

9840 Series PTZ Domes Operation/Programming Manual



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Chapter I – Product Description

With its 9840 Series of IP domes, DVTel offers a line of cost-effective and highly reliable security cameras that represent the peak of CCTV surveillance/security technology.

Utilizing newly developed digital signal processing technology, the 9840 Series Domes provide clear and crisp images with high resolution and sensitivity. Their excellent image controls, such as auto iris, white balance and backlight compensation enable them to reproduce smear-free images and natural colors even in poorly illuminated areas.

The domes support a total of 128 presets, 1 autopan and 4 patterns to facilitate site surveillance. Each preset can be called up either manually or automatically upon alarm. Altogether, 2 alarm inputs and 1 relay output are provided internal to the dome and 1 alarm input and 1 output are available for network control, significantly enhancing the domes' alarm handling capabilities. The number of presets varies in different protocols.

The domes provide an "area" feature that divides the whole surveillance site into a maximum of 16 sections, each with an independently defined text description. Privacy mask can be defined to prevent users from viewing undesirable areas.

When no command is received for a certain period of time, the domes can automatically return to "home position" (a selected preset, autopan point or pattern point). An "auto flip" feature enables the dome to turn 180 degrees to follow a subject passing right beneath it.

Advanced data backup function to reserve the data set before regardless of changing dome core or not. Parameters could also be read as preset, autopan, pattern and so on.

Other features include on-screen information display; menus for dome setup, and built-in surge protection.

A variety of 9840 models are designed to suit different applications, installation sites and budgets. Their compact structure and user-friendly design significantly simplify the installation procedures as well as the maintenance routines.

Chapter II – System Features

2.1 High-Performance Image

- The 9840 Series Domes utilize a newly developed 1/4" CCD that features significantly optimized image quality and dramatically reduced smear level.
- The **Digital Slow Shutter (D.S.S.)** allows for considerably long exposure times of 1/1.5 second, enabling cameras to capture more color data. This also greatly enhances their sensitivity.
- Available with 18X optical zoom ("E" models), 23X optical zoom ("D" models) and 35X ("Z" models).

2.2 Outstanding A.I. Camera

- The domes provide continuous **auto focus** to help operators navigate a surveillance site or track a moving subject.
- The pan and tilt speeds are automatically adjusted in proportion to the zoom position. This capability ensures steady images when the camera moves.
- When surrounding illumination changes, the camera automatically adjusts its iris size (**auto iris**) to keep the output image at a fixed level of lighting.
- The **auto white balance** function features built-in sensors to measure the current color temperature, and uses an algorithm to process the image so that the final output image may be close to what the human eyes see.
- Operators can use the **backlight compensation** feature to automatically adjust the exposure level for an object in a strong light background, so as to avoid a sharp contrast of brightness and darkness that usually leads to a vague silhouette of the object.

2.3 Automated Operation

- Up to 128 **presets** (pre-defined pan/tilt/zoom positions) can be programmed and stored in the non-volatile memory of the domes. Each preset can be called up either manually via keyboard or automatically upon alarm.
- In addition to presets, the 9840 Series Domes also provide four **patterns** (recorded navigation courses) to facilitate routine surveillance. Users can easily activate a pattern with simple keystrokes.
- "**AUTOPAN**" function, 4 autopans could be provided in total. Once called up, enables the domes to scan through a surveillance area automatically. A description title for the AUTOPAN can be programmed and stored in the domes.
- The domes, after receiving no command for a certain period of time, will automatically return to a preset position ("**home**").

position").

- When a tilt operation exceeds the straight down position, e.g., when following a person that moves right beneath the dome, the domes will automatically rotate 180 degrees. This "auto flip" feature eliminates the possibility of inverted images, and ensures that the surveillance view will always be seen in an upright position.

2.4 Area Partition and Privacy Mask

- With the help of the "area partition", users can divide the whole surveillance area into a maximum of 16 sections, and define a 16-character description title for each section.
- To prevent users from viewing a specific sensitive place, the 9840 Series Domes feature a "privacy mask" that can screen out the undesirable area.

2.5 Intuitive Menu Programming

- The 9840 Series Domes provide text overlay menus for setting up operation parameters. The menus are mostly self-explanatory and easy to operate with a joystick or virtual joystick.
- Various functions may be programmed via on-screen menus, including lens and pan/tilt parameters, camera A.I. controls, on-screen title descriptions, area partition, privacy mask and other automatic operations.

2.6 Powerful Alarm Handling

- The domes provide 2 alarm inputs to follow external alarm devices such as motion sensors, door contacts, etc. Upon alarm, the domes will be automatically return to a certain preset.
- The preset to call upon alarms as well as their normal states (open or closed) can be easily configured via on-screen menus.
- As an added security feature, 1 alarm output is also provided to activate such auxiliary devices as time elapse recorders or digital video recorders.
- One network alarm input and 1 network relay output are provided for enhanced NVMS operation.

Chapter III – Dome Operation

Before attempting to power up and operate the domes, please make sure that the domes have been properly installed and the DIP switches have been correctly set. By default, the dipswitches on the IP dome do not need to be changed.

3.1 System Initiation




Once powered, the domes automatically perform an initiation sequence to start configuration and check the system status. They will pan, tilt and zoom to verify the correctness of system parameters as well as the normal operation of the dome drive.

When initiation is finished, the domes stops, the dome will display the camera ID number, the selected protocol, the baud rate, the version of the embedded software, and indicates the success of the auto detection.

The information will remain on screen until dome operation starts.

3.2 Basic Operations

The 9840 Series Domes can be controlled via a PTZ keyboard or a software controller.

Operations	Instructions
Camera Call-up	NOTE: The dome cameras must be called up to (put under the control of) a keyboard before operation or programming. To call up a camera, enter the camera ID number, and press the CAM key.
Pan & Tilt	Move the joystick in the desired direction. 
Zoom In	Press the TELE key, or turn the joystick clockwise for a close view of distant objects. 
Zoom Out	Press the WIDE key, or turn the joystick counter-clockwise for a wide scene. 
Iris Open	Press the OPEN key to manually increase the aperture to make the image brighter.

Iris Close	Press the CLOSE key to manually decrease the aperture to make the image darker.
Focus Near	Press the NEAR key to manually adjust focus on near objects.
Focus Far	Press the FAR key to manually adjust focus on distant objects.

For more details on camera control and video switching operations, please refer to relevant manuals supplied with your system. Operations concerning some particular features of the domes will be further discussed in the next chapter, Menu Programming.

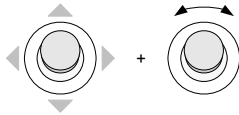
3.3 Setting and Calling up a Preset

Presets enable users to pre-define and save camera information such as pan/tilt angle and zoom to create specific views that can be called up for display either automatically (upon home position or alarm) or manually (via keyboard commands). The 9840 Series Domes are capable of storing up to 128 such camera views.

The following is a brief introduction on how to define and call up a preset using the CCTV or virtual GUI joystick.. For preset instructions on your control system, please refer to relevant manuals provided with your system keyboard.

To set a preset view

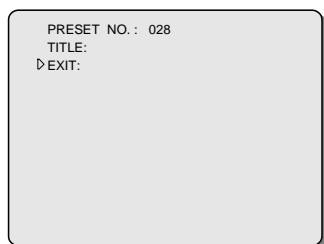
1. Move the joystick to change the pan/tilt and lens positions;



2. Enter the preset number on the keypad, and press the SET PRESET key to store the settings;

Note: If the PRESET TITLE DISP entry of OSD SETUP menu (see section 4.6) is set to “ON”, a description title must be assigned to the preset. Otherwise, if “OFF”, skip to step 9.

3. When the following information is displayed, move the cursor to the first entry of the TITLE item;



4. Deflect the joystick downward (or upward) to select a suitable character (or a space);
5. Move the cursor to the next entry;
6. Repeat Steps 6 through 7 until the whole title has been edited;
7. Exit the title editing menu by deflecting the joystick leftward at the EXIT entry;

To call up a preset








1. Enter the desired preset number on the keypad, and press the CALL PRESET key to call up.

Chapter IV – Menu Programming

The 9840 Series Domes feature on-screen overlay menus for setting up various operation parameters. To utilize functions like AUTOPAN, home position, area partition and privacy mask, appropriate settings must be defined via these menus.

4.1 Menu Navigation and Operation

You can call up and navigate through the programming menus using a CCTV or virtual GUI joystick, and define system parameters. For guidelines on menu navigation and operation, please refer to the table below. Please note that these operations are made in the **PROGRAM** mode.

Operation	Guidelines
Access the Main Menu	For DVTEL protocol, press M (menu) key from virtual GUI joystick or enter 95 and then press the CALL PRESET key.
Position the Cursor	Move the joystick in the desired direction. 
Access a Sub-Menu	Move the cursor to the sub-menu, and deflect the joystick rightward.  DSET CAMERA ID → CAMERA ID : 001
Return to the Main Menu	Move the cursor to the bottom line (Return), and deflect the joystick leftward.  DReturn → 
Select a Parameter	Move the cursor to the desired parameter entry, deflect the joystick upward (or downward) to choose an appropriate value, and then move the cursor back or to the next entry field.  DDIGITAL ZOOM: OFF → DIGITAL ZOOM: D0FF  DDIGITAL ZOOM: D0N → DDIGITAL ZOOM: ON
Exit the Main Menu	Move the cursor to the EXIT line in the main menu, and deflect the joystick rightward to exit.  DEXIT →

4.2 Main Menu

After the successful key operation, the main menu will be displayed directly on the screen when the password protect feature is disabled.

Enter the pre-set password to access the main menu if the password protect feature is enabled.

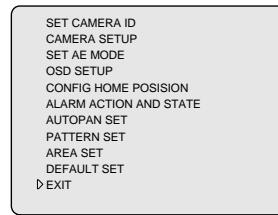


Follow these steps to enter system access password:

1. Move the cursor to the first × symbol;
2. Move the joystick upward (or downward) to toggle through available numbers (0 ~ 9);
3. After choosing the desired number, move the cursor to the next × symbol;
4. Repeat steps 2 through 3 until the whole password is entered.

If the wrong password is entered, the system will prompt “ACCESS DENY” and deny access to the menu.

If the correct password is entered, the main menu will be displayed on the screen, as shown below:



The main menu provides access to eleven (11) sub-menus as well as some other system functions, which are briefly outlined in the following section.

For details on these sub-menus and function items, please refer to the following sections.

1. SET CAMERA ID

- Display the dome's current S/N number.
- Allow users to enter a new S/N number.
- Display the camera ID number.
- Set system password.
- Confirm password.
- Enable/disable password protection.
- Display version number.

2. CAMERA SETUP

- Enable/disable 12X digital zoom.
- Set zoom speed (high/low).
- Set default iris value. [For 22X/23X/35X 9840 Series Domes only.]
- Set iris value level.

- Select iris mode (M/A/Manual Priority).
- Turn on/off backlight compensation.
- Select white balance mode (M/A).
- Set white balance R-gain.
- Set white balance B-gain.
- Select focus mode (M/A/Manual Priority).

3. SET AE MODE

- Set digital slow shutter. [Except for 18X 9840 Series Domes.]
- Set shutter speed.
- Select exposure mode.
- Define color and B/W reverse mode. [For 23X/35X 9840 Series Domes only.]
- Reverse current image. [For 23X/26X/35X 9840 Series Domes and 18X 9840 Series Domes]
- Mirror current image. [For 18X 9840 Series Domes with FCB48BP/B cameras]
- Freeze current preset's image. [For 23X/35X/18X(with FCB480 cameras) 9840 Series Domes]
- WDR. [For 23X/35X 9840 Series Domes only.]
- AGC Level. [For 23 X 9840 Series Domes only.]
- STABLIZE. [For 26X 980S Series Domes.]
- CAM FUNCTION [For 35X 9840 Series Domes.]

4. OSD SETUP

- AUTOPAN title display mode.
- Preset title display mode.
- Zoom display mode.
- Cursor moving speed.
- Display alarm function.
- Line lock.
- Phase Adjust
- Clear title.
- Privacy mask set.
- Direction Display Set

5. CONFIG HOME POSITION

- Set a home position action parameter.
- Determine how long before the domes return to home position (return time).
- Tour

6. ALARM ACTION AND STATE

- Define alarm action for each alarm input.
- Define relay output for each alarm input.
- Set the N.O. or N.C. state for each alarm input.

7. AUTOPAN SET

Set parameters for AUTOPAN, including:

- Pan Number
- Pan direction,
- Pan speed,
- Time to stay at pan limits,
- Title information.

8. PATTERN SET

- Select a pattern to set title information.
- Define title information for selected area.
- Title information ON/OFF.

9. AREA SET

- Set serial number for 16 areas.
- Define title for 16 areas.
- Area display switch.
- Set boundaries among 16 areas.

10. DEFAULT SET

- Set the parameters to factory defaults.
- Reset Camera

11. EXIT

- Exit the main menu.

4.3 Camera Information

The SET CAMERA ID menu is generally used to display the current serial number (S/N) and camera ID number of the domes. The users can enter a new serial number or set a new system access password.

CURRENT S/N

Function: Display the current serial number of the domes.

INPUT S/N

Function: Allow a user to enter a new serial number.

Operation: To input a desired serial number,

1. Move the cursor to the first digit entry;
2. Deflect the joystick downward (or upward) to toggle through available numbers (0 ~ 9);
3. When the desired number is displayed, move the cursor to the next digit entry;
4. Repeat Steps 2 through 3 until the entire serial number is entered.

CAMERA ID

Function: Display the current ID number for the domes.

Note: The camera ID number can be selected via the DIP switch of S1. For details on S1 settings, please refer to the **Quick Installation Guide**.

PASSWORD SET

Function: Set/change system access password.

Operation: To input a desired system access password:

1. Move the cursor to the first × symbol;
2. Push the joystick upward (or downward) to toggle through available numbers (0 ~ 9);
3. After choosing the desire number, move the cursor to the next × symbol;
4. Repeat steps 2 through 3 until entering of the whole password is finished.

CONFIRM PASSWORD

Function: Input the same password as the “PASSWORD SET” entry to confirm a new password.

Operation: Follow the steps described in “PASSWORD SET” to input the confirming password.

Note: If the confirming password is incorrect, the system will deny return to the main menu, and display the following information to require correct password setting and confirmation:

```

CURRENT S/N
INPUT S/N : 20060530001
CAMERA ID : 001
PASSWORD SET : *****
CONFIRM PASSWORD : *****
PASSWORD ENABLE : OFF
VERSION : XXXXXXXXXX
▷ RETURN
PASSWORD NOT MATCH
    
```

PASSWORD ENABLE

Function: Enable/disable the password protect feature.

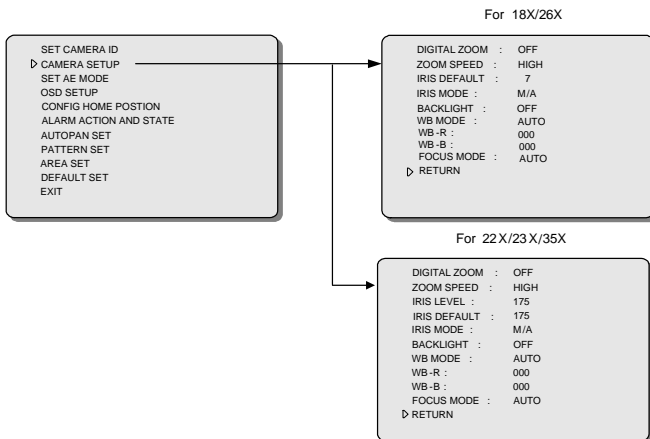
Operation: **ON** - enable the password protect feature; i.e. require entering system access password before accessing the main menu.
OFF - (default) disable the password protect feature.

VERSION

Function: Show current operation program version number..

4.4 Camera Setup

The CAMERA SETUP menu provides configuration for most lens/optics parameters.



DIGITAL ZOOM

Function: Determine digital zooming multiple.

Options:

0/02X-0/12X - Zooming multiple is from 2 to 12. With full capacity of optic zoom, releasing button first then pressing button to enter the digital zoom status.

01X-12X - Zooming multiple is from 1 to 12. With full capacity of optic zoom, pressing button continuously to enter the digital zoom status.

Note: It cannot enter the **0/02X-0/12X** digital zoom status when using the pattern.

ZOOM SPEED

Function: Determine the zooming speed of the camera, i.e., how fast the camera will go from its full wide zoom to its maximum optic zoom.

Options:

HIGH - (default) Set the camera at a high zooming speed.

LOW - Set the camera at a low zooming speed.

IRIS LEVEL

[For 23X/35X 9840 Series Domes only.]

Function: Set the level of the iris.

Options:

0 ~255 - the default is "175" [For 22X/23X/35X 9840 Series Domes.]

IRIS DEFAULT

Function: Set the default value of the iris.

Options:

0 ~015 - the default is "7" [For 18X/26X 9840 Series Domes.]

0 ~255 - the default is "175" [For 22X/23X/35X 9840 Series Domes.]

IRIS MODE

Function: Select the iris mode.

Options:

M/A - (default) When the camera is still, users can adjust the iris manually. Otherwise, when the camera is under control of the joystick, the camera can adjust the iris automatically.

MANU - Users can adjust the iris manually.

AUTO - The camera can adjust the iris automatically.

BACKLIGHT

Function: Turn on/off the backlight compensation feature.

A sharp contrast of brightness and darkness may arise when a bright backlight is present. This usually leads to a vaguely dark or even silhouetted image of a subject under surveillance. Under such circumstances, the backlight compensation can be used to achieve a suitable exposure level so as to get a clear view of the subject.

With backlight compensation, the camera becomes more sensitive to the light level in the center of the

picture, and thus enhances the image quality of the subjects in this area.

Options:

ON - Enable the backlight compensation.

OFF - (default) Turn off the backlight compensation.

WB MODE

Function: Select the white balance mode.

The domes feature built-in sensors to measure the current color temperature, and use an algorithm to automatically process the image so that the final output image may be close to what the human eye sees.

Under some particular situations, however, users can also manually adjust the white balance parameters to achieve what they consider to be the best-balanced pictures.

Options: **AUTO** - (default) Enable the camera to automatically make white balance.

MANU - Allow a user to manually adjust white balance parameters (see below).

WB-R

Function: Allow manual adjustment of R-gain value for customer white balance.

Options: **000 ~ 255** - The color shift will be viewed on the monitor when changing the R-gain value. The greater the number is, the more reddish the picture becomes.

WB-B

Function: Permit manual adjustment of B-gain value for customer white balance.

Options: **000 ~ 255** -The color shift will be viewed on the monitor when changing the B-gain value. The greater the number is, the more bluish the picture becomes.

FOCUS MODE

Function: Select the focus mode of the camera.

Options: **AUTO** - (default) Enable the camera to automatically focus on the subject in the center of the picture.

MANU- Manually adjusts focus on the target.

M/A - When the camera is still, users can adjust the focus manually. Otherwise, when the camera is

under control of the joystick, the camera can adjust its focus automatically.

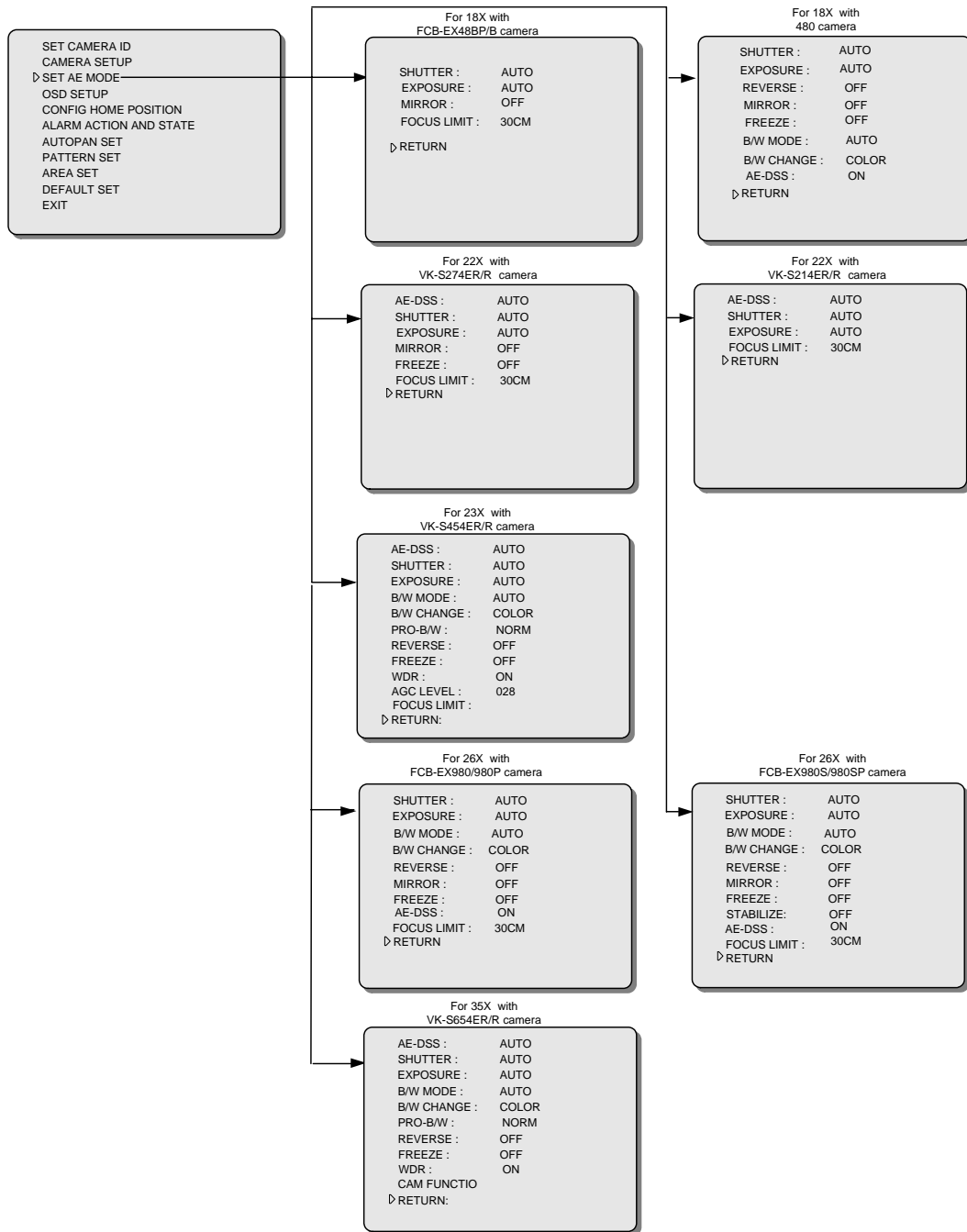
Note: For the following reasons, the camera may not perform the best auto focus when the target:

- is not in the center of the image;
- appears too dark or too vague;
- is a strongly lit object (e.g., a flash light);
- is a large blank area such as a white wall;
- is located behind a screen-like object such as a painted glass window or a safety net;
- is moving too fast.

4.5 Setting AE (Automatic Exposure)

Mode

The AE mode menu helps a user set up an appropriate AE (Automatic Exposure) mode to have the camera automatically set the shutter speed and/or aperture value to match the brightness of the scene. Digital Slow Shutter (DSS) can also be set in this menu.



AE-DSS [For 23X/35X9840 Series Domes only]

Function: Enable/disable the DSS capability, and set the digital slow shutter.

The digital slow shutter (DSS) slows the picture frame rate and enhances the camera's sensitivity in poor light environments. Light sensitivity improves as the value of DSS increases.

Option: **AUTO** - (default) Auto digital slow shutter function.

The classification of manual DSS relates to the formats of the 9840 Series Domes.

Under the PAL format, the range can be adjusted as follows:

1/1.5, 1/3, 1/6, 1/12, 1/25, 1/50

Under the NTSC format, the range can be adjusted as follows:

1/2, 1/4, 1/8, 1/15, 1/30, 1/60

Note: It can only set the ON/OFF status when using the 26X domes.

SHUTTER

Function: Select the shutter speed-priority AE mode, and set a suitable speed.

Once a shutter speed is set, the camera will automatically select an aperture value to match the brightness. Faster shutter speeds allow the camera

to capture instantaneous streak-free images of a moving subject, while slower speeds improve light sensitivity in poorly illuminated areas.

Option: **AUTO** - (default) Auto shutter speed priority AE mode.

The classification of manual shutter speed relates to the formats of the 9840 Series Domes.

[For 18X 9840 Series Domes]

Under the PAL format, the adjustment range of the shutter speed is as follows:

1/1,1/2, 1/3, 1/6, 1/12, 1/25, 1/50, 1/75,1/100,1/120, 1/150, 1/215, 1/300,1/425,1/600,1/1000,1/1250,1/1750,1/2500, 1/3500, 1/6000, 1/10000

Under the NTSC format, the adjustment range of the shutter speed is as follows:

1/1,1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/90,1/100,1/125, 1/180, 1/250, 1/350,1/500,1/725,1/1000,1/1500,1/2000,1/3000, 1/4000, 1/6000, 1/10000

[For 23X/35X 9840 Series Domes]

Under the PAL format, the range may be adjusted as follows:

1/1.5, 1/3, 1/6, 1/13, 1/25, 1/50, 1/100, 1/150, 1/250

1/500, 1/1000, 1/2000, 1/4000, 1/10000, 1/30000

Under the NTSC format, the range may be adjusted as follows:

1/2,1/4,1/8,1/15,1/30,1/60,1/120,1/180,1/250,1/500 1/1000,1/2000,1/4000,1/10000,1/30000

EXPOSURE

Function: Select exposure compensation mode or set an appropriate internal reference brightness level.

Options: **AUTO** - (default) Auto exposure compensation mode.

[For 18X9840 Series Domes]

0~15 - Set an appropriate internal reference brightness level.

[For 23X/35X 9840 Series Domes]

F1.6, F2.2, F3.2, F4.4, F6.4, F8.8, F12, F17, F24, F34

B/W MODE [For 23X/26X /35X 9840 Series Domes only]

Function: Select black & white /color conversion mode.

In a brightly illuminated area, the camera will generate normal color images. If the illumination fades and the area becomes dark, the camera will convert color images into black & white images to increase light sensitivity.

Options: **AUTO** - (default) Enable the camera to automatically switch between color and black/white imaging according to changes of lighting condition.

MANU - Require a user to manually switch imaging mode between color and black/white.

B/W CHANGE [For 23X/26X /35X 9840 Series Domes only]

Function: Change imaging mode between color and black/white manually.

Options: **COLOR** - (default) Enable the camera to display color image no matter how illumination conditions may change.

B/W - Make the camera output black & white images regardless of lighting conditions.

PRO_B/W [For 23X/26X /35X 9840 Series Domes only]

Function: Change different illumination conditions for black & white/color conversion.

Options: day, norm (default), night

As illumination decreases, a setting of “day” will cause a hard conversion from color to B/W, while a setting of “night” will cause an easier conversion from color to B/W. As illumination improves, a setting of “day” will cause an easier conversion from B/W to color, while a setting of “night” will cause a hard conversion from B/W to color. Intermediate value “norm” is the default status.

REVERSE [For 18X (with FCB480 cameras)/23X/26X /35X 9840 Series Domes and 18X Series Domes with 480 camera]

Function: Reverse the current image vertically.

Options: **OFF** - (default) Turn off the image reverse function of the camera.

ON - Turn on the image reverse function of the camera.

MIRROR [For 18X Series Domes with 480 camera and 22X Series Domes with 274ER/R camera]

Function: Mirror the current image horizontally.

Options: **OFF** - (default) Turn off the image mirror function of the camera.

ON - Turn on the image mirror function of the camera.

FREEZE [For 23X/35X 9840 Series Domes, 26X Domes, 18X Series Domes with 480 camera and 22X Series Domes with 274ER/R camera]

Function: Freeze the current image.

Options: **OFF** - (default) Turn off the image freeze function of the camera.

ON - Turn on the image freeze function of the camera.

PRESET - turn on the image freeze function when using the preset function.

WDR [For 23X/35X 9840 Series Domes]

Function: Present the clear image on the conditions that black & white show a striking contrast. The illumination's proportion between indoor and outdoor can reach to 1:128 at farthest.

Options: [For 23X 9840 Series Domes]

OFF - (default) Turn off the image wide dynamic range function of the camera.

ON - Turn on the image wide dynamic range function of the camera.

[For 35X 9840 Series Domes]

MD1 -WDR image processing mode 1

MD2 -WDR image processing mode 2

AGC LEVEL [For 23X Domes only]

Function: It can increase light sensitivity automatically under lower illumination conditions and heighten the CCD semaphore intensity to obtain clear image.

Options: 000~040 levels can be selected.

The higher AGC level, the higher the sensitivity that camera detects. It suits to adjust the light under lower illumination conditions.

The lower the AGC level is, the lower sensitivity the camera detects. It suits to adjust the light under higher illumination conditions.

STABILIZE

[For 26X Domes with 980S camera]

Function: Stabilize function can proof the image shaking when the domes are operating on the acceleration or abrupt halting condition.

Options: **OFF** - (default) Disable the stabilize function.

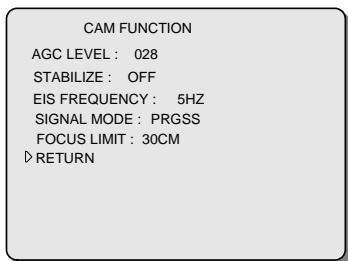
ON - Enable the stabilize function.

CAM FUNCTION [For 35X Domes]

Function: Stabilize function could proof the image shaking when the domes're operating on the acceleration or abrupt halting condition.

Options: EIS FREQUENCY: 5 HZ (default), 10 HZ

SIGNAL MODE: PRGSS (default), INTEL



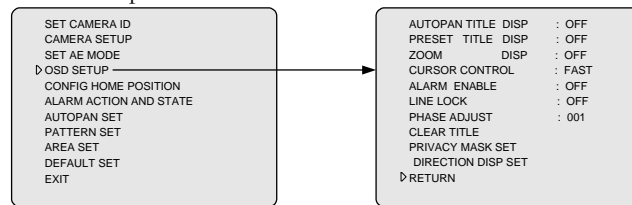
FOCUS LIMIT

Function: Select appropriate focus to catch clear pictures..

Options: 0 - 30CM

4.6 OSD (On-Screen Display) Setup

The domes can generate overlay text descriptions concerning various operations to facilitate site surveillance. Use the OSD SETUP menu to activate the on-screen displays (OSD) for these descriptions:



AUTOPAN TITLE DISP

Function: Enable/disable the on-screen title information for a running AUTOPAN or not.

Options: **OFF** - (default) turn off the on-screen display for AUTOPAN.

ON - display the title information of AUTOPAN.

Note: The title information for AUTOPAN is defined in the AUTOPAN menu.

PRESET TITLE DISP

Function: Determine whether to display the title information for a called-up preset.

Options: **OFF** - (default) disable the on-screen display for preset title.

ON - display the title information for a called-up preset.

ZOOM DISP

Function: Turn on/off the on-screen display of the current zoom value (i.e., lens magnification times).

Options: **OFF**- (default) turn off the on-screen zoom information.

ON - enable the on screen display of the current lens magnification times.

CURSOR CONTROL

Function: Adjust the moving speed of the on-screen cursor.

Options: **FAST** - (default) set the on-screen cursor to move at a high speed.

SLOW - slow the moving cursor.

ALARM DISPLAY

Function: Display the alarm function of the domes.

Options: **OFF** - (default) disable the alarm function of the domes.

ON - enable the alarm function of the domes.

LINE LOCK

Function: Turn on/off the line lock SYNC function of the camera.

Options: **OFF** - (default) Turn off the line lock SYNC function of the camera

ON- Turn on the line lock SYNC function of the camera.

Note: The option could not resume default in DEFAULT SET menu.

The function is available when the power supply is AC.

The function is invalid when the power supply is DC.

PHASE ADJUST

Function: Adjust forward/afterward the line lock SYNC level of the camera

Option: Under the PAL format

001~198 Slightly adjust the line lock SYNC level of the camera

Under the NTSC format

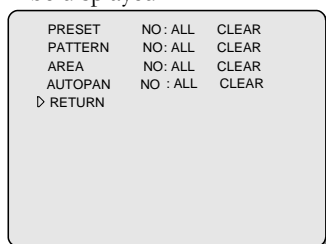
001~165 Slightly adjust the line lock SYNC level of the camera

Note: The option could not resume default in DEFAULT SET menu.

CLEAR TITLE

Function: Clear the programmed title information of presets, patterns, areas and AUTOPAN.

Move the cursor to CLEAR TITLE and deflect the joystick rightward, the following information will be displayed.



PRESET NO

Function: Clear part of or all preset title information.

Options: **001~128** - Clear title information of the selected preset.

ALL - Clear the title information of all presets.

PATTERN NO

Function: Clear part of or all pattern title information.

Options: **001~004**- Clear title information of the selected pattern.

ALL - Clear the title information of all patterns.

AREA NO

Function: Clear part of or all area title information.

Options: **001~016** - Clear title information of the selected

area.

ALL - Clear the title information of all areas.

AUTOPAN

Function: Clear part or all the AUTOPAN title information.

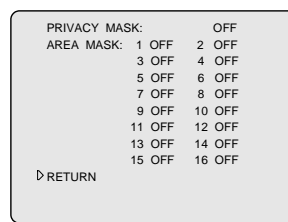
To clear title information:

1. Move the cursor to "ALL" (To clear AUTOPAN title, start from step 3 directly);
2. Deflect the joystick or virtual joystick upward or downward to select a desired number (of presets, patterns or areas), or select ALL;
3. Move the cursor to the relevant CLEAR;
4. Deflect the joystick upward or downward to clear title information;
5. Continue clearing other title information or return to the previous menu from RETURN.

PRIVACY MASK SET

Function: "Privacy Mask" can be used when specific areas need to be covered to avoid being seen by operators. The system will cover those areas by displaying blank screens, and operators will be unable to see those areas on the monitor. The covered areas would not expose with the movement of lens or zoom operations, and by doing so the areas will always be screened.

For 18X/26X cameras, move the cursor to PRIVACY MASK SET and deflect the joystick rightward, the following information will be displayed:



PRIVACY MASK

Function: Turn on/off Privacy Mask function.

Options: **OFF** - (default) Turn off Privacy Mask function.

ON - Turn on Privacy Mask function.

Note: The following options can be set only when the Privacy Mask is set as "ON".

AREA MASK

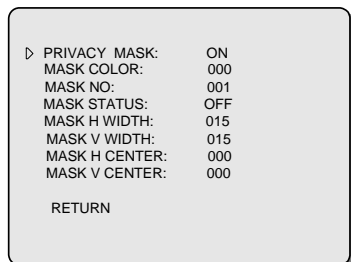
Function: Set the number of those areas that need to be hidden (1-16).

Options: **OFF** - (default) The area is exposed.

ON - The area is hidden.

Note: Because all of the areas in this menu are divided by the “Setting Area” function, the range and number of each area should be defined in the AREA SET menu before the setting.

For 22X/23X/35X cameras, move the cursor to PRIVACY MASK SET and deflect the joystick rightward, the following information will be displayed:



MASK COLOR

Function: Select the color for the private areas. The color changes with the numbers.

Options: 001~015. The default number is 000 (Black).

MASK NO

Function: Select the area NO. for the private areas.

Options: 001~008 for 23X/35X 9840 Series Domes;

Note: For 22X/ 23X/35X 9840 Series Domes, the private areas cannot exceed two on the screen. The screen can display a maximum of two private areas.

MASK STATUS

Function: Turn on/off Privacy Mask function.

Options: **OFF** – (default) Turn off Privacy Mask function.

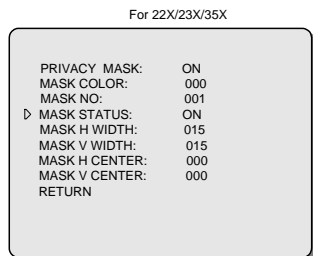
ON - Turn on Privacy Mask function.

When set the mask status is set “ON”:

Enter the dome menu to set (23X/35X dome) and move the pointer up and down from the current menu and select orders to set (18X dome).

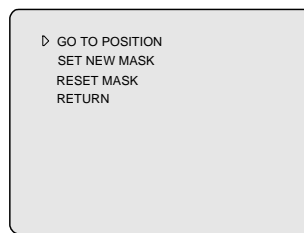
Note: According to the different camera type of dome, the menu settings are different as follows:

1. For 22X/23X/35X dome:



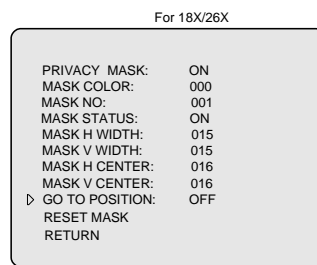
Set the PRIVACY MASK to “ON”, then enter into the submenu to continue to the advanced settings. Adjust the

size of the privacy area through the MASK H WIDTH / MASK V WIDTH when the area position has been confirmed.



Choose “GO TO POSITION”. The following information will be displayed on the screen: “PRESS 1 CALL PRESET TO END”. In operation mode, click “1”+ “CALL PRESET ” .

2. For 18X/26X dome,



Set the PRIVACY MASK to “ON”. The following information will be displayed on the screen: “PRESS 1 CALL PRESET TO END”. The image on the screen becomes netted.

Choose “RESET MASK” to resume primary privacy mask.

Choose “RETURN” to return to the PRIVACY MASK SET interface.

MASK H WIDTH

Function: Set the horizontal width of the private areas.

Options: 000~127. The default number is 015.

MASK V WIDTH

Function: Set the vertical width of the private areas.

Options: 000~127. The default number is 015.

MASK H CENTER

Function: Set the horizontal distance deflecting from the screen center.

Options: 000~255. The default number is 000.

MASK V CENTER

Function: Set the vertical distance deflecting from the screen center.

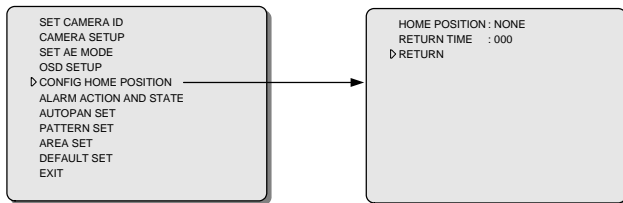
Options: 000~255. The default number is 000.

In order to ensure that the areas can be completely screened, operators should also pay attention to the following points:

1. Reset to the factory default when using the 9840 for the first time;
2. Return to the previous menu to set the next private area after setting one private area;
3. The horizontal corner between two private areas should be bigger than 60° ; the vertical corner should be bigger than 45° .

4.7 Home Position

After receiving no command for a certain period of time, domes can automatically return to a position that has been previously defined ("home position"). This feature ensures that the domes view a key area when not controlled by a user. Home position can be set up in the CONFIG HOME POSITION menu.

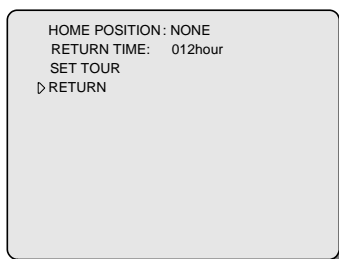


HOME POSITION

Function: The home position parameters.

Options: NONE - Disable the home position feature.

PRESET 001 ~ PRESET 128 - choose one of the 128 presets as the dome's home position. (Except for special preset 99, 97, 91-95, 88, 89, 65-73, 33, 34)



Note: Before selecting a preset as the home position, please make sure that it has been properly set.

RETURN TIME

Function: Determine how long before an inactive dome returns to its home position.

Options: 000 ~ 010(Step by 1) Set the return time (in minutes).

000 ~ 060(Step by 10) Set the return time (in minutes).

001 ~ 012(Step by 1) Set the return time (in hours).

SET TOUR

Function: Set different actions in serials.

Options: 6 tour could be set at the most and each tour could link with 16 actions, which could be preset, pattern or autopan and the period could be set independently.

TOUR NO: 001 ~ 006

PAGE: Page up or page down.

TIME: 000 ~ 060s

TOUR NO	001	PAGE 1
ACT		TIME
1.	NO	000
2.	NO	000
3.	NO	000
4.	NO	000
5.	NO	000
6.	NO	000
7.	NO	000
8.	NO	000
RETURN		

TOUR NO	001	PAGE 2
ACT		TIME
9.	NO	000
10.	NO	000
11.	NO	000
12.	NO	000
13.	NO	000
14.	NO	000
15.	NO	000
16.	NO	000
RETURN		

Note: 97+CALL PRESET (OPERATE) is to call current TOUR selected by menu.

The action set in TOUR could vary according to the time it stays. As to the tour without action but with time set, the camera will also stay at the position set.

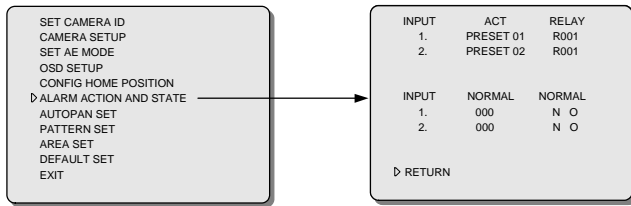


The example above shows that when dome was left unused for 30mon, it could return to preset 1.

4.8 Alarm Action and State

The 9840 Series Domes provide 2 alarm inputs and 1 relay output. Each input can be used to connect an external alarm device such as a door contact, motion sensor or smoke alarm. Relay output can be set to respond to the alarm input.

By programming the ALARM ACTION AND STATE menu, you can define the normal state (N.O. or N.C.) for each alarm input, and assign it with an action (a preset), so that when the normal state changes to abnormal, the domes is automatically positioned at the preset for surveillance.



Note: If the domes have been configured to accept Manchester control codes, they can be programmed to respond to any of the 2 alarm inputs, but cannot transmit the state changes to the matrix switcher. To compensate for this, the alarm devices must be connected directly to both the domes and the matrix switcher.

ACT

Function: Assign each alarm input with a preset to call upon alarm.

Options: **NONE** - (default) Indicate a no-action command that disables the automatic preset call.

PRESET 001 ~ PRESET 128 - select one of the 128 presets for automatic call up.

Operation: To assign alarm inputs with desired actions (presets):

1. Move the cursor to the ACT entry associated with an alarm input in use (i.e., one that has been properly connected to an alarm device);
2. Deflect the joystick or virtual joystick downward (or upward) to select the preset (1-128);
3. Move the cursor to the ACT entry for the next alarm input in use;
4. Repeat Steps 1 through 3 until all desired entries have been defined.

To set alarm linkage priority

1. High and low priority in total and the grade become higher in turn. If several alarm links, the system will respond to the one with higher priority grade;
2. If priority grades are the same, the system will automatically enter cycle response mode;
3. If other operation commands are entered while alarm links occur, the alarm link operation will be interrupted. The message on display will show: "ALARM BLOCKED";
4. If alarm linkage operation is interrupted, press corresponding manual command according to different protocols to recover the former alarm action.

RELAY

Function: Assign each alarm input with a relay output.

Options: **NONE** - (default) Changes of alarm state will not lead to a relay output.

R 001 - one relay output.

Operation: To assign alarm inputs with specific relay:

1. Move the cursor to the RELAY entry associated with an alarm input in use;
2. Deflect the joystick or virtual joystick downward (or

- upward) to select a relay output;
- Move the cursor to the next RELAY entry associated with an alarm input in use;
3. Repeat Steps 2 through 3 until all the entries have been defined.

NORMAL STATE

Functions: Define the normal state of each alarm input.

Options: **NO** - (default) Indicate the normal state as normally open (N.O.).

NC - Set the normal state as normally closed (N.C.).

Operation: To define the normal state for each alarm input in use:

1. Move the cursor to the STATE entry associated with a used alarm input;
2. Deflect the joystick downward (or upward) to select an appropriate normal state;

Note: Since a variety of alarm devices may be utilized, please refer to the manuals supplied with a particular device to determine the normal state for the connected alarm input.
3. Move the cursor to the STATE entry associated with the next alarm input in use;
4. Repeat Steps 2 through 3 until all the entries have been programmed.

Example:

INPUT	ACT	RELAY
1.	PRESET 01	R001
2.	PRESET 02	R001
INPUT	NORMAL	NORMAL
1.	000	N O
2.	000	N O
▷ RETURN		

This sample menu indicates:

- Alarm Input 1 has been defined as normally open, assigned with Preset 001 as its alarm action, and R001 as its relay output.
- Alarm Input 2 has been defined as normally open, and assigned with Preset 022 as its alarm action, and R001 as its relay output.

Therefore:

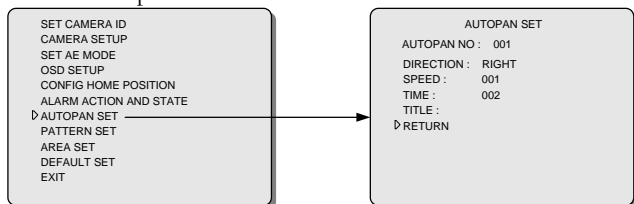
- When Alarm Input 1 detects an alarm (i.e. Alarm Input 1 changes from normally closed to open), the domes will be automatically positioned at Preset 1 and startup relay 1 output;
- When Alarm Input 2 detects an alarm (Alarm Input 2 changes from normally open to closed), the domes will be automatically positioned at Preset 22 and startup relay 1 output.

Note: A dome under the Up the Coax only has one RELAY output.

4.9 AUTOPAN

By being able to scan between two boundary lines, domes can monitor some area continuously under system automatic running state.

AUTOPAN parameters can be set in AUTOPAN SET menu.



DIRECTION

Functions: Set the original orientation when dome do horizontal running.

Options: RIGHT & LEFT

RIGHT: (default) Start point that camera aims at and runs to the right.

LEFT: Start point that camera aims at and runs to the left.

SPEED

Functions: Select the scanning speed.

Options: 001~022. The smaller the digit is, the faster the speed will be. Default is 008.

TIME

Functions: Set the period when dome stays on the left & right boundaries.

Options: 000~030 (S). The default is 000.

TITLE

Functions: Define AUTOPAN route (no more than 16 characters). Display could show or conceal the appellation. If the set is ON, the appellation will be displayed when scanning.

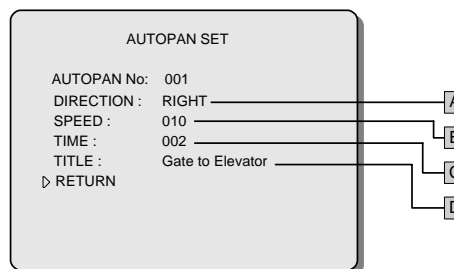
Options: 62 characters could be applied in total when define the appellation. 52 big & small English letter and 0-9 Arabic numerals are available. Blank is allowed in appellation.

Steps:

1. Move the cursor to the first character of TITLE.
2. Move the operation hand up and down to select character or blank.
3. Move the cursor to the next character.

4. Repeat Step 2 and Step 3 to complete the appellation.

Example:



The above menu will appear after enabling the AUTOPAN function:

Camera will go to boundary A automatically and run to right (A) to scan at the speed of 10 grade (B). When camera moves to another boundary, stays 2s (C), return to the starting boundary and stays 2s. Camera moves to scan between 2 boundaries and display will show route a name "Gate to Elevator" (D).

Set two boundaries:

The two boundary points of AUTOPAN (point A & B) are not set by the menu but by the keyboard operation:

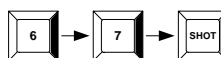
Set boundary point A according to the steps below:

1. Move the operation hand to set camera to aim at the proper location.

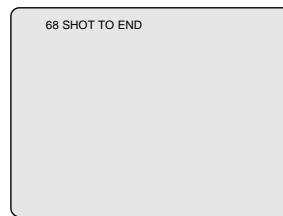


2. Input command "67, SET PRESET"

Set the orientation camera aiming at as boundary point A



4. Text information on display indicates successful set and meanwhile, another boundary point is to be set.

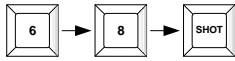


Set boundary point B according to below steps:

1. Move operation hand to enable camera to aim at the proper orientation.

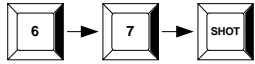


2. Input command 68 SET PRESET to set current orientation as boundary point B.



AUTOPAN OPERATION

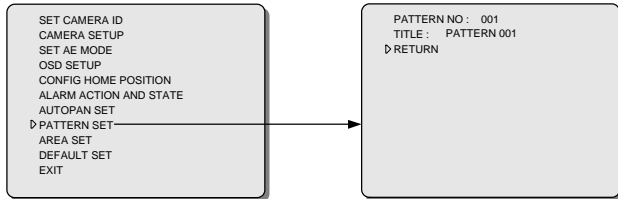
1. Input command “67, CALL Preset”.



4.10 Pattern

Pattern is the patrol record of dome and may be applied by keyboard. Domes can record horizontal, vertical and zoom operation, and can repeat the recorded operation accurately when applied. This identity may be used to define a normal route.

Clients may use the PATTERN SET menu in the list below to define the pattern serial number and add appellation.



PATTERN NO

Functions: Select pattern needs to be added appellation.

Options: 001~004 - Under Manchester protocol, domes can define and store 3 independent patterns; under RS485 protocol, domes can define and store 4 independent patterns. Under Up the Coax protocol, domes can define and store 1 independent pattern. Each pattern is allowed to have independent appellation.

TITLE

Functions: Define appellation for pattern. (No more than 16 characters.)

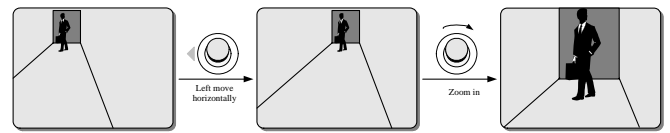
Options: 62 characters are available including 52 big and small English letters and Arabic numerals 0-9. Blank is available in appellation.

Edit pattern appellation:

1. Move the cursor to the first character of TITLE;
2. Move the operation hand to select character or blank;
3. Move the cursor to the next character;
4. Repeat Step 2 and Step 3 to complete the appellation.

Pattern Definition

1. Select Pattern 1
2. Press RECORD
3. Do horizontal, vertical and zoom operation to complete the patrol with keyboard operation hand:

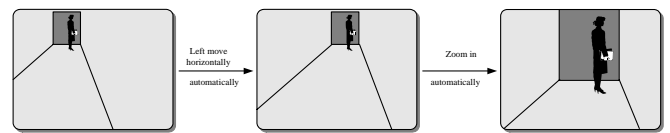


4. Press Stop Record to store pattern.
5. Repeat for Patterns 2 through 4.

Pattern operation

1. Select Pattern 1 through 4 and press PLAY button.

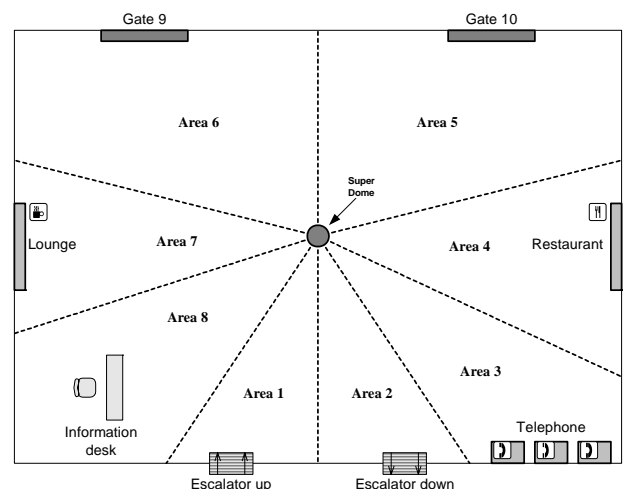
Domes will automatically repeat the recorded patrol.



4.11 Setting Areas

The "area" feature allows the entire surveillance site to be divided into a maximum of 16 sections (areas). Each section can be labeled with a unique area number and a description title, which will be displayed on the screen when the camera navigates through it.

Illustrated on the following page is a waiting hall at an airport passenger terminal that is under the surveillance of a 9840 and has been partitioned into 8 sections using the "area" feature:



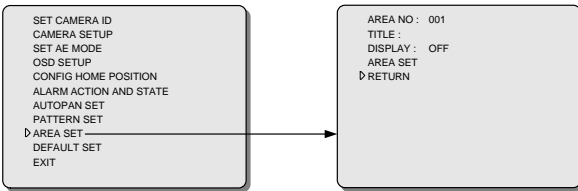
As the example shows, partitioned areas together usually constitute a contiguous 360-degree view around the domes, with the ending point of one area as the starting point for the next. **Note that the ending point of the last area cannot surpass the starting point of the first.**

Areas may be assigned different sizes to meet the requirements of a particular installation. In the example shown above, the two areas covering the boarding gates (Areas 5 and 6) are much larger than those covering the escalators (Area 1 and 2).

The zoom level may also affect the area size during camera operations. As the camera zooms in, the size of an area becomes smaller, and its boundaries draw closer. Please refer to the following illustrations on how zoom operations affect area size. This feature may become helpful when the area boundaries need to be precisely located (see later discussions in this section).



Using the AREA SET menu shown, users can easily mark the boundaries for the required areas, and label them with description titles.



AREA NO

Function: Select an area to define its title and on-screen display status.

Options: 1 ~ 16 The 9840 Series Domes support a total of 16 areas. Each area may have a unique description label set below.

TITLE

Function: Edit a description title (up to 16 characters) for the selected area.

Operation: A total of 62 characters, including English letters in upper and lower cases, as well as numbers from 0 to 9, are available for editing the area title. Spaces can also be created to separate description words. A title may contain up to 16 characters and spaces.

To edit a description title

1. Move the cursor to the first entry of the TITLE item;
2. Deflect the joystick or virtual joystick downward (or

- upward) to select a suitable character (or a space);
3. Move the cursor to the next entry;
4. Repeat Steps 2 through 3 until the whole title has been edited.

DISPLAY

Function: Enable/disable the on-screen title description for the selected area.

Options: **ON** - Turn on the accompanying description label.

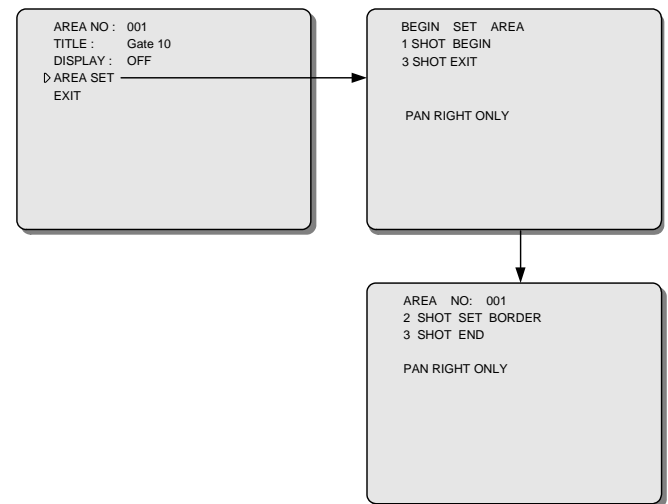
OFF - (default) Turn off the accompanying description label.

AREA SET

Function: This menu item is used to access the menu for setting area boundaries. Details are addressed below.

How to set area boundaries

When entering the AREA SET menu, the menu for setting area boundaries will be displayed, offering on-screen instructions for the operation.



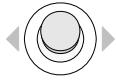
Code Commands: (see Table 3)

Table 3- Call Preset Commands

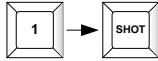
Commands	Operations	Functions
"1, CALL PRESET "	Enter "1" on the numeric keypad, and then press the Call key.	Start the setting operation, and set the starting boundary for the first area.
"2, CALL PRESET "	Enter "2" on the numeric keypad, and then press the Call key.	Set the ending boundary for the current area (the starting boundary for its next area).
"3, CALL PRESET "	Enter "3" on the numeric keypad, and then press the Call key.	Designate the current area as the last, and finish the setting operation.

To define boundaries for required areas

1. Deflect the joystick or virtual joystick to move the camera to the starting boundary of the first area.



2. Enter code command "1, CALL PRESET " to start the setting operation. The current position will be defined as the starting boundary for the first area.



3. Move the camera to the right until the ending boundary of the area is displayed.



4. Enter code command "2, CALL PRESET " to set the current position as the ending boundary for this area. This position is also the starting boundary for the next area.

5. Repeat Steps 3 through 4 until the starting boundary of the last area has been defined.

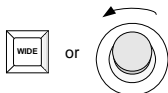


Note: The starting boundary of the first area is the ending boundary of the last area.

6. Enter code command "3, CALL PRESET " to finish the setting operation.

To locate a boundary point precisely

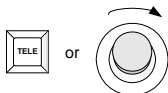
1. Zoom out the image to get a wide view (making the area appear large);



2. Move the camera until the desired boundary point is displayed somewhere near the center of the screen;



3. Zoom in the image to get a close view (making the area appear small but the objects appear large);



4. Move the camera until the enlarged image of the boundary point is displayed in the screen center;



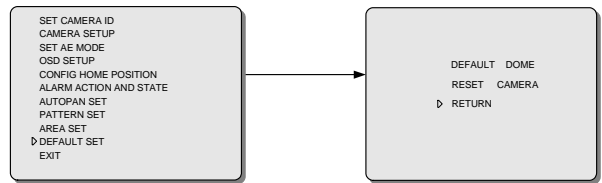
5. Enter appropriate code commands to set the boundary.

If the DISPLAY option has been set "ON" in the AREA SET menu, overlay texts indicating area number and title description will be displayed as long as the camera view stays in the area.



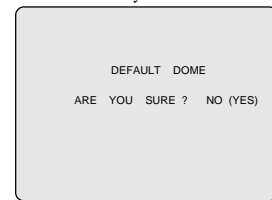
4.12 Default Set

The DEFAULT SET item in the main menu is generally used to clear most user-programmed data in the domes, and reset the dome system to factory default.



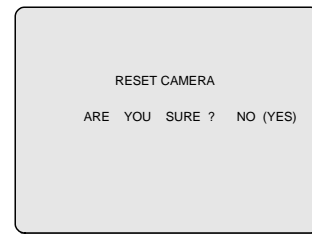
DEFAULT DOME

Clear most user-programmed data in the domes, and reset the dome system to factory default.



RESET CAMERA

Reset the camera and resume the status as powered on.



WARNING: This procedure will erase **MOST** user-programmed data.

Note: "LINE LOCK" and "PHASE ADJUST" in "OSD SETUP" menu can not resume default.

Appendix A- Troubleshooting Guide

Product Type	Symptom	Recommended Action
DVT960x/97xx and DVT9840	Cannot discover or dome appears offline (red) in the camera tree	<ul style="list-style-type: none"> • Check physical connection - Ethernet cable and network switch • Make sure you're discovering from the same network/VLAN • Check your switch and computer Ethernet ports to see if you're getting a good Ethernet link • If the camera is connected over wireless... <ol style="list-style-type: none"> a. Can you ping the camera/encoder's IP from the server? b. Can you ping the Wireless access point at the far end where the camera is connected? c. Trace connection between server and camera and make sure communication is good between them. • If discovering from <u>Latitude 3.5 AdminCenter</u>, make sure you have chosen a unit type of RCP+ when discovering 9600/9700 units, and VSIP when discovering 9840 units. <ul style="list-style-type: none"> ○ From AdminCenter>Discovery>VSIP, check your VSIP port range. Try 4000 to 6000 first; if unsuccessful, try from 4000 to 9000. ○ From AdminCenter>Discovery>VSIP, click Advanced Settings (tools icon) and checkmark "Search all units on LAN". • If using the Device Configurator, make sure the application's version is 4.22 or higher. Additionally, Check your discovery settings by clicking "Program Options" from the General property sheet. <ol style="list-style-type: none"> a. Select your PC's IP from the drop down list b. Check the box for "Detect All Units on LAN". c. Try discovering first using the default port 5510, if unsuccessful in discovering devices, try using the common port (9541) instead. This will discover in the entire port range. d. Both, Device Configurator and Latitude Discovery Tool only work when discovery

Product Type	Symptom	Recommended Action
		is done from the same VLAN (network segment), or wherever broadcast or multicast is supported.
DVT960x/97xx and DVT9840	No Ethernet Link	<ul style="list-style-type: none"> • Check Camera/Housing power source • Make sure the camera head is properly inserted into the housing unit. The camera head provides the 12V DC for the encoder. If the head is not inserted, the encoder will not be powered. • Check the camera's power cable • Check the camera's Ethernet cable • Check the Ethernet connection on the back of encoder housing • Still have issues? Contact DVTeI Support for further troubleshooting or an RMA.
DVT960x/97xx and DVT9840	Housing unit and Camera head are not powering up	<ul style="list-style-type: none"> • Check Power source • 960x, 97xx and most DVT9840 operate on 24V AC, 2A, but some DVT9840 units use 12V DC • Check voltage levels at the housing unit and make sure you're getting either 24V AC (9605/9710/9840) or 12V DC (9840 with 12V option). If the voltage has decreased due to cable run, the camera may not operate correctly and you may experience unwanted behavior. • Check the fuse on housing unit's power supply board
DVT960x/97xx and DVT9840	Unit powers up, but fans are not working	<ul style="list-style-type: none"> • Check the fan connection cable on power supply board. The fans should be running, even if camera head is not inserted.
DVT960x/97xx and DVT9840	No PTZ Control from Latitude or the camera's web interface	<ul style="list-style-type: none"> • Check the encoder's serial port settings and make sure they are set to 8,N,1,4800, and RS485 4-wires • Make sure that the PTZ address configured via AdminCenter's PTZ Property Pane matches that of the dome (the dome's address is always 1 unless changed using its dip switches). • Check the protocol in AdminCenter and make sure that it is set to DVTeI • Check the dip switches on the camera head... • S1= all switches off (down)

Product Type	Symptom	Recommended Action
		<ul style="list-style-type: none"> • S2 = Dip switch #1 should be in the up position (DVTel Protocol) • S2 = Dip switch#6 should be up (4800 baud). • All other dip switches should be off • Check dome through its web interface • Go into the camera's menu and load the factory default settings
DVT960x/97xx and DVT9840	No Video, or Black/Dark picture	<ul style="list-style-type: none"> • Check Camera iris settings in camera menu, it may be closed • Go into the camera's menu and load factory settings to reset the iris • Check encoder's Attribute settings in Latitude AdminCenter • Try another camera head/unit on same housing. • Contact DVTel Support
DVT960x/97xx and DVT9840	Video Quality issues	<ul style="list-style-type: none"> • Check camera settings in AdminCenter (General tab) • If camera is set to CIF, try 2CIF • Change input filter to NONE • ----- • If video is pixilated... • ----- • Check network settings • Make sure your network supports Multicast and that IGMP Snooping is enabled on the switches • From AdminCenter, select a camera with pixilated video • Change the connection type to UNICAST UDP for Unit & Archiver, and Client & Server (or all 3, if not recording same as viewing) • View this camera from only one client (location) • Did the video quality improve? Contact DVTel Support for further assistance
DVT960x/97xx and DVT9840	Camera is powered but does not boot up or does not	<ul style="list-style-type: none"> • Recycle power to housing unit • Check power source and make sure it's providing sufficient power to camera and

Product Type	Symptom	Recommended Action															
	complete the boot process	encoder <ul style="list-style-type: none"> Contact DVTel Support 															
DVT960x/97xx and DVT9840	Camera motor is stuck or the camera does not pan/tilt all the way	<ul style="list-style-type: none"> Recycle power to the camera/encoder Contact DVTel Support 															
DVT9605/9710	How can I add audio to a DVT9605 / DVT9710?	<ul style="list-style-type: none"> The connector ST 600 is placed optionally and is a JST pin header type BM04B-SRSS-TB <table border="1" data-bbox="841 569 1297 758"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>IN</td> <td>Microphone in</td> </tr> <tr> <td>2</td> <td>GND</td> <td>GND</td> </tr> <tr> <td>3</td> <td>OUT</td> <td>Speaker out</td> </tr> <tr> <td>4</td> <td>GND</td> <td>GND</td> </tr> </tbody> </table> <p>(1mm pitch, 4 pins, tp entry shrouded header)</p> The pinning for this connector is listed in the following table: 	Pin	Signal	Description	1	IN	Microphone in	2	GND	GND	3	OUT	Speaker out	4	GND	GND
Pin	Signal	Description															
1	IN	Microphone in															
2	GND	GND															
3	OUT	Speaker out															
4	GND	GND															
DVT9840	How can I add audio to a DVT9840?	<ul style="list-style-type: none"> Please refer to the DVT9840 Quick Install Guide (M9830A) 															