

1 . Select the+NUMBER+and set the desired number by pushing the **Joystick** left or right.

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2. To edit the title, follow the procedure of the auto scan above to edit titles.

3. Select "START ANGLE": Hold down the **CTRL** key while selecting the start position using the **Joystick**. Current panning position will be displayed. Release **CTRL** key to complete the selection of the start position. Or Press **IRIS Open** then the "CTRL" displays. Move the desired position. Press **IRIS Close** 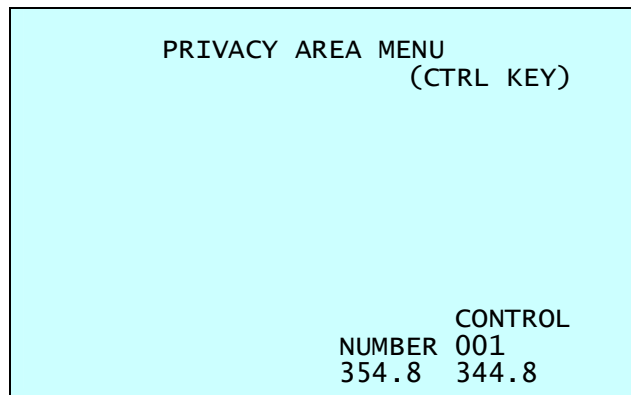then the "CTRL" disappears. To adjust at the 0.1 degree interval, twist the **Joystick** at the pan field and the tilt field.

4. Select "END ANGLE." Hold down the **CTRL** key while moving the Joystick to select the end position. Release the **CTRL** key to complete the selection of the end position.
Or Press **IRIS Open** then the "CTRL" displays. Move the desired position. Press **IRIS Close** then the "CTRL" disappears. To adjust at the 0.1 degree interval, twist the **Joystick** at the pan field and the tilt field.

5. Select "SWAP": Set to ON, to exchange the start angle and the end angle.

6. Select Save and Exit and push the **Joystick** to the right or press **IRIS Open**. Press **ESC** or **IRIS Close** to exit the program without saving.

3.11 Privacy Zone

Hide up to 8 unwanted scenes in a camera.

```
          PRIVACY ZONE SETUP
                              (CTRL KEY)
     NO        TITLE              METHOD
     01 ABC               ON    BLOCK
     02 DEF               ON    V.OFF
     03                   OFF   ----
     04                   OFF   ----
     05                   OFF   ----
     06                   OFF   ----
     07                   OFF   ----
     08                   OFF   ----

     SAVE AND EXIT(ESC TO CANCEL)
```

1. Place the cursor at the title field.
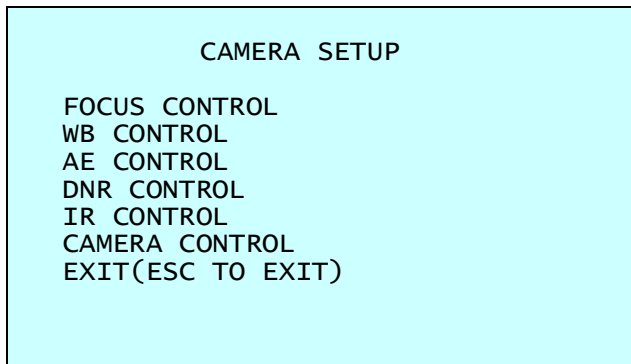
2. Holding down the **CTRL** key displays the privacy area menu while selecting the position using the **Joystick**. Current position will be displayed. Release **CTRL** key to complete the selection of the position.

   Or Press **IRIS Open** then the privacy area menu displays. Move the desired position. Press **IRIS Close** then the "CTRL" disappears and returns to the previous menu.

```
                    PRIVACY AREA MENU
                                   (CTRL KEY)




                                     CONTROL
                           NUMBER 001
                           354.8   344.8
```

3. Place the cursor at the title field. Twist the **Joystick** to enter the title edit mode. Follow the procedure of the auto scan above to edit titles.

4. To turn the stored zone On or Off, twist the **Joystick** handle or press **Tele** or **Wide** Key.

5. Set the method, %BLOCK+or %.OFF(video off)+

6. Select the Save and Exit option by pushing the **Joystick** up or down. Save and exit the program by pushing the **Joystick** to the right. Press **ESC** to exit the program without saving.

Press the **HOME** key to delete programmed privacy zone at the title field.

3.12 Camera Menu

```
                    CAMERA SETUP

        FOCUS CONTROL
        WB CONTROL
        AE CONTROL
        DNR CONTROL
        IR CONTROL
        CAMERA CONTROL
        EXIT(ESC TO EXIT)
```

• FOCUS CONTROL

```
          FOCUS SETUP

   MODE              : AUTO
   FOCUS LIMIT       : 0.5M
   SAVE AND EXIT(ESC TO CANCEL)
```

MODE	AUTO / MANUAL / ONE PUSH / CONSTANT MANUAL
	Use manual mode in normal use.
FOCUS LIMIT	This distance is approximate value and the focus operate 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        :   AWB
   R GAIN      :   ---
   B GAIN      :   ---
   SAVE AND EXIT(ESC TO CANCEL)
```

MODE	AWB / WAWB / INDOOR / OUTDOOR / MANUAL
AWB	Computes the white balance value output using color information from the entire screen automatically.
WAWB	Wide range auto white balance mode
INDOOR	Indoor white balance mode
OUTDOOR	Outdoor white balance mode
MANUAL	Manual mode, you can change R and B Gain manually.
RGAIN	0~255
BGAIN	0~255

RGAIN / BGAIN modes are controllable only in MANUAL Mode

• AE CONTROL

```
          AE SETUP

   MODE              : MANUAL
   DSS LIMIT         : ---
   GAIN              : MIN
   BRIGHT            : 003
   SHUTTER           : 1/60
   FLICKERLESS       : ---
   BACK LIGHT        : OFF
   WDR               : ---
   WDR LEVEL         : ---
   NIGHT SHOT        : AUTO
   SAVE AND EXIT(ESC TO CANCEL)
```

MODE	AE1 / AE2 / SHUTTER PRIO / MANUAL

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AE1	Auto exposure mode1.(Use to normal surroundings : indoor)
AE2	Auto exposure mode2 (Use to high brightness surroundings : outdoor)
SHUTTER PRIO	Variable Shutter speed, Auto Gain.
MANUAL	Variable Shutter speed, Gain.

DSS LIMIT	OFF / x2 / x4 / x8 / x16 / x32 / x64 / x128 / x256 / x512
GAIN	MIN / LOW / MID / HIGH
BRIGHT	10 ~ 50
SHUTTER	1/60(50), 1/100(120), 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, 1/100000
FLICKERLESS	OFF / ON
BACK LIGHT	OFF / BLC / HLC (**NOTE: When BLC or HLC, WDR will be disabled.**)
WDR	OFF / ON (**NOTE: When ON, BACKLIGHT will be disabled.**)
WDR LEVEL	LOW / MIDLOW / MID / MIDHIGH / HIGH
NIGHT SHOT	AUTO / ON / OFF / GLOBAL

NOTE: Values in ( ) are for PAL Camera. The WDR operates in AE1 mode only.
NOTE: When BACKLIGHT set BLC or HLC, focus issues may occur in certain lighting conditions.

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.

The operator can enable NIGHT SHOT for all dome cameras at the same time.
If the NIGHT SHOT mode is set to GLOBAL, %99++ **ENTR** will turn Off the NIGHT SHOT mode and %88++ **ENTR** 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.

• DNR CONTROL

```
        DNR CONTROL SETUP

  2DNR(1)          : 003
  3DNR(1)          : AUTO
  2DNR(2)          : 003
  3DNR(2)          : 001

  SAVE AND EXIT(ESC TO CANCEL)
```

2DNR(1), 2DNR(2)	Select 2D noise reduction level (OFF / 001~007)
3DNR(1), 3DNR(2)	Select 3D noise reduction level (AUTO / 001~028)

NOTE: DNR(1) applied when motor stopped. DNR(2) applied when motor moving.

• IR CONTROL

When used with IR illuminator, changing the zoom ratio automatically synchronizes the IR illuminator.

```
              IR CONTROL

  IR MODE            : SENSOR
  FIXED IR BRIGHT    : 2
  MOVING IR BRIGHT   : 4
  IR ON LEVEL        : 035
  IR OFF LEVEL       : 05
  IR DELAY           : 03
  FIXED IR LEVEL     : 48
  MOVING IR LEVEL    : 17
  MOVING IR MODE     : MIDDLE
  SAVE AND EXIT(ESC TO CANCEL)
```

IR MODE	SENSOR, OFF, ON, DAY/NIGHT
SENSOR	It will be in sync with the built-in brightness sensor of the camera. The IR mode will be controlled according to the illumination.
OFF	Does not use the IR illuminator.
ON	Activates the IR illuminator. Always displays black & white image.
DAY/NIGHT	Synchronizes the IR Illuminator with Day/Night mode of the camera. Set the Day/Night mode so that the product uses the IR illuminator in the night but does not use the illuminator during the day.
FIXED IR BRIGHT	Specify the bright of the Fixed IR illuminator. (0 ~ 4)
MOVING IR BRIGHT	Specify the bright of the Moving IR illuminator. (0 ~ 4)
IR ON LEVEL	Specify the illumination level that activates the IR mode. If the illumination is below the specified level, the indicator will turn on. (31 ~ 99)
IR OFF LEVEL	Specify the illumination level that deactivates the IR mode. If the illumination is above the specified level, the indicator will turn off. (31 ~ 99)
IR DELAY	The duration of both the lighting conditions can be customized to let the IR divert between activation and deactivation. (1 ~ 60)
FIXED IR LEVEL	Specify the level when the Fixed IR is turned off.
MOVING IR LEVEL	Specify the level when the Moving IR is turned off.
MOVING IR MODE	Specify the intensity of the light of the Moving IR in the center of the screen.

NOTE : The IR is turned on, the D/N mode changes BW automatically

```
              CAMERA CONTROL SETUP

   SHARPNESS          : 07
   IR SHARPNESS       : 15
   RESOLUTION         : LOW
   DIGITAL ZOOM       : OFF
   IMAGE FLIP         : OFF
   PRESET FREEZE      : OFF
   STABILIZATION      : OFF
   SAVE AND EXIT(ESC TO CANCEL)
```

SHARPNESS   The higher the value, the more edges in the picture will be
                   enhanced. (0~15)
IR SHARPNESS   In IR Mode the higher the value, the more edges in the picture will be
                   enhanced. (0~15)

RESOLUTION   Select resolution mode (LOW / MID / HIGH)
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.
STABILIZATION ON: To increase the stability of an image from frame-to-frame jitter with shaking.

3.13 Dome Setup

```
        CONFIGURATION MENU

   LANGUAGE          : ENGLISH
   HOME FUNCTION SETUP
   OSD DISPLAY
   VIEW ANGLE SETUP
   INITIALIZE DATA
   DOME RESET
   SYSTEM MENU
   SYSTEM INFORMATION
   SAVE AND EXIT(ESC TO CANCEL)
```

• LANGUAGE SETUP

LANGUAGE　　　　　　　　: Select the language you want.

• HOME FUNCTION SETUP

```
       HOME FUNCTION SETUP

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

HOME FUNCTION　　　: None/ Tour/ Pattern / Auto Scan / Preset
FUNCTION NUMBER　: - - -
WAITING TIME　　　　: 10~240 Seconds
FUNCTION ENABLE　: ON/ OFF

The Home function can be set so that the camera automatically goes to Preset, Tour, Pattern, Auto Scan after the keyboard controller has been idle for a 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 Home Function by pushing the **Joystick** to the right or to the left to scroll through the None, Tour, Pattern, Auto Scan or Preset functions.
2. Select Function Number and push the **Joystick** to the right or to the left. The recorded function number will scroll.
3. Select Waiting Time and push the **Joystick** to the right or to the left to select from 10 to 240 seconds.
4. Select Function Enable and turn to ON or OFF by pushing the **Joystick** to the right or to the left.

• **OSD DISPLAY**

```
            OSD DISPLAY SETUP

    CAMERA TITLE          : DOMEID
    VIEW DIRECTION        : OFF
    DOME OSD              : ON
    AREA TITLE            : OFF
    PRESET TITLE          : CONSTANT
    FOCUS EXPOSURE        : ON
    OSD POSITION SETUP

    SAVE AND EXIT(ESC TO CANCEL)
```

CAMERA TITLE   : up to 6 characters.

VIEW DIRECTION   : ON / OFF
 %ON+sets current direction as N(north) and the coordinate angle to 000. %OFF+hides the
  directional title. Every 90 degrees of clockwise rotation will change the title to E(East), S(South),
  W(West). If using the ON/OFF option frequently, it is recommended that you set %North+as a Preset.
  Recall the %North+Preset before enabling the directional title.

DOME OSD   : ON / OFF
   All display or title will disappear when DOME OSD DISPLAY sets OFF

AREA TITLE   : ON / OFF
   If this option is enabled, the area title displays when the camera moves.
   Note: The DOME OSD DISPLAY must be enabled.
PRESET TITLE   : CONSTANT / OFF / 3, 30, 60,120,180 second
        Set the preset title display time.

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

OSD POSITION SETUP
  Select the OSD option with **Joystick** up and down, press **CTRL** and adjust the position by
 Joystick .

```
(AREA TITLE)                  (AF AE)
(FUNC TITLE)




          (CTRL KEY TO MOVE)

     SAVE AND EXIT(ESC TO CANCEL)



  (ALARM MESSAGE)    DOMEID…XXXX
                     XXX.X  XXX.X
```

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• VIEW ANGLE SETUP

```
              VIEW ANGLE SETUP

      PANNING RANGE
      FLIP             : ON
      TILT ANGLE LIMIT : 00°
      SAVE AND EXIT(ESC TO CANCEL)
```

FLIP ON / OFF
    OFF   the dome camera moves until 90° vertically.
    ON   When the camera reaches the floor directly above the moving object, it will stop. At that time, release the **Joystick** handle instantly and pull it down again to run the auto-flip function. When you use the panning range, we recommend using the flip mode to ON.

    TILT ANGLE LIMIT   -10 ~ 10
      This option is used to set the limit of the horizontal view

PANNING RANGE
    When the dome camera is installed near a wall, panning range can be limited by user.

```
          PANNING RANGE SETUP
                        (CTRL KEY)

      RIGHT LIMIT : 000.0
      LEFT LIMIT  : 000.0
      ENABLE      : OFF
      SWAP        : OFF
      AUTO PAN    : ON
      SAVE AND EXIT(ESC TO CANCEL)
```

1. Place the dome camera under 90 degree vertically.
2. Set the right limit by pushing the **Joystick** to the right.
3. Set the left limit by pushing the **Joystick** to the left.
4. Set ENABLE to ON to use

To exchange the right and the left limit, set SWAP to ON.
To apply limits on the auto pan (endless panning), set AUTO PAN to ON.

NOTE: When you use the panning range, we recommend using the flip mode to AUTO. When the flip mode is 90°, 100°, 110° or 120° and you moves over 90° vertically, the panning range operates in opposite side.
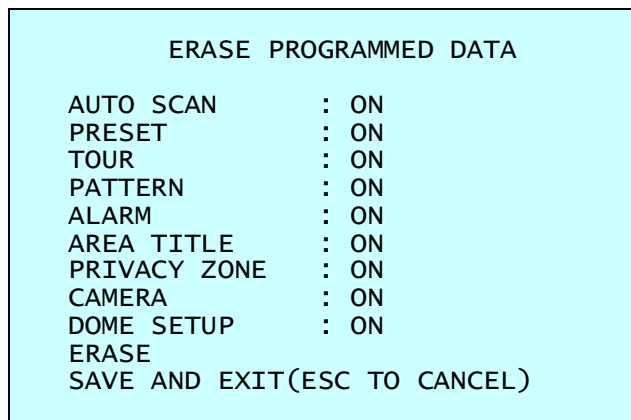
• INITIALIZE DATA

```
        INITIALIZE DATA

FACTORY DEFAULT
ERASE PROGRAMMED DATA
PRESET FOCUS DEFAULT
EXIT (ESC TO CANCEL)
```
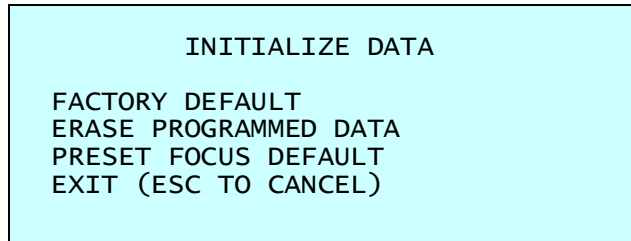
FACTORY DEFAULT
   Select the Factory Default to initialize the Data.

```
        FACTORY DEFAULT

        ARE YOU SURE ?

            CANCEL
             OK
```
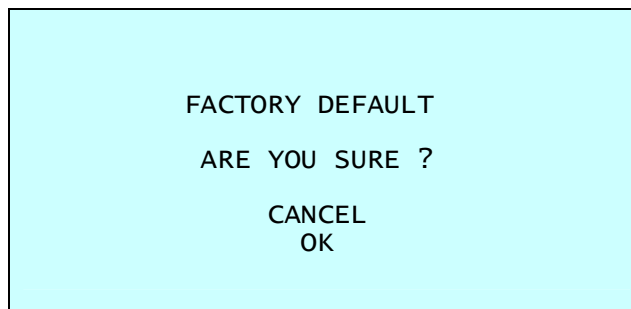
ERASE PROGRAMMED DATA
   Erase all stored data from the Flash-ROM of the selected dome camera. You will be asked to enter
   ON or OFF. If you desire to erase all data then select the Erase Run, otherwise press the **ESC** key to
   exit without erasing. The erased data includes all
   stored data (auto scan, presets, and toursõ .) except origin offset.
   The offset value is still valid after all data is erased. The offset value can be zero with default set of
   Offset origin menu.

```
        ERASE PROGRAMMED DATA

AUTO SCAN        : ON
PRESET           : ON
TOUR             : ON
PATTERN          : ON
ALARM            : ON
AREA TITLE       : ON
PRIVACY ZONE     : ON
CAMERA           : ON
DOME SETUP       : ON
ERASE
SAVE AND EXIT(ESC TO CANCEL)
```

PRESET FOCUS DEFAULT

This menu set the default mode of the focus when you save the preset.

```
              PRESET FOCUS DEFAULT

     FOCUS        : AUTO


     SAVE AND EXIT(ESC TO CANCEL)
```

FOCUS   : AUTO/MANUAL/ONE PUSH

• DOME RESET

```
               DOME RESET

             ARE YOU SURE ?

                 CANCEL
                   OK
```

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

• SYSTEM MENU

```
                SYSTEM MENU

      MOTOR SETUP
      PASSWORD EDIT
      ORIGIN CHECK
      WHITE DEFECT COMPENSATION
      PASSWORD ENABLE    : OFF
      MENU TIME OUT      : OFF
      BLINK CURSOR       : ON
      DOME ANSWER        : ON
      SAVE AND EXIT(ESC TO CANCEL)
```

PASSWORD ENABLE   : ON (requires the password to enter menu) / OFF
MENU TIME OUT   : ON(5mintues) / OFF(always menu display)
BLINK CURSOR   ; ON / OFF(no blinking cursor)
DOME ANSWER   ; ON / OFF(no acknowledge command from the dome) This option is
helpful to escape the collision of the command using some DVR.

MOTOR SETUP

Motor Setup menu provides the pan and tilt speed of a camera. User can set the desired speed with twist the **Joystick** left or right. During operation, pressing **153** **+** **ON** will change the speed to the SLOW mode and pressing **153** **+** **OFF** will change the speed to the Normal mode.

Holding and pressing **CTRL** and moving the joystick will operate with the TURBO speed mode.

```
              MOTOR SETUP

  PROPOTIONAL P/T      : ON
  P/T MODE             : NORMAL
  SAVE AND EXIT(ESC TO CANCEL)
```

PROPOTIONAL P/T   : ON / OFF
P/T MODE   : SLOW / NORMAL / TURBO

PASSWORD EDIT

```
       PASSWORD EDIT SETUP
                    (CTRL KEY)
  INPUT PASSWORD
  PASSWORD :

    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 ( )

    SAVE AND EXIT (ESC TO EXIT)
```

You can change the password with 6-digit character in this menu.
The default password is **555555**.
When the password enable is on, the input password window displays to enter the menu.
At this time, move the cursor to the desired character by the joystick and press **CTRL** or **IRIS OPEN**.

ORIGIN CHECK

When you find the wrong position of the dome during operation, execute this origin check and the dome camera will arrange the right position after the origin check operation.
Pressing **151** **+** **ON** will execute the origin check.

```
              ORIGIN CHECK

           ARE YOU SURE ?

               CANCEL
                 OK
```

WHITE DEFECT COMPENSATION
 wWhite defect of CCD sensor will be compensated.

```
WHITE DEFECT COMPENSATION

     ARE YOU SURE ?

        CANCEL
          OK
```

• **SYSTEM INFORMATION**

```
        SYSTEM INFORMATION

CAMERA TYPE   : xxxx
H/W VERSION   : Vx.xx
ROM VERSION   : Vx.xx
PROTOCOL      : xxxx
BUADRATE      : 9600
IR VERSION : x.xx

EXIT(ESC TO EXIT)
```

The system information provides essential information about the dome camera if service is required.
When you view this screen, you can determine the camera type, ROM version.
The information on this screen cannot be modified.

3.14 Dome Communication

```
DOME COMMUNICATION SETUP

COMMUNICATION MODE : H/W

  DOME ID    X001
   PROTOCOL   AUTO
   BAUDRATE   9600
   PARITY     NONE

SAVE AND EXIT(ESC TO CANCEL)
```

1. Select the desired Function by pushing **Joystick** Up or Down.

2. Select the number by twist the **Joystick** in DOME ID, PROTOCOL, BAUDRATE, and PARITY.

 COMMUNICATION MODE : H/W (Hardware) , S/W(Software)
 DOME ID   : 000 - 999
 PROTOCOL : **Auto(default)** / F2,F2E / Sensormatic / Pelco-P/D / Vicon / Ernitec /
                 F2/ Philips / Dynacolor
 BAUDRATE : 2400/4800/**9600(default)/**19200/38400 bps
 PARITY   : None, Even

3.15 Function Run

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

```
             FUNCTION RUN SETUP
                              (CTRL KEY)

     PRESET          : ---
     PATTERN         : ---
     TOUR            : ---
     SCAN            : ---
     HOME
     AUTO PAN
     ALARM OUT       : ---
     EXIT (ESC TO EXIT)
```

3. Select the desired Function by pushing **Joystick** Up or Down.

4. Select the number by twist the **Joystick** in PRESET,PATTERN,TOUR, and SCAN.

5. Press **CTRL** or **IRIS Open** to execute.

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

- **HOME**
 Select the HOME menu and press **CTRL** key. Then dome camera goes to the default position to which the dome camera returns after an assigned period of inactivity passes.
The default position may be a Preset, Tour, Pattern or no action.

- **AUTO PAN**
 You can execute the endless auto pan which is to turn one direction continuously by select the Auto Pan.

- **ALARM OUT**
This function can operate only when the relay output setup has the time in the alarm menu.
Ex)

```
          ALARM OUT SETUP

          OUT    : ALARM
          RELAY  : 1 MIN
          EXIT(ESC TO EXIT)
```

You can select RELAY and press **CTRL** or **IRIS Open** then that relay operates during the setting time only.

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3.16 Motion Setup

The motion detection function is available in the preset mode only. After you set the motion in any preset, when you call the preset with the motion, the motion detection operates.
In the preset setup, you can set the motion setup as below.

```
        PRESET SETUP
    NUMBER   : 001
    TITLE    : ---
    CAMERA SET
    DWELL    : --- SEC
       12345678901234567890
    00 ■**-----------------
    02 --------------------
    04 --------------------
    06 --------------------
 NEXT PAGE
 SAVE AND EXIT(ESC TO CANCEL)
```

```
    PRESET CAMERA SETUP

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

To enable the motion on the preset, set MOTION to **ON**.
To enter the motion setup, push the joystick to right on the motion setup.

```
          MOTION SETUP
     SENSITIVITY   : 6
     POSITION      : ALL
     DELAY         : 00SEC
     OUTPUT        : OFF
     HOLD TIME     : 03SEC
     EXIT(ESC TO EXIT)
```

SENSITIVITY : 1-10
POSITION : ALL,CENTER(the center box displays): motion detection area.
DELAY : 00-05SEC : The delay time is used to make adjustments for scenes that have sudden changes such as lights and shadows created by headlights
 of nearby traffic. The motion action occurs only when the motion keeps continuously during the delay time,
OUTPUT : OFF,OUT,RELAY
HOLD TIME : 03-99SEC: The hold time starts to count after the motion detects.

When a motion occurs, the dome activates the relay output, displays the message of %MOTION+on the screen, and sends the command of %ALARM 8+to the keyboard.

Appendix A — Specifications

36x FASTRAX V IR SPEED DOME CAMERA

MODEL	36x
MODULE	
CCD Type	1/4" Super HAD CCD II (Double Scan)
Optical / Digital Zoom	**36X / 16X**
Resolution (NTSC/PAL)	700 TVL
Focal length	f = 3.4mm ~ 122.4mm
Angle of view	3.4mm . 56.0° (H) 122.4mm . 1.9° (H)
F-Number	F1.6 ~ F4.5
Min. Illumination	
-Normal	0.1 Lux
-ICR on & Slow Shutter	0.00001 Lux
ICR on (Day & Night)	YES
WDR	YES
Motion Detection (in PRESET)	YES

* Specifications are subject to change without notice x

Electrical	
Input Voltage	12VDC
Power Consumption	36W
Alarm Output	1 TTL output, 1 Relay output 24VDC/1A Max. (selectable NC/NO)
Alarm Input	4 Normal dry contact (selectable NC/NO)
Control	RS-485 baud rate: 2400~38.4k bps (default: 9600bps)
ID (Camera Address)	999 (3999 by software setting)
Built-in IR	Synchronized IR LED & Fixed IR LED
Mechanical	
Dimension	see dimension drawing
Weight	Approx 4.9 kg for dome
Pan Angle	360° continuous rotation
Speed	0.1° to 380°/sec. (proportional to zoom)
	Preset Speed: Max. 380°/sec
Flip	90° Auto Flip
Auto Scan	16 auto scans and one endless panning
Preset Position	240 positions with camera status (12-character title)
Tour	8 tours
Pattern	8 patterns, up to 500 second
Privacy Zone	8 Privacy Zones with Block or Video OFF option
On-Screen Display	Displays camera ID and area name on screen
Environment	
Operating temperature	-20°C to 50°C (-4°F to 122°F)
Operating humidity	0 to 90%RH (non-condensing)

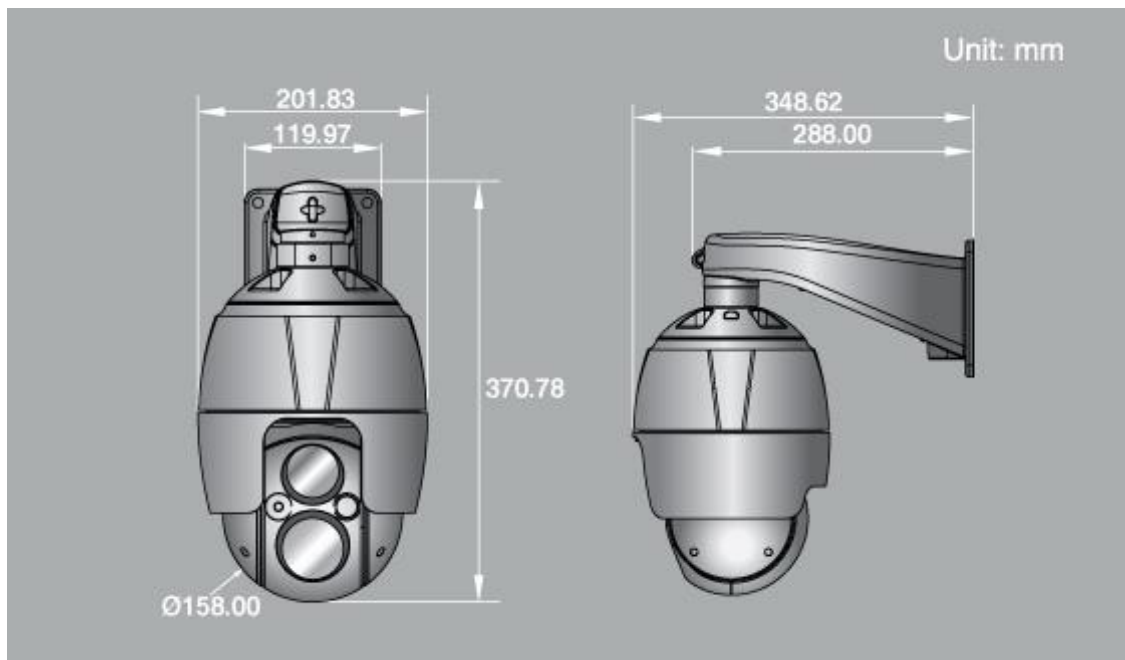* *Specifications are subject to change without notice.*

Figure 8 – Dimension

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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 dome camera. Check that 8-pin cable is connected to the Keyboard. 8-pin cable for Keyboard is proprietary. Cable for video is shielded.
Dome cameras lose their positions.	Reset the cameras using the Dome configuration menus. Check that the dome cameras are inserted properly in the base. Check the voltage level of the dome camera.
Camera number does not match the multiplexer number.	Check the camera ID and insert the BNC cable into the proper input of the multiplexer.

Appendix C — Glossary

ALARM ACTIONS
The assigned responses for the dome camera when inputs change from normal to abnormal states. The dome may run a Preset, Pattern, or have no assigned action for each of the four dome inputs. The dome may also send alarm states to the host controller for processing. See also Input and Normal Input State.

AREAS
Programmed start and end points of the dome's field of view around its pan axis.
Each area is a part of a circular viewing area that extends around the dome. The areas can be different sizes. Up to 16 areas can be programmed for the dome.

AUTOMATIC GAIN CONTROL (AGC)
Allows for the amplification of the video signal in scenes with minimal ambient light. Many low-light scenes result in picture noise. As gain is increased, the picture noise is also amplified. When AGC is enabled, the value of the gain setting is based on feedback from the camera. When AGC is disabled, the camera uses the value set for the manual gain setting. The trade-off between picture level and noise may be adjusted when AGC is disabled.

ON-SCREEN MENU
The text overlay menu system used for setting dome features. The utility is accessed using a keystroke combination. The utility provides settings for camera functions, zoom, alarms, text display, and password protection.

FLIP
Allows the dome to automatically turn 180 degrees when the camera tilts to its lower limit and stays in that position for a brief delay. When the dome flips (rotates), the camera starts moving upward as long as the tilt control is kept in the down position. Once the control is released, the tilt control returns to its normal operational mode. The flip feature is useful when you need to track someone who walks directly beneath the dome and continues on the other side.

HOME POSITION
The default position to which the dome camera returns after an assigned period of inactivity passes. The default position may be a Preset, Tour, Pattern, or No Action.

INPUT ALARM
A connection point on the dome camera that enables the system to monitor Input Devices. There are four inputs available for the dome camera.

INPUT DEVICES
External devices that provide information about the condition of system components that connect to the inputs on the dome camera. Typical input devices include door contacts, motion detectors and smoke detectors.

IR MODE
A feature of the camera that permits manual or automatic switching between color and IR (black-and-white) operation. When IR mode is active, clearer images may be obtained under low-light conditions.

NAME INFORMATION
Relates to the display the dome name, the area where the dome is pointing, the name of the preset or pattern that is running, and alarm names. The display of each type of name setting can be enabled or disabled. When the display of camera or area title(name) is enabled, the information appears on the screen continuously. Preset, tour and pattern titles(names) appear only while they are active.

NORMAL INPUT STATE

Describes the expected state of a device connected to one of eight dome camera's inputs. The normal state may be open or closed. When a device is not in its normal input state, an alarm is issued.

NORTH POSITION

User-definable setting that may correspond to magnetic north or some well-known landmark.
Used to approximate the camera dome's pointing direction when Direction Indicators are enabled.

SLOW SHUTTER

Setting used to improve the quality of video obtained in extreme low-light situations. When the Low Shutter setting is enabled, low-light information is collected over multiple fields based on the Shutter Limit setting. As a result, video may appear blurred or choppy in extreme low-light situations. This setting does not effect camera operation in normal lighting situations.

PATTERN

A series of pan, tilt, zoom and focus movements from a single programmable dome. Up to 8 patterns may be programmed for the dome camera.

PRESET

Programmed video scene, based on a specific pan, tilt, zoom, and focus settings. Up to 240 presets may be programmed for the dome camera.

PRIVACY ZONES

Masked areas of the dome camera's viewing area. These masks prevent operators of the surveillance system from viewing these designated zones. The Privacy Zones move in relation to the dome camera's pan/tilt position. In addition, the apparent size of the Privacy Zone adjusts automatically as the lens zooms in or out. Up to eight Privacy Zones may be established for a dome camera.

SHUTTER LIMIT

Setting used to define the maximum exposure time for the Open Shutter setting. The values for the setting range from 1/2 to 1/60. The default setting is 1/4.

VECTOR SCAN

Move from start point to end point including tilt and zoom simultaneously and linearly.

WHITE BALANCE

Adjustments in the color hue (red and blue) gains for a camera so that true white appears white in the image. It is normally compensated for by the automatic gain control. In some lighting conditions, you may need to manually adjust the red and blue settings for optimal viewing. When Automatic White Balance is enabled, the camera measures the image and automatically adjusts the red and blue settings to balance white. When Automatic White Balance is disabled, the camera uses the values set for the red and blue settings to balance white.

Appendix D — Short Cut Key

Short Cut Key	Function		
PRST	Pop up preset setup menu.		
TOUR	Pop up Tour setup menu.		
PTRN	Pop up Pattern setup menu.		
SCAN	Pop up Auto Scan setup menu.		
NO.+ CTRL +PRST	Store the current view at the selected number.		
Short Cut Key	**Function**	**Short Cut Key**	**Function**
1 + ON	Turn On Alarm Out	1 + OFF	Turn Off Alarm Out.
2 + ON	Turn On Relay Out.	2 + OFF	Turn Off Relay Out.
7 + ON	Change FOCUS to AUTO	7 + OFF	Change FOCUS to manual
8 + ON	Change AE to AUTO	8 + OFF	Change AE to manual
9 + ON	Change Night Shot to AUTO		
10 + ON	Night Shot on (go to the manual mode)	10 + OFF	Night Shot off (go to the manual mode)
11 + ON	BLC on (AE auto mode)	11 + OFF	BLC off (AE auto mode)
12 + ON	Digital Zoom on (According to digital zoom setting)	12 + OFF	Digital Zoom off
13 + ON	Dome OSD on	13 + OFF	Dome OSD off
14 + ON	Dome Area Title Display on	14 + OFF	Dome Area Title Display off
15 + ON	View Direction on	15 + OFF	View Direction off
100 + ON	Shutter speed auto		
101 + ON	Shutter speed 1/4(PAL 1/3)sec		
102 + ON	Shutter speed 1/2 sec		
103 + ON	Shutter speed 1 sec		
104 + ON	WDR ON	104 + OFF	WDR off
105 + ON	Image Stabilizer ON	105 + OFF	Image Stabilizer off
150 + ON	Image Flip ON	150 + OFF	Image Flip off
151 + ON	Origin Check		
152 + ON	Place the camera in the 0° area horizontally.		
153 + ON	Go to the slow speed mode	153 + OFF	Go to the normal speed mode
154 + ON	Display System Information		
155 + ON	Flip the camera in the 180° area horizontally.		
250 + PRESET	Set the dome ID up to 3999		
888 + ENTER	Night Shot on (in the global mode only)		
999 + ENTER	Night Shot off (in the global mode only)		

* Some function may not operate according to the model.

REVO ELITE 36x IR SPEED DOME CAMERA