Matrix Keyboard
Engineer/Installer Manual

Table of Contents

1 Safety and Precautions

1. Please read these notes before attempting to operate the 360 Vision Matrix Keyboard, and keep for future reference.

2. All servicing and repairs must be handled by 360 Vision Technology.

3. Installation should be carried out by suitably qualified personnel, in accordance with local codes of practice and regulations.

4. 360 Vision Technology Limited accept no liability for any damage caused by incorrect or improper installation.

5. Use only 360 Vision Keyboard power supplies.

6. Always ensure that this product is installed in a location that will not expose it to environmental conditions that are outside of its IP rating. This product is for indoor use only.

2 Dimensional Drawing
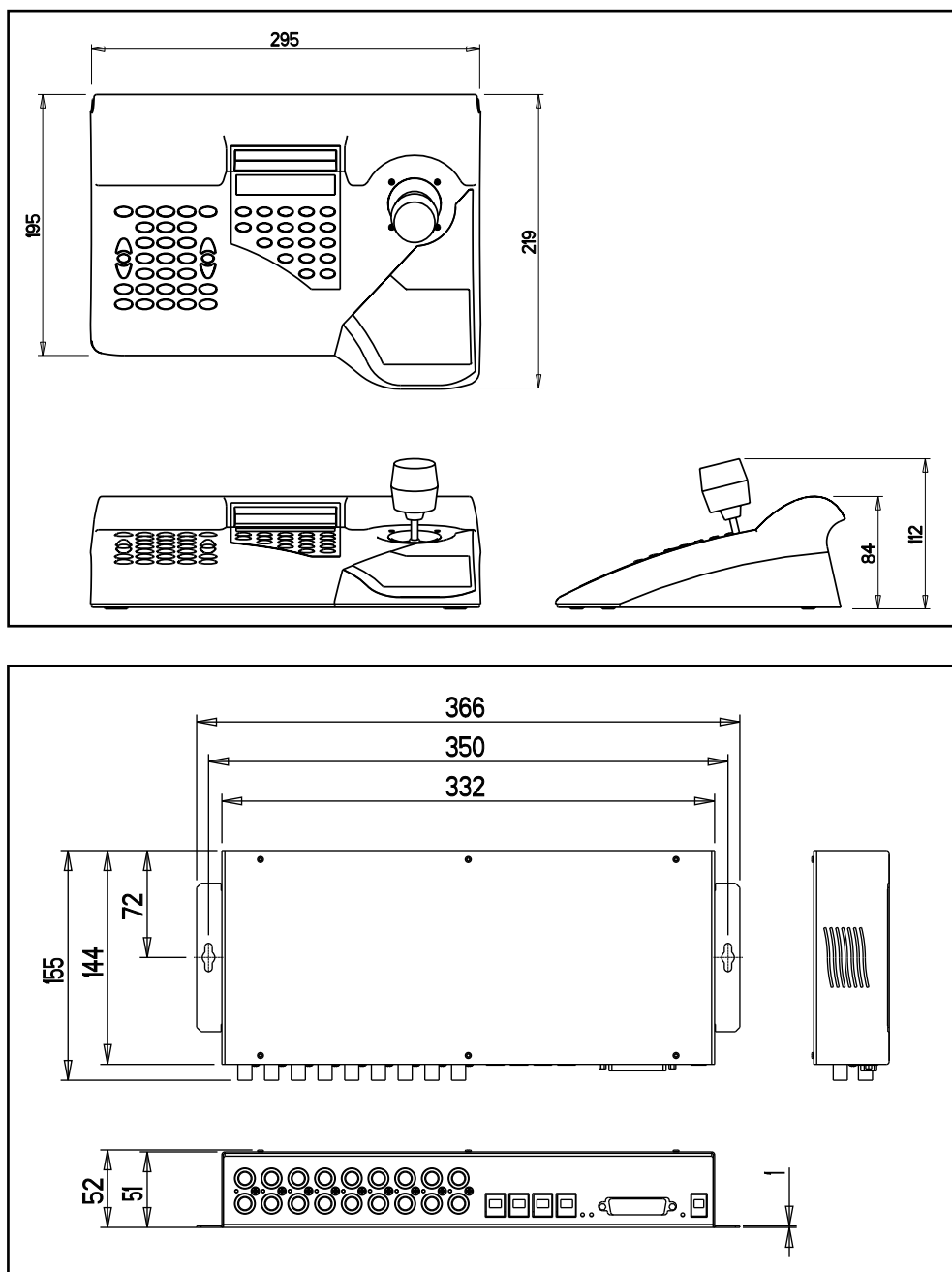
3 Connections

3.1 Keyboard Connections

RS-485	RS-232	RS-485	Power
(Port 3)	(Port 2)	(Port 1)	(Port 0)
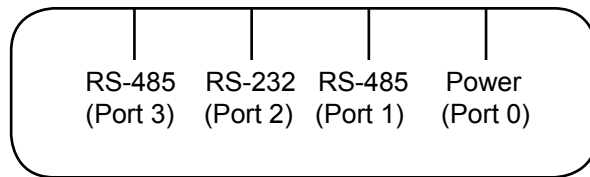
VKAVXM485-EU
VisionKeyboard with LCD Display & DVR Control

RS-485	RS-232	RS-232	Power
(Port 3)	(Port 2)	(Port 1)	(Port 0)
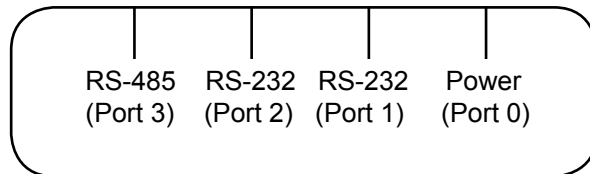
VKAVXM232-EU
VisionKeyboard with LCD Display & DVR Control

All connections to keyboards via RJ type connectors. The DVR can be controlled using RS232 or RS485 (depending on the DVR type). Connections shown below.

Port 0 Power
Connect the supplied 12vdc 500mA PSU to the 4 way RJ9 (4P4C) Port 0.

0v
12vdc
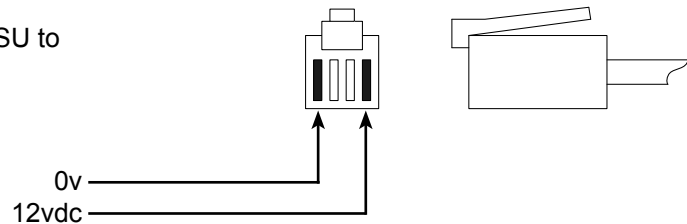
Port 1 Matrix Control (RS485)
Connect the RS485 kbd matrix cable to the 6 way RJ11 (6P4C).

Data (+)
Data (-)
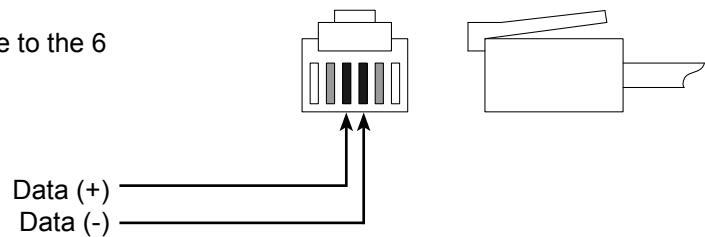
Port 1 Matrix Control (RS232)
Connect the RS232 kbd matrix cable to the 6 way RJ11 (6P4C).

Gnd
Tx
Rx
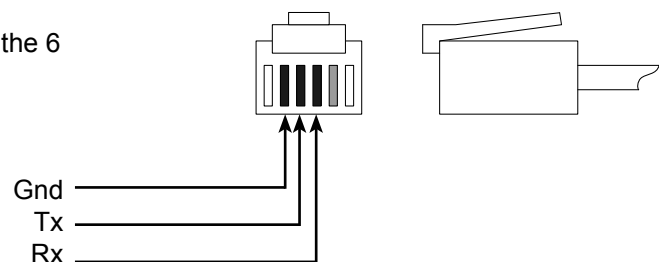
Port 2 DVR Control (RS232)
Connect the RS232 DVR control cable to the
6 way RJ11 (6P4C) Port 2, if used.

Gnd
Tx
Rx
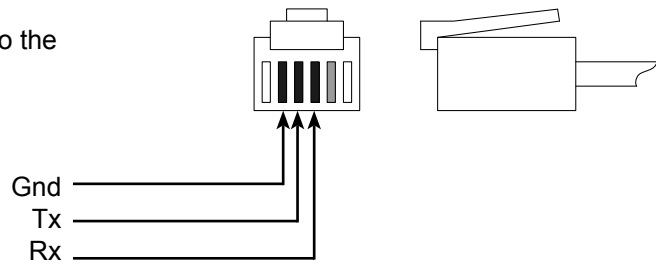
Port 3 DVR Control (RS485)
Connect the RS485 DVR control cable to the
6 way RJ11 (6P4C) Port 3, if used.

Data (+)
Data (-)
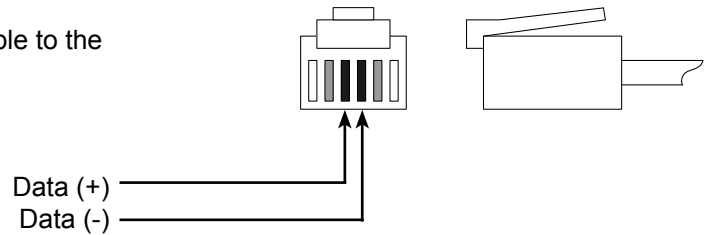
3.2 Matrix Connections

Power
Connect the supplied 12vdc 500mA PSU to
the 4 way RJ9 (4P4C) Power connection.

0v
12vdc
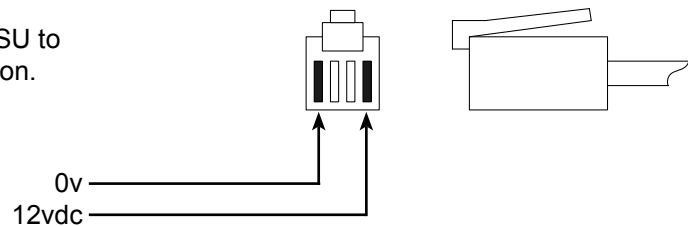
Matrix Control (RS485)
Keyboard and RS485 connections use a
6 way RJ11 (6P4C).

Data (+)
Data (-)
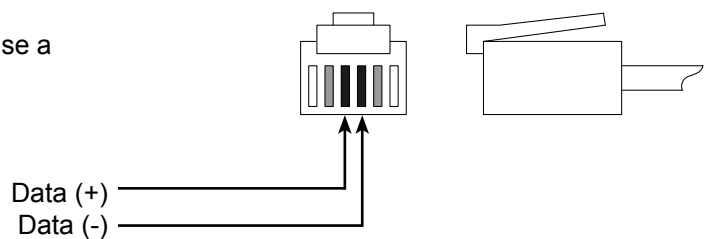
Matrix Control (RS232)
Keyboard connection use a 6 way RJ11
(6P4C).

Gnd
Tx
Rx
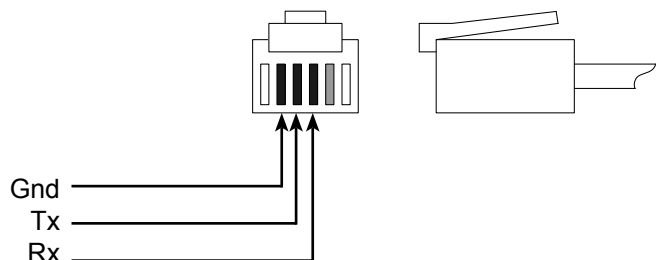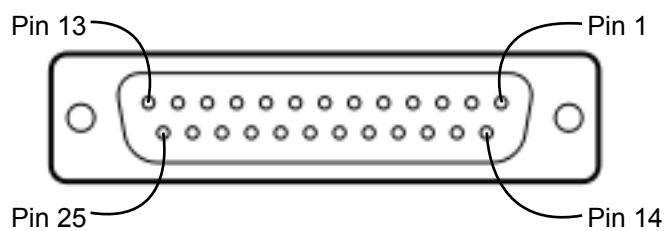
View of 25D Alarm I/O socket on rear of matrix.

Pin Number	Function
1	Alarm Input 1
14	Alarm Input 2
2	Alarm Input 3
15	Alarm Input 4
3	Alarm Input 5
16	Alarm Input 6
4	Alarm Input 7
17	Alarm Input 8
5	Alarm Input 9
18	Alarm Input 10
6	Alarm Input 11
19	Alarm Input 12
7	Alarm Input 13
20	Alarm Input 14
8	Alarm Input 15
21	Alarm Input 16
11	Relay COM
24	Relay N.C.
12	Relay N.O.
13, 25	Gnd

3.3 Matrix Video Termination

75Ω Termination switches can be found on the underneath of the matrix unit.

3.4 DVR connections

Typical System Wiring
Keyboard port 1 to Matrix kbd 1 connection
Keyboard port 2 not used
Keyboard port 3 to DVR RS485 terminals Rx+/Rx-
DVR Tx+/Tx- terminals to Matrix kbd 2 connection

VKAVXM485-EU
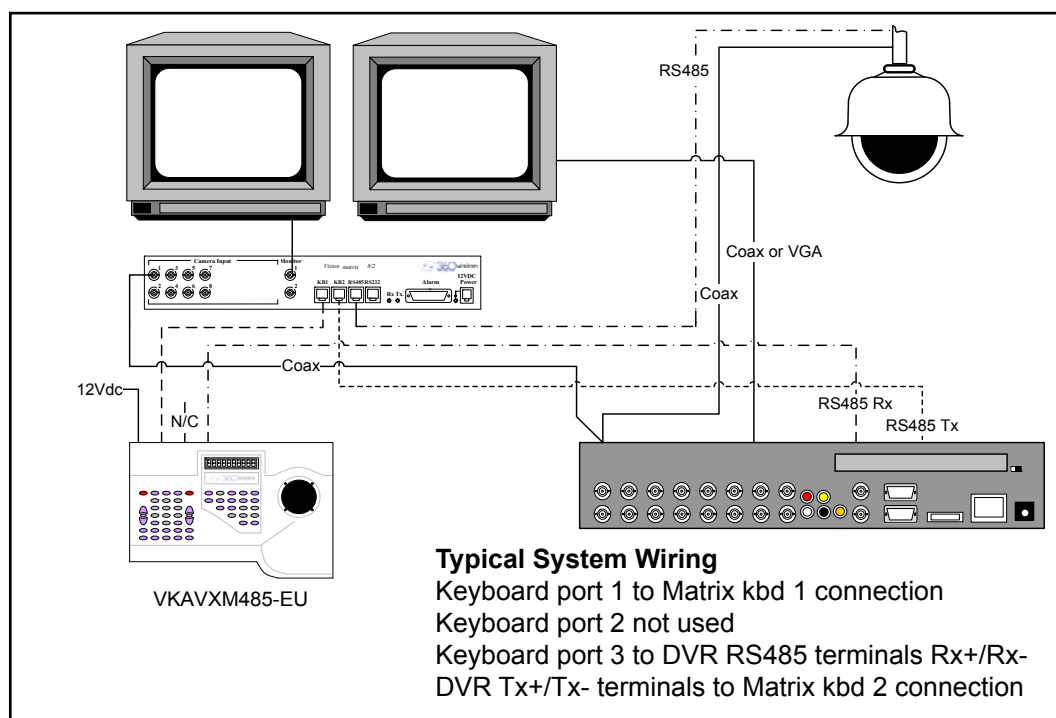
Diagram shows a typical installation with the 360 Vision keyboard controlling the 360 Vision H series DVR. The 360 Vision DVR will then have control of the PTZ camera via the 360 Matrix. This allows local and remote PTZ control.

360 Vision keyboard will only control 360 Vision DVR's.

3.5 DVR Setup - H Series

Enter the settings menu of the Avalon H DVR and go into Serial Configuration page found in the Network column. In here set the RS485 settings to :-

Type - External Controller   Baud Rate - 9600bps
Model - WTX1500/2000   Date Bits - 8
                                                                              Parity - None
                                                                              Stop Bits - 1

DVR ID also needs to be changed to suit. e.g. DVR 1 is ID 1. DVR ID is found in the System Configuration menu which is in the System column of the DVR settings menu.

PTZ cameras being controlled with 360 keyboard via the H series DVR must also run at 9600bps baud rate.

3.6 DVR setup

The 360 keyboard can be setup to control DVR's of different channel sizes, so that DVR operation is seamless. To enter keyboard DVR setup mode.

Select DVR mode by pressing F2 , keyboard LCD will display.

```
DVR:1   Avalon T   16ch
Cameras:   1 - 16
```

Then press and hold 🔑 and then press 5, 3, 2, 6 and then release the 🔑 button. The display will then change to the below. Use the joystick up and down to change the selected field, left and right to select another field.

```
┌─────────────────────────────┐
│ DVR:1  Avalon T  16ch       │
│         =======             │
└─────────────────────────────┘
```

Options are:-
DVR ID - 1 to 16.
DVR model - Avalon T (uses same protocol as Avalon H) or Avalon S.
DVR Channel - Choice of 16, 8 or 4ch DVR.

When the selected DVR changes are complete, use the joystick zoom in or out function to set and exit.

4 Matrix Mode Keyboard Operation

4.1 Keyboard Lock

The VisionKeyboard can be locked/unlocked, press and hold ⊙ and then press 9, 3, 0, 3 and then release the ⊙ button to toggle lock. The display will then change from the below.

```
┌─────────────────────────────┐
│          [Locked]           │
│                             │
└─────────────────────────────┘
```

4.2 Keyboard Modes

The VisionKeyboard operates in two modes:-
- • Matrix - Control of 360 Vision Matrix cameras.
- • DVR - DVR control of 360 Vision DVR's.

To toggle between two modes use the **F2** button.

```
┌─────────────────────────────┐
│ Matrix:                  *  │
│ CAMERA 1                    │
└─────────────────────────────┘
```

```
┌─────────────────────────────┐
│ DVR:1   Avalon T   16ch     │
│ Cameras:   1 - 16           │
└─────────────────────────────┘
```

⚠ * present in top right hand corner of the LCD indicates that the keyboard is communicating with the matrix.

4.3 Keyboard Buzzer

To toggle operation of keyboard button press buzzer, press and hold ⊙ and then press 🔔 and then release the ⊙ button.

4.4 Camera Select (Monitor must be connected to 360 Vision Matrix)

To select a camera, press the camera number required using the grey number buttons and then the ⬭ button.

4.5 Monitor Select (Monitor must be connected to 360 Vision Matrix)

To select a monitor, press the monitor number required using the grey number buttons and then the ⬒ button.

4.6 Auto Sequence (Monitor must be connected to 360 Vision Matrix)

To select an auto sequence, press the sequence number required using the grey number buttons and then the ⊚ button. To setup auto sequence camera schedule see section 6.2 pg 14.

Monitor screen will show a S1→01:

S1 indicates auto sequence number 1, 4 are available,
→ indicates auto sequence is running,
01: shows the current camera being shown.

To toggle auto sequence run or pause press the ⊚ button, text will then change to S1 ıı 01:
ıı shows that the auto sequence is paused.

When in this paused state the next camera in the sequence can be selected by pressing the ⊚ button.

To stop the auto sequence operate the joystick, the auto sequence needs to be running e.g. S1→01:

4.7 Operator Alarm

To toggle a manual alarm (trigger the matrix relay output), press and release the ⊚ button.

4.8 Alarm acknowledgement

To acknowledge an external alarm (an alarm created via the matrix or matrix alarmcard), press the ⊚ button the silence the keyboard alarm buzzer and then the ⊚ button again to acknowledge the alarm.

4.9 Pan/Tilt/Zoom Control

To operate the camera Pan, Tilt control use the joystick up, down, left, right operation. The joystick has proportional speed control of the camera, i.e. the more you move the joystick the faster the camera will move.

To operate the camera zoom, twist the joystick.

To zoom in, twist the joystick clockwise.
To zoom out, twist the joystick anti-clockwise.

4.10 Iris and Focus Control

Manual adjustments can be made to both Iris and Focus of the camera.

Close Iris		Focus Near	
Auto Iris		Auto Focus	
Open Iris		Focus Far	

⚠ Take care storing presets when the camera is in manual iris/focus mode, as this may not suit all environments/ time periods.

4.11 Preset Seek

To seek a preset (Stored View), press the grey numeric buttons to suit the preset and then the ⊘ button or use the quick 1 - 5 preset seek buttons ① ② ③ ④ ⑤ .

The LCD will show:

```
Matrix:                    *
CAMERA 1          P1
```

4.12 Preset/Mimic Tour Recall

To activate a preset or mimic tour, press the grey numeric buttons to suit the tour and then press the ⟳ button.

Preset Tours are numbered 1 - 4.
Mimic Tours are numbered 5 - 8.

4.13 Auto-Flip

To spin the camera 180° use the 180° button.

360 Vision camera can also be configured to spin 180° automatically when using the tilt down function on the joystick.
Two options available are:
- Mode 1/Semi - When the 360 Vision camera has been fully tilted down, let go of the joystick and tilt down again, the camera will spin 180°.
- Mode 2/Full - When the 360 Vision camera has been fully tilted down, the camera will spin 180°.

4.14 Predator/Centurion Auxiliary Functions

Aux modes can be used to activate the extra functions of the 360 Vision Predator or Centurion camera.

Press A1 to toggle white light (if dark).

Press A2 to activate the wiper (double wipe).

Press and hold A3 to activate wash function (not available on Centurion).

4.15 Camera Auxiliary Functions

Aux modes can be used to activate extra functions on all 360 Vision cameras.

Press and hold ⌐O and then press A1 then release ⌐O to toggle colour/mono test function.

Press and hold ⌐O and then press A2 then release ⌐O to toggle colour/mono.

Press and hold ⌐O and then press A3 then release ⌐O to toggle fast shutter mode.

⚠ Take care using fast shutter mode, as this will disable the automatic colour/mono changeover process.

5 DVR Mode Keyboard Operation

5.1 Camera select

To select different cameras via the DVR, press the camera number required using the grey numeric buttons and then the ⬭ button. Choosing a camera higher than the current selected DVR will automatically select the correct video channel on the relevant DVR (keyboard needs to be configured to the DVR size) e.g. Selecting ch17 will automatically select channel 1 on DVR 2, if DVR 1 is a 16 channel unit.

5.2 DVR select

To select different DVR units, press the DVR number using the grey numeric buttons and then the ⬭ button.

5.3 Multi-Screen display

Use the ⬭ button to toggle between all the multi-screen display options available.

5.4 PTZ control

To control a PTZ camera via the DVR, select the required camera and then press the ⬭ button. This will allow the user to use the keyboard joystick to operate the PTZ camera. To exit PTZ mode press the ⬭ button.

```
DVR:1   Avalon T   16ch
Cameras:   1 - 16   PTZ
```

5.5 Auto Sequence

To toggle the DVR auto sequence, press the ⬭ button.

5.6 Menu access

Use the ⬭ button to gain access to the DVR settings/menu. Use the joystick pan and tilt to navigate the menus while using zoom in to select.

5.7 Search screen access

Use the ⬭ button to access the DVR search options. Use the joystick pan and tilt to navigate and zoom in to select.

5.8 Emergency Record

To activate emergency record use the ⬭ button.

⚠ Take care using Emergency record as your HDD storage will be used up quickly and will reduce the amount of days that are stored.

5.9 Playback, Pause, Stop, Fast Forward, Rewind

Use play ▶ button to start playback, and then use the standard fast forward ⏩ , rewind ⏪ , pause ⏸ , and stop ⏹ button as required.

6 Matrix menu access (Engineer level) (Monitor must be connected to 360 Vision Matrix)

To access the matrix menu, press and hold 🔑 and then press 5, 4, 9, 8 and then release the 🔑 button.

Pin code for operator level 360.
Pin code for controller level 1379.

The matrix screen will then show the below menu screen.
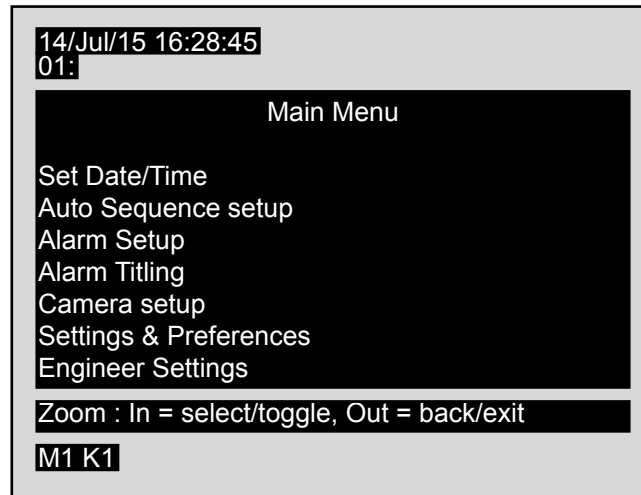
```
14/Jul/15 16:28:45
01:

                      Main Menu

Set Date/Time
Auto Sequence setup
Alarm Setup
Alarm Titling
Camera setup
Settings & Preferences
Engineer Settings

Zoom : In = select/toggle, Out = back/exit

M1 K1
```

Use the joystick up and down to highlight the required option, and twist the joystick clockwise (zoom in) to select. Twisting the joystick anti-clockwise (zoom out) to save and exit out of the current menu page.

Menu pages will automatically exit after 1 minute of no operation.

Twist joystick anti-clockwise (zoom out) to save and exit the menu setup pages.

6.1 Set Date/Time

Enter the matrix menus, and then use the joystick to enter the Set Date/Time setup page.

The matrix screen will then show the below menu screen.

```
14/Jul/15 16:28:45
01:

Set Date/Time

2015/07/15  16:10:10

(Year)




Zoom : In = select/toggle, Out = back/exit

M1 K1
```
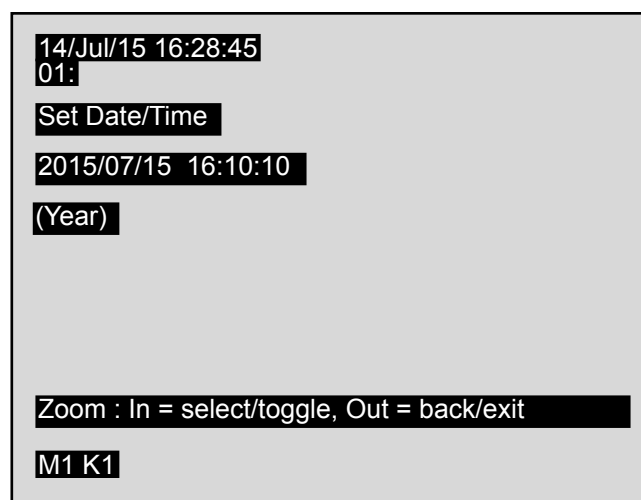
Enter the required date using the grey number buttons. The cursor will automatically move along the date and then time. If a mistake is made use the joystick left and right to highlight the parameter that needs changing.

Twist joystick clockwise (zoom in) to set date and time.

Twist joystick anti-clockwise (zoom out) to save and exit the menu setup pages.

6.2 Auto Sequence setup

Enter the matrix menus (see pg 13), and then use the joystick to enter the Auto Sequence setup page.

The screen will then show

```
14/Jul/15 16:28:45
01:

Edit Sequence 1 (AUTOSEQ) key to change

Step    On/Off    Cam    Dwell    Preset
1       On        1      2        0
2       On        2      2        0
3       On        3      2        0
4       On        4      2        0
5       On        5      2        0
6       On        6      2        0

Zoom : In = select/toggle, Out = back/exit

M1 K1
```
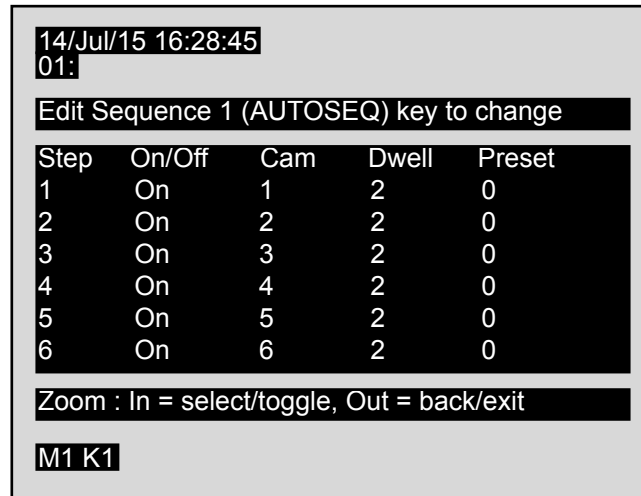
There are 4 auto sequences available, use the ⊙ button to select the required sequence. Each auto sequence consists of:-

•   Step - Order of next camera in the sequence.

•   On/Off - Used to set if the selected step is shown in the sequence or not.

•   Cam - Camera to be displayed on the selected step (does not need to run in order and can contain repeated cameras).

•   Dwell - The time in seconds that the current step will be displayed.

•   Preset - The specific preset the camera will be at, when the step is shown. Use preset 0 if camera is performing a tour.

Use the joystick to highlight the required option that is being changed and then use the grey number buttons to alter the setting.

Twist joystick anti clockwise to save and exit the menu page.

6.3 Alarm Setup

Enter the matrix menus, and then use the joystick to enter the Alarm Setup pages.

The screen will then show

```
14/Jul/15 16:28:45
01:

Alarm Setup

Number  Type  On/Off  Time  Cam  Action   Mon
 001    N.O.   Off      5     1   Preset 1   1
 002    N.O.   Off      5     1   Preset 1   1
 003    N.O.   Off      5     1   Preset 1   1
 004    N.O.   Off      5     1   Preset 1   1

* = Alarm absent
Use Tour/preset keys to change action
Zoom : In = select/toggle, Out = back/exit
M1 K1
```

The Alarm setup consists of the following:-

- Number - The number of the alarm input to which the action relates to.
  An asterisk(*) in the left hand column shows that the matrix cannot connect to the related alarmcard.
  A hash (#) in the left hand column shows that the matrix is not polling the related alarmcard as one or more
  of the alarm inputs on this card is switched off in the matrix alarm setup page.

- Type - Defines if the alarm input is Normally Open or Normally Closed contacts.

- On/Off - Defines if the alarm input is active or not.

- Time - Sets the time that the alarm picture will be displayed after the alarm has cleared.

- Cam - Sets which camera is associated with the alarm input.

- Action - Defines what action the camera will perform when the alarm triggers. Use the preset or tour buttons
  and then a number to select the required camera response.

- Mon - Set which matrix monitor output will be used to display the alarm.

Use the joystick to highlight the required option that is being changed and then use the joystick left/right or the
grey number buttons to alter the setting.

Twist joystick anti clockwise to save and exit the menu page.

6.4 Alarm Titling

The matrix can be used to display alarm text to help identify the alarm.

Enter the matrix menus (see page 13), and then use the joystick to enter the Alarm Titling page.

The screen will then show

```
14/Jul/15 16:28:45
01:


_  ,  .  @  *  +  -  #  :  ( )  '  /
Q W E R T Y U I O P      7 8 9      COPY
  A S D F G H J K L      4 5 6      PASTE
  Z X C V B N M          1 2 3      UNDO
    SPACE                  0

Lock+Pan:   Move cursor in text field
Lock+Tilt:     Up=Uppercase down=Lowercase
Lock+Zoom: Out=delete character at cursor
Zoom : In = select/toggle, Out = back/exit

M1 K1
```
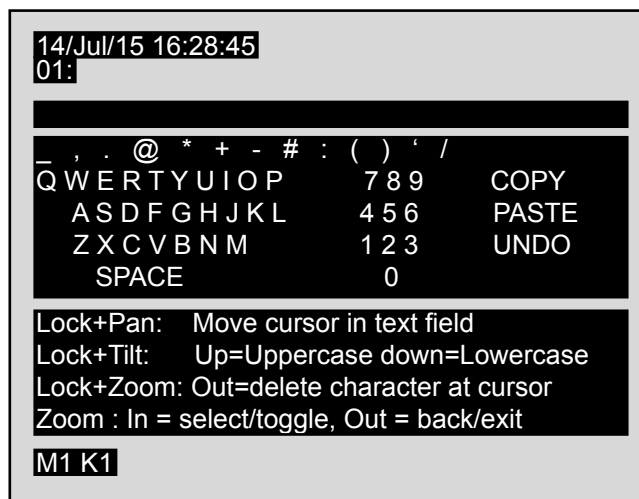
There are 20 characters available for titles.

Creating Alarm Titles

Move the joystick around the on screen keyboard and twist the joystick clockwise to select the highlighted character.

Amending Titles

Press and hold the 🔑 button, move the cursor using the joystick left or right until the character in the title is selected and then release the 🔑 button. Then use the joystick to select the required character using the on screen keyboard and select by twisting the joystick clockwise (zoom in) to amend.

To delete a character

Press and hold the 🔑 button, move the cursor using the joystick left or right until the character in the title is selected and twist anti-clockwise (zoom out), then release the 🔑 button.

Upper and Lower case characters

Press and hold the 🔑 button, and use the joystick up and down to select upper or lower case characters. Release the 🔑 button when complete.

Copying Titles

To copy the current title, move the cursor to copy and twist the joystick clockwise (zoom in) and then twist the joystick anti-clockwise (zoom out) once. To change camera while in the camera setup page, press and hold the 🔲 button and then the camera number required using the grey number buttons. Select paste using the joystick and twist clockwise (zoom in) the text that was copied will then be displayed in the current alarm title. Use the amend title process to make any alterations.

Undo

Selecting undo will remove any changes and display the last saved alarm title.

6.5 Camera Setup

Enter the matrix menus (see page 13), and then use the joystick to enter the Camera setup page.

The screen will then show
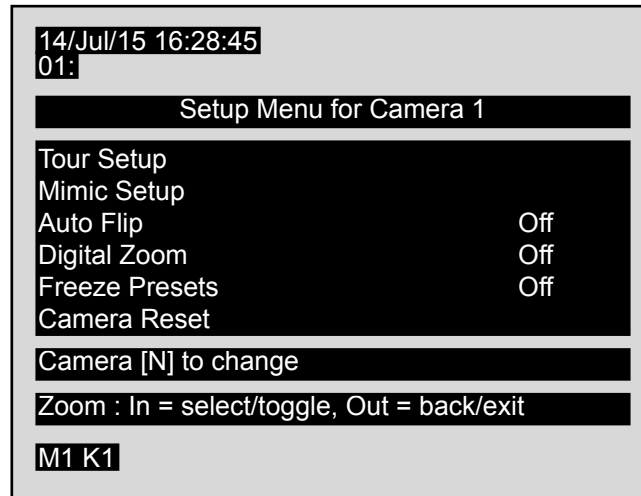
```
14/Jul/15 16:28:45
01:

            Setup Menu for Camera 1

Tour Setup
Mimic Setup
Auto Flip                              Off
Digital Zoom                           Off
Freeze Presets                         Off
Camera Reset

Camera [N] to change

Zoom : In = select/toggle, Out = back/exit

M1 K1
```

Use the joystick up and down to highlight the required option, and twist the joystick clockwise (zoom in) to select.

To change camera while in the camera setup page, press and hold the ⬭ button and then the camera number required using the grey number buttons.

6.5.1 Tour Setup

A tour is stored in the camera as a list of tour points. Each tour point consists of a preset number, the dwell time for which the camera will pause and the speed parameter that will be used to seek the preset.

Enter the matrix menus (see page 13), and then use the joystick to enter the Camera setup page and then the Tour setup page.

The screen will then show

```
14/Jul/15 16:28:45
01:

        Edit Tour 1 (TOUR key to change)

    Point     Preset     Dwell      Speed
      1          1          5         100
      2          3         10          10
      3          4          5          50

*After Tour Num = Changed; Speed 0 = Max
Lock+Zoomin = Add Point
Lock+Zoomout = Clear Tour/Toggle  changed

Zoom : In = select/toggle, Out = back/exit

M1 K1
```
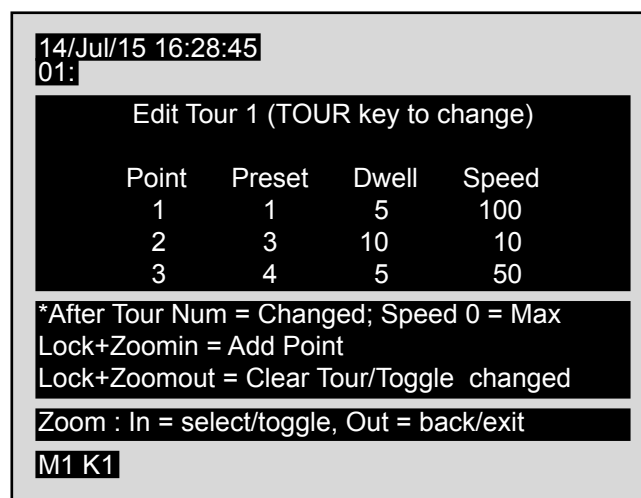
In some applications it is not possible for the 360 Vision PTZ camera to send data back to the VisionMatrix. Under these circumstances the parameter is shown in the menu as --- or <->. When these parameters are adjusted, the appropriate commands are sent the camera but the menu will not be updated with the data from the 360 Vision PTZ camera.

To change the number of the tour that you are programming press the ⊚ button until the correct tour number is displayed.

To program a preset tour:

Enter the preset number, the dwell time (how long it will stay at this position for in seconds) and then the speed (how fast it will move to this position, 10 is slow, 100 is fast, 0 is maximum speed), for each point using the grey number buttons.

To alter a preset tour:

Highlight the parameter to be changed using the joystick and change the setting using the grey number buttons.

To save and exit the tour setup page twist the joystick anti-clockwise (zoom out).

6.5.2 Mimic Setup

A mimic is stored in the camera. When a mimic tour is started, the camera will perform all the actions which were defined when the mimic was programmed.

Enter the matrix menus (see page 13), and then use the joystick to enter the Camera setup page and then the Mimic setup page.

The screen will then show
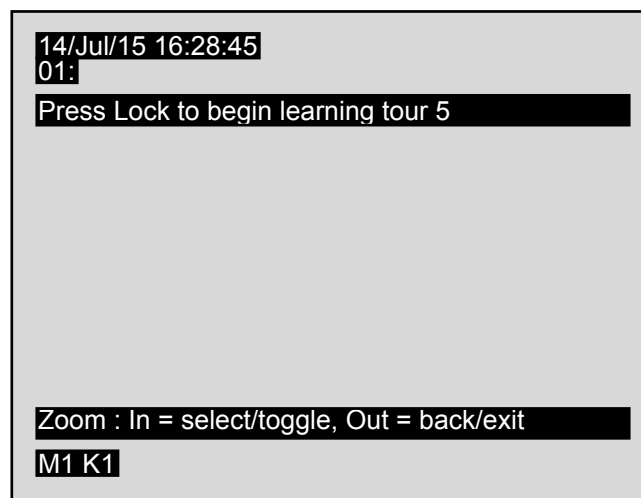
```
14/Jul/15 16:28:45
01:

Press Lock to begin learning tour 5




Zoom : In = select/toggle, Out = back/exit
M1 K1
```

To change the number of the tour that you are programming press the ⊚ button until the correct tour number is displayed.

```
┌─────────────────────────────────────────┐
│ 14/Jul/15 16:28:45                        │
│ 01:                                       │
│                                           │
│ Use PTZ; Lock to finish learning          │
│                                           │
│                                           │
│                                           │
│                                           │
│                                           │
│                                           │
│                                           │
│                                           │
│                                           │
│                                           │
│                                           │
│ M1 K1                                     │
│                                           │
└─────────────────────────────────────────┘
```
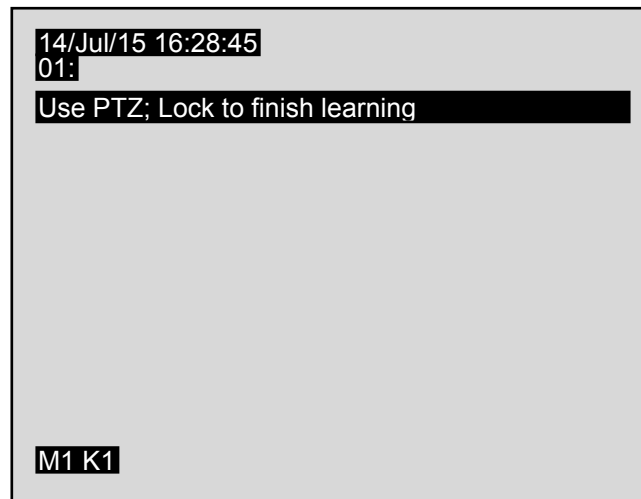
When finished press the ⊖ button.

Twist joystick anti-clockwise (zoom out) to save and exit the menu.

6.5.3 Auto Flip

Auto Flip is how the camera will function when full tilt down is used, the camera can automatically spin 180° if required.

Enter the matrix menus (see page 13), and then use the joystick to enter the Camera setup page, and then highlight auto flip.

Twist the joystick clockwise to change the setting.

• Auto Flip - Off
  When the camera is tilted fully down, it will not auto flip.
• Auto Flip - Semi-Auto
  When the camera is fully down and the joystick is released and then used again to tilt down the camera, it will automatically spin 180°.
• Auto Flip - Full-Auto
  When the camera is tilted fully down the camera will spin 180° automatically.

Twist joystick anti-clockwise (zoom out) to save and exit the menu.

6.5.4 Digital Zoom

Digital Zoom is used at the end of the optical zoom. The image is zoomed in digitally, the magnification is increased. Image quality maybe reduced.

Enter the matrix menus (see page 13), and then use the joystick to enter the Camera setup page, and then highlight digital zoom.

Twist the joystick clockwise to change the setting.

• Digital Zoom - On
  The camera will use digital zoom at the end of the optical zoom, if the joystick is twisted clockwise (camera is zoomed in) is released and then twisted clockwise again.
• Digital Zoom - Off
  The camera will not enter digital zoom mode.

Twist joystick anti-clockwise (zoom out) to save and exit the menu.

6.5.5 Freeze Presets

Freeze presets function will freeze the current image when seeking presets at maximum speed.

Enter the matrix menus (see page 13), and then use the joystick to enter the Camera setup page, and then highlight freeze presets.

Twist the joystick clockwise to change the setting.

- Freeze Presets - On
  Camera will freeze the current view when seeking preset position at maximum speed.
- Freeze Presets - Off
  Camera will not freeze the current view when seeking a preset.

Twist joystick anti-clockwise (zoom out) to save and exit the menu.

6.5.6 Camera Reset

Camera reset function will perform a remote power reset on the camera, no settings will be lost. This option requires telemetry control.

Enter the matrix menus (see page 13), and then use the joystick to enter the Camera setup page, and then highlight camera reset.

Twist the joystick clockwise to power reset the selected camera.

Twist joystick anti-clockwise (zoom out) to save and exit the menu.

6.5.7 Camera Title

The matrix can be used to display camera title text to help identify the camera.

Enter the matrix menus (see page 13), and then use the joystick to enter the Camera setup page, and then highlight camera title.

The screen will then show

```
14/Jul/15 16:28:45
01:


_ , . @ * + - # : ( ) ' /
Q W E R T Y U I O P        7 8 9        COPY
 A S D F G H J K L         4 5 6        PASTE
 Z X C V B N M             1 2 3        UNDO
   SPACE                     0

Lock+Pan:    Move cursor in text field
Lock+Tilt:     Up=Uppercase down=Lowercase
Lock+Zoom: Out=delete character at cursor
Zoom : In = select/toggle, Out = back/exit

M1 K1
```
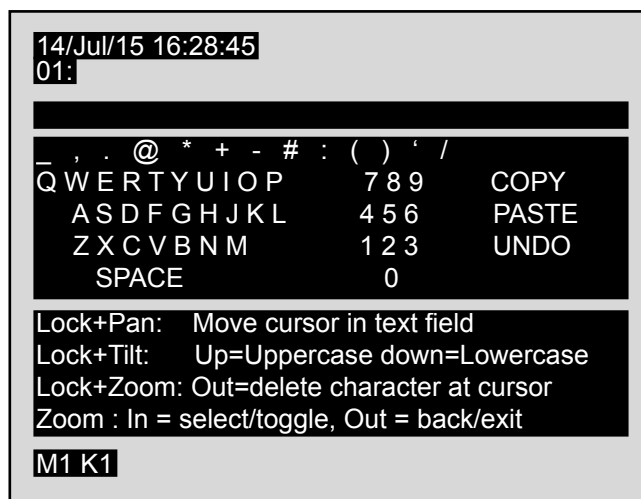
There are 20 characters per camera available for titles.

Creating Camera Titles

Move the joystick around the on screen keyboard and twist the joystick clockwise to select the highlighted character.

Amending Titles

Press and hold the ⬭ button, move the cursor using the joystick left or right until the character in the title is selected and then release the ⬭ button. Then use the joystick to select the required character using the on screen keyboard and select by twisting the joystick clockwise (zoom in) to amend.

To delete a character

Press and hold the ⬭ button, move the cursor using the joystick left or right until the character in the title is selected and twist anti-clockwise (zoom out), then release the ⬭ button.

Upper and Lower case characters

Press and hold the ⬭ button, and use the joystick up and down to select upper or lower case characters. Release the ⬭ button when complete.

Copying Titles

To copy the current title, move the cursor to copy and twist the joystick clockwise (zoom in) and then twist the joystick anti-clockwise (zoom out) once. To change camera while in the camera setup page, press and hold the ⬭ button and then the camera number required using the grey number buttons. Select paste using the joystick and twist clockwise (zoom in) the text that was copied will then be displayed in the current camera title. Use the amend title process to make any alterations.

Undo

Selecting undo will remove any changes and display the last saved camera title.

6.5.8 Preset Titling

The matrix can be used to display preset text to help identify the preset.

Enter the matrix menus (see page 13), and then use the joystick to enter the Camera setup page, and then highlight preset titling.

The screen will then show

```
14/Jul/15 16:28:45
01:


_ , . @ * + - # : ( ) ' /
Q W E R T Y U I O P       7 8 9      COPY
  A S D F G H J K L       4 5 6      PASTE
  Z X C V B N M           1 2 3      UNDO
     SPACE                  0

Lock+Pan:   Move cursor in text field
Lock+Tilt:    Up=Uppercase down=Lowercase
Lock+Zoom: Out=delete character at cursor
Zoom : In = select/toggle, Out = back/exit

M1 K1
```

There are 20 characters available for titles.

Creating Preset Titles

Move the joystick around the on screen keyboard and twist the joystick clockwise to select the highlighted character.

Amending Titles

Press and hold the ⊙ button, move the cursor using the joystick left or right until the character in the title is selected and then release the ⊙ button. Then use the joystick to select the required character using the on screen keyboard and select by twisting the joystick clockwise (zoom in) to amend.

To delete a character

Press and hold the ⊙ button, move the cursor using the joystick left or right until the character in the title is selected and twist anti-clockwise (zoom out), then release the ⊙ button.

Upper and Lower case characters

Press and hold the ⊙ button, and use the joystick up and down to select upper or lower case characters. Release the ⊙ button when complete.

Copying Titles

To copy the current title, move the cursor to copy and twist the joystick clockwise (zoom in) and then twist the joystick anti-clockwise (zoom out) once. To change camera while in the camera setup page, press and hold the ⊡ button and then the camera number required using the grey number buttons. Select paste using the joystick and twist clockwise (zoom in) the text that was copied will then be displayed in the current preset title. Use the amend title process to make any alterations.
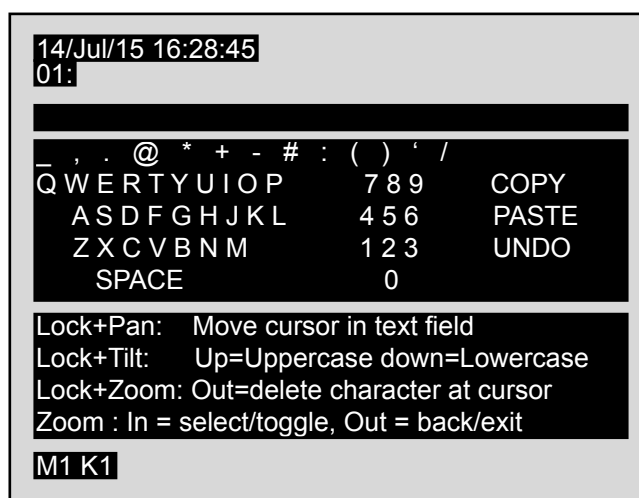
Undo

Selecting undo will remove any changes and display the last saved preset title.

6.5.9 Home Function

Camera can be set to move to a preset position or preset/mimic tour after a period of inactivity.

Enable or disable home function as required, twist the joystick clockwise (zoom in) to set action as required.

Twist joystick anti-clockwise (zoom out) to save and exit the menu.

6.5.10 Home Action

Set action for home function, options are preset, preset tour or mimic tour.

Highlight home action and then twist the joystick clockwise (zoom in) to set action as required, Options are preset, preset tour and mimic tour. To change preset or tour number use the grey numeric buttons.

Twist joystick anti-clockwise (zoom out) to save and exit the menu.

6.5.11 Home Delay

Used to set the time period of inactivity for the home function. Use the grey numeric buttons to enter the time required. Time is in seconds.

6.5.12 Telemetry Type

Telemetry PTZ control can be set to RS485 or Coax. Highlight the telemetry type and zoom in to change the option to RS485/twisted Pair or coax. Press the ⬭ button to set all the cameras to the selected telemetry control type.

(!) The 360 VisionMatrix only transmits 360 Vision protocol.
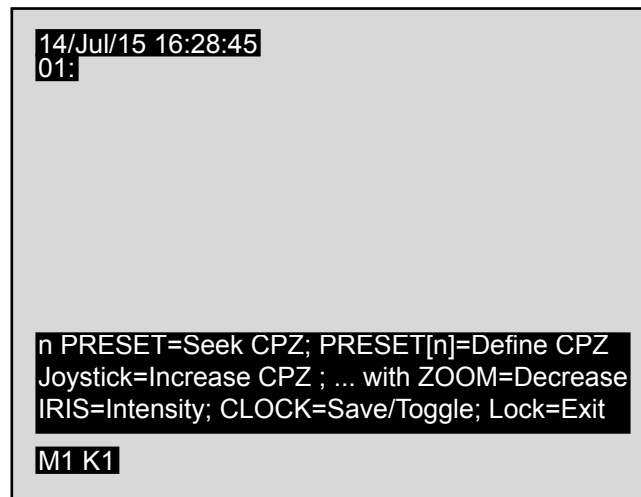
6.5.13 Creative Privacy Zones

A creative privacy zone is a 'masked' area of the image that ensures the chosen zone cannot be viewed.

The height, width and transparency of the zone can be adjusted, only available when using 360 Vision cameras.

Enter the matrix menus (see page 13), and then use the joystick to enter the Camera setup page, and then select creative privacy zones.

The screen will then show

```
14/Jul/15 16:28:45
01:




n PRESET=Seek CPZ; PRESET[n]=Define CPZ
Joystick=Increase CPZ ; ... with ZOOM=Decrease
IRIS=Intensity; CLOCK=Save/Toggle; Lock=Exit

M1 K1
```

To create a creative privacy zone, use pan, tilt and zoom to centre the camera view on the object to be obscured. Then press and hold ⬭ and then press a number button (range 1 to 32, depending on camera model) to activate the privacy zone, release the ⬭ button.

A small privacy zone will appear in the centre of the screen, and the camera will zoom out. While the privacy zone is slightly transparent use the joystick pan and tilt to make the zone bigger to suit the area. To reduce the privacy zone pan and tilt while using zoom in.

Iris buttons can be used to set the transparency of the privacy zone, if required.
To set the privacy zone press the ⬭ button.

The keyboard will still be in the privacy zone mode, use this to set another privacy zone using the above process or press the ⬭ button to end setup.

To edit/delete a privacy zone, enter the keyboard privacy zone menu using the above method. Seek the privacy zone preset by pressing the number of the privacy zone (range 1 to 32, depending on camera model) and then press the ⬭ button. Use the ⬭ button to switch the privacy zone off (delete) or back on, if required.

Press the ⬭ button to save and exit the menu.

6.5.14 Gain

Gain adjustment provides the means to adjust the 1 volt peak to peak video at the control end of the cable run.

Enter the matrix menus (see page 13), and then use the joystick to enter the Camera setup page, and then select gain. Use the joystick pan right and left control to increase or decrease the video level.

Amount of gain available is dependant on the 360 Vision camera setup, whether the camera is set to less than 300m or more than 300m coax cable length.

6.5.15 Lift

Lift adjustment provides the means to adjust the overall contrast level, allows the video signal to be improved over long cable runs.

Enter the matrix menus (see page 13), and then use the joystick to enter the Camera setup page, and then select lift. Use the joystick pan right and left control to increase or decrease the video level.

Amount of lift available is dependant on the 360 Vision camera setup, whether the camera is set to less than 300m or more than 300m coax cable length.

6.5.16 Public

This option is used to 'hide' cameras from the 360 VisionMatrix second monitor output, when shop monitor feature is switched on (see pg 26).

6.5.17 Sync Mode

Option to line lock the camera to the ac supply or use the cameras internal sync option. Changing the cameras sync mode will cause the image to tear/waver for a short period.

6.5.18 Autosync Enabled

Option can be switched off to prevent the 360 VisionMatrix from attempting to synchronise the cameras each time they are selected.

6.5.19 White Balance

This option is used to set the camera white balance, to help improve the camera/image colour definition.

Twist joystick clockwise (zoom in) to set, options available are auto, indoor and outdoor.

More options are available using the camera OSD menu, see camera manual.

6.5.20 Proportional Speed

Used to set the pan and tilt speed control depending on the zoom ratio.

Twist joystick clockwise (zoom in) to set, options available are on or off.

6.5.21 Factory Reset Camera

This option is used to factory reset the camera. Highlight the function and twist the joystick clockwise (zoom in), a message will appear on screen.

FACTORY RESET - WARNING ALL PRESETS ETC WILL BE LOST

ARE YOU SURE?
YES/NO

Selecting YES will factory reset the camera, all presets, tours, privacy zones etc will be lost. The camera will perform a reboot.
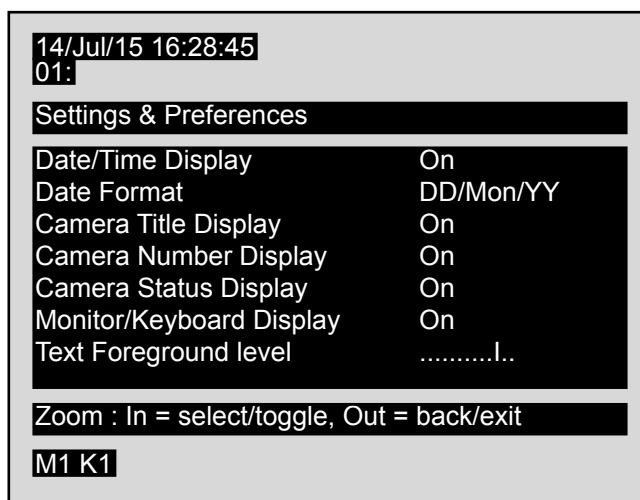
(!) Camera protocol settings and ID will not be affected.

6.6 Settings and Preferences

Enter the matrix menus (see page 13), and then use the joystick to enter the Settings and Preferences setup page.

The screen will then show

```
14/Jul/15 16:28:45
01:

Settings & Preferences

Date/Time Display          On
Date Format                DD/Mon/YY
Camera Title Display       On
Camera Number Display      On
Camera Status Display      On
Monitor/Keyboard Display   On
Text Foreground level      ..........I..

Zoom : In = select/toggle, Out = back/exit

M1 K1
```

Use the settings and preferences page to set what information is shown on the matrix monitor screen.

Options are:-
·   Date/Time Display - Set if the date/time will displayed on screen.
·   Date Format - Choose the format of the date to be displayed.
·   Camera Title Display - Set if the camera title is to be displayed on the screen.
·   Camera Number Display - Set if the camera number is to be displayed on the screen.
·   Camera Status Display - Used to show the camera status on the screen. This will show preset and tour information.
·   Monitor/Keyboard Display - Set if the monitor and keyboard information will be displayed on screen.
·   Text Foreground level - Used to adjust the level of the text foreground.
·   Text Background level - Used to adjust the level of the text background.
·   Menu Highlights level - Used to adjust the level of the highlight text cursor.
·   Alarm Beep - Switch on/off the alarm buzzer, keyboard button press beep is not affected.
·   Dead Cameras in Sequences - Used when auto sequence option is activated, choose if missing cameras will be skipped or shown as missing cameras.

6.7 Engineer Settings

Enter the matrix menus (see page 13), and then use the joystick to enter the Engineer Settings setup page.

The screen will then show

```
14/Jul/15 16:28:45
01:

AutoSync                       On
AutoSync Ref. Camera           1
OSD Rendering                  Opaque
Abs. Position Display          On
Continuous Alarm Numbers       Off
Man. Alarm Excludes Others     Off
Camera Pre-Alarm Restore       On
Matrix Pre-Alarm Restore       On
Show Alarm Title Only          On

Zoom : In = select/toggle, Out = back/exit

M1 K1
```
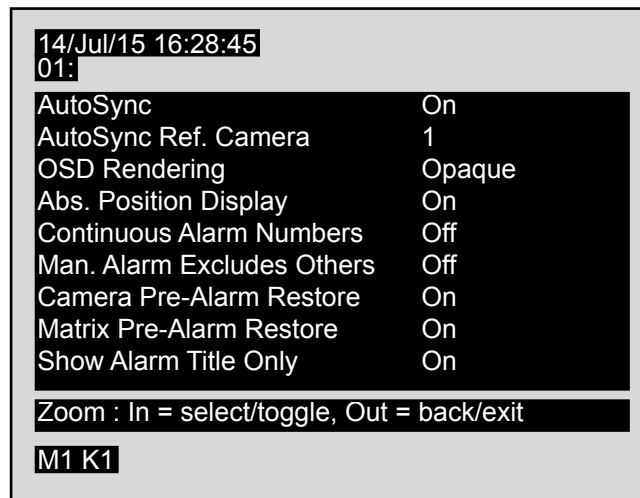
Use the engineers settings page to set how the matrix operates.

Options are:-

- AutoSync - When switched on all 360 cameras will sync to the sync reference camera. This can cause image the image to wave/tear as the camera synchronises, switch feature off if not required.
- AutoSync Ref. Camera - Set the auto sync reference camera.
- OSD Rendering - Set OSD display to opaque or transparent.
- Abs. Position Display - Used to display the pan, tilt and zoom co-ordinates of the 360 Vision camera. Text will be displayed xxx° (Pan) xxx° (Tilt) xx.x (Zoom). Text will only be displayed if two communication to the camera is available.
- Continuous Alarm Numbers - Sets how the alarm inputs are shown in the alarm setup page. On will display the alarms available 1 -144, off will display the alarms as the 360 matrix alarmcard id/alarm input contact ie 01/02 alarmcard id 1 input 2.
- Man. Alarm Excludes Others - With this function on, the keyboard alarm ⬤ button will set the matrix into manual alarm mode and the matrix will ignore all other alarm inputs.
- Camera Pre-Alarm Restore - Disable this feature if you do not want the camera to return to the pre alarm state.
- Matrix Pre-Alarm Restore - Disable this feature if you do not want the matrix to return to the pre alarm state.
- Show Alarm Title only - Enabling this function will show the alarm title only, no alarm numbering will be shown.
- Use Alarm Status Type 2 - Set this to on to support current 360 Vision matrix alarmcards (type 2). Older version matrix alarmcards support type 1.
- Coax Router uses Monitor 2 - To be used on systems, that are using coax telemetry with remote DVR control. The camera being controlled by the DVR will be selected on the matrix 2nd monitor output.
- Router Bi-directional - Legacy feature must be set to default off.
- Router Acknowledge - Legacy feature must be set to default off.
- Monitor 2 = SHOP MONITOR - Used to set the 2nd monitor output as public display/shop monitor. Cameras can be set as not public (see pg 24). The camera being viewed on monitor 1 and any cameras set as not public will not be displayed on the 2nd monitor output.
- Restore Factory Defaults Only - This feature is used to factory reset the matrix, all settings including camera text will be lost. The camera will not be affected.

7 Warranty

This information and/or any technical information – whether received verbally or writing – is given in good faith but without warranty and this also applies where proprietary rights of third parties are involved. The information provided does not release you from your obligation to check its validity and to test the products suitability for the intended purpose(s) and use(s). The application, use and installation of the products either in isolation or in conjunction with other products used, provided and installed by you on the basis of the technical advice issued are beyond our control and therefore remain entirely your own responsibility.

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8 Notes