



# **Installation and Operation Manual**

## **PTZ640**

*For Internal or External Use*



**Version 2.0**

Last Revised 16/05/2014

## CONTENTS TABLE

<b>Description</b>	<b>Page No.</b>
Contents	2
Safety Precautions	4
Description of Functions	5
Integrated Multi-Protocol Decoder	5
Integrated Speed – Variable PAN/TILT	5
High Intelligent Functions	5
Software Modify the Dome Address & Baud Rate	6
Setting Protocol	6
Getting the dome up & running	7
Overview – introduction to fitting PTZ equipment	8
RS485 Wiring methods & Tips	10
Characteristics of RS485	10
Transmission distances of RS485 signals using CAT5	10
RS485 Connection Methods	10
Daisy Chain Connection	10
Star method of connection	11
Overcoming RS485 data loss using an RS485 distributor	12
Setting up the Dome Camera	13
RS485 connection – Connecting the Keypad or DVR to the Dome	14
Connecting the video out of the dome	15
If you are using more than one dome on a site	18
Setting up a unique address in the dome	18
Entering the address or baud rate in the menu	18
Setup of the Protocol	19
Using the PTZ730 keypad with the PTZ series	20
PTZ640 Functionality	21
Presets	22
PRESETS - How to set up a preset using a keyboard	22
Vector Scans	23
Patterns	25
Patrol (Tour)	28
AUTO SCAN – How to set it up	30
Using the Dome’s Advanced Functions	31
The Menu System	32
Language	32
Display Options	33
<i>Presets, Sector Setup, Coordinates, Crosshairs, Start-Up Screen Message, OSD Style, Dome Name</i>	
Control Options	36
<i>Pan/Tilt Reverse, Find Home Position, Set Default, Speed Limit, Auto Flip, Auto Focus, Auto AE, Vector Scan AF, Vector Scan Still, IR Setup.</i>	
System Options	38
<i>Clear Memory, Restore Defaults, Colour System, Reset Dome, Dome Info, COMM Settings, Camera Memory.</i>	

Camera Options	
Focus	40
Exposure	40
White Balance	42
Day/Night	42
Backlight	43
3D-DNR	44
Image Adjust	44
Special	45
OSD Setup	46
Save & Exit	47
Function Programming	48
Program Pattern	48
Program Vectorscan	49
Program Alarms	50
Mask Zone (This option not available)	
Temperature Program	53
User Admin	54
Date/Time	56
Date/Time Setup	56
Assignment	57
Power Timer	58
Short Cut Operations	59
Alarm Connections	59
Technical Specification	60
Troubleshooting	61

Please read this operation manual carefully  
before installing and using this unit !!!!



**Please read the following;**

1. Please read the operation manual carefully before installing and operating the product.
2. The actual dome requires a **24v AC 2Amp power supply**. During the course of transportation, storage and installation, the product should be handled with care avoiding vibration and any weight pressure, which may cause damage to the sophisticated optical and electronic equipment inside the machine.
3. Do not attempt to disassemble the camera. In order to prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside the camera.
4. Always use and stick to current electrical safety standards to install and use the dome. Use a correctly rated power supply. The RS485 and video signal cables should be kept way from other high voltage equipment such as mains cables and especially fluorescent lights. Using an anti surge protection device is recommended to prevent damage to the domes from lightning and mains surges. Damage to domes by lightning or mains voltage surges is not covered under the dome warranty.
5. Do not operate in areas exceeding the stipulated limitations concerning temperature, humidity and power supply.
6. Do not aim the camera directly towards the sun or an extreme light source whether it is switched on or not. Do not let the camera focus on bright and stationery objects for a long time. Doing either of these may damage the camera.
7. Do not use strong detergents to clean the main body of the camera as these may damage the dome cover or paintwork. Wipe dirt with dry cloth. If needed a mild detergent can be used.
9. Operate the dome camera with great care to avoid shock or vibration. If operated incorrectly, the Dome could be damaged.
10. Ensure the dome is not dropped. Never mount the unit on a ceiling that cannot support its weight.
11. If necessary, use a commercial lens cleaning paper to clear the lens windows. Gently wipe the lens window until clean.

## Description of Functions

This intelligent IR PTZ dome camera is a hi-tech CCTV product, which incorporates a high-clarity colour camera. It has a panoramic variable speed PAN/TILT movement, a multifunctional decoder, a character generator and an on-board processor for logic handling. The dome is easy to connect, install, maintain and operate, and has many features. The dome is compact and has a strong structure with a modern and appealing appearance.

### 1. Integrated Multi-Protocol Decoder

- a. The integrated multifunctional decoder can communicate with 5 different protocols. The baud rate can be independently set allowing compatibility with numerous systems with selectable baud rates from 2400 bps to 19200 bps. This dome uses RS485 serial control and can address from 1 to 255 cameras using binary addresses. Note that this camera uses software settings to set the camera ID, but protocol and baud rate are set by dipswitches.

### 2. Integrated Speed-Variable PAN/TILT

- a. The dome can turn 360° horizontally and continuously with unlimited positions with a manual adjustable pan speed range of 0.1° ~ 240° per second and manual tilt speed range of 0.1° ~ 120° per second vertically. The tilt action also has a -2° ~ +90° viewing adjustment.
- b. The dome can run at low speed, low noise, and does not show any picture shake.
- c. The maximum running speed when a preset is called can reach 400° per second.
- d. This dome is a high precision unit and maintains preset positions up to ±0.1°.
- e. The vertical flip function has a 10° automatic forward tracing facility.

### 3. High Intelligent Functions

#### Overview

This PTZ camera can initiate the following options:

Up to 128 Presets,

1 x Auto Scan (using preset commands),

1 x Tour (initiate using preset 65 command & calls up to first 16 presets),

3 x Patterns (using PTZ menu options),

8 x Vector Scans (using PTZ menu options).

The Vector Scan allows you to specify in a table format a list of actions which may include a number of presets, tour, auto scan and or patterns. The table allows a selected speed and dwell time for each action. You can trigger numerous Vector Scans so the options are very powerful.

- a. This dome can store up to 128 preset positions in non-volatile memory that are not lost with a power failure. Refer to the section “Presets and other functions.”

- b. The dome can run an Auto Scan (scans horizontally between two points) by setting the start point using Preset 52 and the end point by using Preset 53 and then starting the Auto Scan using Call 52. Refer to the section on “Auto Scan.”
  - c. One tour with 16 preset positions can be called using the CALL 65 command. This calls the presets in sequence. If you want to call a non sequential list of presets automatically or adjust the dwell time or speed between presets, you can set these in a Vector Scan in the PTZ menu. Refer to the section on “Patrols (Tours)” and “Vector Scans.”
  - d. The dome camera can simulate up to three different routes operated by you within a 120 second interval by utilising the Record Pattern facility in the PTZ menu. Refer to the section on “Record Pattern.”
  - e. Up to 8 Vector Scans can be setup in the PTZ menu that allow you to call presets, patterns and other Vector Scans. Note that only one tour can be called and therefore you are unable to set any parameters for the tour. However you can edit presets and therefore replacing tours with Vector Scans provides the same results with additional options.
  - f. Proportional pan function. The dome travel speed will depend upon the extent of the zoom coverage. In telephoto zoom mode, the pan and tilt speeds will be slower for a given amount of joystick movement than that in wide zoom mode. This keeps the image from moving too fast on the monitor when there is a large amount of zoom coverage.
  - g. Display Camera name & position. Allows the camera name to be edited and the angle of PTZ displayed on screen.
  - h. Returns to last position. If unit loses power, when re-powered it can be set to return after the self test to the position that it was at, when power was lost.
  - i. Operation return function. Once this is set, the PTZ will always return to the previous operation.
  - j. Temperature Display. Allows the display of dome temperature so that it can be adjusted.
4. **Software Modify the Dome Address and Baud Rate**. Allows dome address to be changed through PTZ menu. Call 95 > System Options > Comm Settings > Dome ID. Use the IRIS – or open button to select the ID number. You must enter the PTZ serial number in order for the ID change to take effect.

## 5. **Setting Protocol**

This dome has no dipswitches for setting the protocol. The internal protocol is set to Auto and is self-sensing but will select from PELCO-D and PELCO-P.

## Getting the dome up and running!



You **MUST** connect up the dome and your control equipment on a workbench or kitchen table before the actual site installation and **CHECK YOU KNOW HOW TO INSTALL IT CORRECTLY!!!!!!!!!!!!!!!!!!!!!!**.

By doing this you can set-up camera addresses, protocols, baud rate, adjust the camera and learn about how it operates before taking it to site. This will save you hours of time on-site trying to work out why a particular item doesn't function as you expected it to. There is nothing worse than installing something and then having to take it down to see how to get it working!! Do the learning curve in the comfort of your own premises!!!!

**SPECIAL NOTE: THIS PTZ HAS NO DIPSWITCHES AND IF YOU NEED TO INSTALL MORE THAN ONE UNIT CONTROLLED BY A KEYPAD OR DVR, YOU MUST CHANGE THE ID NUMBER IN THE MENU. AS ALL PTZ UNITS WILL HAVE IDENTICAL ADDRESSES OF 001, EACH UNIT IS UNIQUELY IDENTIFIED BY THE CAMERA SERIAL NUMBER. IN ORDER TO ACCESS THE CORRECT PTZ AND CHANGE THE ID, YOU MUST ENTER THE CAMERA SERIAL NUMBER.**

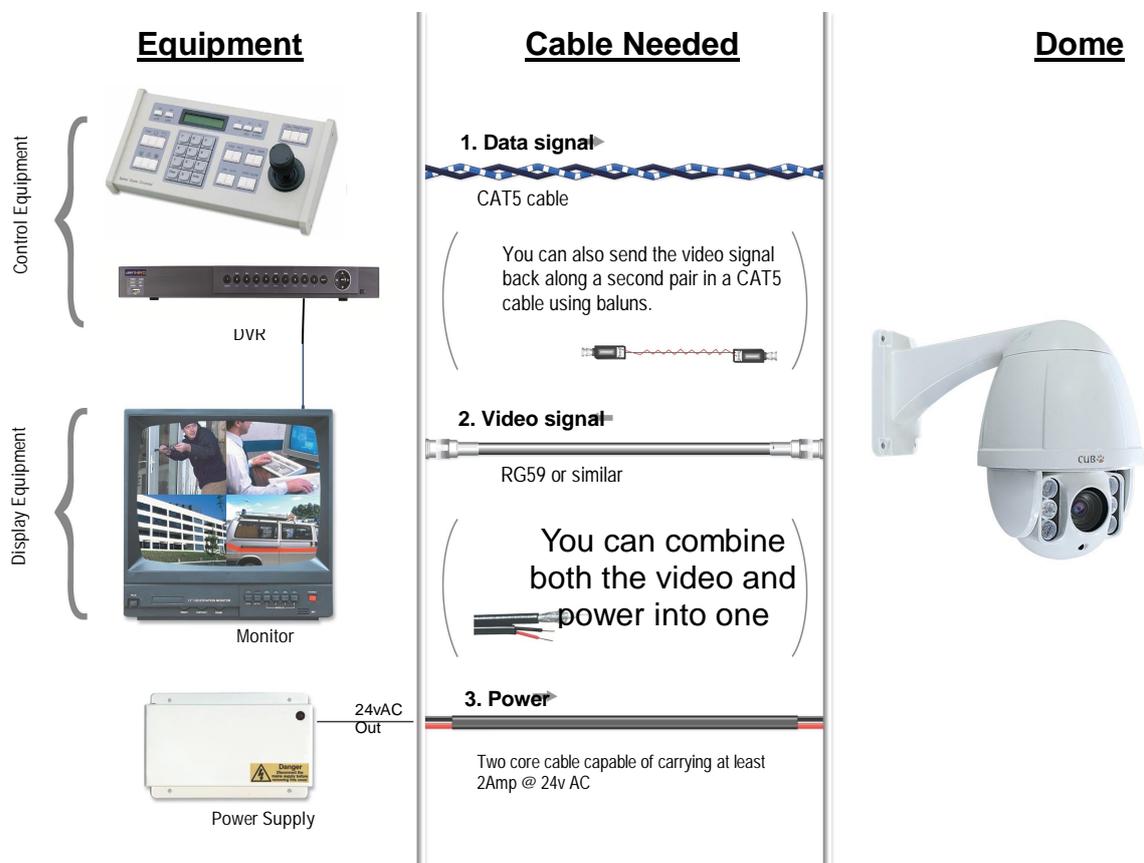
**Do you KNOW how to install PTZ equipment that is controlled by RS485 data signals?  
*If not please read the following introduction to PTZ >>>....***

## Overview- introduction to fitting PTZ equipment

Generally speaking, PTZ Domes requires four things;

- 1- They require a power supply and a cable to supply this power to the dome. This external PTZ dome uses 24V A.C.
- 2- They require a cable to get the video signal back to the monitor or recording device.
- 3- They require a cable to transmit the “RS485 control signal” from the keypad or DVR to tell the dome to pan, tilt and zoom etc.
- 4- They require something to control them, either a keypad or a DVR.

The following diagram indicates the basic cable requirements for a PTZ system.



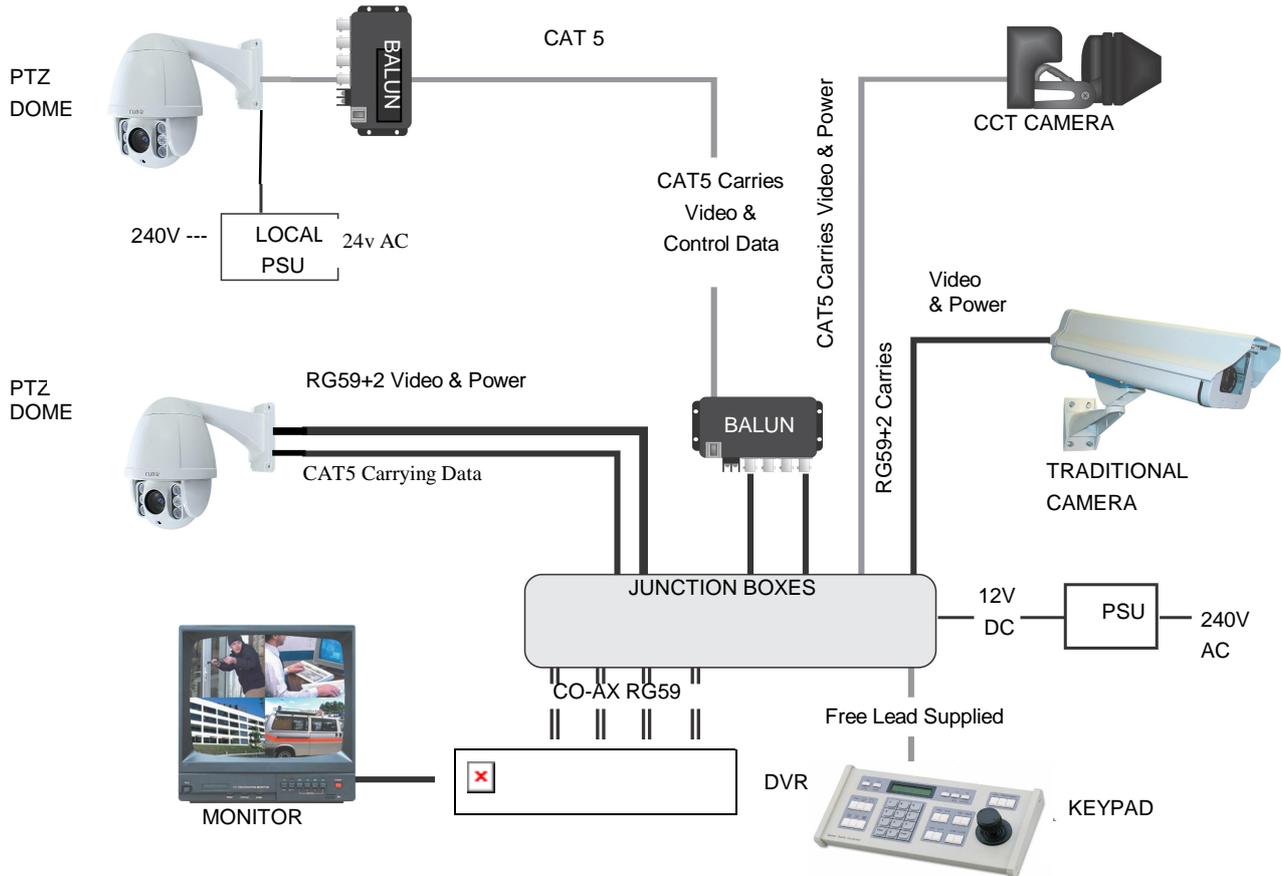
You can get “composite” cables that will carry both the power and the video signals and this has the benefit of combining two of the three cables into one. You may choose to power the dome locally to it, so you may only need to get the video signal back from the dome and the RS485 control signals to it. If this is the case you may choose to use a pair of BALUNS. By using baluns you can send the video signal and control signal down the same CAT5 cable just using different cores for each signal.

The control signal (RS485) is nearly always sent along a “twisted-pair” type cable. The twists in the cable help prevent interference affecting the data signal by “shielding” it. Many

installation companies use a CAT5 type or similar cable to run out to the domes to carry the data signal.

If you are considering using baluns please note - DVR's tend to require very good video signals to function correctly and "passive baluns" can lose some signal strength over the 50 metre mark so try to restrict the use of passive baluns to below 50 metre cable runs when using them with DVRs. Above this distance perhaps consider an active balun. Active baluns require power, passive baluns do not.

You can mix and match how you wire up your PTZ installation and the following general diagram gives you a guideline about how to do it. Remember this is a GUIDE and is not an instruction what to fit!



Many installation companies can get the power and video signal correct, but struggle with the control of the dome using the keypad or DVR using the RS485 data.

The key to successfully installing the data cabling to the dome is to get the basics right. Use a quality data cable such as CAT5 (never use just a standard untwisted cable such as alarm cable for the RS485 signal).

Also, you must follow the RS485 wiring convention; the following section explains this.

## RS485 Wiring methods & Tips >>>>>

### 1. Characteristics of RS485

As specified by RS485 standards, RS485 is a half-duplex data transmission type with characteristic impedance of 120Ω. The maximum load capacity is 32 units (domes, keyboards and DVRs).

### 2. Transmission distances of RS485 Signals using CAT5 or similar cables

Selecting a CAT5 or similar sized twisted pair data transmission cable, the maximum theoretical transmitting distances are as follows:

Baud Rate	<u>Maximum</u> Transmitting Distance
2400 Bps (PELCO-D)	1500m
4800 bps	1000m
9600 bps	600m

**PLEASE NOTE** - Using inferior cables, or installing the dome in an environment with strong electromagnetic interference, or connecting a lot of PTZ domes to the same cable carrying the RS485 signal will reduce the maximum transmitting distance.

### 3. RS485 Connection methods

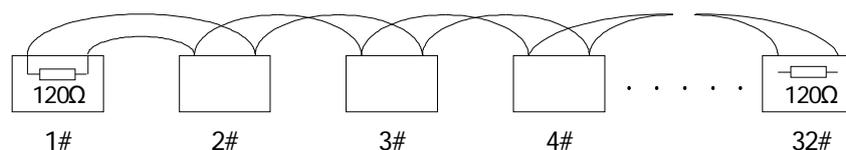
#### **METHOD 1 – DAISY CHAIN CONNECTION.**

The general RS485 standard recommends a “daisy chain” connection of equipment that is to be controlled. This means that the control cable is looped out of the one dome to the next dome and so on. The last dome in the line is then fitted with what is known as a “termination resistor”. This has a value of 120Ω.

The resistor is not built into this PTZ dome so must be fitted across the RS485 connections in the PTZ terminal connector on the last or longest run. The keyboard itself generally has a built-in 120Ω resistor. These termination resistors help make the signal more stable and give the system better reliability so the domes function, as expected. A common mistake installer’s make is not making sure the 120Ω resistor is switched ON in the LAST dome. Also installers often select the resistor to ON in another dome in the chain, these errors will make control of the dome unpredictable.

A simplified Daisy chain is shown below;

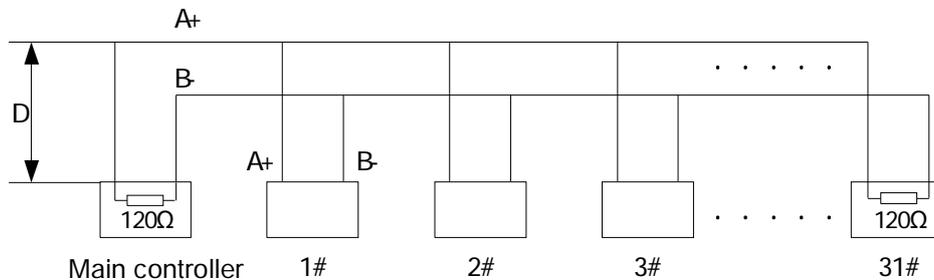
This first diagram shows the cables looping in one dome and out of another;



#### **Standard Daisy-Chain connection for the RS485 PTZ control signal**

(just the last dome only has the 120Ω resistor set to on, the first device is the keyboard and has the 120Ω built in as default)

This next diagram is a slight variation on the Daisy Chain arrangement. Again it's one cable going out to all the domes but instead of the cable going into each dome then back out to the next one, a junction box is used to "Spur-Off" to each dome. Whilst this can be done THE SPUR LENGTH (D) must be NO MORE THAN 10 metres!!!!!! The overall cable length between the Controller and the last dome is limited to around 300 metres in such an arrangement.



**Daisy-Chain connection WITH SHORT SPURS for the RS485 PTZ control signal**

(one main radial with very short spurs to each dome off it, keeping the spurs to less than 10 meters)

**STAR method of connection.**

In some circumstances you may need to adopt a star configuration for practical purposes. For instance, all the domes may be so scattered on a large site that running out separate spurs to each dome in a "STAR" array is the only practical solution.

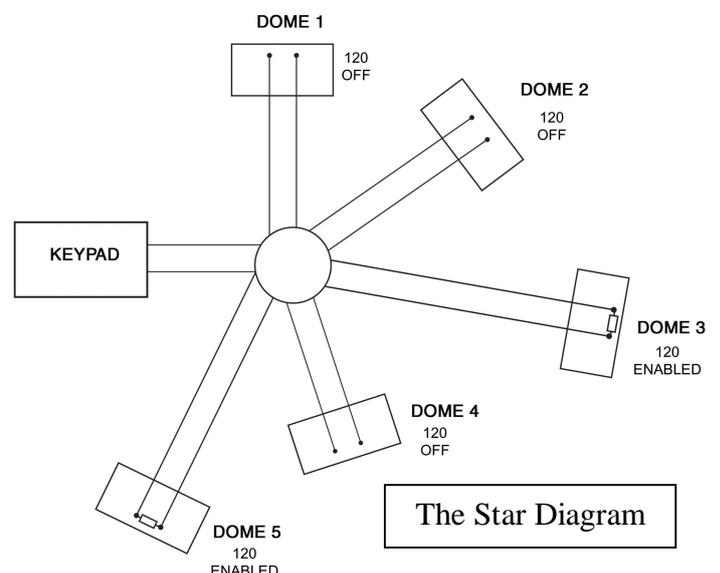
*So how do you do this in practice?*

The termination resistors must be connected to the two domes that are furthest away from each other, such as domes 3 and 5 in the following "Star diagram". Note that all the other domes do not have the 120ohm resistor connected. To fit them, connect them across the two connections in the PTZ camera terminal connector.

As the star configuration is not in conformity with the requirements of RS485 standards, problems such as signal reflections may arise, especially when there are long cable connections. The results are that control signals are decreased and the dome may not respond to, or just responds intermittently to the controller.

If your STAR circuit is not too extensive with each spur in the region of 20-50 metres you can expect quite good reliable performance using this technique. If you experience any problems though, there is a RS485 distribution box available CODE PT750 to help overcome any problems.

**The Star circuit for wiring PTZ's.**  
 The two furthest domes need the 120ohm resistors enabling, by moving the "Jumper"  
*In this example it's domes 3 & 5.*



## Overcoming RS485 data loss using an RS485 distributor

In the real world not everything always works exactly as it's expected to!

RS485 data signals that control the domes' movements are tiny signals that can get corrupted for many reasons. Poor cable quality, not using a PAIR of cores from a CAT5 but using one core from TWO separate pairs, running the CAT5 cable near mains equipment such as fluorescent lighting all will have a detrimental effect on the signal. These are things that you can correct with good installation practices.

Where you wish to run several separate CAT5 cables out to send the RS485 data signal out to the domes you are in effect correcting the STAR method of RS485 data distribution. As previously mentioned the problem with the Star method is that it is not actually designed for RS485 but generally works okay if you follow the previous notes on getting the 120ohm resistor setting right, as per the previous notes.

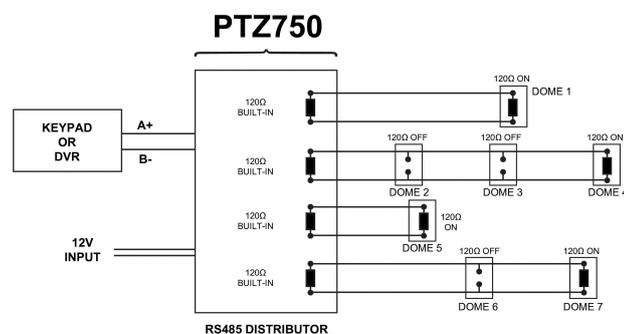
One way that takes the guesswork out of installing the Star method is to utilise an RS485 distributor. This has the advantage that the RS485 signal is correctly distributed to the domes so that they behave as expected. You can create up to 4 spurs to the domes and put up to 4 domes on each spur. Just like the Daisy chain method the end dome on each spur needs to have the 120ohm resistor enabled.

Although the RS485 distributor is a small additional expense, it takes some of the guess work out of the installation design and gives a more flexible approach to cabling which itself can save time and money on the installation. Not forgetting you get more predictable results!

The RS485 distributor (PTZ750) amplifies the RS485 control signal and distributes it evenly to 4 separate spurs, each spur can have up to 4 domes. This means that you could theoretically have up to 4 individual spurs of over 1000mtrs each to control up to 16 PTZ domes in total.

Ideally you would put just one dome on each spur from the PTZ750 but up to 4 domes is generally acceptable. The following diagram shows a typical use of the PTZ750 RS485 distributor.

In the following example and diagram, domes 1,4,5 and 7 are at the end of each spur and therefore require the 120ohm resistor enabling by moving the jumper setting within the domes. Domes 2,3 and 6 are all "midway" in each spur and do not need the 120ohm resistor and can be left as default. The PTZ750 itself has four 120ohm resistors built in as shown and you do not have to do anything with the PTZ750 as the resistors are permanently connected within it.



(Diagram showing how to use an RS485 distributor to improve PTZ control reliability)

Please note if you have the PTZ750 located within 5mtrs of the keypad or DVR you can connect up to 3 of them in parallel.

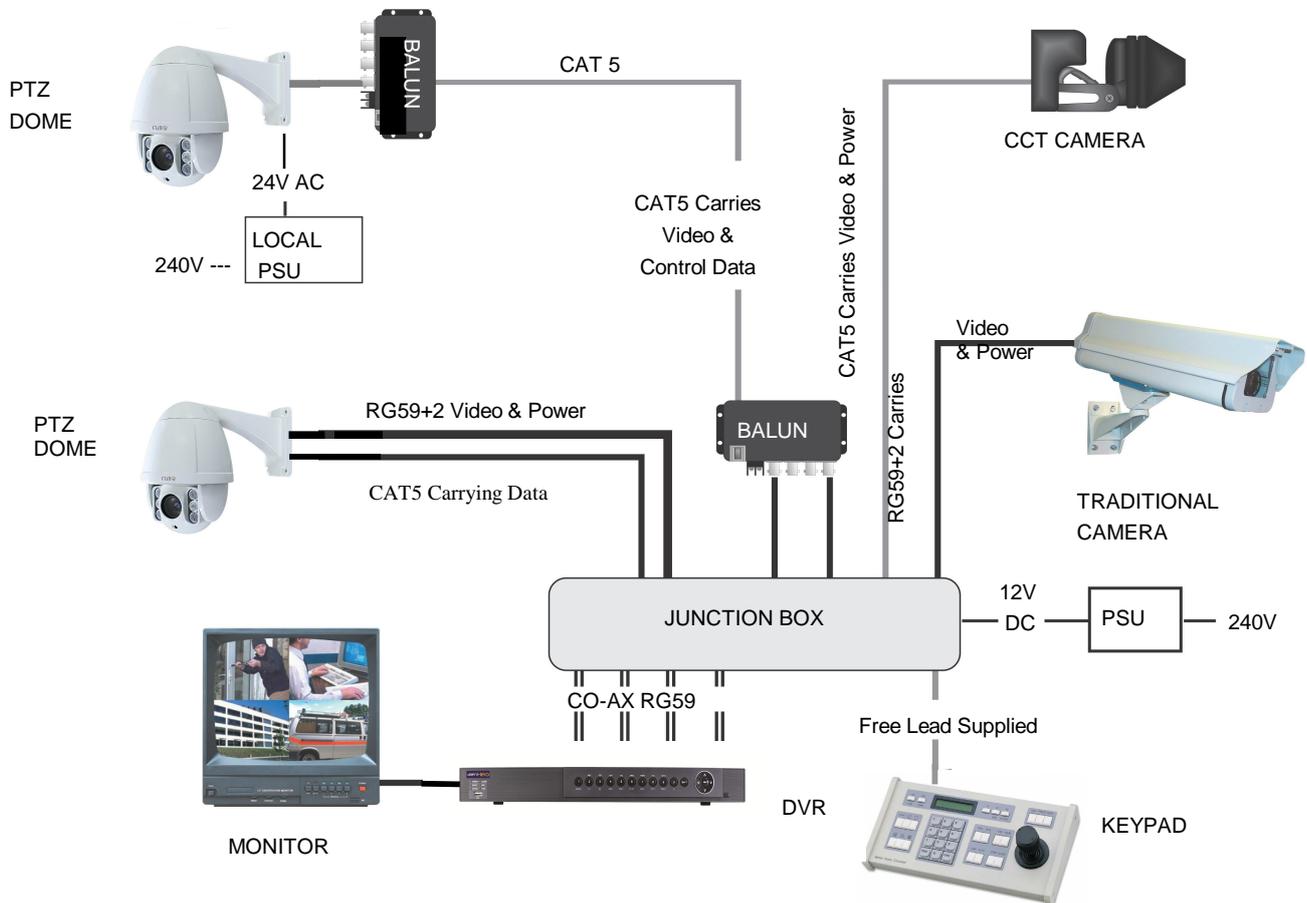
## Setting up the Dome Camera

### 1. Connection of the System

There are many ways to wire up a PTZ system.

If you have read the introduction at the beginning of these instructions you should have got a good idea what your options are.

Below is a general schematic diagram showing you some of these options.



**Figure 1.**

### *Powering the domes-*

All the domes will need power. For this dome it is a 24v AC power supply. The power supply must be capable of delivering at least 2 Amps per dome.

You can either power each dome with its own PSU locally to it or have the PSU's remotely situated perhaps near the keyboard or DVR.

A popular way to power the domes is using our COMPOSITE VIDEO cable (or shotgun as its also known) as this cable can carry the power to the dome and the video signal back to the monitor or DVR. Alternatively the COMBO cable also provides the RS485 data cable.



### ***Connecting the PTZ camera***

A heavy duty multi-core cable is used for power, video, alarm and RS485 connections.

### ***The power connection***

The thick BLACK cable in the multi-core cable has a power jack socket and this is connected to a 24vAC power supply. The distances for power cables are improved when using a 24vAC camera but voltage drop over a long run may cause the camera to fail to initialise. Obviously you can power the domes locally if you are able, which overcomes this issue.

### ***The video connection***

The thinner BLACK cable in the multi-core cable has a BNC connector which is the “VIDEO-OUT” from the camera and goes to the monitor or “VIDEO-IN” of a DVR camera input.

### ***The RS485 data connection for telemetry***

The Orange and Yellow pair of cores in the multi-core cable are the RS485 data cables. These are the cores that carry the RS485 control signal to the dome from either the keyboard or the DVR. The next section of the instructions gives more detail on how to connect the RS485 data. Please also read the RS485 WIRING METHODS & TIPS section towards the beginning of these instructions.

## **RS485 connection - *Connecting the Keypad or DVR to the Dome.***



The dome is controlled by an RS485 data signal that is given by either a KEYPAD or a suitable DVR. This data signal tells the dome to pan, tilt, zoom etc. It is important that you read the early section of these instructions to understand the fundamental principle of RS485 cabling techniques so that you get it right.

RS485 has two cores, A and B or more commonly known as RS485 + (A) and RS485 – (B) and if you get these two, the wrong way around, you will not be able to control the dome. Sometimes installers get the connections right on one dome but not on the other and find only one dome works. They then swap the wires around at the keyboard only to find out one dome has now burst in to life and the other one now failed!! But they don't put 2 + 2 together and realise their mistake, that they have wired one dome different to the other. Take great care getting these the right way around and make sure you wire each dome IDENTICALLY so that if you have to swap the A & B lines over at the keyboard you know all domes are wired the same!!

The PTZ640 series adopts the following RS485 convention:

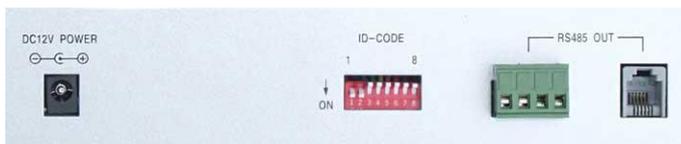
ORANGE = RS485 + or A  
YELLOW = RS485 – or B

You should initially be wiring the dome to the keyboard or DVR on your workshop bench or at least your kitchen table to prove you know how to get everything to work. Once you have done this, it is just a job of extending the cables and physically installing the domes on site. You must obviously take note of the RS485 wiring techniques mentioned at the beginning of these instructions and get the 120ohm resistors correct at the “End of line” domes. Generally speaking you will always be extending the RS485 signal from either the keypad or the dome using a CAT5 or similar cable. **Note that data cables do not need to be connected through baluns.**

The PTZ730 and PTZ700 are just two of the keypads that can be used with the PTZ640 series. On the rear of the keypads you will see the RS485 connections. Ensure they are connected correctly i.e the RS485 + A line and the RS485 – B line. Always connect to the **Transmit** and not the **Receive** connections. Note that both these keypads need to be set to the same protocol as the PTZ dome. Refer to the relevant keypad instruction manuals on the keypad dipswitch settings.



PTZ730



Rear of PTZ730

↑ ↑  
RS485 connections



RS485 connections



PTZ700 keypad

Rear of PTZ700

If you use cores from two different pairs in the CAT5 cable you will not get the benefit of the shielding effect of the cable twists and the dome will function erratically. You must always use a core from a PAIR, not two cores from two different pairs!!

***Connecting the video out of the dome.***

The dome has a short BNC lead attached to it. This is the lead that carries the video signal from the built-in camera. You need to extend this lead to the “VIDEO-IN” of the DVR or monitor. Use a good quality RG59 coax cable or similar to do this.

TIP – If you can’t get a picture at the remote end you could always take your test monitor to your PTZ dome and check the picture quality on its own short BNC lead.

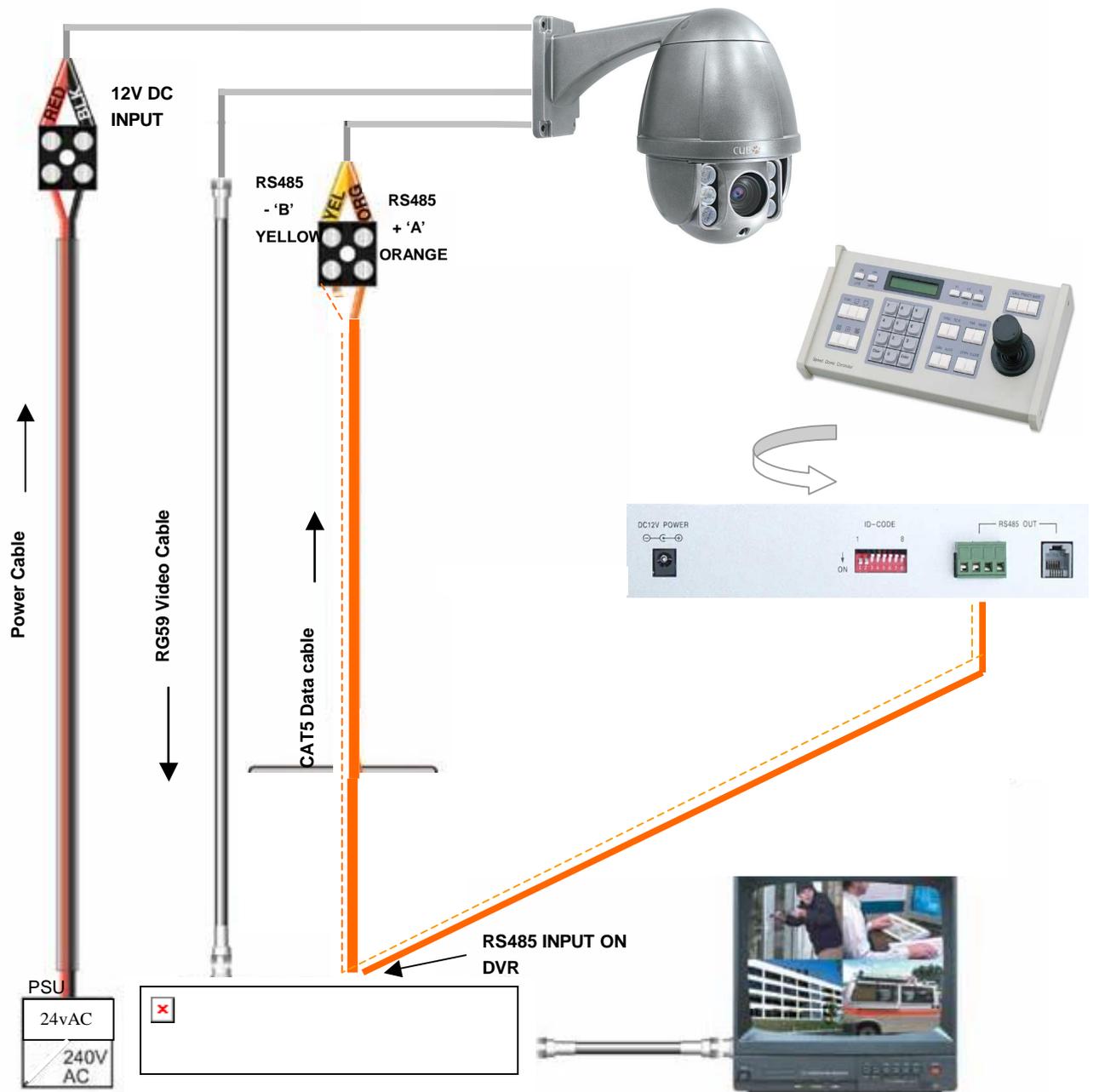
If you’re testing the equipment on a workbench you now have a one dome system.

For setting up the keyboard and testing the dome please read sections on default Dome settings and using the keyboard.

You can use a keyboard or a suitable DVR to control the dome. A suitable DVR would be one with PTZ functionality built into it and preferably Pelco-D protocol. If your DVR has a list of protocols it’s always best to try “Pelco-D” first. In the DVR, with Pelco-D set, you must also make sure you set up the “baud-rate” to 2400.

A typical site installation would look like the following diagram on the next page.

It shows the dome connected to the keypad plus how the dome could also be connected to a DVR instead of the keypad or at the same time. DVR’s that have the capabilities of PTZ control will have a terminal or connection on them somewhere, where the dome’s RS485+ A and RS485- B transmit line can connect to. Please refer to the individual DVR instructions of how to do this.



## *If you're using more than one dome on a site*

Each dome has a unique "address" so that if you are using more than one on a site the keyboard "talks" to the right dome when you want it to PTZ. If you only have the one dome on the site then the default "address" of "1" is okay and you have no reason to change the dome from this.

With multiple dome sites you need to set up each dome address separately.  
See below.....

**Special Note:**  
**There are no dipswitches for setting the address or baud rate. These are only configurable in the menu.**

### **Termination Resistor**

There is no termination resistor setting in this dome. You will need to fit an external 120Ω resistor across the RS485 connections from the PTZ camera. You need to connect this resistor across the last PTZ RS485 in a daisy chain arrangement. In a star RS485 arrangement it is connected on the longest run for up to three PTZs and on the two longest runs, for more than three PTZs.

## *Setting up a unique ADDRESS in the dome*

This dome does not have any dipswitches for setting the camera address. Changes can only be made via the PTZ menu.

### **SPECIAL NOTE:**

As there are no dipswitches in this PTZ camera to set addresses, if you are installing more than one of these units, you will need to setup the address in each additional unit. As the PTZ cameras are set with address 001 which is not a unique number, to change the address it is also necessary to enter the unique camera serial number.

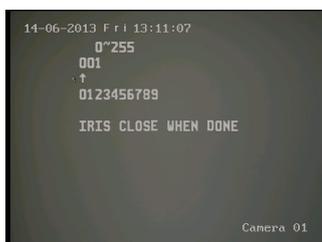
## *Entering the address and or baud rate in the menu*

To enter the main menu CALL preset 95 using the keypad or DVR with PTZ control. The ---- HIGH SPEED DOME ---- menu is then displayed.

Move down to the **SYSTEM OPTIONS** (4) menu and press the right arrow movement or the **IRIS+** or **OPEN** key to enter the **SYSTEM OPTIONS** menu.

Move down to the **COMM SETTINGS** (6) menu and press the right arrow movement or the **IRIS+** or **OPEN** key to enter the **COMM SETTINGS** menu.

Move down to **DOME ID** (2) and/or **BAUD RATE** (3) and press the right arrow movement or the **IRIS+** or **OPEN** key to enter **DOME ID** or **BAUD RATE**.



Move to the digit you wish to change using the right direction key and press the **IRIS+** or **OPEN** key and a second arrow will appear under the numeric number list. Use the right direction key to select the new ID digit and then press the **IRIS+** or **OPEN** key to apply the digit and then press **IRIS-** or **CLOSE** key to save new value.

Note the baud rate can be set to 2400, 4800, 9600 or 19200.

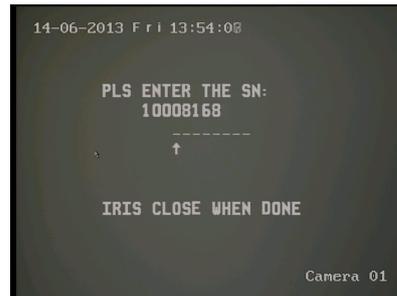
In order to ensure that only this camera ID and/or Baud Rate will be changed you will see that in the **COMMS SETTINGS** menu there is a blank field to the right of **INPUT SN** and underneath this a unique camera serial number to the right of **SN**.



You need to re-enter this unique serial number in order for the ID and/or Baud Rate change to take effect.

Move down to **INPUT SN** and press the **IRIS+** or **OPEN** key to enter this unique number.

Write down the serial number and then press the **IRIS+** or **OPEN** key.



Using the left or right direction key move the arrow under the first digit of the serial number and press the **IRIS+** or **OPEN** key to select the required digit and then press the **IRIS+** or **OPEN** key again to select it.

When the last digit of the serial number is entered press the **IRIS+** or **OPEN** key to save it and then press the **IRIS-** or **CLOSE** key to exit. The changes will then take effect. Note that the **INPUT SN** serial number will return to a blank field to allow a new change to be made if required.

### ***Setup of the Protocol***

There are no dipswitches in this PTZ allowing protocol changes. The protocol is self-detected and is automatically selected from either PELCO-D or PELCO-P.

## Using the PTZ730 keypad with the excelPTZ series



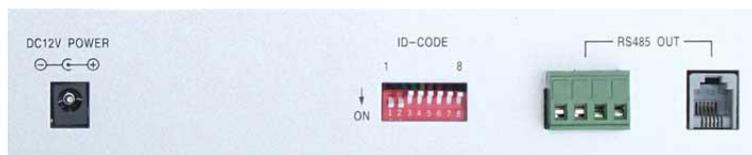
PTZ730 keypad

**NOTE 1:** For more detailed instructions in setting up the keypad or using one of our other keypads, please refer to the instruction manual supplied with the product.

**NOTE 2:** The PTZ730 keypad requires you to press the function key first followed by the value e.g <CAM> 01 <Enter> whereas some keypads e.g PTZ700 require the value first, then the function e.g 01 <CAM> <Enter>

When you first take the keyboard out of the box you will need to set it up for the domes that you are using.

**The dome you have purchased has the default settings of PELCO-D 2400-BAUD rate Address 1**



Rear of PTZ730 keypad

First read through the keypad instruction manual supplied. Set the protocol and baud rate in the keypad using the dipswitches on the rear of the unit. Note that all PTZ domes controlled by this keypad must have identical protocol and baud rate settings. The manual supplied with the keypad will show you what these settings should be.

Next connect the RS485 connections from the dome/s ensuring that the A and B lines are connected correctly.

Finally connect the power supply. Both the PTZ730 and PTZ700 keypads require a 12V DC PSU (1A minimum).

It is recommended to use a POW802 or equivalent for this purpose. Now press the keypad ON button.

Select a PTZ camera by pressing CAM button followed by camera address and Enter\*. The LCD display will indicate the camera channel selected. CAM 01 indicates that the keyboard is ready to talk to camera with address 1, if you have another dome set at camera address 2, press CAM button followed by 02 and Enter. This would change the display screen to CAM 02.

If you have multiple domes you will need to change the address of each dome so they are different but PLEASE LEAVE THE DOMES ON PELCO-D 2400 BAUD RATE.

\* see NOTE 2 above.

## **PTZ640 Functionality**

This PTZ dome is different to many other PTZ domes in that presets that are normally initiated within a tour are initiated instead within a Vector Scan. A Vector Scan is similar to a tour that is held in a table in the PTZ dome except that it also can initiate a range of functions such as listed below including other Vector Scans. This gives the PTZ dome very powerful control options.

- 255 x **Presets** (setup using keyboard or DVR – keyboard only if over 127)
- 6 x **Vector Scans** (setup using PTZ menu options) – CALL 83 ~ 88
- 3 x **Patterns** (setup using PTZ menu options) – CALL 80 ~ 82
- 1 x **Tour** (setup using PTZ menu option – CALL 65)

### **In addition the PTZ dome can manually run:-**

- 1 x **Auto Scan** (setup using keyboard or DVR)  
Start Point PRESET 52 – End Point PRESET 53 – CALL 52 to run
  
- 255 x **Presets** (setup using keyboard or DVR – keyboard only if over 127)  
Select PRESET <preset number> then CALL <preset number> to run
  
- 1 x **Tour** (initiate using keyboard or DVR)  
CALL 65 to run (this calls up to the first 16 presets)

## PRESETS

The dome has up to 255\* presets that once programmed with stay in the domes non-volatile memory so they will be retained even after a power cut.

What is a preset? A preset is a particular area or object that the dome was looking at and has been stored into its memory so when the preset is “called-up” the dome will select the area again without the operator using the joystick to do this. Even the zoom at the time is stored into the preset. This means that you could for example store a PRESET of a car-park entrance. When the operator calls up this preset the camera automatically zooms in on this area. By storing more than one preset you can add even more functionality to the dome. By having two or more presets, you can then get the dome to go on a Tour or Vector Scan of the presets. When you run these the dome goes to one preset, then waits a short period then on to the next preset and so on. The dome continues to cycle until you cancel it. The length of time the camera stays at one location and the speed of travel between each preset point can be set in the menu.

### ***PRESETS -How to set up a preset using a keyboard***

Aim the dome where you want it to look, zoom in or out to get the correct scene and let the camera auto focus. Now press the following keys on the keypad : <PRESET> + **xx** + <Enter> (where **xx** is the preset number you wish to store). For example <PRESET> **01** <Enter> would store PRESET 01 and the camera would always go to this location when 01 is <CALLED>.

To test if the preset is stored correctly use the joystick to move the camera to point in a new location. Now press <CALL> **01** <Enter> (where **xx** is the preset you wish the camera to go to). In this example if you press <CALL> **01** <Enter> the dome should go straight to the PRESET 01 location.

TIP -You may wish to write down a list of presets that you have stored next to the keypad for the operator.

### ***CALLING a preset using a keyboard***

This may be as follows;

PRESET 01 = MAIN GATE (a long zoom shot)

PRESET 02 = ENTRANCE DOOR

PRESET 03 = FIRE ESCAPE

PRESET 04 = EMERGENCY EXIT

PRESET 05 = CAR PARK (zoomed-out wide angle)

PRESET 06 = CAR PARK (zoomed-in narrow angle)

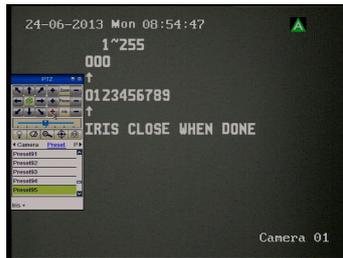
When the operator wishes to quickly zoom in on the MAIN GATE all he has to do is press <CALL> **01**<Enter>. To go to the EMERGENCY EXIT he would press <CALL> **04** <Enter> and so on.

To call up any previously stored preset camera location, simply press <CALL> **xx** <Enter>, where **xx** is the preset number.

\*Whilst up to 255 presets positions can be setup, please note that some presets in the higher end range are used for engineer access only, so you may find some presets in the range from 128 upwards that are not recognised.



Use the right arrow key to move to the Preset **NUMBER** column. Press the IRIS+ or Open button to display the numeric sequence screen.



Press the IRIS+ or Open button and an UP arrow will appear below the list of numerics to be selected. Use the right arrow to move to the first preset number to be selected and then press the IRIS+ or Open button to select it. When the preset number has been set press the IRIS+ or Open button to confirm and the IRIS- or Close button to save.

Now use the right arrow key to move to the **Velocity** column. This is the speed of the PTZ moving to the preset point. Again use the IRIS+ or Open button to select a speed from 1 ~9. Then press the right arrow button to move to the **DWELL** time. Again use the IRIS+ or Open button to select a dwell time from 1 ~99 seconds. Then press the right arrow button to set the next preset. Remember that the presets must have already been setup, this is just a table to run the required functions. Other options to include in the Vector Scan if required are Patterns, one Tour and/or other Vector Scans.

### ***Running a Vector Scan***

There are two methods for running the Vector Scan. Run using a command from the keyboard or DVR, or run through the PTZ menu.

#### ***Using the Keyboard***

Enter CALL <nn> Enter (where nn = 83 ~ 88)

Note up to 6 Vector Scans can be setup

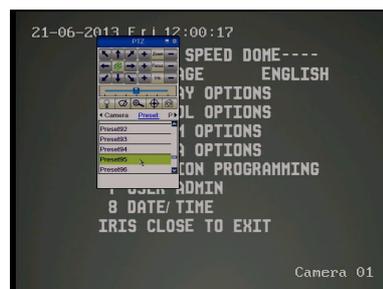
e.g Vector Scan 1 = CALL 83, Vector Scan 2 = CALL 84, Vector Scan 6 = CALL 88

#### ***Using the PTZ640 menu***

To enter the menu enter CALL 95 Enter or 95 CALL on the keyboard or via the PTZ option in the DVR. For this example we are using an Alien DVR. Using the mouse click on the left mouse button to display the following:



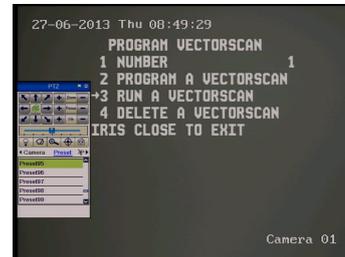
Now click on PTZ and go to Presets and call preset 95 by clicking on it to display menu. If you left click mouse when pointer is in the PTZ control box, you can drag it to avoid it overlaying menu.





Move down using down arrow key to Function Programming (6) and then enter using IRIS+ or Open button enter this menu.

Now move down using down arrow key to Run A Vectorscan (3) and then enter using IRIS+ or Open button. This will now trigger the Vector Scan. Enter a manual movement to stop Vector Scan.



## Patterns

### ***RECORD PATTERN- What is a record pattern***

This dome has an option to store a record pattern. A record pattern consists of a continuous sequence of standard pan and tilt movements or lens commands recorded within a 120 second interval. A record pattern does not use presets. You can limit movement at a required position and pan and tilt within the 120 second time restriction. Once the recording is complete, i.e you have closed the recording or the record time has expired, you may use an option to replay the recorded pattern. Once this recorded pattern is initiated, the dome will run the record pattern continuously until a keypad movement is detected or an alarm is activated. However if the pattern is included in a Vector Scan then there may be other functions that can be initiated before or after the pattern.

### ***RECORD PATTERN- What is the difference between a pattern & the patrol (tour)***

There is only one patrol (tour) and this uses presets and when initiated, the dome will move to the first 16 preset positions using a dwell time of 2 seconds. The speed of dome movement between any two presets is a constant speed and not a variable speed. Only one patrol (tour) can be scheduled whereas three record patterns can be recorded.

A record pattern does not use presets. It however allows the user to record a continuous sequence of standard pan and tilt movements or lens commands. The record pattern sequence can be recorded using the keypad pan and tilt joystick but will only record up to a 120 second interval. A record pattern allows the user a continuous view rather than selected preset positions and is similar to an auto scan except that an auto scan only allows a selected movement speed whereas the record pattern reflects the user movements made during the recording of the record pattern.

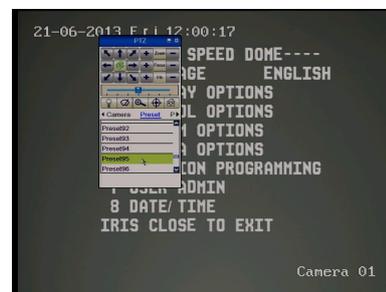
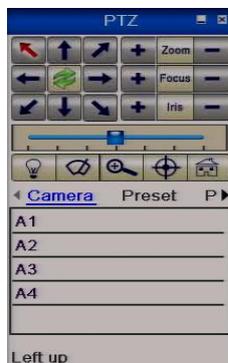
## ***RECORD PATTERN- How to set it up***

**Record Pattern** allows a pattern to be recorded which consists of any standard pan and tilt or lens command within a 120 second interval. A pattern is automatically closed when the 120 second interval is exceeded or by pressing the **CLOSE** button.

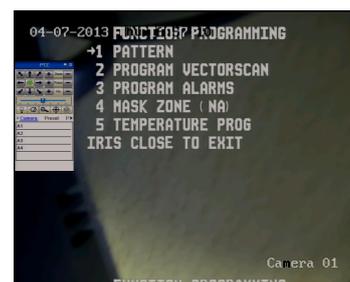
To enter the menu enter CALL 95 Enter or 95 CALL on the keyboard or via the PTZ option in the DVR. For this example we are using an Alien DVR. Using the mouse click on the left mouse button to display the following:



Now click on PTZ and go to Presets and call preset 95 by clicking on it to display menu. If you left click mouse when pointer is in the PTZ control box, you can drag it to avoid it overlaying menu.



Move down using down arrow key to Function Programming (6) and then enter using IRIS+ or Open button enter this menu.



Now select Pattern (1) and then enter using IRIS+ or Open button. This will now open the Pattern menu.



Now move down to NAME and set the pattern name using the IRIS+ or Open button to enter edit field and press IRIS+ or Open button again to display following alphabet selection.



Now press IRIS+ or Open button after moving up arrow on screen to character required, then continue same procedure under name completed and then press IRIS- or Close button to save.

Then move down with down arrow key to PROGRAM A TOUR.

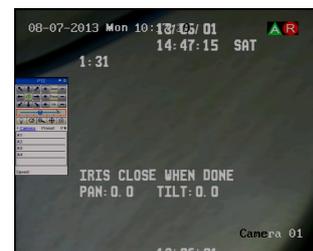
**NOTE:** PROGRAM A TOUR refers to programming this pattern.

Press the IRIS+ or Open button to enter this option. You will then see the following screen displayed.



Enter IRIS+ or Open button to begin recording the pattern.

You will see the 2 minutes counting down. Now use the direction keys to move the PTZ. You can also use the Zoom button. You can record for the two minutes and the unit will automatically stop or use IRIS- or Close to end pattern before 2 minutes are reached.



## ***Running the Pattern***

### ***Using the Keyboard***

Enter CALL <nn> Enter (where nn = 80 ~ 82)

Note up to 3 Patterns can be created

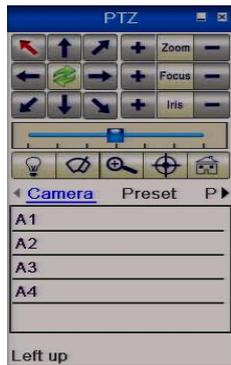
e.g Pattern 1 = CALL 80, Pattern 2 = CALL 81, Pattern 3 = CALL 82

### ***Using the PTZ640 menu***

To enter the menu enter CALL 95 Enter or 95 CALL on the keyboard or via the PTZ option in the DVR. For this example we are using an Alien DVR. Using the mouse click on the left mouse button to display the following:

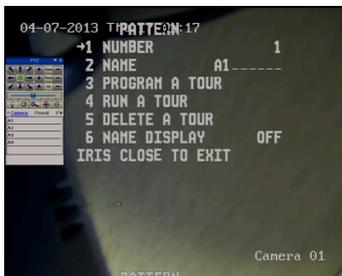
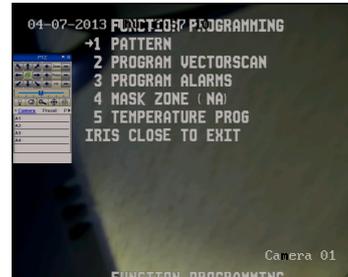


Now click on PTZ and go to Presets and call preset 95 by clicking on it to display menu. If you left click mouse when pointer is in the PTZ control box, you can drag it to avoid it overlaying menu.



Move down using down arrow key to Function Programming (6) and then enter using IRIS+ or Open button enter this menu.

Now select Pattern (1) and then enter using IRIS+ or Open button. This will now open the Pattern menu.



Select the appropriate pattern number then move down to RUN A TOUR using the down arrow button and press IRIS+ or Open to start the pattern.

### ***Patrol (Tour) – How to set it up and use it***

A patrol (tour) is simply a collection of at least two preset camera locations that are run in sequence with the dome stopping at each location for a brief period of time and then moving on to the next preset. For an example, you could use a patrol so that an outside dome camera points at a gate, then at a side doorway, then zooms out to get an overall shot of a car park and finally zooming in on a delivery bay, before repeating the whole cycle again. Patrols can be useful for both outside and internal PTZ's. For a shop they could be used to cover key areas like clothes rails, tills and changing rooms in a sequence.

To set up a patrol you need to set up the individual stop points where the camera will pause. These are called *presets*. On this PTZ camera, only one Patrol can be setup by using a keypad or DVR. There is no menu option for tours but a Vector Scan does an identical job, so use that instead if you want to drive PTZ presets in more than one tour from the menu. If you run a tour, the camera will select up to the first sixteen presets.

## *An example for a four preset mini-tour*

### *Setting the presets using the keypad*

STEP 1- Using the keypad joystick, move to where you wish to start the tour and then press **<PRESET> 01<Enter>**

STEP 2- Now move to the next location and press **<PRESET> 02 <Enter>**

STEP 3- Now move to the third location and press **<PRESET> 03 <Enter>**

STEP 4- Finally move to where you wish to end the tour and press **<PRESET> 04 <Enter>**

### *Deleting a preset using the keypad*

You may wish to delete a preset.

To do this just overlay the original preset number with a new **<PRESET> xx <Enter>** .

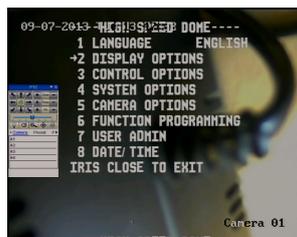
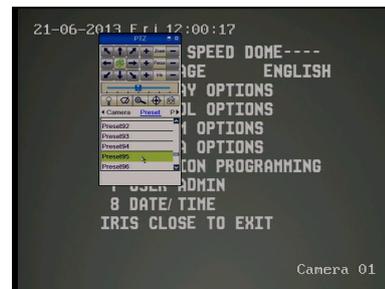
Obviously if you wish to overwrite a preset with a new location, simply aim the camera at the new location and store the preset as normal, this will simply overwrite the old preset.

### *Setting the presets using the PTZ640 menu*

To enter the menu enter CALL 95 Enter or 95 CALL on the keyboard or via the PTZ option in the DVR. For this example we are using an Alien DVR. Using the mouse click on the left mouse button to display the following:

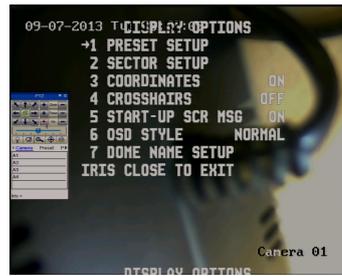


Now click on PTZ and go to Presets and call preset 95 by clicking on it to display menu. If you left click mouse when pointer is in the PTZ control box, you can drag it to avoid it overlaying menu.



Move down using down arrow key to Display Options (2) and then enter using IRIS+ or Open button to enter this menu.

Press IRIS+ or Open button to enter the PRESET SETUP menu. Now move camera to preset position.



Now press the IRIS+ or Open button to set the preset number.



Now press the IRIS- or Close button to save the preset number and return to menu above.

### ***Running the Patrol (Tour) using a keyboard***

Enter CALL 65 Enter

Note only one tour can be initiated. The tour will call the first sixteen presets in order, with a two second dwell time at each preset position.

### ***Running the Patrol (Tour) using the PTZ640 menu***

The tour can be initiated using a Vector Scan. Please refer to the earlier details on setting up a Vector Scan. Note only one tour can be initiated. The tour will call the first sixteen presets in order, with a two second dwell time at each preset position.

### ***AUTO SCAN- How to set it up***

**Auto-scan** scans between two points. These are not presets as per the patrol(tour) facility but auto scan selection points. You may program only one Auto Scan and this is only possible via a keyboard or DVR.

Select the required camera by pressing the <CAM> button and then entering <camera address> on the keypad.

Move the camera to the start position and press **PRESET 52 <Enter>** on the keypad. Move the camera to the end position and press **PRESET 53 <Enter>** on the keyboard.

### ***Calling the Auto Scan***

To start the Auto Scan press **CALL> 52 <Enter>** via the keypad or DVR.

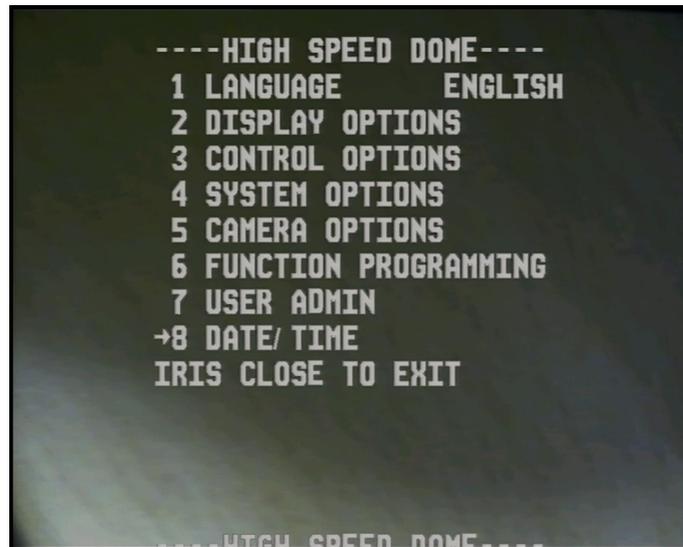
## ***USING THE DOME'S ADVANCED FUNCTIONS-***

### ***On Screen Graphics (OSD) –***

The PTZ640 series boasts six Vector Scans, three Patterns, one Tour and Presets. All these can be configured using the OSD.

To bring up the camera menu press <CALL> 95 <Enter> (varies with keyboard type).

The OSD is then displayed on the screen. You can navigate between the various options using the Joystick control – up to increase and down to decrease – right pan to enter. You can also use the IRIS – or OPEN button to enter and the IRIS + or CLOSE button to save and exit.



# THE MENU SYSTEM

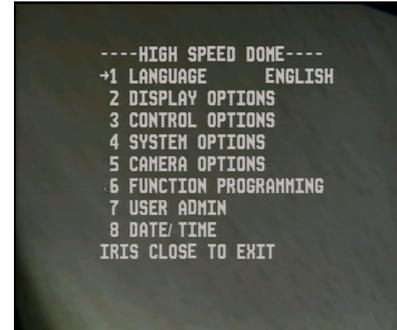
## Using the Menu System.

This menu system allows the user to alter the dome menu instruction options and settings using a control keypad or DVR. This first page shows the initial main menu page and only describes the general functions. The following pages show the main menu option selected on the left hand side of the page and a breakdown of that menu page on the right hand side of the page.

### MAIN MENU

To enter the main menu system press **CALL 95 <Enter>** on the Keypad.

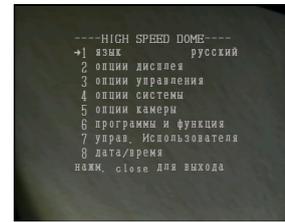
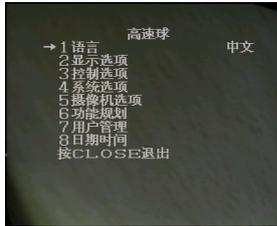
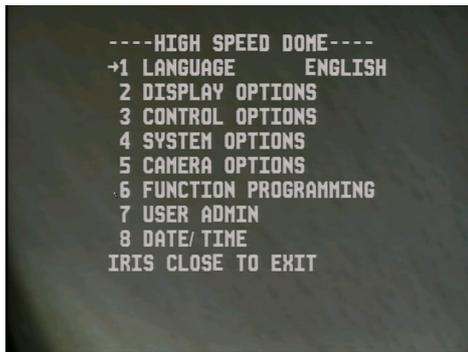
Use the Joystick control to move up or down the menu and the right arrow/IRIS+/OPEN to change value. This can also be used to enter a selection and the IRIS-/CLOSE button to exit. To leave the main menu press IRIS-/CLOSE in Main Menu.



## DESCRIPTION OF MENU OPTIONS

- 1. LANGUAGE:** English, Chinese, Russian, Spanish
- 2. DISPLAY OPTIONS:** Presets, Sector setup,  
Coordinates, Crosshairs, Start-Up Screen Message, OSD Style, Dome Name setup
- 3. CONTROL OPTIONS:** Set Pan/Tilt reverse, Find Home position, Set Default function, Speed Limit, Auto Flip, Auto Focus, Auto AE, Vector Scan AF, Vector Scan still, IR Setup
- 4. SYSTEM OPTIONS:** Clear Memory, Restore Defaults, Color System, Reset Dome, Dome Info, COMM settings, Camera Memory
- 5. CAMERA OPTIONS:** Focus, Exposure, White Balance, Day/Night, BackLight, 3D-DNR, Image Adjust, Special, OSD Setup
- 6. FUNCTION PROGRAMMING:** Pattern, Vector Scan, Alarms, Temperature
- 7. USER ADMIN:** Master Setup, Operator Setup, Authorisation, Password Logon
- 8. DATE/ TIME:** Date/Time setup, Assignment, Power Timer

To access the Language menu press the Iris+ or Open button on keypad/DVR or move the Joystick to the right. The menu below will be displayed.

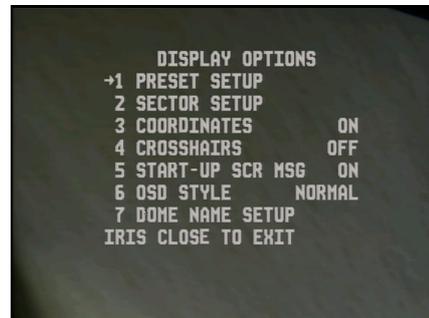
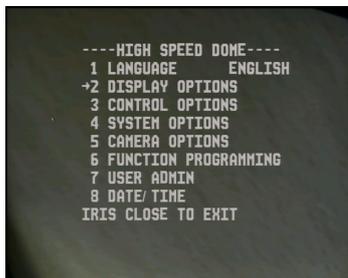


## LANGUAGE

This allows the menu to be changed from English to Chinese, Russian or Spanish



To access the Display Options menu press the Iris+ or Open button on keypad/DVR or move the Joystick to the right. The menu below will be displayed.

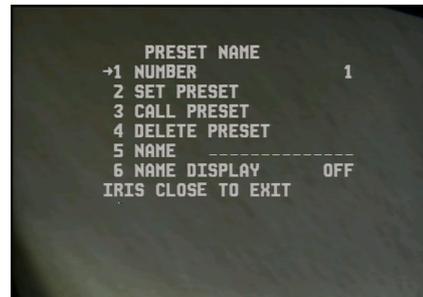


## DISPLAY OPTIONS

This menu covers the setup of the following options: Presets, Sector setup, Coordinates, Crosshairs, Start-Up Screen Message, OSD Style, Dome Name setup

### (1) PRESET SETUP

This menu allows the setting of up to 255 presets. Presets can be set in the menu, using a keyboard or via a DVR menu. If using the menu, you will need to first move the camera to the required preset position and then enter the menu to set it.



#### 1. NUMBER

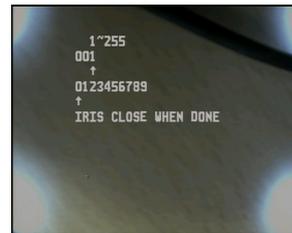
This allows you to set a preset number. You must have first moved the PTZ to the preset position required. Press the IRIS+ or Open button to enter the menu to change the preset number.



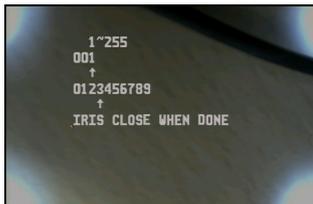
The menu above is displayed.



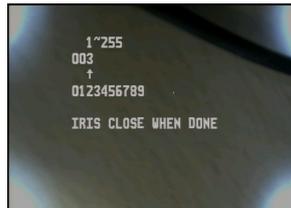
Move to digit that you wish to change using direction key.



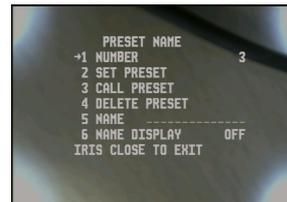
Press Iris+ to select second line of numbers.



Move to digit required using direction keys.



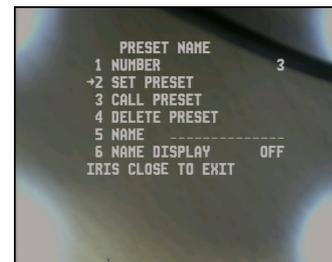
Press Iris+ or Open to select digit and this is entered as preset digit.



Then press Iris- or Close and the preset number is then displayed.

## 2. SET PRESET

Once the preset number has been selected move down to Set Preset and press the Iris+ or Open button and the message IRIS CLOSE WHEN DONE will be displayed. Press the Iris- or Open button to display STORED which means the preset position has been Saved.



## 3. CALL PRESET

Clicking on the Iris- or Close button or the right direction key will call the preset number selected.

## 4. DELETE PRESET

Clicking on the Iris+ or Open button, or the right direction key, will display the question : ARE YOU SURE TO DO THIS?

IRIS OPEN TO CONFIRM  
IRIS CLOSE TO CANCEL

Press Iris+ or Open to confirm delete or Iris- or Close to cancel delete.

## 5/6. NAME/NAME DISPLAY

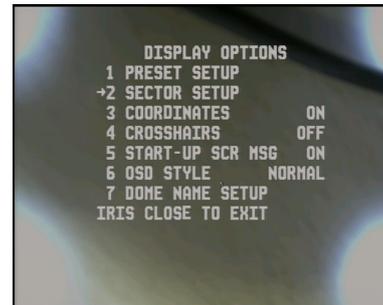
The name facility allows you to display a preset name when the preset is called. You need to switch NAME DISPLAY to ON



The following menu settings do not describe the steps to initiate the menu call or to apply menu changes. These have been covered in the preset setup instructions above.

## (2) SECTOR SETUP

This facility allows you to create up to 8 sectors. Each sector can be named. You can draw a box with pan and tilt settings and when moving through the sector the name is displayed on the screen.



(1) NUMBER <1 ~ 8>

Set the sector number

(2) NAME <8 character sector name>

Set the sector name

(3) PAN START POS

If you move the right or left arrows this

sets the horizontal start position of the sector.

(4) PAN END POS

Moving the left or right arrow keys sets the horizontal end position of the sector.

(5) TILT START POS

If you move the up or down arrows this sets the vertical start position of the sector.

(6) TILT END POS

If you move the up or down arrows this sets the vertical end position of the sector.

(7) NAME DISPLAY OFF/ON

Switch this to ON to display the sector that is being accessed.

## (3) COORDINATES OFF / ON

This option will display position coordinates on screen when switched to ON.

## (4) CROSSHAIRS OFF / ON

Setting this option allows you to overlay the display window with a crosshair display centred in the middle of screen. This can be useful for selecting centre of picture when zooming in.

## (5) START-UP SCR MSG ON / OFF

When switch to ON a startup screen of the settings used will be displayed.

## (6) OSD STYLE NORMAL

This is not a changeable option.

## (7) DOME NAME SETUP

This option allows dome name to be setup.



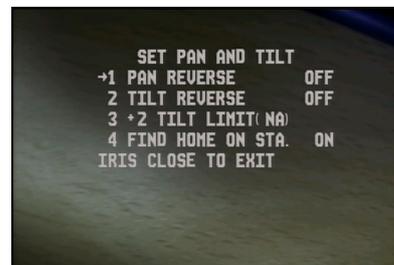


## CONTROL OPTIONS

This menu provides an option for pan and tilting in reverse and finding Home on startup, switching on speed limit, auto flip, auto focus, automatic exposure, Vector Scan auto focus, Vector Scan still frame and IR setup.

### (1) SET PAN AND TILT

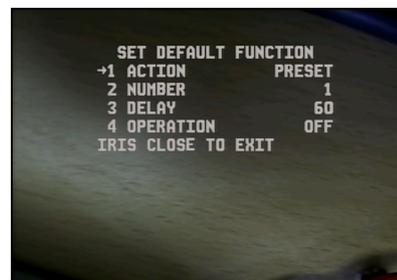
1. PAN REVERSE OFF/ON  
Switch to on to set pan in reverse.
2. TILT REVERSE OFF/ON  
Switch to on to set tilt in reverse.
3. +2 TILT LIMIT (NA)  
This option is not selectable
4. FIND HOME ON STA. ON/OFF  
This option when set will set PTZ to home position following startup.



### (2) SET DEFAULT FUNCTION

This option sets default function if OPERATION (4) is switched on.

1. ACTION PRESET/VECTORSCAN/PATTERN  
AUTO SCAN/TOUR
2. NUMBER <numeric value 1 ~ 255>  
The number of the preset/vectorscan/pattern/auto scan or tour
3. DELAY <time delay in seconds 1 ~ 999>  
The time in seconds before the function is actioned
4. OPERATION OFF/ON  
Activates default function.

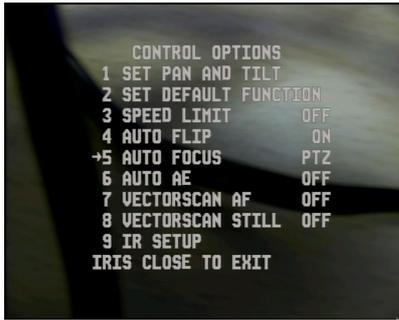


### (3) SPEED LIMIT OFF / ON

This switches operational speed limit on or off.

### (4) AUTO FLIP OFF / ON

The auto flip option flips the camera over when reaching limit.



**(5) AUTO FOCUS PTZ / OFF / Z**

This option allows PTZ to auto focus and this is the default option. You can switch it off if required. The Z option allows auto focus on zoom.

**(6) AUTO AE PTZ / OFF / Z**

This option allows Auto Exposure. You can switch it off for manual control or Z for auto exposure on zoom.

**(7) VECTORSCAN AF OFF / ON**

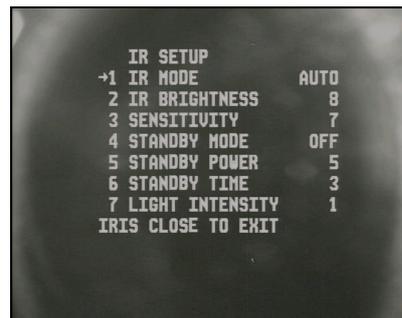
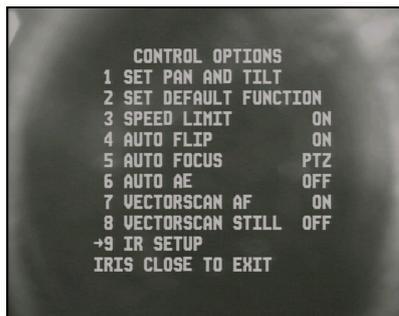
You can set auto focus to on in your Vector Scan.

**(8) VECTORSCAN STILL OFF / ON**

This option can be set to stop Vector Scan.

**(9) IR SETUP**

This option allows you to control the IR lighting, including brightness, sensitivity and standby mode that can provide extended IR life. There are six sets of IRs in this camera and dependent on the zoom range will trigger certain IR sets.



**(1) IR MODE AUTO / FAR / NEAR / F+N / CLOSE**

This option allows you to select the IRs required for the application. AUTO will automatically select IRs in accordance with the zoom setting used. FAR is used to manually select a longer and more narrow IR beam, NEAR is used to manually select a closer, wider angle IR illumination and F+N is to manually select all IRs. If you select CLOSE this will completely stop IRs from switching on.

**(2) IR BRIGHTNESS <1 ~ 30>**

This sets the brightness level of the IRs.

**(3) SENSITIVITY <1 ~ 30>**

This option sets the sensitivity for the IRs to switch on and off.

**(4) STANDBY MODE ON / OFF**

If you do not operate the dome for a while, you can set this option to set standby to on and this will reduce power running costs and provide improvements in the IR life.

(5) STANDBY POWER <1 ~ 30>

This adjusts the level of power in standby mode.

(6) STANDBY TIME <1 ~ 999>

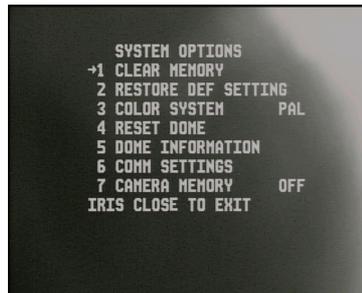
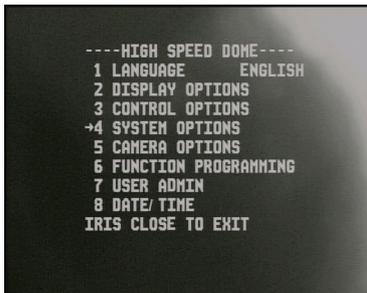
This is used to set the time in seconds after no movement is detected, before the PTZ enters standby mode.

(7) LIGHT INTENSITY

This is a display facility only and is not changeable. The value displayed relates to the amount of light that the PTZ can see at a point in time.

**SYSTEM OPTIONS**

This option is for data management and includes Clear Memory, Restore Default Settings, Colour System, Reset Dome, Dome Information, Comm Settings and Camera Memory. The authority to use the System Options is only limited to the administrator with correct password.



**(1) CLEAR MEMORY**

This option clears the memory in the PTZ camera.

**(2) RESTORE DEFAULT SETTINGS**

This options restores the manufacturer’s default settings.

**(3) COLOR SYSTEM**

This allows you to change colour system from PAL to NTSC. PAL is used in the UK.

**(4) RESET DOME**

This option just restarts the dome and runs the self test.

**(5) DOME INFORMATION**



CAMERA:	Type of camera
PROTOCOL:	Control protocol
BAUD RATE:	Baud Rate
DOME NUMBER :	Dome Number
COMM MODE:	Communication Mode
SN:	Serial Number

## (6) CONTROL SETTINGS

This option allows you to set the communications settings for your PTZ camera.

To enter the main menu CALL preset 95 using the keypad or DVR with PTZ control. The ---- HIGH SPEED DOME ---- menu is then displayed.

Move down to the **SYSTEM OPTIONS** (4) menu and press the right arrow movement or the **IRIS+** or **OPEN** key to enter the **SYSTEM OPTIONS** menu.

Move down to the **COMM SETTINGS** (6) menu and press the right arrow movement or the **IRIS+** or **OPEN** key to enter the **COMM SETTINGS** menu.

Move down to **DOME ID** (2) and/or **BAUD RATE** (3) and press the right arrow movement or the **IRIS+** or **OPEN** key to enter **DOME ID** or **BAUD RATE**.



Move to the digit you wish to change using the right direction key and press the **IRIS+** or **OPEN** key and a second arrow will appear under the numeric number list. Use the right direction key to select the new ID digit and then press the **IRIS+** or **OPEN** key to apply the digit and then press **IRIS-** or **CLOSE** key to save new value.

Note the baud rate can be set to 2400, 4800, 9600 or 19200.

In order to ensure that only this camera ID and/or Baud Rate will be changed you will see that in the **COMMS SETTINGS** menu there is a blank field to the right of **INPUT SN** and underneath this a unique camera serial number to the right of **SN**.



You need to re-enter this unique serial number in order for the ID and/or Baud Rate change to take effect.

Move down to **INPUT SN** and press the **IRIS+** or **OPEN** key to enter this unique number.

Write down the serial number and then press the **IRIS+** or **OPEN** key.



Using the left or right direction key move the arrow under the first digit of the serial number and press the **IRIS+** or **OPEN** key to select the required digit and then press the **IRIS+** or **OPEN** key again to select it.

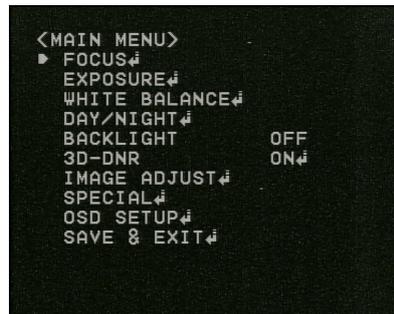
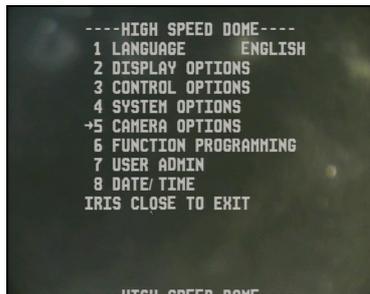
When the last digit of the serial number is entered press the **IRIS+** or **OPEN** key to save it and then press the **IRIS-** or **CLOSE** key to exit. The changes will then take effect. Note that the **INPUT SN** serial number will return to a blank field to allow a new change to be made if required.

### (7) CAMERA MEMORY OFF / ON

Use this option if you want to default settings to the last camera module installed.

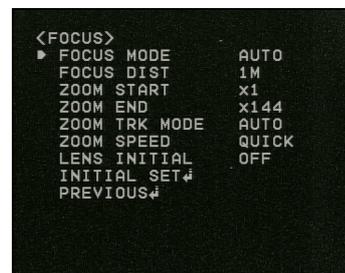
### CAMERA OPTIONS

This option allows you to access the camera module menu. This menu can be different according to the module fitted. This example uses the 12x PTZ072 camera module. Use IRIS+ or Open or right arrow to enter/change menu value.



**FOCUS MODE**    AUTO / MANUAL / PUSH ⇐  
**AUTO**            Automatic Focus  
**MANUAL**        Manual Focus  
**PUSH**            Use IRIS+ for push command

**FOCUS DIST**    1m,1.5m,2m,3m,5m,10cm,50cm.  
 This option will use the focus distance parameter and the greater the distance the quicker the focus adjustment will take.



**ZOOM START**    x1 ~ x12  
 Optical zoom range. Altering this will limit zoom start.

**ZOOM END**        x144  
 Digital zoom range. Altering this will limit zoom end.

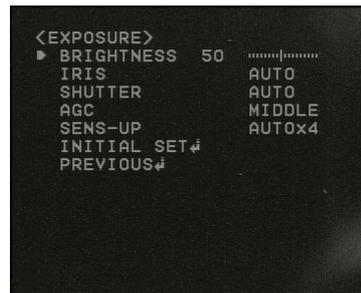
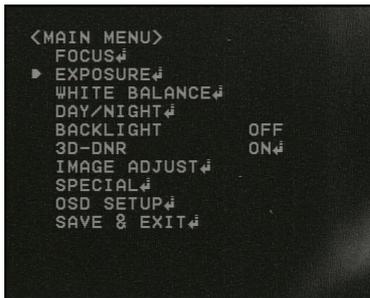
**ZOOM TRK MODE** Auto / Manual / Off

**ZOOM SPEED**    Quick / Slow / Normal

**LENS INITIAL**   Off / One Push ⇐ / Auto  
 This option will automatically initialise the lens. The option if set allows a period of 1 ~ 7 days to be set.

**INITIAL SET**    ⇐  
 Clicking this option defaults the FOCUS menu settings.

**PREVIOUS**       ⇐  
 Returns to previous menu.



**BRIGHTNESS 1 ~ 100 Default 50**

This sets camera brightness setting. For night time viewing increase brightness so that picture does not white out during brightest point in the day. This will provide the maximum light at night.

**IRIS AUTO / MANUAL**

This option allows manual control of the IRIS setting. The unit is generally left in AUTO mode. Note that entering the manual operation allows 1 ~ 100 setting.

**SHUTTER AUTO / A-FLK / MANUAL / OFF**

The Shutter should normally be set to AUTO. If the camera is located close to a fluorescent light source and a strobing effect is caused, then try using the A-FLK option. In manual mode you have a choice in selecting the shutter speed from the following: 1/160, x2, x3, x4, x5, x6, x8, x10, x12, x14, x16, x24, x32, x64, x128, 1/90000, 1/50000, 1/30000, 1/10000, 1/7000, 1/5000, 1/2500, 1/1600, 1/1000, 1/700, 1/500, 1/250.

**AGC MIDDLE / HIGH / LOW**

This option is for setting automatic video gain.

**SENSE-UP**

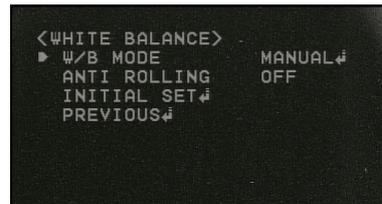
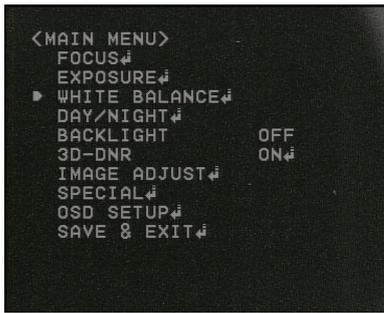
This option is the NiteDevil feature and this holds the shutter open at night to grab more light. Note that delaying the shutter speed can cause drag on moving objects so settings must be carefully selected. The higher the delay time the more potential for increasing the drag effect. The following can be set: AUTOx4, x8, x16, x32, x64, x128, OFF or AUTOx2. Default is AUTOx4.

**INITIAL SET**

Clicking this option defaults the EXPOSURE menu settings.

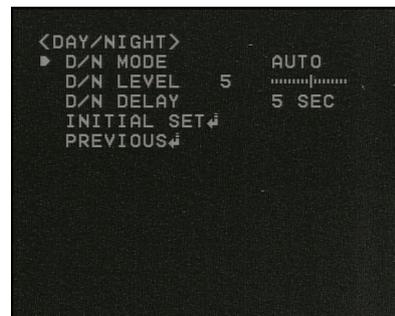
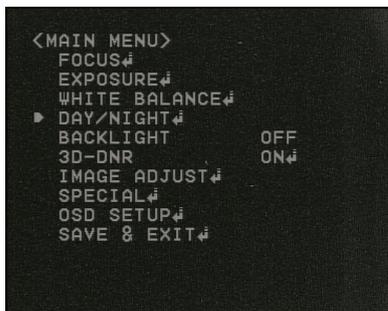
**PREVIOUS**

Returns to previous menu.



### W/B MODEL MANUAL / AWB / ATW / INDOOR / OUTDOOR / PUSH

This menu allows you to set the white balance. As a general guide AWB (Auto White Balance) is where the light level is static e.g indoors and ATW (Alternating White Balance) for outdoor use where there are changing light temperatures. Indoor and Outdoor modes are similar to AWB and ATW. Push allows you to set white balance using the Iris + or Open button.



### DAY/NIGHT

#### D/N MODE AUTO / DAY / NIGHT / EXT / CDS

This menu allows you to set either colour during the day and black and white at night, or colour all the time, or black and white all the time, or using an external light or CDS sensor.

#### D/N LEVEL 0 ~ 10 Default 5

This sets the level of light for switching from Day to Night

#### D/N DELAY 5 ~ 60 seconds (5, 10, 15, 30, 60)

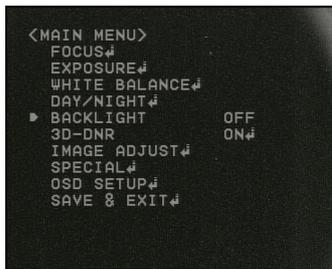
When switching from day to night, to overcome erroneous switching backwards and forwards at dusk, setting the delay time will stop camera switching until it sees a continuous interval of light level as determined by the D/N Level setting.

#### INITIAL SET

Clicking this option defaults the DAY/NIGHT menu settings.

#### PREVIOUS

Returns to previous menu.



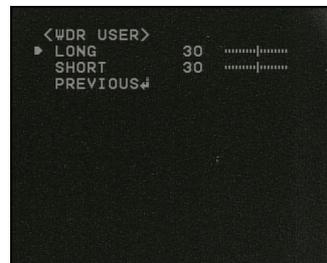
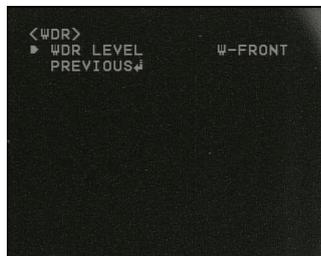
**BACKLIGHT OFF / BLC↔ / WDR↔ / ECL↔**  
 This menu allows you to set backlight compensation, wide dynamic range and eclipse. These options are for balancing light levels and are useful when there is strong light source that is affecting the overall picture quality.

**BLC Backlight Compensation MIDDLE / HIGH / LOW**

This option is useful to dull down a light source enabling a uniform overall light level.

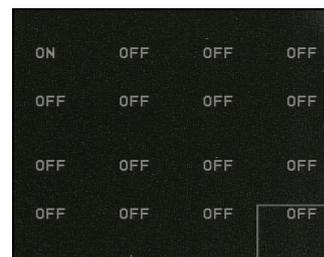
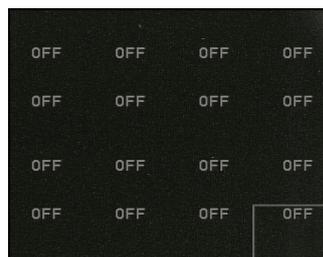
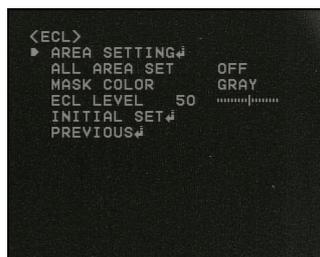
**WDR Wide Dynamic Range W- FRONT / W-MIDDLE / W-REAR / W-USER↔**

Wide Dynamic Range is provided with two elements in the CCD one capturing the darkest connects of the picture and one the brightest. These are then merged. WDR applies generally to day time pictures. The W-FRONT, W-MIDDLE or W-REAR target these locations but if a more generalised adjustment is needed then use the W-USER option.

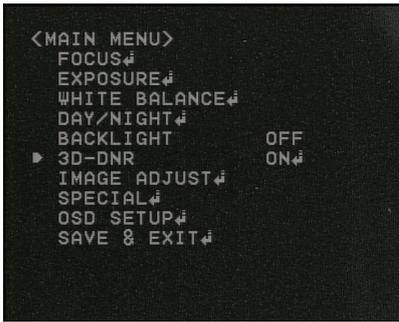


**ECL ECLIPSE**

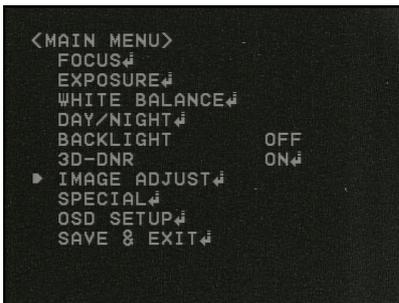
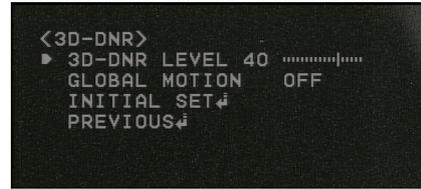
The Eclipse menu is the equivalent to HSBLC (High Sensitivity Backlight Compensation) or Shield options. It is for equalising a very bright light source so that the picture does not white out. You need to select a box around the area where the bright light source occurs and set a mask colour.



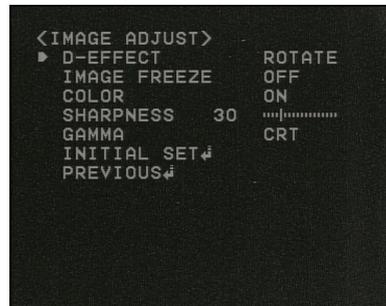
The ALL AREA SET option will change all the OFFs to ON. The MASK COLOR can be GRAY, D.GRAY or BLACK. The ECL level can be set from 1 ~ 100 default 50. This increases or decreases the masking level.



**3D-DNR Digital Noise Reduction OFF / ON**  
This option is generally used in conjunction with the Sense-Up option to reduce digital noise and the effects of ghosting.



**IMAGE ADJUST**  
This option allows picture rotation, image freeze, sharpness and switching colour on or off.



**D-EFFECT OFF / V-FLIP / MIRROR / ROTATE Default OFF**

Use this option to change to vertical flip, mirror or rotate viewing

**IMAGE FREEZE OFF / ON Default OFF**

Set this to freeze picture frame.

**COLOR ON / OFF Default ON**

Switches colour on or off.

**SHARPNESS 0 ~ 100 Default 30**

This allows you to improve the sharpness setting of the picture. If you see black lines around objects, the setting is too high.

**GAMMA CRT / LCD / USER↵ Default CRT**

It is an electronic correction carried out by the camera circuitry to balance the brightness seen by the camera to that of the monitor.



**USER 0.45 ~ 1.00 Default 0.45**

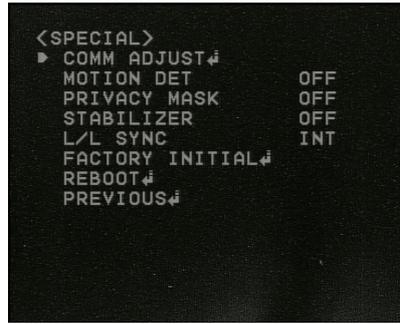
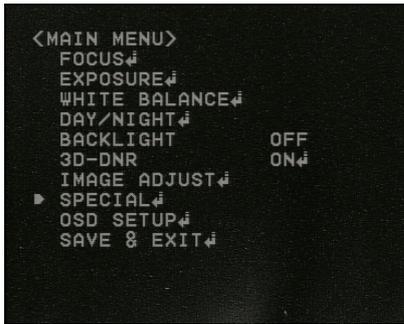
This option is used to manually set the GAMMA setting.

**INITIAL SET↵**

This option defaults this menu

**PREVIOUS ↵**

This returns to previous menu.



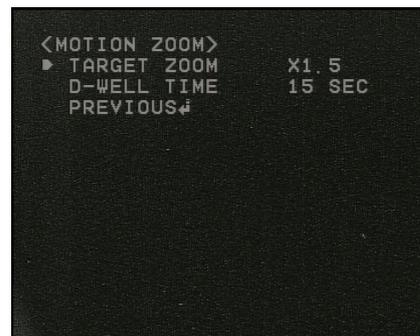
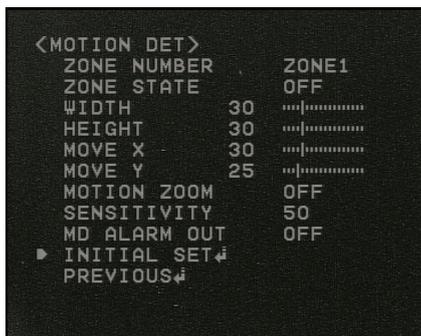
## SPECIAL

This menu includes **COMM ADJUST**.

**ON NO ACCOUNT MAKE ANY CHANGES TO THE COMM ADJUST MENU AS IT WILL STOP COMMUNICATION BETWEEN THE PTZ UNIT AND THE CAMERA MODULE**

## MOTION DET

This option enables the setting of four zones for detection of motion. Set the zone state to on to enable each zone. Draw a detection zone using width and height and position on screen using Move X and Y. Motion Zoom allows you to zoom in when the motion is detected. The Motion Detect Alarm Out is not provided on this camera.



## ZONE NUMBER 1 ~ 4

Select up to four zone areas.

## ZONE STATE OFF / ON

Switch the relevant zone area on for motion detection.

## WIDTH / HEIGHT / MOVE X / MOVE Y

Set the zone area and then the zone area position

## MOTION ZOOM OFF / ON

This option will zoom in to TARGET ZOOM setting (x1.5 ~ x12) and will stay zoomed in according to the DWELL TIME settings (5,10,15,30,60) in seconds.

## SENSITIVITY 0 ~ 100 Default 50

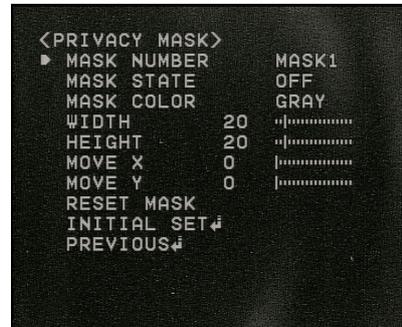
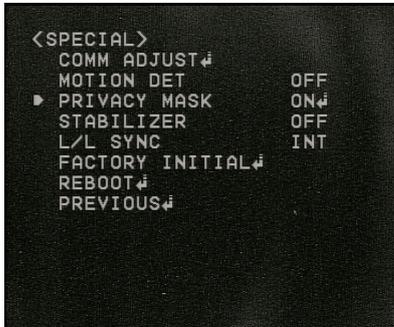
The sensitivity adjusts the level before motion is detected.

## INITIAL SET ←

This option defaults this menu

## PREVIOUS ←

This returns to previous menu.



## PRIVACY MASK OFF / ON ←

This option allows you create up to 8 privacy masking zones however this feature is not available in this PTZ camera.

## STABILIZER OFF / ON

Leave this option switched off.

## L/L SYNC INT

Leave this option set to INT.

## FACTORY INITIAL ←

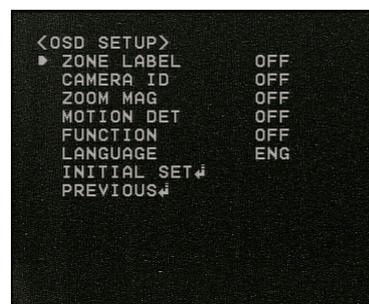
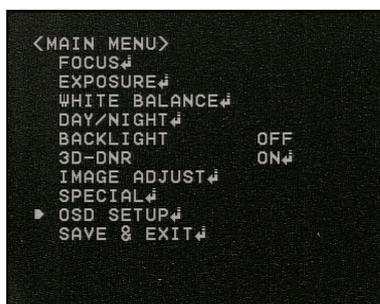
This will reset camera module back to factory settings.

## REBOOT ←

This will reboot camera module.

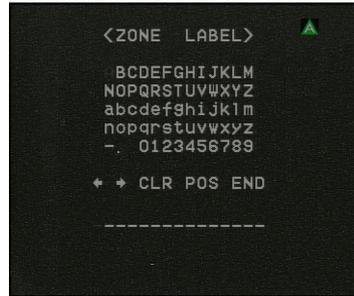
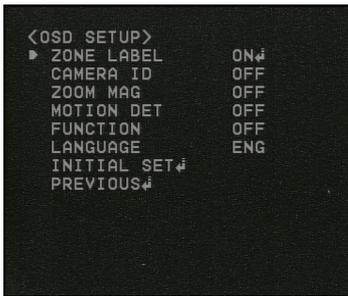
## PREVIOUS ←

Returns to previous menu using Iris + or Open.



## OSD SETUP ←

This menu allows you to name a Zone, switch on various functions and change language.

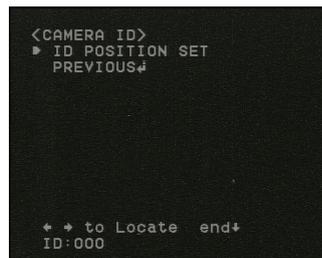


**ZONE LABEL OFF / ON**

This allows the creation of a zone label. Use right arrow to select character and press IRIS+ to enter. Use left or right arrows in display menu to move to character required and press CLR to clear. Use the POS option to set the position of label using arrow keys and then IRIS+ or Open to save position and select END and press IRIS+ or Open to save.

**CAMERA ID OFF / ON**

This allow you to position the camera ID at a different position across bottom of screen using the left and right arrows on the screen display and the down arrow to end.



**ZOOM MAG OFF / ON**

This option switches zooming on and off.

**MOTION DET OFF / ON**

This option switches motion detection on and off.

**FUNCTION OFF / ON**

This switches the motion function off and on.

**LANGUAGE ENG**

This language is fixed on English.

**INITIAL SET**

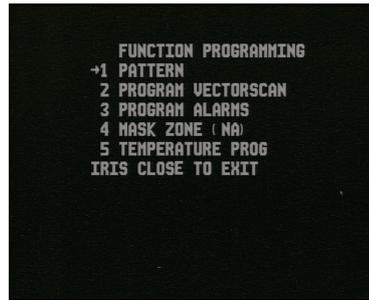
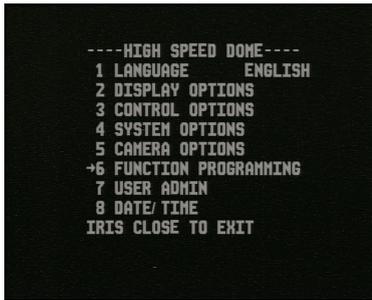
This option defaults this menu

**PREVIOUS**

This returns to previous menu.

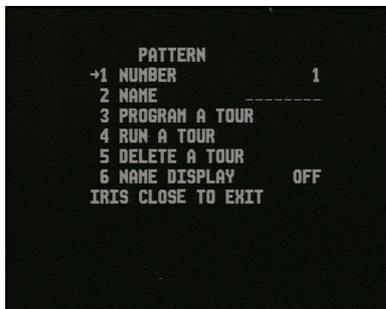
**SAVE & EXIT**

This saves changes to camera menu and exits.



## PATTERN

A record pattern consists of a continuous sequence of standard pan and tilt movements or lens commands recorded within a 120 second interval. A record pattern does not use presets. Refer to section earlier on Pattern setup and running.



### NUMBER 1 ~ 3

Sets the pattern number.

### NAME

Sets the pattern name.

### PROGRAM A TOUR (Tour refers to pattern)

Record pan and tilt movements within a 120 second time period. Press IRIS + or Open to start and IRIS - or Close to exit.

### RUN A TOUR (Tour refers to pattern)

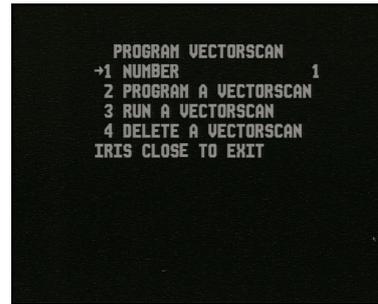
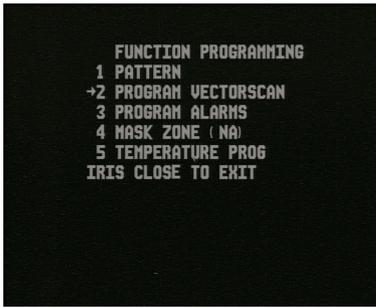
This runs the pattern number selected.

### DELETE A TOUR (Tour refers to pattern)

This deletes the pattern number selected. A display asks  
 ARE YOU SURE TO DO THIS?  
 IRIS OPEN TO CONFIRM  
 IRIS CLOSE TO CANCEL

### NAME DISPLAY OFF / ON

Displays the pattern named in NAME if option set to on.



## PROGRAM VECTORSCAN

A Vector Scan is similar to a tour that is held in a table in the PTZ dome except that it also can initiate a range of functions such as listed below including other Vector Scans. This gives the PTZ dome very powerful control options.

- 255 x **Presets** (setup using keyboard or DVR – keyboard only if over 127)
- 6 x **Vector Scans** (setup using PTZ menu options) – CALL 83 ~ 88
- 3 x **Patterns** (setup using PTZ menu options) – CALL 80 ~ 82
- 1 x **Tour** (setup using PTZ menu option)

### NUMBER 1 ~ 6

This sets the Vector Scan you are creating or editing. Up to 6 Vector Scans can be setup.

### PROGRAM A VECTORSCAN

This menu is this Vector Scan table.

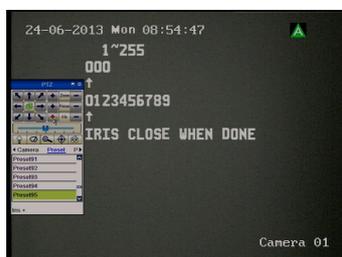
You will see that by pressing the IRIS+ or Open button you can cycle through PRE (preset), VECT (Vectorscan), PATT (Pattern), TOUR (Tour) or - - - - (blank).

	NAME	NUM	U	DWELL
1-	PRE	1	7	3
2	PRE	2	4	3
3	PRE	3	4	4
4	----	-	-	-
5	----	-	-	-
6	----	-	-	-
7	----	-	-	-
8	----	-	-	-

IRIS CLOSE WHEN DONE  
Camera 01

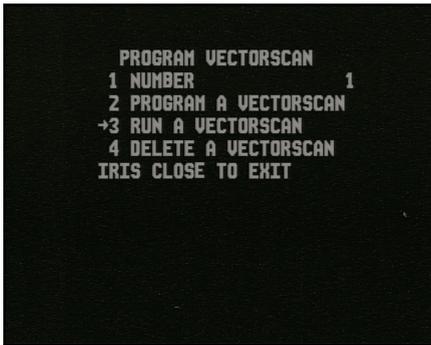
NOTE: Presets must have been created as detailed in how to setup a preset.

Use the right arrow key to move to the Preset **NUMBER** column. Press the IRIS+ or Open button to display the numeric sequence screen.



Press the IRIS+ or Open button and an UP arrow will appear below the list of numerics to be selected. Use the right arrow to move to the first preset number to be selected and then press the IRIS+ or Open button to select it. When the preset number has been set press the IRIS+ or Open button to confirm and the IRIS- or Close button to save.

Now use the right arrow key to move to the **Velocity** column. This is the speed of the PTZ moving to the preset point. Again use the IRIS+ or Open button to select a speed from 1 ~9. Then press the right arrow button to move to the **DWELL** time. Again use the IRIS+ or Open button to select a dwell time from 1 ~99 seconds.

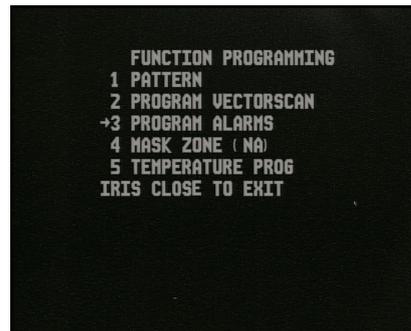
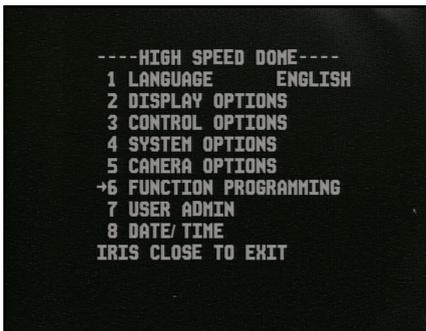


### RUN A VECTORSCAN

Press the IRIS+ or Open button. This will now trigger the Vector Scan. Enter a manual movement to stop the Vector Scan.

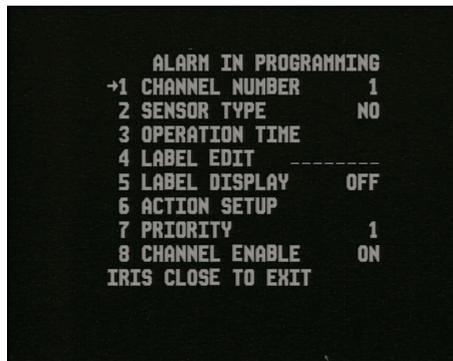
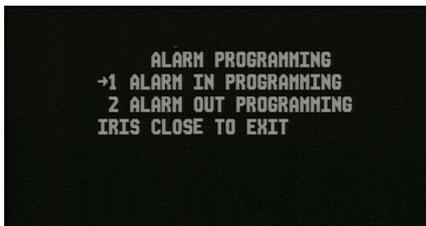
### DELETE A VECTORSCAN

This option deletes a Vector Scan.



## PROGRAM ALARMS

There are four input alarm and two output alarm channels on this PTZ camera. When you ground any of the alarm inputs this can initiate a preset, vector scan, pattern, autoscan or tour. You can also trigger up to two alarm outputs.



## ALARM PROGRAMMING

There are two options in the alarm programming menu. Alarm In and Alarm Out.

### ALARM IN PROGRAMMING

This menu allows you to select an alarm channel between 1 and 4 and detail the required action when the alarm is triggered.

#### CHANNEL NUMBER 1 ~ 4

Select required input alarm number between 1 and 4.

## SENSOR TYPE NO / NC

The sensor type relates to whether the alarm trigger is a normally open or normally closed alarm. Normally open means that when the PTZ receives an alarm it will switch normally open to close, to trigger the alarm.

## OPERATION TIME

This allows you to set when you want to make the alarm operational, whether it is for every day, Monday to Friday, the weekend or a day of the week and date and time.

```
ALARM IN PROGRAMMING
1 CHANNEL NUMBER      1
2 SENSOR TYPE         NO
->3 OPERATION TIME
4 LABEL EDIT          -----
5 LABEL DISPLAY       OFF
6 ACTION SETUP
7 PRIORITY            1
8 CHANNEL ENABLE      ON
IRIS CLOSE TO EXIT
```

```
OPERATION TIME
->1 MODE              MON
2 ENABLE TIME SETUP
3 DISABLE TIME SETUP
IRIS CLOSE TO EXIT
```

## MODE EACHDAY / WORKDAY / WEEKEND / MON~SUN

Set when you want to make the alarm operational, either for every day, Monday to Friday, the weekend or day of the week.

## ENABLE TIME SETUP

```
ENABLE TIME SETUP
->1 HOUR              0
2 MINUTE             0
3 SECOND             0
IRIS CLOSE TO EXIT
```

```
0~23
00
↑
0123456789
IRIS CLOSE WHEN DONE
```

## HOUR 0 ~ 23

Sets hour on 24 hour clock

## MINUTE 0 ~ 59

Set minutes

## SECOND 0 ~ 59

Set seconds

```
ENABLE TIME SETUP
1 HOUR              2
2 MINUTE            30
->3 SECOND           55
IRIS CLOSE TO EXIT
```

```
OPERATION TIME
1 MODE              MON
2 ENABLE TIME SETUP
->3 DISABLE TIME SETUP
IRIS CLOSE TO EXIT
```

## DISABLE TIME SETUP

The Disable Time Setup allows you to zeroise the Hour, Minute and Second parameters. They all have to be zeroised. Use the Iris + to select amendment line, the right arrow key to move to digit and the Iris – to enter.

```

      ALARM IN PROGRAMMING
1 CHANNEL NUMBER      1
2 SENSOR TYPE        NO
3 OPERATION TIME
+4 LABEL EDIT -----
5 LABEL DISPLAY      OFF
6 ACTION SETUP
7 PRIORITY           1
8 CHANNEL ENABLE     ON
IRIS CLOSE TO EXIT

```

```

0123456789ABCDEF6HIJKLMN
↑
OPQRSTUVWXYZ_
IRIS OPEN WHEN DONE
IRIS CLOSE TO EXIT

```

### **LABEL EDIT < 8 character field – alpha numeric >**

This option allows you to setup an eight character field for display of the alarm input. Use the Iris + or Open to display the character selection menu, the right or left arrow to find the character and the Iris + to select. When complete press the Iris – or Close to exit.

### **LABEL DISPLAY OFF / ON**

Allows the label display to be switched on and off.

```

      ALARM IN PROGRAMMING
1 CHANNEL NUMBER      1
2 SENSOR TYPE        NO
3 OPERATION TIME
4 LABEL EDIT -----
5 LABEL DISPLAY      OFF
+6 ACTION SETUP
7 PRIORITY           1
8 CHANNEL ENABLE     ON
IRIS CLOSE TO EXIT

```

```

      ACTION SETUP
→1 ACTION            PRESET
2 NUMBER             1
3 DWELL TIME         60
IRIS CLOSE TO EXIT

```

### **ACTION SETUP PRESET / VECTOR / PATTERN / AUTO SCAN / TOUR**

This option allows you to select the alarm action when the alarm is triggered.

### **NUMBER < relates to the number of the action selected above >**

For example 1 ~ 255 for presets, 1 ~ 8 for Vector Scans, 1 ~ 6 for patterns etc.

### **PRIORITY 1 ~ 4**

This applies a priority level to this alarm. Priority 1 is the highest level.

### **CHANNEL ENABLE ON / OFF**

Enables the alarm channel to be switched on and off.

### **ALARM OUT PROGRAMMING**

This menu allows you to select two output alarm channels, 1 and 2 and associate the alarm input channel or channels that will trigger the respective alarm out.

### **CHANNEL NUMBER 1 ~ 2**

Select required input alarm number 1 ~ 2.

**LABEL EDIT < 8 character field – alpha numeric >**

This option allows you to setup an eight character field for display of the alarm output.

Use the Iris + or Open to display the character selection menu, the right or left arrow to find the character and the Iris + to select. When complete press the Iris – or Close to exit.

**LABEL DISPLAY OFF / ON**

Allows the label display to be switched on and off.

**TRIGGER Alarm In 1 ~ 4 / ANY**

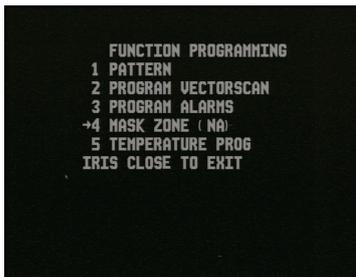
Set the input alarm channel that will trigger the output alarm channel or select ANY.

**ENABLE OFF / ON**

Switch output alarm on or off.

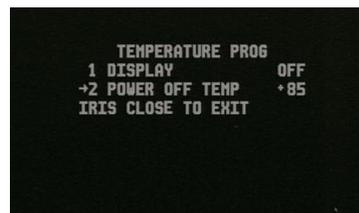
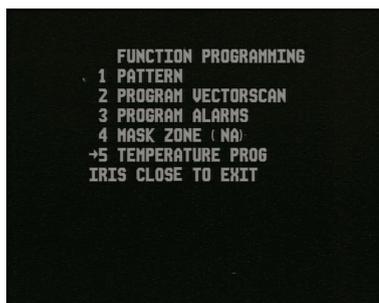
**DWELL TIME < Default 60 >**

Sets the time in seconds for the alarm output dwell time.



**MASK ZONE ( NA)**

This PTZ does not have Privacy Masking.



**TEMPERATURE PROG**

This allows the setting up of temperature that when exceeded will switch off the PTZ in order that damage is not caused to the electronics. Note that the default is set at maximum at +85.

**DISPLAY OFF / ON**

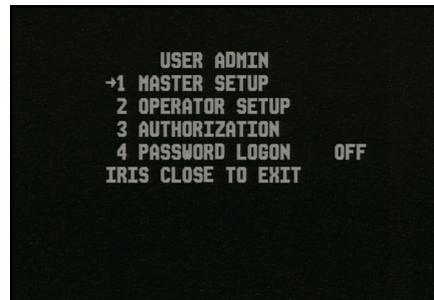
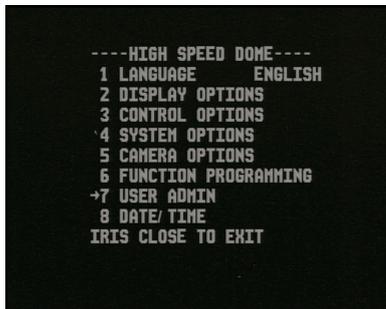
This displays the temperature setting on the monitor screen.

**POWER OFF TEMP 0 ~ 99**

Note you will not be able to set a level higher than +85.

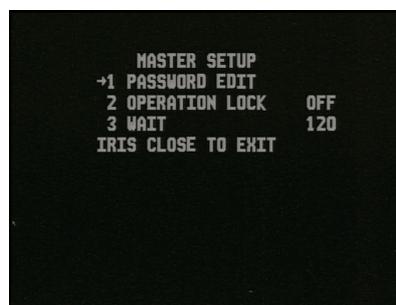
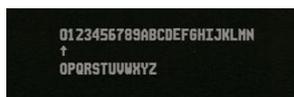
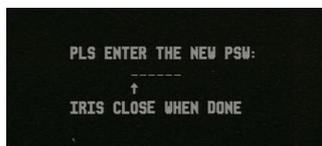
## USER ADMIN

This menu is for setting controls so that specific users are given certain privileges for using functions on the PTZ camera.



## MASTER SETUP

This allows setting of a new Master password.



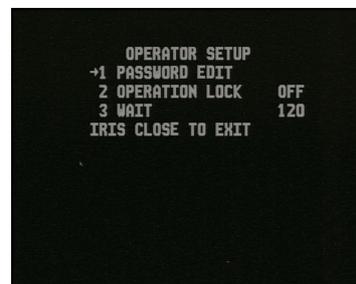
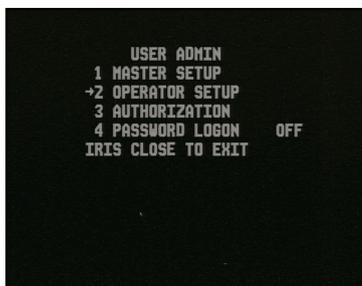
Use the Iris+ to enter character field, arrow buttons to select character and Iris- to close.

## OPERATION LOCK OFF / ON

If the operation lockup function is enable and no control command is received within the specified waiting time, the PTZ will lock the operation until a successful re-login is initiated. Note that operational lockup of all level users only applies to its own level.

### WAIT 1 ~ 999 Default 120

This can be set between 1 and 999 seconds. The default is 2 minutes.



## OPERATOR SETUP

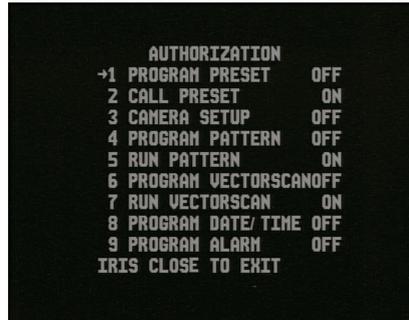
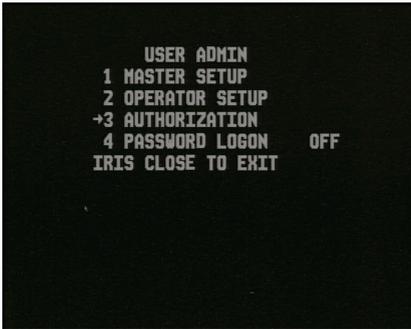
This allows you to set the Operator password. This is an identical procedure to the Master password above.

## **OPERATION LOCK OFF / ON**

If the operation lockup function is enable and no control command is received within the specified waiting time, the PTZ will lock the operation until a successful re-login is initiated. Note that operational lockup of all level users only applies to its own level.

## **WAIT 1 ~ 999 Default 120**

This can be set between 1 and 999 seconds. The default is 2 minutes.



## **AUTHORIZATION**

This menu is a configuration of general users' operating authorities and is set by the Administrator. Where functions are set to ON this means that general users have the rights to use these functions but if set to OFF, a screen display will show the following: **"No Authorization"**

## **PROGRAM PRESET OFF / ON**

Enable or disable the authorization to set presets.

## **CALL PRESET ON / OFF**

Enable or disable the authorization to call presets.

## **CAMERA SETUP ON / OFF**

Enable or disable the authorization to setup the camera menu.

## **PROGRAM PATTERN OFF / ON**

Enable or disable the authorization to set a pattern.

## **RUN PATTERN ON / OFF**

Enable or disable the authorization to run a pattern.

## **PROGRAM VECTORSCAN ON / OFF**

Enable or disable the authorization to program a Vector Scan.

## **RUN VECTORSCAN ON / OFF**

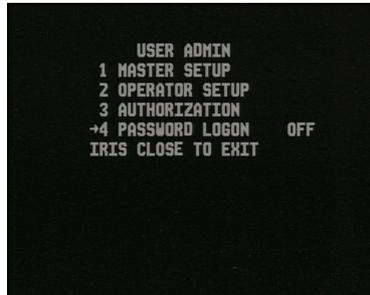
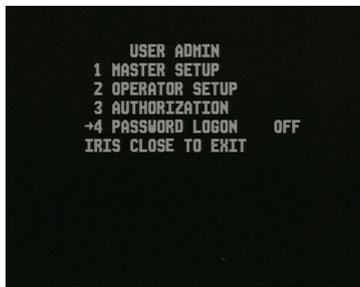
Enable or disable the authorization to run a Vector Scan.

### PROGRAM DATE/TIME OFF / ON

Enable or disable the authorization to program date and time.

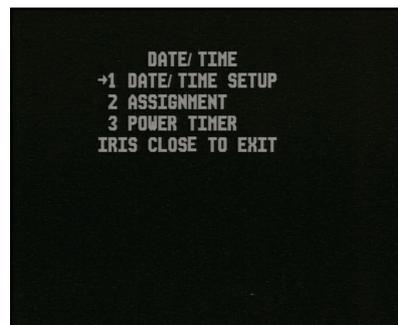
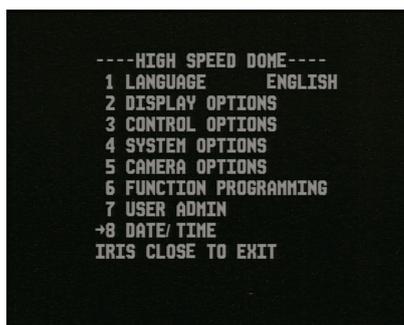
### PROGRAM ALARM OFF / ON

Enable or disable the authorization to program alarms.



### PASSWORD LOGON OFF / ON

This switches on or off the need to use a password to log on to the PTZ.

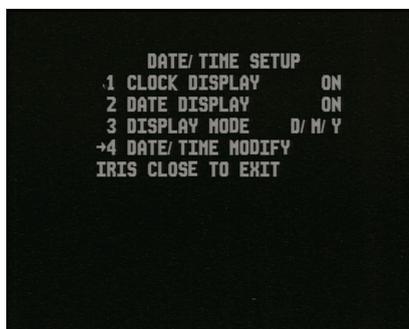


### DATE / TIME

The date and time menu allows management of PTZ assignment and operating time.

### DATE / TIME SETUP

This option allows switching the time display on and off, the date display on and off and the date display format. You also have the facility to modify the date and time.



### CLOCK DISPLAY ON / OFF

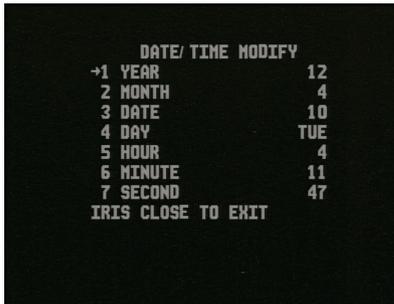
This switches on or off time display

### DATE DISPLAY ON / OFF

This switches on or off date display

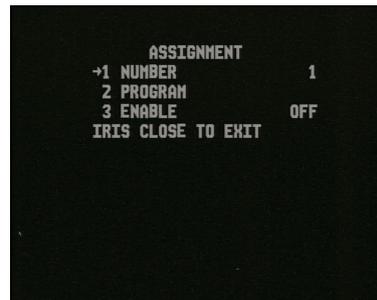
### DISPLAY MODE D/M/Y ... Y/M/D

Select date format either Day – Month – Year  
or Year – Month - Day



### DATE/ TIME MODIFY

This option allows you to change the date and time settings.



### ASSIGNMENT

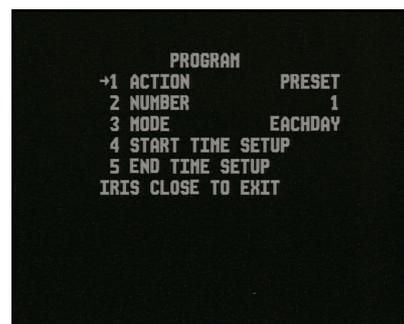
This option allows up to 8 assignments to be automatically executed at a programmed time. If a task is terminated by manual operation it will restart automatically as long as another manual operation is not performed within a ten second period.

### NUMBER 1 ~ 8

This is the assignment priority level. 1 is the highest and 8 is the lowest.

### PROGRAM PRESET / VECTOR / PATTERN / AUTO SCAN / TOUR

Select the required program from the list above. These have to be setup in advance.



### NUMBER < number of program >

This is the number of the preset, vectorscan, pattern, auto scan or tour.

### MODE < EACHDAY / WORKDAY / WEEKEND / MON ~ SUN

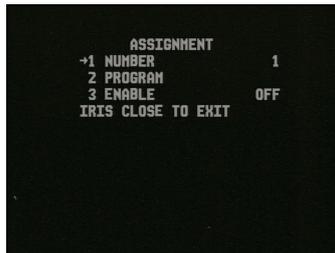
Select when the program is to be scheduled.

### START TIME SETUP < HOUR MINUTE SECOND>

Enter the start time on 24 hour clock when program should run.

## END TIME SETUP < HOUR MINUTE SECOND>

Enter the end time on 24 hour clock when program should end.



### ENABLE OFF / ON

This switches the assignment program off and on.



## POWER TIMER

This option allows you automatically power down the PTZ camera at a pre-determined date/time.

### Power Timer Restrictions

1. User can perform a timed startup and shutdown for the PTZ.
2. The time period between the startup and shutdown time is the operating period, whereas the time period between the shutdown time and the startup time is the shutdown period.
3. The system will wake up once the controlled command is received. If no controlled command is received within 60 seconds under non-menu status, the PTZ re-enters the shutdown status.
4. The priority of Assignment is higher than the Power Timer. That means that the Assignment will be executed first whether or not the Power Times status is in Startup or Shutdown status and the Power Timer can only be entered after the Assignment has been completed. However other non-Assignment functions would be automatically discontinued or quitted before the Power Timer is executed.



### MODE OFF / EACHDAY / WORKDAY / WEEKEND / MON ~ SUN

This switches the Power Timer option off and on.

### POWER ON SETUP < HOUR MINUTE SECOND >

This sets the power on time on 24 hour clock.

## POWER OFF SETUP < HOUR MINUTE SECOND >

This sets the power off time on 24 hour clock.

## SHORT CUT OPERATIONS

This table provides a list of codes and their relevant operations.

CALL	PRESET	FUNCTION
65		Tour start – Calls presets in order
80		Pattern 1 start
81		Pattern 2 start
82		Pattern 3 start
	52	Auto Scan start point
	53	Auto Scan end point
83		Vector Scan 1 start
84		Vector Scan 2 start
85		Vector Scan 3 start
86		Vector Scan 4 start
87		Vector Scan 5 start
88		Vector Scan 6 start
92		Password Entry for Administrator Logon Default: 000000
93		Password Entry for Operator Logon Default: 111111
95		Menu

## ALARM CONNECTIONS

ALARM INPUT 1 Red/White  
ALARM INPUT 2 Yellow/White  
ALARM INPUT 3 Brown/White  
ALARM INPUT 4 Blue/White  
ALARM INPUT COMMON Black/White

ALARM OUTPUT 1 Blue/Green and Blue  
ALARM OUTPUT 2 Brown/Green and Green

## Technical Specification

Image Sensor	¼" IT CCD
Resolution	550 TVL
Image Output	1volt peak ~ peak 75Ω
Minimum Illumination	0.1 Lux Day, 0.0002 Lux Night
Sense Up (NiteDevil)	Yes
Infra Red LEDs	6 x 850nm - Max IR Distance 50metres
Input Voltage	24vAC
Current Consumption	2A
IP Rating	IP66
Iris Control	Auto or Manual
Signal to Noise Ratio	More than 52dB
Gain Control	Automatic
Video Connection	BNC socket
Protocol	PELCO-D, PELCO-P
Operating Temperature	Outdoor -20° ~ +60° C
Optical Zoom	12x
Digital Zoom	12x
Alarm Inputs/Outputs	4 x Alarm Inputs 2 x Alarm Outputs
Dome Address	0 ~ 255
Pan Rotate Range	360° continuous rotation
Tilt Rotate Range	0 ~ 90° continuous rotation
Pan Manual Speed	0 ~ 300° per second
Tilt Manual Speed	0 ~ 120° per second
Call Preset Position	400° per second
Accuracy	± 0.1 degrees
Preset Positions	128
Language	English, Chinese, Russian, Spanish
Automatic Flip Option	Yes
Dimensions	140mm Dome Diameter
Build Material	Aluminium Alloy

## Troubleshooting

1. To avoid problems and to ensure the PTZ has been correctly setup it is always advisable to test the equipment in your workshop before you go on-site. If workshop setup is successful, any problems experienced on-site will be greatly minimised.
2. Always read these instructions before you connect the equipment to any power supply and check that you are using the correct rated power supply and voltage. If you are having problems with no video, power the PTZ and plug the video cable direct into your monitor. If still no video then check if PTZ is running the initial self test. If not check power to the PTZ, cables and connections. Remember that every PTZ is tested before despatch to you so it will be very unlikely to be a faulty PTZ unit. Note that video loss can occur on a long cable run, or loss of signal strength resulting in no video, poor quality video or even video in black and white mode.
3. If video is okay but the telemetry is not working then check the software settings in the dome agree with the settings in the control unit i.e keypad or DVR. The software sets the protocol, baud rate and PTZ address. Ensure that the RS485 cable connecting the PTZ to the control unit is connected the right way around.



WEE/CG0783SS

This symbol on the products and/or accompanying documents means that used electronic equipment must not be mixed with general household waste. For treatment, recovery and recycling please return this unit to your trade supplier or local designated collection point as defined by your local council.

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