Redvision™

X-SERIES

USER MANUAL

Products Covered:

RV X-SERIES™ PTZ Positioning Camera
RVX-PSU Power Supply
RVX-PSU-ALM16 Power Supply with Alarm Module
RVX-PSU-ALM16-W PSU with Wireless PIR module

[RVX V9.2.10]

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1 INSTALLING THE CAMERA HEAD

1.1 CONVERT DOME TO BALL PTZ CONFIGURATION

The RVX Series can be mounted as a dome or ball PTZ configuration. To convert the dome to ball PTZ remove the M4 button head screws with 2.5mm allen key provided. See FIG A below.

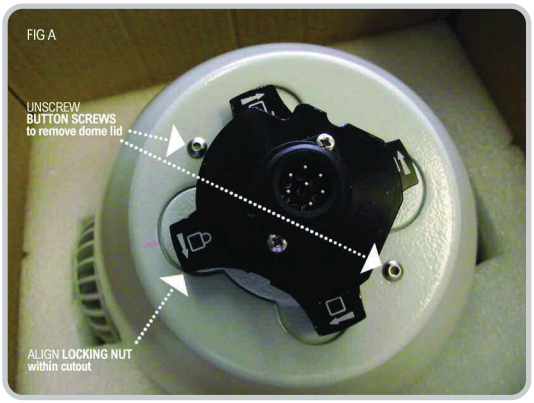


FIG B MOUNTING ORIENTATION



OBSERVE THE FOLLOWING PRECAUTIONS WHEN INSTALLING:

1. Mount the Camera in a position where it cannot be be interfered with either intentionally or accidentally.
2. The mounting surface should be capable of supporting the weight of both the Camera and mounting brackets under all expected conditions of load, vibration and temperature.
3. The mounting brackets should be fitted in accordance with instructions and should observe all appropriate safety precautions & local building regulations.
4. Ensure the Camera is in the correct orientation, see FIG B above.

1.2 ATTACHING CAMERA TO BRACKET

BRACKET INSTALLATION:

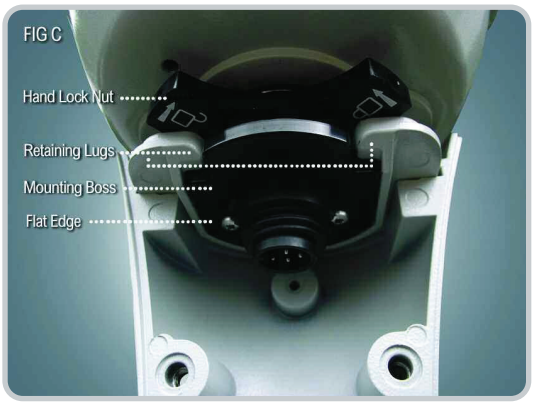
Fixings to the various bracket types will depend on the fixing surface. It is important to use adequate quality fixings to safely support the complete Dome/Ball PTZ assembly. Fixing slots on a 4" PCD provide adequate clearance for 6mm bolts if attaching the Pedestal or Swan Mount to the mast.

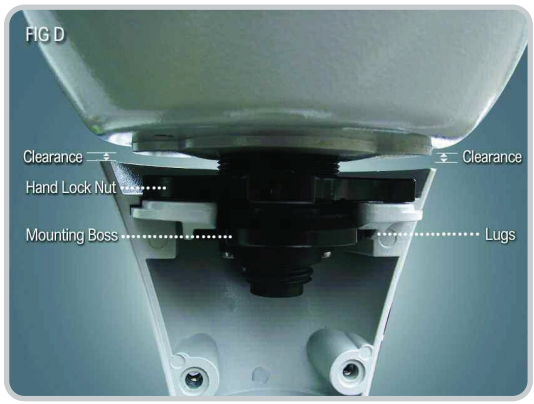
FLYING LEAD:

If using a Swan/Pedestal/Pendant Mount, install the Fly Lead optionally through the Central Mounting Tube or via a 20mm Gland Entry Point. The Gland Entry is supplied with a 20 x 1mm thread to accomodate industry standard 20mm Glands.

ATTACHING CAMERA TO THE BRACKET: See Fig C & D below

1. Remove Mount Cover Plate.
2. Fully unscrew Hand Lock Nut.
3. Offer Camera to Bracket. The Mounting Boss orientation is important and should match the picture in FIG C & D below. i.e The Flat Edge should be positioned to the rear and the Retaining Lugs engaged in the Boss Cut Outs.
4. If RV-PED (Pedestal) is being used support the Camera with hand when tightening the Hand Lock Nut - ensure the Hand Lock Nut is fully tightened.
5. Ensure the Clearance is even throughout 360° rotation and the Camera is free moving.
6. Replace Mount Cover Plates.





1.3 BRACKET TYPES

RV-SWAN (Swan mount), RV-WALL (Wall mount), RV-PNDT (Pendant mount), RV-PED (Pedestal for mast/tower mount).

TECH SUPPORT COMMENT: **It is important to match the menu software settings to the Camera orientation (6.4.7) i.e. is the Camera hanging down or upright?**

'hanging down' would be using one of the following bracket types :

- **swan [RV-SWAN] ,**
- **pendant [RV-PNDT]**
- **or wall [RV-WALL] - NOT SUITABLE FOR UPRIGHT MOUNTING**

'Upright' would be using the pedestal bracket [RV-PED]

1.4 HOW TO CANTILEVER BALL/PTZ ARMS FORWARD

1. Remove pear shaped badge on each arm using small flat head screw driver.
2. Slightly loosen by one turn (BUT DO NOT REMOVE) the allen screws.
3. Cantilever the Ball Arms forward to 'STOP' position.
4. Tighten allen screws.
5. Replace badges (spares are provided).
6. See Section 6.4.7 and from the SET UP MENU select either 'UPRIGHT ARMS OUT' or 'HANGING ARMS OUT'



2 HOW TO CONFIGURE THE CAMERA

2.1 REMOVING THE DIP SWITCH SCREW COVER

There are two rows of DIP switches located behind the large screw cap (see FIG 1 below). Use flat bladed screw driver to remove by turning anti-clockwise to unscrew.



2.1.1 CAMERA ORIENTATION FOR SETTING DIP SWITCHES

CAUTION: **Make sure the dip switches read right way up before configuring Camera. The word 'protocol' should be displayed as per picture see FIG 2 below**

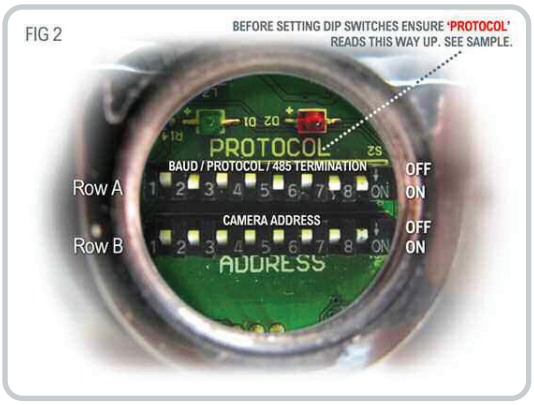
➔ **'ON' is down (away from the word protocol)**
➔ **'OFF' is up (toward the word protocol)**

The switch numbers read 1 to 8 from left to right

THE BAUD & PROTOCOL SWITCHES (ROW A) WORK AS FOLLOWS:

SWITCH 1,2,3	PROTOCOL (SEE 2.3)
SWITCH 4 & 5	BAUD RATE (2.4)
SWITCH 6	NOT USED
SWITCH 7	REAL TIME CLOCK (RTC) BATTERY ENABLE (2.6). TURN "SWITCH 7" ON DURING INSTALL
SWITCH 8	RS485 TERMINATION ENABLE (2.5)

Use row B (FIG 2 below) to set the Camera address (2.2)



2.1.2 DEFAULT DIP SWITCH SETTINGS

All X-series™ cameras are factory defaulted to the following configuration:

- BBV Up The Coax (UTC)
- Camera address set to 1
- RS485 termination set to ON
- Real-time clock set to OFF. TURN "SWITCH 7" ON DURING INSTALL

2.2 SETTING THE CAMERA ADDRESS

See table TABLE 1 below for guidance on DIP switch setting for each Camera address. '0' represents OFF and '1' represents ON.

TABLE 1

CAMERA ADDRESS	ROW 'B' DIP SWITCH 1	2	3	4	5	6	7	8	CAMERA ADDRESS	ROW 'B' DIP SWITCH 1	2	3	4	5	6	7	8
not used	0	0	0	0	0	0	0	0	16	0	0	0	0	1	0	0	0
1	1	0	0	0	0	0	0	0	17	1	0	0	0	1	0	0	0
2	0	1	0	0	0	0	0	0	18	0	1	0	0	1	0	0	0
3	1	1	0	0	0	0	0	0	19	1	1	0	0	1	0	0	0
4	0	0	1	0	0	0	0	0	20	0	0	1	0	1	0	0	0
5	1	0	1	0	0	0	0	0	21	1	0	1	0	1	0	0	0
6	0	1	1	0	0	0	0	0	22	0	1	1	0	1	0	0	0
7	1	1	1	0	0	0	0	0	23	1	1	1	0	1	0	0	0
8	0	0	0	1	0	0	0	0	24	0	0	0	1	1	0	0	0
9	1	0	0	1	0	0	0	0	25	1	0	0	1	1	0	0	0
10	0	1	0	1	0	0	0	0	26	0	1	0	1	1	0	0	0
11	1	1	0	1	0	0	0	0	27	1	1	0	1	1	0	0	0
12	0	0	1	1	0	0	0	0	28	0	0	1	1	1	0	0	0
13	1	0	1	1	0	0	0	0	29	1	0	1	1	1	0	0	0
14	0	1	1	1	0	0	0	0	30	0	1	1	1	1	0	0	0
15	1	1	1	1	0	0	0	0	31	1	1	1	1	1	0	0	0

See www.redvisioncctv.com/support/downloads for camera address 32 to 255

2.3 SETTING THE CAMERA PROTOCOL

On row 'A' Set DIP switch numbers 1, 2 and 3 (See TABLE 2 below). '1' represents ON and '0' represents OFF.

TABLE 2

PROTOCOL	ROW 'A' DIP SWITCH 1	2	3	4	5	6	7	8
BBV Up the Coax	0	0	0					
Pelco P	0	1	0					
Pelco D	1	1	0					
Dennard	1	0	1					
Vista	0	0	1					
Bosch Forward Vision	0	1	1					
BBV422	1	1	1					

2.4 SETTING THE CAMERA BAUD RATE

On row 'A' Use DIP switch numbers 4 and 5 to set the Baud rate. 0=off & 1=ON. (See TABLE 3 below).
For Baud Rate settings refer to user manual for the control equipment being used.
NB Pelco D is normally 2400, Pelco P is 4800, Dennard is 9600.

TABLE 3

BAUD	ROW 'A' DIP SWITCH 1	2	3	4	5	6	7	8
9600				0	0			
2400				1	0			
4800				0	1			
19200				1	1			

2.5 SETTING THE CAMERA RS485 TERMINATION

The default position is ON.

TABLE 4

TERMINATION	ROW 'A' DIP SWITCH 1	2	3	4	5	6	7	8
OFF								0
ON								1

CAUTION: **Termination switch should be set to ON if:**

- ➔ **The Camera is being run on coax protocol**
- ➔ **The Camera is the only one connected to the twisted pair**
- ➔ **The Camera is last one on a daisy chain**
- ➔ **An alarm module has been fitted to the Camera power supply & is running 485 protocol**

The termination switch should be OFF if:

More than one Camera is connected on a DAISY CHAIN but it is NOT the last in line [The exception would be if an alarm module were installed. If this were the case, the Camera should be terminated (ON) and the alarm module would un-terminated (OFF) see section 4.5 Setting the Alarm Module RS485 Termination].

2.6 REAL TIME CLOCK (RTC)

Row A, switch 7 sets the Camera's internal real time clock. The RTC is used for setting the cameras' internal clock & can be used for programming timed tours as well as RVX Series alarm functions (if using RVX-PSU-ALM16/W). The RTC battery should be set to 'ON' either at commissioning or installation stage. The default position is OFF.

TABLE 5

RTC	ROW 'A' DIP SWITCH 1	2	3	4	5	6	7	8
OFF							0	
ON							1	

2.7 REPLACING THE DIP SWITCH COVER

- Before replacing the DIP switch screw cap, it is important to check it is free of dirt and grit. Thread contamination could affect the waterproof seal.
- The thread should be carefully aligned to prevent burring.
- Using a large flat bladed screw driver turn the screw CLOCKWISE to tighten.

2.8 RE-SETTING THE DOME

To re-set the dome before set-up:

- ➔ LOGIN > SET UP > **CLEAR SETTINGS**
- ➔ MOVE ▲▼ TO YES
- ➔ MOVE ◀ TO SAVE & EXIT

2.9 POWERING THE DOME

Dome should be powered up as soon as possible after fitting to ensure that the internal heater and fan can maintain an ambient temperature.

3 POWER SUPPLY INSTALLATION & SETUP

WARRANTY & SAFETY NOTICE: DISCONNECT ALL POWER BEFORE OPENING OR WORKING ON THE POWER SUPPLY UNIT. INSTALLATION MUST BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON.

Camera Warranty is void unless it is installed using one of the following Redvision power supplies and a Redvision supplied fly lead (Composite cable): Using the wrong type of 3rd party PSU could compromise safety and damage the camera unit.

- RVX-PSU • RVX-PSU-ALM16 • RVX-PSU-ALM16-W

The RVX Power Supplies are compatible with the following X-Series Cameras:
RVX18, RVX18-W, RVX18-IR, RVX18-IR-W, RVX28, RVX28-W, RVX28-IR, RVX28-IR-W, RVX40, RVX40-W, RVX40-IR, RVX40-IR-W, RVX40-IRWL, RVX40-IRWL-W, RVX18-IRWL, RVX18-IRWL-W, RVX28-IRWL, RVX28-IRWL-W

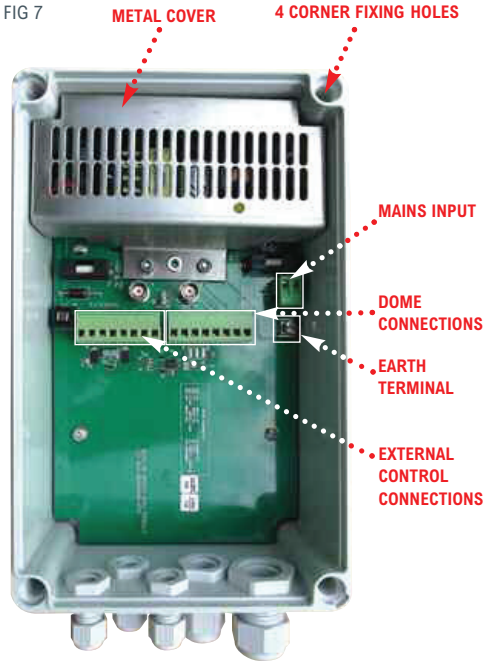
COMPOSITE CABLE: A pre-made composite cable with a 7 way female amphenol connector is supplied with all Redvision brackets. The female connector connects directly to the male connector on the RVX PTZ Camera housing. Follow the colour coding idents as shown in table 3.2.2 for terminating the fly lead in the power supply.

CABLE/ PIN OUT TABLE 6

PIN No.	CABLE/WIRE
1	Video Signal
2	Video Screen
3	White
4	Orange
5	NOT USED
6	RED 24Vdc
7 (Centre)	BLACK 0Vdc

The Redvision power supply (part code: RVX-PSU) outputs 24V DC & is supplied in a weather proof ABS box rated IP67.

FIG 7



3.1 REDVISION POWER SUPPLY (RVX-PSU)

1. Mount the Redvision PSU in a position so it cannot be interfered with intentionally or accidentally. Ideally use a lockable cabinet .
2. Securely fix the Redvision PSU using appropriate size screws and ensure the cable glands have sufficient clearance to allow the cables to enter.
3. All cables should be channelled through the appropriate sized gland holes.
4. It is recommended that a good quality screened data pair or coax is used for transmitting data signal.
5. If the Redvision alarm module and or wireless PIR module is to be used refer to section 4 and 5.
6. If Star configuration is used it is recommended a suitable Star Card interface is used.
7. Only use Redvision supplied umbilical cables for connecting the X-SERIES ball/PTZ dome & Redvision PSU. Warranty will be void if these cables are extended between the PTZ/dome unit and PSU. Extending cables could also compromise safety.

3.2 VOLTAGE

Input: 110V/230V @ 0.3A
Output: 24Vdc @ 2.5A

3.3 RVX-PSU INTERNAL CONNECTIONS

3.3.1 MAINS INPUT

TABLE 7

PCB IDENT	MAINS POWER
LIVE	LIVE (BROWN) 110/230Vac Connection via 2 way terminal block
NEUTRAL	NEUTRAL (BLUE) Connection via 2 way terminal block
EARTH	GREEN/YELLOW Connection via terminal screw

NOTE: Earth connection requires 4mm red spade loop (supplied with PSU) to be fitted by engineer at installation.
SAFETY: ENSURE MAINS INPUT & EARTH CONNECTIONS ARE SECURELY STRAIN RELIEVED.

3.3.2 CONNECTIONS TO CAMERA - 8 WAY TERMINAL BLOCK

TABLE 8

PCB IDENT	UMBILICAL LEAD TO CAMERA
AUX-C	Not used
AUX-E	Not used
VIDEO	Coax signal
V-GND	Coax screen
RS485(A)(+)	White
RS485(B)(-)	Orange
+24V	Red
0V	Black and cable screen

3.3.3 CONNECTIONS TO CONTROL - 8 WAY TERMINAL BLOCK

TABLE 9

PCB IDENT	EXTERNAL CONTROL CONNECTIONS
N/C	Not used
N/C	Not used
VIDEO	COAX signal (BNC P6)
V-GND	COAX screen
RS485(A)(+)	RS485(A)
RS485(B)(-)	RS485(B)
24V	
0V	

3.3.4 FUSE PROTECTION

TABLE 10

PCB IDENT	DESCRIPTION
F1	Mains input fuse 3.15A - Anti Surge
F2	Camera fuse 3.15A - Fast Blow

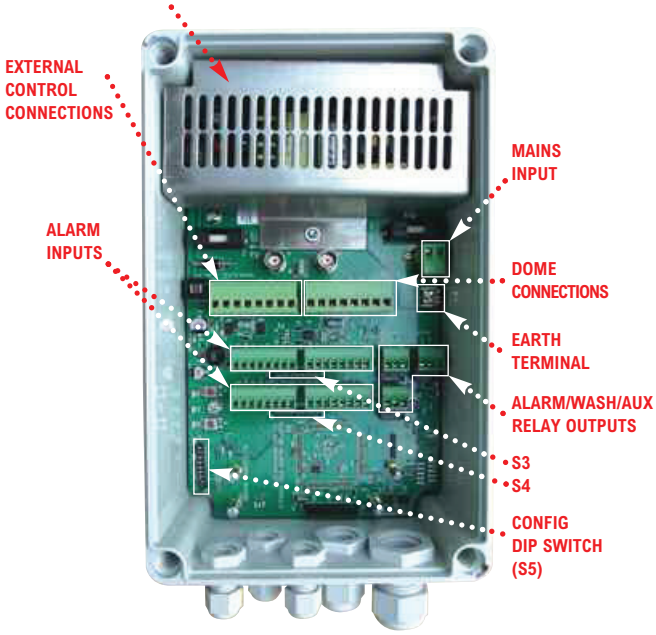
4 RVX-PSU-ALM16 (PSU WITH ALARM MODULE)

WARRANTY & SAFETY NOTICE: DISCONNECT ALL POWER BEFORE OPENING OR WORKING ON THE RVX-PSU-ALM16 POWER SUPPLY UNIT WITH EMBEDDED ALARM CARD. THIS PROTECTS HIGH VOLTAGE COMPONENTS. INSTALLATION MUST BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON.

4.1 VOLTAGE

Input: 100-230V 47-63Hz
80VA MAX @ 0.3A
Output: 24Vdc @ 2.5A

FIG 8



TECH SUPPORT COMMENT: **When an RVX-PSU-ALM16 is used ensure S5 config switch has matching protocol and baud rate settings as the dome.**

4.2 ALARM MODULE DIP SWITCH SETTINGS

Refer to S5 'CONFIG DIP SWITCH' (see diagram in FIG 8, page 8) for Setting Protocol, Baud Rate & RS485 termination. Switches 6 & 7 are NOT used.

4.2.1 PROTOCOL - ALARM MODULE

TABLE 11

	Protocol			Baud Rate				RS 485 Termination
DIP SWITCH No.	1	2	3	4	5	6	7	8
BBV Coax	0	0	0			NOT USED	NOT USED	
Pelco P	0	1	0					
Pelco D	1	1	0					
Dennard	1	0	1					
Vista	0	0	1					
Bosch/ForwardVision	0	1	1					
BBV 422	1	1	1					

TECH SUPPORT COMMENT: **Alarm module PROTOCOL should be set to the same PROTOCOL as the camera.**

4.2.2 BAUD RATE - ALARM MODULE

TABLE 12

	Protocol			Baud Rate				RS 485 Termination
DIP SWITCH No.	1	2	3	4	5	6	7	8
2400				1	0	NOT USED	NOT USED	
4800				0	1			
9600				0	0			
19200				1	1			

TECH SUPPORT COMMENT: **Alarm module BAUD RATE should be set to the same BAUD RATE as the camera.**

PELCO D normally uses 2400. PELCO P normally uses 4800.

4.2.3 RS485 TERMINATION - ALARM MODULE
See 4.5.1 for TERMINATION SCENARIOS

TABLE 13

	Protocol			Baud Rate				RS 485 Termination
DIP SWITCH No.	1	2	3	4	5	6	7	8
OFF						NOT USED	NOT USED	0
ON								1

4.3 ALARM INPUTS

1-16 sets of volt free contacts which can be configured using the onboard 8 way dip S3 & S4 (FIG 8, page 8) for either normally open or normally closed operation. See **4.5** below.

4.3.1 ALARM INPUT GROUNDS
16 Alarm Inputs are provided to match 16 Ground Inputs.

4.3.2 RELAY OUTPUTS (VOLT FREE)
There are 3 relay outputs NO/NC 0V output: Alarms, Wash and Aux.
ALARMS are tied into ALARM INPUTS.
WASH is activated by a wash command or by user defined preset.
AUX can be triggered by ACTIVE ALARMS or NIGHT MODE SWITCHING.

4.4 NORMALLY OPEN/NORMALLY CLOSED ALARM INPUTS

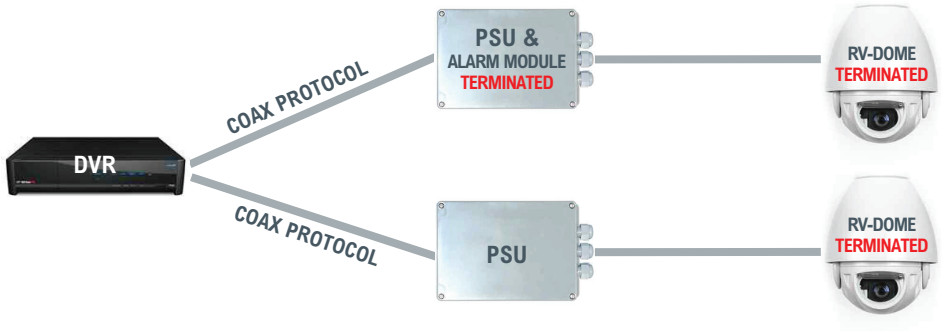
See S3 & S4 on the RVX-PSU-ALM16 PCB (see diagram FIG 8, page 8)

TABLE 14

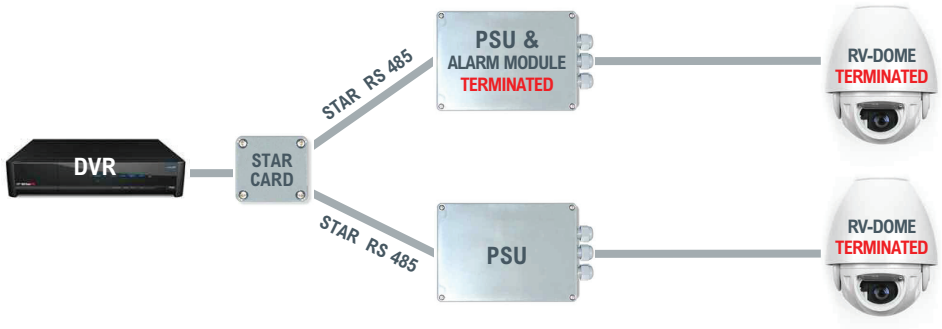
S3	NO/NC ALARMS 1-8
S4	NO/NC ALARMS 9-16

4.4.1 TERMINATION SCENARIOS

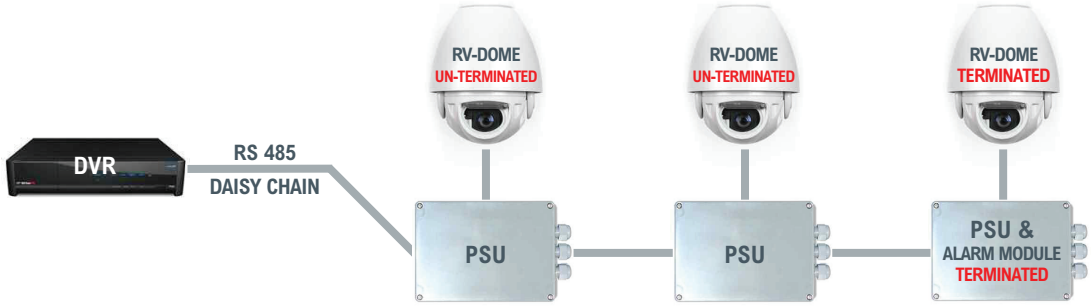
If control is over coax protocol, both the Camera and Alarm Module should be terminated.



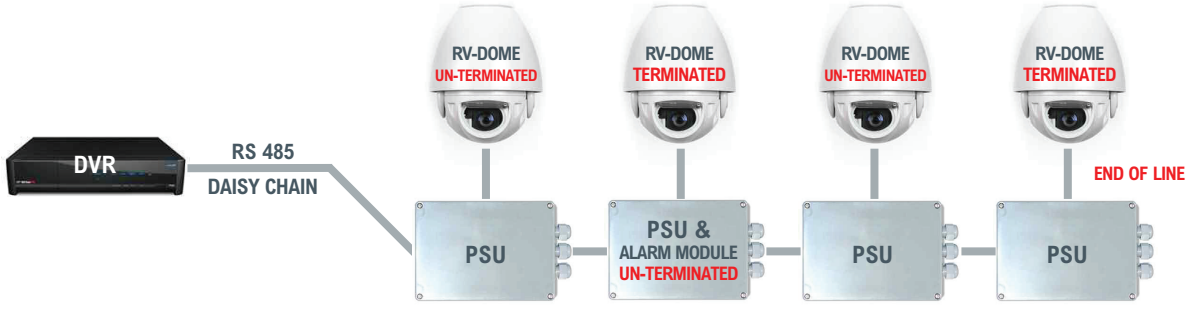
If control is over RS485 and the system is running a Star Card configuration, both the Camera and Alarm Module should be terminated.



If control is over RS485 and the system is running a Daisy Chain configuration then;
(A) *If the Camera and Alarm Module is the last in line, both the Camera and Alarm Module should be terminated.*



(B) *) If the Camera and Alarm Module is NOT the last in line, the Camera should be terminated and the Alarm Module un-terminated. The Alarm Module takes over the termination from the Camera i.e. it (the Alarm Module) should be un-terminated!*



5 WIRELESS ALARM CARD (WIRELESS PIR DETECTOR)

WARRANTY & SAFETY NOTICE: DISCONNECT ALL POWER BEFORE OPENING OR WORKING ON THE POWER SUPPLY UNIT AND ALARM CARD. WIRELESS ALARM CARDS SHOULD NOT BE HOT SWAPPED OR INSTALLED WHILST THE POWER IS LIVE. INSTALLATION MUST BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON.

5.1 FACTORY FITTED WIRELESS CARD (RVX-PSU-ALM16-W)

The Redvision Wireless Card is compatible with the Redvision Wireless PIR, Luminite Genesis Range and the Redwall Wireless Transmitter Module Part Code WF434T, (wireless enables Redwall PIRs).

This PSU is compatible with the following RVX SERIES PTZs:
RVX18, RVX18-IR, RVX18-W, RVX18-IR-W, RVX28, RVX28-IR, RVX28-W, RVX28-IR-W, RVX40, RVX40-W, RVX40-IR, RVX40-IR-W, RVX40-IRWL, RVX40-IRWL-W, RVX18-IRWL, RVX18-IRWL-W, RVX28-IRWL, RVX28-IRWL-W

Refer to **4.2** for RVX-PSU INTERNAL CONNECTIONS & **4.3** for ALARM MODULE DIP SETTINGS.

5.1.1 CONFIGURING WIRELESS ALARM MODULE

ALARM INPUTS

The RVX-PSU-ALM16-W has 16 Alarm Inputs. These can either be used as either HARDWIRED or WIRELESS Alarm Inputs, or a combination of both, e.g. 8 HARDWIRED & 8 WIRELESS.

DIP SWITCH SETTINGS

The WIRELESS Alarm Module has a single 8 Way DIP SWITCH. (See FIG 8 below).

TABLE 19

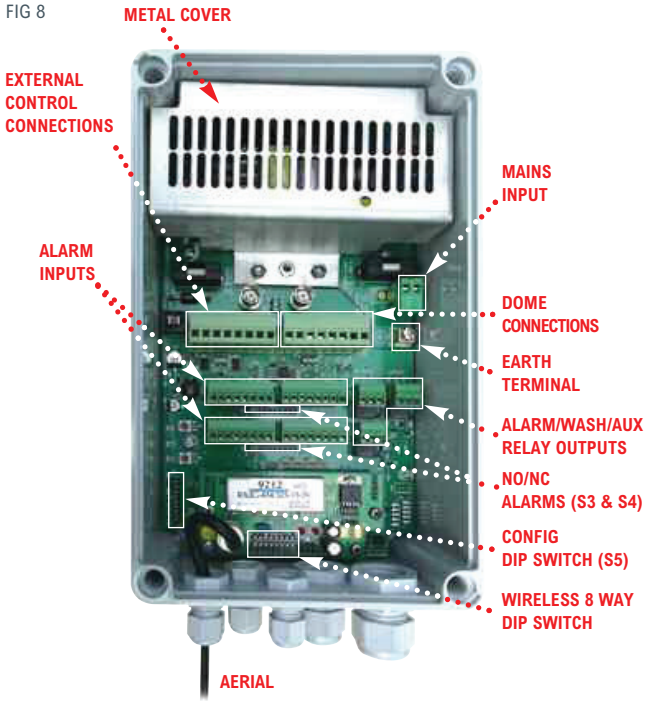
SW1

	4	5	6	7	8
1	▲	▲	▲	▲	▲
2	▲	▲	▲	▲	▼
3	▲	▲	▲	▼	▲
4	▲	▲	▲	▼	▼
5	▲	▲	▼	▲	▲
6	▲	▲	▼	▲	▼
7	▲	▲	▼	▼	▲
8	▲	▲	▼	▼	▼
9	▲	▼	▲	▲	▲
10	▲	▼	▲	▲	▼
11	▲	▼	▲	▼	▲
12	▲	▼	▲	▼	▼
13	▲	▼	▼	▲	▲
14	▲	▼	▼	▲	▼
15	▲	▼	▼	▼	▲
16	▲	▼	▼	▼	▼

UP = ▲
DOWN = ▼

- 1 to 3 dip switches are not used & should be left 'ON'
- Switches 4 to 8 (Dome Head Site Code) provide up to 32 (1 to 16 shown in TABLE 19) channels of wireless transmission to enable alarm activation.
- The transmission needs to be matched between the Dome Head Site Code on the wireless alarm module & the Site Code within the PIR detector (see separate PIR installation guide supplied with the PIR).
- One or more domes wil respond to any wireless PIR within range providing the Dome Head Site Code & corresponding PIR Site Code match.

FIG 8



5.1.2 POSITIONING OF RVX-PSU-ALM16-W

To maximise the transmission range install the PSU externally with the aerial pointing through the gland towards the ground. An optional booster aerial (RV-AE434) can be used to significantly improve signal and range. It is recommended to use the booster aerial if the PIRs are installed on metal clad buildings.

5.2 IF RETRO FITTING WIRELESS ALARM RECEIVER

If Retro-Fitting a wireless alarm receiver card onto an existing 16 way alarm module (RVX-PSU-ALM16-W) observe the following steps:

A) ISOLATE POWER FROM PSU - YOU CANNOT HOT SWAP WIRELESS ALARM MODULE.
B) Align Wireless Alarm Module with P3 Connector and secure with M3 fixings.
E) Thread aerial antenna through gland and connect to BNC on Wireless Receiver.
F) See Table 19, 5.1.1 for DIP switch settings.

6 NAVIGATING THE MENUS

6.1 MENU NAVIGATION - FLOW CHART

Use joystick/Arrow keys to navigate the menu options. See FIG 9, page 15.

6.1.1 ACCESS MAIN MENU FROM 3rd PARTY CONTROLLERS

As most keyboards differ in the way they access the Camera's MAIN MENU it is recommended the user refers to the specific keyboard manual for the control system they are using. See Table 15, below, for examples.

Some common examples for accessing the camera main menu and commands are as follows:

TABLE 15

CONTROLLER	ACCESS MAIN CAMERA MENU
BBV 400	Press & hold # then press 1
DTX400	Press & hold SHIFT then press 1
BBV 1000	Press hold # then press wash key
DTX 1000	Press & hold # then wash key
PELCO P&D	Save 95 Preset
DENNARD	Go to Preset 94
BOSCH FORWARD VISION	Go to Preset 85

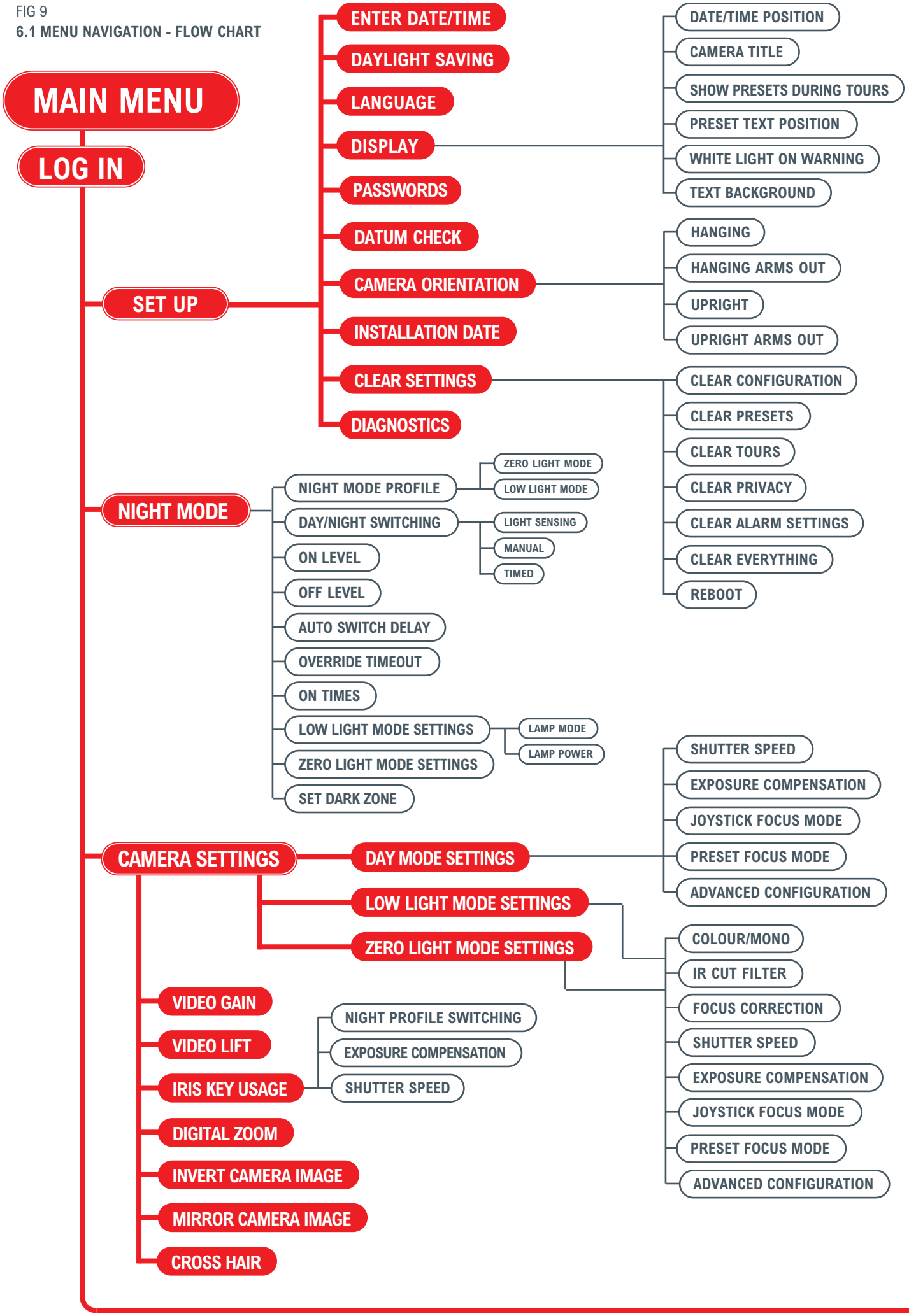
6.1.2 EXIT MENU

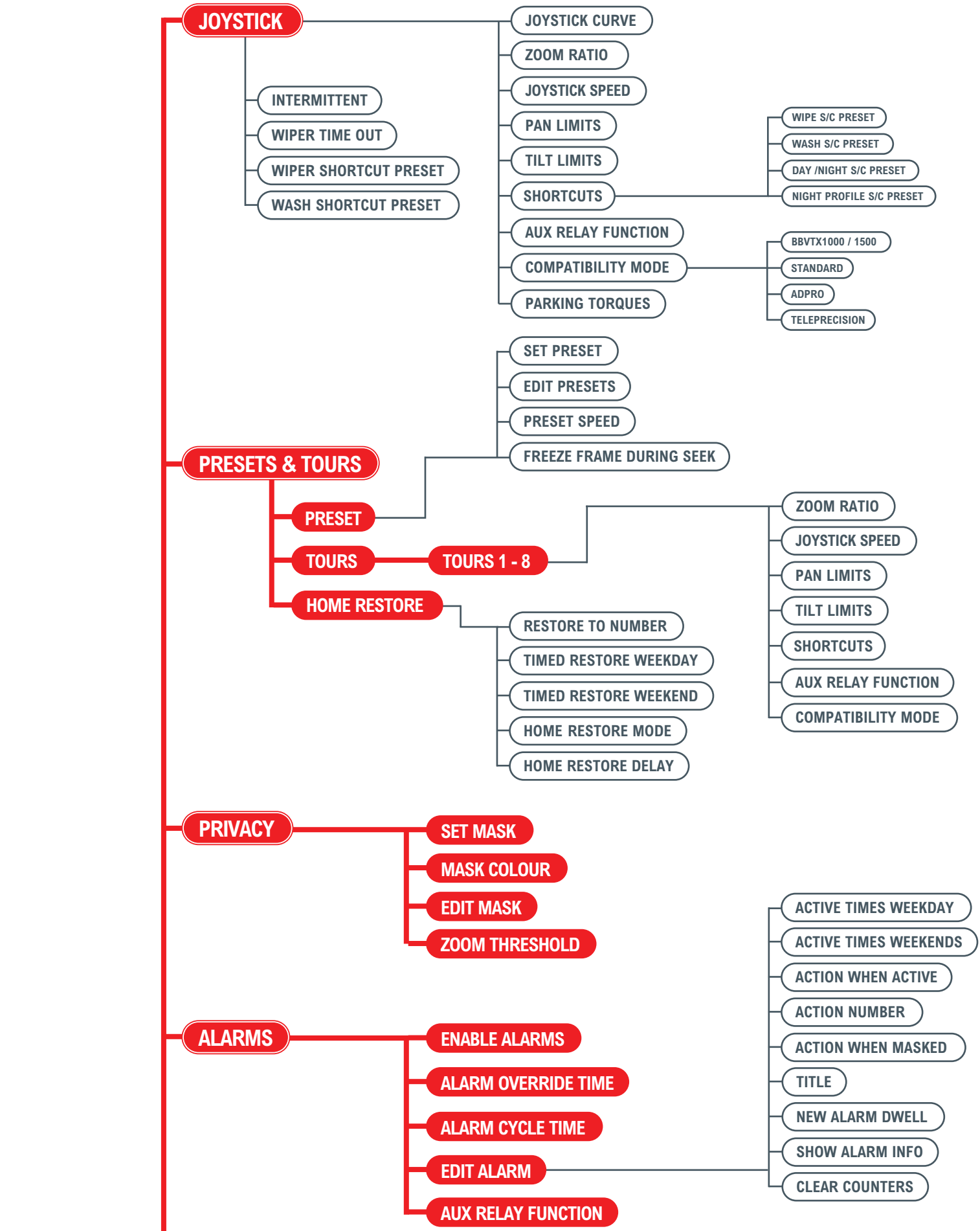
Move the joystick or arrow keys to the left from all levels to exit the Camera main menu. Any changes made will be saved permanently when the menu is exited. The message 'SAVED OK' will appear to confirm changes have been saved.

You can also re-enter the menu command again (i.e. Save 95 Preset on Pelco P or D). To exit - save menu configuration.

FIG 9

6.1 MENU NAVIGATION - FLOW CHART




JOYSTICK
JOYSTICK CURVE
ZOOM RATIO
JOYSTICK SPEED
PAN LIMITS
TILT LIMITS
SHORTCUTS
WIPE S/C PRESET
WASH S/C PRESET
DAY /NIGHT S/C PRESET
NIGHT PROFILE S/C PRESET
AUX RELAY FUNCTION
COMPATIBILITY MODE
BBVTX1000 / 1500
STANDARD
ADPRO
TELEPRECISION
PARKING TORQUES
INTERMITTENT
WIPER TIME OUT
WIPER SHORTCUT PRESET
WASH SHORTCUT PRESET
PRESETS & TOURS
PRESET
SET PRESET
EDIT PRESETS
PRESET SPEED
FREEZE FRAME DURING SEEK
TOURS
TOURS 1 - 8
ZOOM RATIO
JOYSTICK SPEED
PAN LIMITS
TILT LIMITS
SHORTCUTS
AUX RELAY FUNCTION
COMPATIBILITY MODE
HOME RESTORE
RESTORE TO NUMBER
TIMED RESTORE WEEKDAY
TIMED RESTORE WEEKEND
HOME RESTORE MODE
HOME RESTORE DELAY
PRIVACY
SET MASK
MASK COLOUR
EDIT MASK
ZOOM THRESHOLD
ALARMS
ENABLE ALARMS
ALARM OVERRIDE TIME
ALARM CYCLE TIME
EDIT ALARM
AUX RELAY FUNCTION
ACTIVE TIMES WEEKDAY
ACTIVE TIMES WEEKENDS
ACTION WHEN ACTIVE
ACTION NUMBER
ACTION WHEN MASKED
TITLE
NEW ALARM DWELL
SHOW ALARM INFO
CLEAR COUNTERS

6.2 LOGIN

Use joystick/Arrow keys to navigate the menu options.

- ➔ From main menu move joystick/arrow ▸ TO LOGIN MENU
- ➔ MOVE ◂▸▴▾ ENTER DIGIT PASSWORD
- ➔ MOVE ◂ TO SAVE & EXIT

A message will display to confirm successful login or not.

Default PASSWORDS:	TECHNICIAN	999900 (Full access)
	SUPERVISOR	555500 (partial access)
	OPERATOR	111100 (limited access)

To change a password see 6.4.5.4 & view permissions rights see 6.4.5

6.3 LOGIN EXPIRY

After 5 minutes of user inactivity the system times out and the Camera reverts to its previous activity. Access to the menu will be denied unless password is re-entered.

6.4 SET UP

The 'SET UP' is the main sub menu for accessing Camera configuration settings. See 6.4.1 to 6.4.10.

LOGIN > MAIN MENU > **SET UP**

6.4.1 ENTER DATE & TIME

- ➔ LOGIN > MAIN MENU > **SETUP > ENTER DATE/TIME**
- ➔ MOVE ◂▸▴▾ TO SET DATE DD:MM:YY & TIME HH:MM:SS
- ➔ MOVE ◂ TO SAVE & EXIT

6.4.2 DAYLIGHT SAVING

Default setting is AUTO.

- ➔ LOGIN > MAIN MENU > **SETUP > DAYLIGHT SAVING**
- ➔ MOVE ◂▸▴▾ TO SET AUTO, OFF (+0), ON (+1)
- ➔ MOVE ◂ TO SAVE & EXIT

6.4.3 LANGUAGE OPTIONS

Localise the display messages into the following language options:

- English
- Spanish
- German
- French
- Portuguese

- ➔ LOGIN > MAIN MENU > **LANGUAGES**
- ➔ MOVE ▴▾ TO CHANGE LANGUAGE
- ➔ MOVE ◂ TO SAVE & EXIT

6.4.4 DISPLAY

6.4.4.1 DATE/TIME POSITION

User has the option of inserting the on screen position of the date/time

- ➔ LOGIN > MAIN MENU > **SETUP > DISPLAY > DATE & TIME POSITION**
- ➔ MOVE ▴▾ TO MOVE THE DISPLAY POSITION
- ➔ MOVE ◂ TO SAVE & EXIT

Default is OFF (nothing displayed).

6.4.4.2 SET WHITE LIGHT 'ON' WARNING

- LOGIN > MAIN MENU > **SETUP > DISPLAY > WL ON WARNING**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.4.3 CAMERA TITLE

- LOGIN > MAIN MENU > **SETUP > DISPLAY > CAMERA TITLE > TITLE**
- MOVE ▲▼ TO CHANGE ALPHANUMERIC CHARACTERS
- MOVE ◀ TO SAVE & EXIT

6.4.4.4 CAMERA TITLE SCREEN POSTION

- LOGIN > MAIN MENU > **SETUP > DISPLAY > CAMERA TITLE > POSITION ON SCREEN**
- MOVE ▲▼ TO MOVE SCREEN POSITION
- MOVE ◀ TO SAVE & EXIT

6.4.4.5 SHOW PRESET TITLES DURING TOURS

- LOGIN > MAIN MENU > **SETUP > DISPLAY > SHOW PRESET TITLE DURING TOURS**
- MOVE ▲▼ SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.4.6 PRESET TEXT POSITION

- LOGIN > MAIN MENU > **SETUP > DISPLAY > SHOW PRESET TEXT POSITION**
- MOVE ▲▼ TO CHANGE POSITION
- MOVE ◀ TO SAVE & EXIT

TECH SUPPORT COMMENT: **It is important users do not set everything to the same corner of the screen**

6.4.4.7 TEXT BACKGROUND

- LOGIN > MAIN MENU > **SETUP > DISPLAY > TEXT BACKGROUND**
- MOVE ▲▼ SELECT TO CHANGE TEXT BACKGROUND
- MOVE ◀ TO SAVE & EXIT

6.4.5 PASSWORDS

- LOGIN > MAIN MENU > **SETUP > PASSWORDS**

6.4.5.1 OPERATOR (LIMITED ACCESS)
Default password is 111100. TO CHANGE see 6.4.5.4
Permission rights:

- Date/time
- Daylight saving
- Presets
- Tours
- Display options
- Language options
- Datum check

6.4.5.2 SUPERVISOR (PARTIAL ACCESS)
Default password is 555500. TO CHANGE see 6.4.5.4
Permission rights: All operator permissions plus:

- Clear privacy
- Set privacy
- Alarms

6.4.5.3 TECHNICIAN (FULL ACCESS)

Default password is 999900. TO CHANGE see 6.4.5.4

Permission rights: All operator & supervisor permissions plus:

- Camera titles
- Set passwords
- Installation date
- Clear settings
- Reboot
- Diagnostics
- Night mode settings
- Camera settings
- Joystick settings
- Wiper settings

6.4.5.4 TO CHANGE PASSWORD

➔ LOGIN > MAIN MENU > **SETUP > PASSWORDS**
➔ LOGIN USING TECHNICIAN PASSCODE
➔ MOVE ◂▸▴▾ TO SELECT LEVEL TO BE CHANGED
➔ MOVE ◂▸▴▾ TO CHANGE PASSWORD NUMBER
➔ MOVE ◂ TO SAVE & EXIT

6.4.5.5 LOCK PRESETS

Presets can be locked to various permission levels. This means presets cannot be added or altered using a controller from outside of the menu, unless the selected permission level is logged in.

➔ LOGIN AS TECHNICIAN > MAIN MENU > **SETUP > PASSWORDS > LOCK PRESETS**
➔ MOVE ◂▸▴▾ TO SELECT LEVEL (OPERATOR/SUPERVISIOR/TECHNICIAN/NONE)
➔ MOVE ◂ TO SAVE & EXIT

6.4.6 DATUM CHECK

The Redvision X-Series Camera is programmed to perform a datum check every 24 hours. The Camera will pan and tilt for a few seconds while it undergoes a self diagnostic test and re-checks its alignment. When the process is complete the Camera will revert to its previous activity including any tours with presets.

TECH SUPPORT COMMENT: **It is recommended to leave the Camera in the default 24 hour option**

6.4.7 CAMERA ORIENTATION

The Camera orientation automatically sets the maximum tilt up/down positions depending on whether the Camera is in upright or hanging down mode. The maximum tilt restrictions can be deactivated to allow full tilt movement. See 9.6.

➔ LOGIN > MAIN MENU > **SETUP > CAMERA ORIENTATION**
➔ MOVE ▴▾ TO SELECT CAMERA ORIENTATION > HANGING, HANGING ARMS OUT, UPRIGHT, UPRIGHT ARMS OUT
➔ MOVE ◂ TO SAVE & EXIT

6.4.8 DATE AND TIME OF INSTALLATION

➔ LOGIN > MAIN MENU > **SETUP > INSTALLATION DATE**
➔ MOVE ◂▸▴▾ TO ENTER INSTALLATION DATE/TIME
➔ MOVE ◂ TO SAVE & EXIT

6.4.9 CLEAR SETTINGS

6.4.9.1 CLEAR CONFIGURATION

Use this option to partially clear configuration settings. All configuration changes except for tours and presets will be reset to factory default.

- LOGIN > MAIN MENU > **SETUP > CLEAR SETTINGS > CLEAR CONFIG**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.9.2 CLEAR PRESETS

Use this option to clear ALL stored presets.

- LOGIN > MAIN MENU > **SETUP > CLEAR SETTINGS > CLEAR PRESETS**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.9.3 CLEAR TOURS

Use this option to clear ALL stored tours.

- LOGIN > MAIN MENU > **SETUP > CLEAR SETTINGS > CLEAR TOURS**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.9.4 CLEAR PRIVACY MASKS

Use this option to clear ALL privacy masks.

- LOGIN > MAIN MENU > **SETUP > CLEAR SETTINGS > CLEAR PRIVACY MASKS**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.9.5 CLEAR ALARM SETTINGS

- LOGIN > MAIN MENU > **SETUP > CLEAR SETTINGS > CLEAR ALARM SETTINGS**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.9.6 CLEAR EVERYTHING

This option clears ALL settings but does not reboot the camera, therefore leaving video picture.

- LOGIN > MAIN MENU > **SETUP > CLEAR SETTINGS > CLEAR EVERYTHING**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.9.7 REBOOT

To soft restart the camera (equivalent to power cycling).

- LOGIN > MAIN MENU > **SETUP > CLEAR SETTINGS > REBOOT**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.10 DIAGNOSTICS

There are five diagnostic screens which display useful information for the technician and remote help diagnostics for Redvision's technical support helpdesk. They are not configurable.

To access the diagnostic screens.

- LOGIN > MAIN MENU > **SETUP > DIAGNOSTICS**
- MOVE ▲▼ TO SELECT SYSTEM, STATUS, CAMERA, TELEMETRY, MOTORS, EVENT LOG AND DIAGNOSTICS X9
- MOVE ◀ TO SAVE & EXIT

TECH SUPPORT COMMENT: **After entering the motor diagnostics page, you cannot exit with the joystick - this must be done by re-entering the menu.**

7 NIGHT MODE

ACTIVATING NIGHT-MODE

The X-Series operates either in “Day Mode” or “Night Mode”.

Switching between these two modes is controlled by the “Night Mode Switching” setting, and the “Auto switch delay” period.

The user can force the X-Series PTZ to switch between day & night using the “lamp” key on their controller, or by using the shortcut preset when configured from the “Joystick >Shortcuts >Night Mode Switching” menu .

If the X-Series PTZ is configured to switch between day & night automatically, it will revert back after the “Auto switch delay” period.

LOW-LIGHT / ZERO-LIGHT PROFILES

The X-Series allows the user to store two possible profiles for night operation. One of these is selected as the default when the X-Series PTZ switches from day to night, the user selects this from the “Night mode profile” menu.

Both profiles can be configured in any way, giving a great degree of flexibility.
If the X-Series has illuminators fitted, these can be configured in the “Night Mode > Low Light Mode Settings” and “Night Mode >Zero Light Mode Settings” menus. If mixed-mode illuminators are fitted, the illumination mode (IR / White) can also be set.

CAMERA (PICTURE) SETTINGS

The X-Series allows the user to configure separate camera (picture) configuration for each profile: Day Mode (colour), Low Light Mode (low light colour or white light), and Zero-Light Mode (IR). These profiles are configured from the “Camera settings” menu.

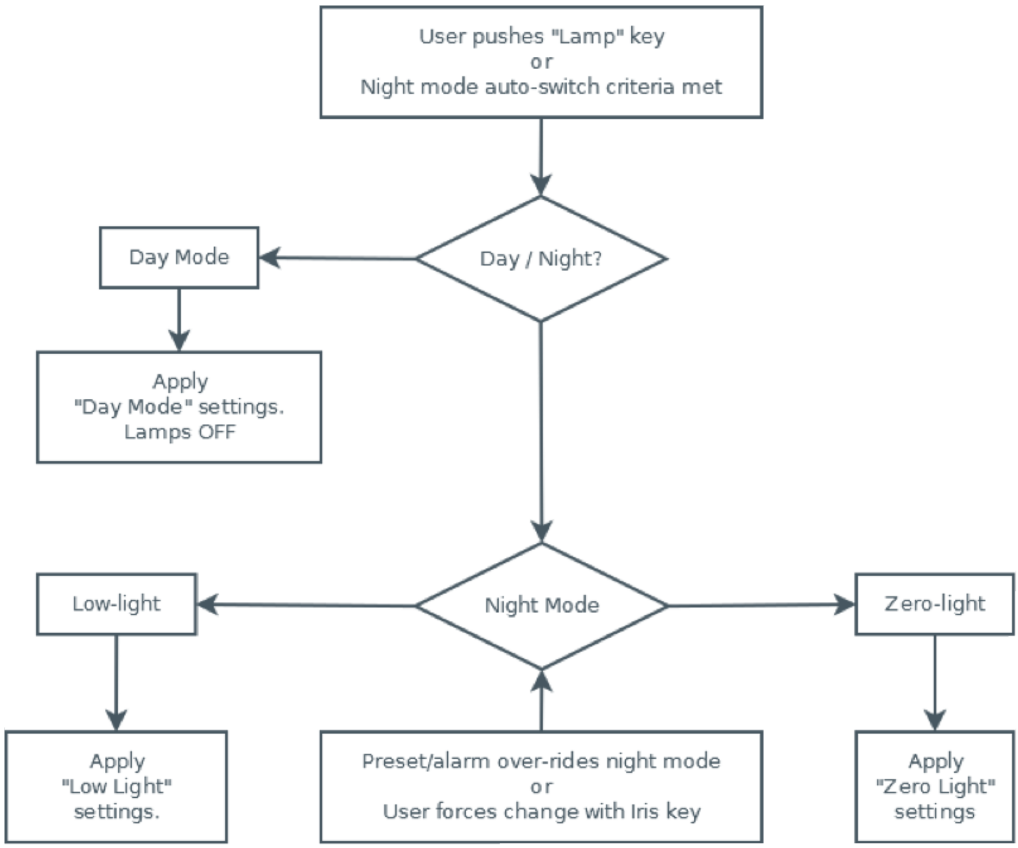
NIGHT PROFILE SWITCHING

At night, the user can force the X-Series to switch between these two configurations in several ways:

- Using the “Iris” key, when configured from the Camera menu “Iris Key Usage”
- By configuring one or more preset positions to over-ride the default setting (Menu > Preset > Edit Preset > Night Mode)
- Presets which are stored when the dome is in night-mode will recall which configuration (Low-light or zero-light) was active when they were stored. Presets set in day mode will automatically use the “Select Night Mode” setting.
- By using the shortcut preset, when configured from the “Joystick > Shortcuts > Night Mode Profile”
- When there is an active alarm input configured to over-ride the default night-mode (Menu > Alarms > Edit Alarm > Night Mode)

If the user forces a profile switch, the dome will revert back to the configured profile after the period set in the “Night Mode > Override Timeout” menu.

X-SERIES MODE FLOW-CHART



7.1 SELECT NIGHT MODE PROFILE

Low light mode (default white light)
Zero light mode (default IR)

- LOGIN > MAIN MENU > **NIGHT MODE > SELECT NIGHT MODE PROFILE**
- MOVE ▲▼ ZERO LIGHT MODE OR LOW LIGHT MODE
- MOVE ◀ TO SAVE & EXIT

7.2 NIGHT MODE SWITCHING

Light sensing. Manual. Timed

- LOGIN > MAIN MENU > **NIGHT MODE > NIGHT MODE SWITCHING**
- MOVE ▲▼ TO SELECT EITHER LIGHT SENSING, MANUAL OR TIMED
- MOVE ◀ TO SAVE & EXIT

7.3 ON LEVEL

Light level at which the camera switches to Night Mode (Low light mode can be set to force camera to stay in colour or mono without infra red)
On level must be lower than OFF level. The lower the number the darker the light needs to be in order for the camera to switch to IR mode or Night Mode.

- LOGIN > MAIN MENU > **NIGHT MODE > ON LEVEL**
- MOVE ▲▼ CHANGE VALUE
- MOVE ◀ TO SAVE & EXIT

TECH SUPPORT COMMENT: ***The numerical value is an arbitrary figure and not a lux measurement.**

7.4 OFF LEVEL

Light level at which the camera switches to DAY MODE.

- LOGIN > MAIN MENU > **NIGHT MODE > OFF LEVEL**
- MOVE ▲▼ CHANGE VALUE
- MOVE ◀ TO SAVE & EXIT

7.5 AUTO SWITCH DELAY

The AUTO SWITCH DELAY time can be set in seconds. The delay prevents the camera responding to short term effects e.g. car headlights, which may cause the IR pods & Camera to switch to DAY MODE.

- LOGIN > MAIN MENU > **NIGHT MODE > AUTO SWITCH DELAY**
- MOVE ▲▼ CHANGE VALUE (1 - 999 seconds)
- MOVE ◀ TO SAVE & EXIT

7.6 ON TIMES

The camera can be programmed to switch between day and night mode at pre-determined times. There are 24 block positions representing each hour of the day

- LOGIN > MAIN MENU > **NIGHT MODE > IR ON TIMES**
- MOVE ▲▼ TO SELECT HOUR TIME BLOCKS
- MOVE ◀ TO SAVE & EXIT

Solid block = Infra red ON
No Block = Infra red OFF

7.7 LOW-LIGHT MODE SETTINGS (DEFAULT WHITE LIGHT MODE)

Lamp mode for Low Light mode can be adjusted between IR and White light (RVX-IRWL models only).
Lamp power can also be adjusted.

- LOGIN > MAIN MENU > **NIGHT MODE > LOW LIGHT MODE SETTINGS**

7.8 ZERO-LIGHT MODE SETTINGS (DEFAULT IR MODE)

Lamp mode for Zero Light mode can be adjusted between IR and White light (RVX-IRWL models only). Lamp power can also be adjusted.

➔ LOGIN > MAIN MENU > **NIGHT MODE > ZERO LIGHT MODE SETTINGS**

7.9 SET DARK ZONE (RVX-IRWL MODELS ONLY)

A 'dark zone' can be programmed to prevent the white lights illuminating certain areas. This can be useful in areas with traffic and public space environments.

➔ LOGIN > MAIN MENU > **NIGHT MODE > SET DARK ZONE > SET LEFT/RIGHT PRESET**
➔ MOVE ▲▼ TO SELECT LEFT/RIGHT PRESET
➔ MOVE ◀ TO SAVE & EXIT

7.10 SAMPLE WHITE LIGHT SET-UP

Manually enabling White light on the RVX dual light dome; when the RVX dome is in "Night Mode" it is possible for either a monitoring station or a onsite security guard to override the default IR settings of the dome to turn on the White Lights by:

1) Entering the RVX menu:

➔ LOGIN > MAIN MENU > JOYSTICK > SHORTCUTS > NIGHT PROFILE S/C PS > Set to "desired preset i.e. Preset 10". This will allow the White Light to be toggled on and off by using the saved preset i.e. preset 10.

2) Entering the RVX menu:

➔ LOGIN > MAIN MENU > CAMERA SETTINGS > IRIS KEY USAGE > Set to "Night Profile Switch". This will allow the White Light to be toggled on and off by using the front end (DVR) Iris key.

Exit left out of the menu and the settings will save.

TECH SUPPORT COMMENT: When presets are saved in the RVX range of domes, they are also automatically saved into "Tour 1" as default!

Setting presets to White light during a tour on the RVX dual light dome; firstly save the presets that you wish to be in the default tour, as these are saved they will have also been saved in default tour 1.

To edit some or all of the presets to be in White Light when touring:

➔ LOGIN > MAIN MENU > PRESETS & TOURS > PRESETS > EDIT PRESET > PRESET

No i.e. Presets 1-5 > NIGHT MODE > Set to "Low-Light Mode". Exit left out of the menu and the settings will save. Now when these presets are run in the tour (when the dome is in "Night Mode") they will be in White Light.

Alarms to trigger RVX dual light dome to White Light on presets; firstly save the presets that you wish to react on alarms i.e. Presets 1-5.

Secondly in the RVX menu:

➔ LOGIN > MAIN MENU > PRESETS & TOURS > PRESETS > EDIT PRESET > PRESET No i.e. Presets 1-5 > NIGHT MODE > Set to "Low-Light Mode". Exit left out of the menu and the settings will save. Now when these presets are recalled (when the dome is in "Night Mode") either by recalling a preset manually or via an alarm the preset will be in White Light.

If these Alarm presets are NOT wanted in the default tour, they can be edited out of the tour;

➔ LOGIN > MAIN MENU > PRESETS & TOURS > TOURS > TOUR 1 > EDIT TOUR > POSITION No i.e. Position 1-5 > PRESET No i.e. Preset 1-5 > Set to "No Preset". This keeps the presets but removes them from the default tour.

8 CAMERA SETTINGS

Use CAMERA SETTINGS to optimise the camera modules' performance for specific day or night-time conditions.

1. Day Settings - default day time colour mode (see 8.1).
2. Night Mode profile - camera is either in Zero-light mode or Low Light Mode (see 7.1).

8.1 DAY MODE SETTINGS

8.1.1 SHUTTER SPEED

Adjust the shutter speed to achieve greater light sensitivity. Default is 1/215

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > SHUTTER SPEED**
- MOVE ▲▼ TO CHANGE SHUTTER SPEED 1/1 to AUTO
- MOVE ◀ TO SAVE & EXIT

8.1.2 EXPOSURE COMPENSATION

Adjustment for unusual lighting distribution. Compensation can be either positive (additional exposure) or negative (reduced exposure). Default setting = 0

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > EXPOSURE COMPENSATION**
- MOVE ▲▼ TO ADJUST EXPOSURE LEVEL BETWEEN +7 AND -7
- MOVE ◀ TO SAVE & EXIT

8.1.3 JOYSTICK FOCUS MODE

There are two settings AUTO focus & MANUAL focus. Default setting for day is auto.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > JOYSTICK FOCUS MODE**
- MOVE ▲▼ TO SELECT AUTO OR MANUAL
- MOVE ◀ TO SAVE & EXIT

8.1.4 PRESET FOCUS MODE **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

There are two modes: auto & stored. Default setting for day is auto.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > PRESET FOCUS MODE**
- MOVE ▲▼ TO SELECT AUTO OR STORED
- MOVE ◀ TO SAVE & EXIT

8.1.5. ADVANCED CONFIGURATION

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > ADVANCED CONFIGURATION**

8.1.5.1 ZOOM LIMIT **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

This can be adjusted from 10% to 100%

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > ZOOM LIMIT**
- MOVE ▲▼ TO CHANGE ZOOM LIMIT (10% to 100%)
- MOVE ◀ TO SAVE & EXIT

8.1.5.2 BACKLIGHT COMPENSATION

The ability of a Camera to compensate in cases where a subject with a large amount of background light would otherwise be obscured by blooming or silhouetting. Can be turned ON or OFF. Default is off.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > ADV CONFIG > BACKLIGHT OMPENSATION**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

8.1.5.3 IMAGE STABILISER **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > ADV CONFIG > IMAGE STABILISER**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

8.1.5.4 WHITE BALANCE

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > ADV CONFIG > WHITE BALANCE**
- MOVE ▲▼ TO SELECT OPTION
- MOVE ◀ TO SAVE & EXIT

8.1.5.5 NOISE REDUCTION (PARKED)

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > ADV CONFIG > NOISE REDUCTION (PARKED)**
- MOVE ▲▼ TO ADJUST 0 to 5
- MOVE ◀ TO SAVE & EXIT

8.1.5.6 NOISE REDUCTION (MOVING)

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > ADV CONFIG > NOISE REDUCTION (MOVING)**
- MOVE ▲▼ TO ADJUST 0 to 5
- MOVE ◀ TO SAVE & EXIT

8.1.5.7 SPOT AE **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > ADV CONFIG > SPOT AE**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

8.1.5.8 APERTURE CORRECTION **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > ADV CONFIG > APERTURE CORRECTION**
- MOVE ▲▼ TO SELECT 1 to 16 (9 IS DEFAULT)
- MOVE ◀ TO SAVE & EXIT

8.1.5.9 GAIN LIMIT

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > ADV CONFIG > GAIN LIMIT**
- MOVE ▲▼ TO CHANGE VALUE
- MOVE ◀ TO SAVE & EXIT

8.1.5.10 CHROMA CORRECTION **(ONLY AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY MODE SETTINGS > CHROMA CORRECTION**
- MOVE ▲▼ TO CHANGE VALUE
- MOVE ◀ TO SAVE & EXIT

8.2 LOW LIGHT MODE SETTINGS

The following settings apply when the camera switches from **DAY MODE SETTINGS** (colour) to **NIGHT MODE > LOW LIGHT MODE SETTINGS**

8.2.1 COLOUR/MONO (THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)

Select either colour or mono for when the camera switches to low light mode.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > COLOUR/MONO**
- MOVE ▲▼ TO SELECT COLOUR OR MONO
- MOVE ◀ TO SAVE & EXIT

TECH SUPPORT COMMENT: **In LOW LIGHT MODE setting, the camera can be programmed to auto switch to ZERO LIGHT MODE by using… THE IRIS KEY or A PRESET NUMBER. (see 8.6 and 9.7)**

8.2.2 IR CUT FILTER

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > IR CUT FILTER**
- MOVE ▲▼ TO CHANGE TO VISIBLE / IR
- MOVE ◀ TO SAVE & EXIT

8.2.3 FOCUS CORRECTION

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > FOCUS CORRECTION**
- MOVE ▲▼ TO CHANGE TO VISIBLE / IR
- MOVE ◀ TO SAVE & EXIT

8.2.4 SHUTTER SPEED

The shutter speed can be slowed down to increase light sensitivity.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > SHUTTER SPEED**
- MOVE ▲▼ TO CHANGE SHUTTER SPEED
- MOVE ◀ TO SAVE & EXIT

8.2.5 EXPOSURE COMPENSATION

Adjustment for unusual lighting distribution. Compensation can be either positive (additional exposure) or negative (reduced exposure).

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > EXPOSURE COMPENSATION**
- MOVE ▲▼ TO ADJUST EXPOSURE LEVEL BETWEEN +7 AND -7
- MOVE ◀ TO SAVE & EXIT

8.2.6 JOYSTICK FOCUS MODE

There are two settings AUTO focus & MANUAL focus. Default setting is AUTO.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > JOYSTICK FOCUS MODE**
- MOVE ▲▼ TO SELECT AUTO OR MANUAL
- MOVE ◀ TO SAVE & EXIT

8.2.7 PRESET FOCUS MODE **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

There are two modes: AUTO & STORED.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > PRESET FOCUS MODE**
- MOVE ▲▼ TO SELECT AUTO OR STORED
- MOVE ◀ TO SAVE & EXIT

TECH SUPPORT COMMENT: **If the camera is experiencing problems focusing at night time, the preset focus mode can be set to stored. The presets should then be re-saved at night time, manually adjusting the focus.**

8.2.8 ADVANCED CONFIGURATION

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > ADVANCED CONFIGURATION**

8.2.8.1 ZOOM LIMIT **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

This can be adjusted from 10 to 100%

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > ADV CONFIG > ZOOM LIMIT**
- MOVE ▲▼ TO ADJUST ZOOM LIMIT BETWEEN 10% and 100%
- MOVE ◀ TO SAVE & EXIT

8.2.8.2 BACKLIGHT COMPENSATION

The ability of a Camera to compensate in cases where a subject with a large amount of background light would otherwise be obscured by blooming or silhouetting.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > ADV CONFIG > BACKLIGHT COMPENSATION**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

8.2.8.3 IMAGE STABILISER **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > ADV CONFIG > IMAGE STABILISER**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

8.2.8.4 WHITE BALANCE

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > ADV CONFIG > WHITE BALANCE**
- MOVE ▲▼ TO SELECT OUTDOOR AUTO/ATW/OUTDOOR/INDOOR/AUTO/SODIUM LAMP/SODIUM LAMP AUTO
- MOVE ◀ TO SAVE & EXIT

8.2.8.5 WIDE DYNAMIC RANGE **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > ADV CONFIG > WIDE DYNAMIC RANGE**
- MOVE ▲▼ TO SELECT OFF/AUTO/ON
- MOVE ◀ TO SAVE & EXIT

8.2.8.6 NOISE REDUCTION (PARKED)

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > ADV CONFIG > NOISE REDUCTION (PARKED)**
- MOVE ▲▼ TO ADJUST 0 to 5
- MOVE ◀ TO SAVE & EXIT

8.2.8.7 NOISE REDUCTION (MOVING)

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > ADV CONFIG > NOISE REDUCTION (MOVING)**
- MOVE ▲▼ TO ADJUST 0 to 5
- MOVE ◀ TO SAVE & EXIT

8.2.8.8 SPOT AE **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > ADV CONFIG > SPOT AE**
- MOVE ▲▼ TO SELECT OFF/ON
- MOVE ◀ TO SAVE & EXIT

8.2.8.9 APERTURE CORRECTION **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > ADV CONFIG > APERTURE CORRECTION**
- MOVE ▲▼ TO SELECT 1 to 16 (9 IS DEFAULT)
- MOVE ◀ TO SAVE & EXIT

8.2.8.10 GAIN LIMIT **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > LOW LIGHT MODE SETTINGS > ADV CONFIG > GAIN LIMIT**
- MOVE ▲▼ TO CHANGE VALUE
- MOVE ◀ TO SAVE & EXIT

8.3 ZERO LIGHT MODE SETTINGS

8.3.1 COLOUR/MONO **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS).**
Select either colour or mono for when the camera switches to Zero Light Mode.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > COLOUR/MONO**
- MOVE ▲▼ TO SELECT COLOUR/MONO
- MOVE ◀ TO SAVE & EXIT

8.3.2 IR CUT FILTER

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > IR CUT FILTER**
- MOVE ▲▼ TO CHANGE TO VISIBLE/IR
- MOVE ◀ TO SAVE & EXIT

8.3.3 FOCUS CORRECTION

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > FOCUS CORRECTION**
- MOVE ▲▼ TO SELECT ON OR OFF
- MOVE ◀ TO SAVE & EXIT

TECH SUPPORT COMMENT: **For typical CCTV applications it is recommended to leave the setting to default 'visable'.**

8.3.4 SHUTTER SPEED
The shutter speed can be slowed down to increase light sensitivity. Default setting = 1/25.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > SHUTTER SPEED**
- MOVE ▲▼ TO CHANGE SHUTTER SPEED 1/12 to AUTO
- MOVE ◀ TO SAVE & EXIT

8.3.5 EXPOSURE COMPENSATION
Adjustment for unusual lighting distribution. Compensation can be either positive (additional exposure) or negative (reduced exposure).

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > EXPOSURE COMPENSATION**
- MOVE ▲▼ TO ADJUST EXPOSURE LEVEL BETWEEN +7 AND -7
- MOVE ◀ TO SAVE & EXIT

8.3.6 JOYSTICK FOCUS MODE
There are two settings AUTO focus & MANUAL focus. Default setting is AUTO.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > JOYSTICK FOCUS MODE**
- MOVE ▲▼ TO SELECT AUTO OR MANUAL
- MOVE ◀ TO SAVE & EXIT

8.3.7 PRESET FOCUS MODE **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**
There are two modes: AUTO & STORED. Default setting for NIGHT is STORED.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > PRESET FOCUS MODE**
- MOVE ▲▼ TO SELECT AUTO OR STORED
- MOVE ◀ TO SAVE & EXIT

8.3.8 ADVANCED CONFIGURATION

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > ADVANCED CONFIGURATION**

8.3.8.1 ZOOM LIMIT **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**
This can be adjusted from 10 to 100%

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > ADV CONFIG > ZOOM LIMIT**
- MOVE ▲▼ TO ADJUST ZOOM LIMIT BETWEEN 10% and 100%
- MOVE ◀ TO SAVE & EXIT

8.3.8.2 BACKLIGHT COMPENSATION

The ability of a Camera to compensate in cases where a subject with a large amount of background light would otherwise be obscured by blooming or silhouetting.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > ADV CONFIG > BACKLIGHT COMPENSATION**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

8.3.8.3 IMAGE STABILISER **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > ADV CONFIG > IMAGE STABILISER**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

8.3.8.4 WIDE DYNAMIC RANGE **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > ADV CONFIG > WIDE DYNAMIC RANGE**
- MOVE ▲▼ TO SELECT OFF/AUTO/ON
- MOVE ◀ TO SAVE & EXIT

8.3.8.5 NOISE REDUCTION (PARKED)

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS> ADV CONFIG > NOISE REDUCTION (PARKED)**
- MOVE ▲▼ TO ADJUST 0 to 5
- MOVE ◀ TO SAVE & EXIT

8.3.8.6 NOISE REDUCTION (MOVING)

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > ADV CONFIG > NOISE REDUCTION (MOVING)**
- MOVE ▲▼ TO ADJUST 0 to 5
- MOVE ◀ TO SAVE & EXIT

8.3.8.7 SPOT AE **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > ADV CONFIG > SPOT AE**
- MOVE ▲▼ TO SELECT OFF/ON (OFF IS DEFAULT)
- MOVE ◀ TO SAVE & EXIT

8.3.8.8 APERTURE CORRECTION **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > ADV CONFIG > APERTURE CORRECTION**
- MOVE ▲▼ TO SELECT 1 to 16 (16 IS DEFAULT)
- MOVE ◀ TO SAVE & EXIT

8.3.8.9 GAIN LIMIT **(THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > ZERO LIGHT MODE SETTINGS > ADV CONFIG > GAIN LIMIT**
- MOVE ▲▼ TO CHANGE VALUE
- MOVE ◀ TO SAVE & EXIT

8.4 VIDEO GAIN

Video gain can be set from 0 to 7db to compensate for losses in long cable runs. Default setting is 0.

> ***TECH SUPPORT COMMENT:*** **It is recommended to use video lift first before adding gain as this will usually give better results**

- ➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > VIDEO GAIN**
- ➔ MOVE ▲▼ TO ADJUST from 0 - 7
- ➔ MOVE ◀ TO SAVE & EXIT

8.5 VIDEO LIFT

High frequency video lift can be set between 0 & 8. Default is zero.

> ***TECH SUPPORT COMMENT:*** **Technician should attempt to compensate for poor cable runs using video lift, before using video gain**

- ➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > VIDEO LIFT**
- ➔ MOVE ▲▼ TO ADJUST BETWEEN 0 -8
- ➔ MOVE ◀ TO SAVE & EXIT

8.6 IRIS KEY USAGE

The iris key can be assigned to either:

- Adjust exposure compensation - brighten/darken image.
- Shutter speed - allows integration & can only be adjusted when the camera is in NIGHT mode.
- Night mode profile switching - switches between Low Light mode and Zero light mode - this can only be used when the camera is in NIGHT mode.

- ➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > IRIS KEY USAGE**
- ➔ MOVE ▲▼ TO SELECT EXPOSURE COMPENSATION, SHUTTER SPEED,NIGHT PROFILE SWITCH OR OFF
- ➔ MOVE ◀ TO SAVE & EXIT

> ***TECH SUPPORT COMMENT:*** **To use the IRIS KEY to activate the white lights at night, this option should be changed to 'NIGHT PROFILE SWITCH'**

8.7 DIGITAL ZOOM (THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)

Select digital zoom if user wants zoom beyond optical zoom limit. Default is off.

> ***TECH SUPPORT COMMENT:*** **Picture degradation may occur at high zoom**

- ➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > DIGITAL ZOOM**
- ➔ MOVE ▲▼ SELECT YES/NO
- ➔ MOVE ◀ TO SAVE & EXIT

8.8 INVERT CAMERA IMAGE (THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)

TECH SUPPORT COMMENT: **Technicians should set the Camera orientation first see 6.4.7.**

'INVERT CAMERA IMAGE' function should only be used to correct for special cases once orientation has been set otherwise it should be set to NO.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > INVERT CAMERA IMAGE**
- MOVE ▲▼ SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

8.9 MIRROR CAMERA IMAGE (THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)

This function reverses the image e.g. left to right will appear right to left.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > MIRROR CAMERA IMAGE**
- MOVE ▲▼ SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

8.10 CROSS HAIR (THIS FUNCTION IS NOT AVAILABLE ON RVX18 MODELS)

- LOGIN > MAIN MENU > **CAMERA SETTINGS > CROSS HAIR**
- MOVE ▲▼ SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

9 JOYSTICK & WIPER

9.1 JOYSTICK CURVE

There are three settings. The following options describe how sensitive the joystick is to small movements. Linear is most sensitive, quasi linear and non-linear allow for finer control at low speeds, ramping up with larger movements. Quasi linear is the default.

- LOGIN > MAIN MENU > **JOYSTICK > JOYSTICK CURVE**
- MOVE ▲▼ TO SELECT QUASI LINEAR, LINEAR OR NON-LINEAR
- MOVE ◀ TO SAVE & EXIT

9.2 ZOOM RATIO

The zoom ratio affects how much the Camera slows down as you zoom in [the higher the numbers make the speed drop off more as you zoom in]. The default setting is 16.

- LOGIN > MAIN MENU > **JOYSTICK > ZOOM RATIO**
- MOVE ▲▼ 8,16,32,64
- MOVE ◀ TO SAVE & EXIT

9.3 JOYSTICK SPEED

Default setting is 60%. Use ▲▼ to increase/decrease.

- LOGIN > MAIN MENU > **JOYSTICK > JOYSTICK SPEED**
- MOVE ▲▼ INCREASE/DECREASE SPEED SETTING
- MOVE ◀ TO SAVE & EXIT

9.4 WIPER

Applies to RVX models fitted with wiper.

- LOGIN > MAIN MENU > **JOYSTICK > WIPER**
- MOVE ▲▼ INTERMITTENT WIPE (1-99) OR WIPER TIMEOUT (1-255)
- MOVE ▲▼ TO CHANGE TIME IN SECONDS: WIPE (1-99) TIMEOUT (1-255)
- MOVE ◀ TO SAVE & EXIT

9.4.1 INTERMITTENT WIPE

- LOGIN > MAIN MENU > **JOYSTICK > WIPER > INTERMITTENT WIPE**
- WIPER SHORT-CUT PRESET > TO SELECT 1–99 SECS

9.4.2 WIPER TIMEOUT

- LOGIN > MAIN MENU > **JOYSTICK > WIPER > WIPER TIMEOUT**
- WIPER SHORT-CUT PRESET > TO SELECT 1–255 MINS

9.4.3 WIPER SHORT-CUT PRESET

If the control unit does not have a dedicated wiper key function it is possible to allocate a ‘PRESET’ number to activate/deactivate the wiper.

- LOGIN > MAIN MENU > **JOYSTICK > WIPER > WIPER SHORTCUT PRESET**
- WIPER SHORT-CUT PRESET > SELECT NO PRESET/OR PRESET NUMBER BETWEEN 1-100

To toggle wiper on and off, the selected preset number needs to be recalled.

9.4.4 WASH RELAY S/C PRESET

If the control unit does not have a dedicated wash key function it is possible to allocate a ‘PRESET’ number to activate/deactivate the wash relay output in the RVX-PSU-ALM16.

- LOGIN > MAIN MENU > **JOYSTICK > WIPER**
- WASH RELAY S/C PRESET > SELECT NO PRESET/OR PRESET NUMBER BETWEEN 1-100

9.5 PAN LIMITS

Program Camera to pan only within pre-defined left and right limits. This can be useful if the Camera is mounted on the corner of a building or a wall. If presets are programmed the Camera will stay within the permitted limits, and not take the shortest route .

- LOGIN > MAIN MENU > **JOYSTICK > PAN LIMIT > SET PAN LIMITS**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

TECH SUPPORT COMMENT: **If re-setting LEFT & RIGHT PAN limits the technician should turn 'use limits' off to allow full movement**

9.5.1 SET RIGHT LIMIT

- LOGIN > MAIN MENU > **JOYSTICK > PAN LIMIT > SET RIGHT PAN LIMIT**
- PAN THE CAMERA TO THE RIGHT MOST PAN LIMIT
- PRESS SELECT OR WAIT 10 SECS FOR AUTO SET
- MOVE ◀ TO SAVE & EXIT

9.5.2 SET LEFT LIMIT

- LOGIN > MAIN MENU > **JOYSTICK > PAN LIMIT > SET LEFT PAN LIMIT**
- PAN THE CAMERA TO THE LEFT MOST PAN LIMIT
- PRESS SELECT OR WAIT 10 SECS FOR AUTO SET
- MOVE ◀ TO SAVE & EXIT

9.6 SET TILT LIMITS

Default setting is 'on'. Limits are determined by the Camera Orientation set-up see 6.4.7

All X-Series Cameras have the following viewing 'tilt' angle:

In Dome configuration (i.e. with lid): 90º to 10º above horizon.
In Ball configuration (i.e. without lid): 90º to 60º above horizon.

Default tilt setting is 'ON'. Limits are determined by the Camera orientation setup. See 6.4.7

- LOGIN > MAIN MENU > **JOYSTICK > TILT LIMIT > SET TILT**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

9.7 SHORTCUTS

It is possible to allocate a PRESET number to activate the WIPER, WASH, DAY / NIGHT SWITCHING, NIGHT MODE PROFILE SWITCHING, DATUM CHECK S/C and ALARM SILENCE S/C

- LOGIN > MAIN MENU > **JOYSTICK > SHORTCUTS**
- MOVE ▲▼ TO SELECT WIPER/WASH/ DAY/NIGHT/ NIGHT PROFILE SWITCHING
- MOVE ▲▼ SELECT 'NO PRESET' OR 'PRESET NUMBER' BETWEEN 1 - 100
- MOVE ◀ TO SAVE & EXIT

TECH SUPPORT COMMENT: **If a preset number is allocated as a shortcut, it cannot be used for a preset position. The shortcut function will override a preset position if it shares the same preset number.**

9.8 AUXILLARY RELAY FUNCTION

If using an RVX-PSU-ALM16 or RVX-PSU-ALM16-W, the auxilliary relay can be programmed to transmit 'active' alarms only or trigger when the camera switches to NIGHT MODE (e.g. Switch on additional IR or WHITE LIGHTING etc.).

- LOGIN > MAIN MENU > **JOYSTICK > AUX RELAY FUNCTION**
- MOVE ▲▼ TO SELECT OFF/ACTIVE ALARMS/ NIGHT MODE
- MOVE ◀ TO SAVE & EXIT

9.9 COMPATIBILITY MODE

Use this function if ADPRO/TELEPRECISION ABSOLUTE POSITIONING/BBV1000/1500 Control Systems are being deployed. All other systems select 'STANDARD'.

- ➔ LOGIN > MAIN MENU > **JOYSTICK > COMPATIBILITY MODE**
- ➔ MOVE ▲▼ TO SELECT CONTROL SYSTEM/STD
- ➔ MOVE ◀ TO SAVE & EXIT

10 PRESETS & TOURS

Presets and tours can be programmed using third party keyboard controllers, or from the Camera's own internal menu. To access presets & tours menu:

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS**

10.1 FOCUS SHIFT

TECH SUPPORT COMMENT: **Technicians will be familiar with setting up focus on a 'fixed' camera by temporarily fitting the lens with a Neutral Density (ND) filter to compensate for focus shift when the camera switches to mono. The best way to ensure optimum focus on THE REDVISION X-SERIES PTZ/Dome camera is to set 'night-time' presets when the light levels are low and the camera is in Zero light mode. If using a PTZ fitted with IR, the IR lamps should be switched ON (RVX-IR versions only). The controller's 'focus near' and 'focus far' keys can be used to fine tune the focus manually before saving the preset. This way the camera will remember the IR focus settings at an absolute focal length for that specific preset.**

10.2 PRESET

10.2.1 SET A PRESET (USING CAMERA INTERNAL MENU)

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > PRESETS > SET PRESETS**
- ➔ MOVE ▲▼ TO SELECT PRESET NUMBER TO BE SAVED (1 - 100)
- ➔ NUDGE JOYSTICK/ARROW right TO PRODUCE CROSSHAIR (NO CROSSHAIR WILL APPEAR ON RVX18 MODELS)
- ➔ USE PTZ CONTROL TO MOVE CAMERA INTO POSITION
- ➔ USE ENTER OR CANCEL TO QUIT OR WAIT 10 SECS FOR PRESET TO AUTO SET
- ➔ REPEAT STEPS 2 TO 6 TO SET MORE PRESETS
- ➔ MOVE ◀ TO SAVE & EXIT

10.2.2 EDIT PRESET

The default display title for a preset is P1, P2, P3 etc. TO CUSTOMISE preset titles. A preset can be edited in three ways: TITLE, NIGHT MODE SWITCHING & CLEAR PRESET

10.2.2.1 TITLE - The default preset title 'P1','P2' etc can be renamed e.g. 'front door':

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > PRESETS > EDIT PRESETS**
- ➔ MOVE ▲▼ TO SELECT PRESET NUMBER TO BE EDITED
- ➔ USE ▶ TO INPUT TITLE
- ➔ USE ▲▼ TO SELECT ALPHANUMERIC CHARACTERS
- ➔ MOVE ◀ TO SAVE & EXIT

10.2.2.2 NIGHT MODE SWITCHING

A preset can be programmed to switch to a different night mode profile e.g. low light mode or zero light mode. For example, this may be useful if the camera is set to switch to IR at night but needs to automatically switch to white light mode when at a certain preset position.

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > PRESETS > EDIT PRESETS**
- ➔ MOVE ▲▼ TO SELECT NIGHT MODE
- ➔ MOVE ▲▼ TO SELECT IR MODE/LOW LIGHT MODE/AUTO
- ➔ MOVE ◀ TO SAVE & EXIT

NOTE: Auto will default to the setting selected in 'SELECT NIGHT MODE' 7.1

10.2.2.3 CLEAR PRESET – (DELETES INDIVIDUAL PRESET & CONTENT)

→ LOGIN > MAIN MENU > **PRESETS & TOURS > PRESETS > EDIT PRESETS**
→ MOVE ▲▼ TO SELECT PRESET NUMBER TO BE EDITED
USE ▶ TO SELECT PRESET
USE ▲▼ TO SELECT YES/NO
→ MOVE ◀ TO SAVE & EXIT

10.2.3 PRESET SPEED

The speed at which the Camera moves to each preset can be programmed. Default is 60%. To change the value:

→ LOGIN > MAIN MENU > **PRESETS & TOURS > PRESETS > PRESET SPEED**
→ MOVE ▲▼ TO SELECT PRESET
→ MOVE ▲▼ TO CHANGE VALUE (10% TO 100%)
→ MOVE ◀ TO SAVE & EXIT

10.2.4 FREEZE FRAME DURING SEEK

Freezes the last preset image until camera moves to next preset image.

→ LOGIN > MAIN MENU > **PRESETS & TOURS > PRESETS > FREEZE FRAME DURING SEEK**
→ MOVE ▲▼ TO SELECT YES/NO
→ MOVE ◀ TO SAVE & EXIT

10.3 TOURS

Tour 1 by default is fully populated & includes all set presets. It is possible to program up to 100 presets per tour. Once a tour is set the Camera moves between each preset within that tour automatically, and will dwell [10.3.1.4] for a period specified. The restore tour mode [10.4.4] can be activated on any tour from 1 to 8.
The tour is continually repeated unless interrupted by:

- Manual pan, tilt or zoom
- Calling up a preset position
- An alarm activation

10.3.1 TOUR 1 TO 8

The user can set up to 8 different tours. Tour 1 by default is fully populated & includes all set presets. These can be edited if required. All other tours are empty.

→ LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS**
→ TOUR
→ MOVE ▲▼ TO SELECT A TOUR NUMBER 1 - 8
→ MOVE ▲▼ TO CHANGE VALUE
→ MOVE ◀ TO SAVE & EXIT

10.3.1.1 TOUR TITLE (HOW TO PROGRAM)

Each tour can be assigned its own title. The default title is T1, T2, T3 etc.

→ LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > TOUR TITLES TOUR**
→ MOVE ▶ TO INPUT TITLE
→ MOVE ▲▼ TO SELECT A TOUR NUMBER TO BE NAMED
→ MOVE ▲▼ TO SELECT ALPHANUMERIC CHARACTERS
→ MOVE ◀ TO SAVE & EXIT

10.3.1.2 HOW TO INITIALISE A TOUR

→ LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > INITIALISE TOUR**
→ MOVE ▲▼ TO SELECT EITHER CANCEL (DOES NOTHING & LEAVES TOUR INTACT), CLEAR (REMOVES PRESETS FROM TOUR) OR SET (POPULATES THE TOUR WITH ALL SET PRESETS IN ORDER)
→ MOVE ◀ TO SAVE & EXIT

10.3.1.3 EDIT TOUR

Allows operator to edit the standard tour sequence e.g. preset 1,2,3,
The default setting is position 1 of the tour = preset 1, and, position 2 = preset 2 etc.
The tour can be edited so that position 1 could = preset 2 for example. any positions set to 'NO preset' will be ignored when the tour is running.

TECH SUPPORT COMMENT: **Note that any positions set to empty presets will be skipped**

- LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > EDIT TOUR**
- MOVE ▲▼ TO SELECT TOUR TO BE EDITED
- MOVE ◀ TO SAVE & EXIT

10.3.1.4 TOUR DWELL TIME

The time the Camera dwells between each preset can be programmed between 1 & 120 seconds. Default is 8 seconds.

- LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > DWELL**
- MOVE ▲▼ TO SELECT DWELL TIME IN SECONDS
- MOVE ◀ TO SAVE & EXIT

10.3.1.5 SPEED

The speed at which the Camera moves to each preset. Programmed using a percentage.

- LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > SPEED**
- MOVE ▲▼ TO SELECT SPEED IN PERCENTAGE
- MOVE ◀ TO SAVE & EXIT

10.3.1.6 TOUR ORDER

The order in which the presets are called during the tour. There are 3 settings available:
Standard (1,2,3,1,2,3)
Ping Pong (1,2,3,2,1)
Random

- LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > TOUR ORDER**
- MOVE ▲▼ TO SELECT STANDARD/PING-PONG/RANDOM
- MOVE ◀ TO SAVE & EXIT

10.3.1.7 FREEZE FRAME DURING SEEK

Freezes the last preset image until Camera moves to next preset image.

- LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > FREEZE FRAME**
- MOVE ▲▼ TO SELECT FREEZE FRAME
- MOVE ◀ TO SAVE & EXIT

10.4 HOME RESTORE (HOME/PARK POSITION)

10.4.1 RESTORE TO NUMBER

This is the preset or tour number that the camera will restore back to after a period of inactivity.

- LOGIN > MAIN MENU > **PRESETS & TOURS > RESTORE > RESTORE TO NUMBER**
- MOVE ▲▼ TO SELECT NUMBER
  (1 TO 100 IF ASSIGNING PRESET NUMBER)
  (1 TO 8 IF ASSIGNING TOUR NUMBER)
- MOVE ◀ TO SAVE & EXIT

10.4.2 TIMED RESTORE WEEKDAY

This function can be used if different home positions or tours are required during different times of the day.

- LOGIN > MAIN MENU > **PRESETS & TOURS > RESTORE > TIMED RESTORE WEEKDAY**
- MOVE ◀ ▶ TO SELECT HOUR TIME BLOCKS*
- MOVE ▲▼ TO SELECT ENABLE (1 - 9) DISABLE (-)
- MOVE ◀ TO SAVE & EXIT

*Note: This is a global setting for Monday through Friday.

10.4.3 TIMED RESTORE WEEKEND

This function can be used if different home positions or tours are required during different times of the day.

- LOGIN > MAIN MENU > **PRESETS & TOURS > RESTORE > TIMED RESTORE WEEKEND**
- MOVE ◀ ▶ TO SELECT HOUR TIME BLOCKS*
- MOVE ▲▼ TO SELECT ENABLE (1 - 9) DISABLE (-)
- MOVE ◀ TO SAVE & EXIT

*Note: This is a global setting for Saturday & Sunday.

10.4.4 HOME RESTORE MODE (PRESETS & TOURS)

Use this option to make the Camera revert to a tour or preset after a specified delay period (in seconds) of inactivity (see RESTORE DELAY 10.4.5). Restore modes:

- LOGIN > MAIN MENU > **PRESETS & TOURS > HOME RESTORE > HOME RESTORE MODE**
- MOVE ▲▼ TO SELECT: OFF, FIXED TOUR, FIXED PRESET, TIMED TOUR, TIMED PRESET
- MOVE ◀ TO SAVE & EXIT

10.4.5 HOME RESTORE DELAY (PRESETS & TOURS)

Time taken before presets or tours are restored. Select between 5 seconds and 30 minutes.

- LOGIN > MAIN MENU > **PRESETS & TOURS > HOME RESTORE DELAY**
- MOVE ▲▼ TO SELECT 'OFF'or CHANGE VALUE
- MOVE ◀ TO SAVE & EXIT

11 PRIVACY ZONES

Multiple privacy zones can be programmed.

TECH SUPPORT COMMENT: **Recommended privacy patch should be set 50% larger than object being masked**

11.1 SET/CLEAR MASK

- LOGIN > MAIN MENU > **PRIVACY > SET/CLEAR MASK**
- MOVE ▲▼ TO SELECT A MASK NUMBER
- MOVE ▶ TO REVEAL CROSS HAIRS (CROSS HAIRS WILL NOT APPEAR ON RVX18 MODELS)
- MOVE CAMERA TO REQUIRED VIEW USING PTZ CONTROLS
- SELECT ENTER COMMAND FROM CONTROL OR WAIT 15 SECS UNTIL BLUE PATCH APPEARS
- MOVE ▲▼ TO SCROLL TO NEXT MASK NUMBER
- REPEAT STEPS 3 TO 5 TO CREATE NEW PRIVACY MASKS
- MOVE ◀ TO SAVE & EXIT

11.2 ZOOM THRESHOLD (THIS OPTION IS NOT AVAILABLE ON RVX18 MODELS)

- LOGIN > MAIN MENU > **PRIVACY > ZOOM THRESHOLD**
- MOVE ▲▼ 0 - 100%
- MOVE ◀ TO SAVE & EXIT

11.3 MASK COLOUR

This is a global setting for all privacy zones.

- LOGIN > MAIN MENU > **PRIVACY > MASK COLOUR**
- MOVE ▲▼ TO SELECT A MASK COLOUR TO BE EDITED
- MOVE ◀ TO SAVE & EXIT

11.4 EDIT MASK

- LOGIN > MAIN MENU > **PRIVACY > EDIT MASK**
- MOVE ▲▼ TO SELECT A MASK NUMBER TO BE EDITED
- CLEAR MASK ▲▼ YES/NO
- MOVE ◀ TO SAVE & EXIT

12 ALARM HANDLING IN MENU SOFTWARE

The alarms can be mapped to any preset or tour, or to just put a message on the screen.

Within the Edit Alarm menu (12.4) use ▲▼ to select alarm number; within each alarm you can set type of action, dwell, and time-based masking for weekdays (12.4.1) & weekends (12.4.2).

The time-based masking is SECONDARY to the "Enable alarms" menu (12.1). If the alarm is not enabled, it will be completely ignored.

If an alarm is enabled, but masked, the user can then decide to set it to be "silent" or "message only" [12.4.3].

Title [12.4.6] is the title or name of the alarm (just like giving a preset or tour a title), this will be displayed on screen when the alarm activates.

ALARM ACTIONS:
"Go to preset" will go to preset *if set* and dwell on it for <dwell> seconds. Otherwise it will just display alarm title (if set) or alarm number (if not) on screen for <dwell> before moving on.

"Go to tour" will invoke the selected tour (if set) for <dwell> seconds. Otherwise it will just display alarm title (if set) alarm number (if not) on screen for <dwell> before moving on.

It is down to the user to ensure that the alarm dwell time gives sufficient time to run the tour, or as much of the tour as they require.

"Message only" will display alarm title (if set) / number (if not) on screen for <dwell> seconds before moving on.

Silent will do nothing and move on instantly.

When all alarms are cleared, the camera will be pointing at wherever the last preset was, or running the last tour. This will continue until either the user moves the Camera, or the HOME RESTORE MODE (10.4.4) [if set] kicks in.

12.1 ENABLE /DISABLE ALARMS

Alarms need to be 'enabled' in order to function correctly. This feature can also be used to disable nuisance alarms caused by faulty alarm input devices such as PIRs. The alarm default setting is 'all' alarms enabled [block].

- ➔ LOGIN > MAIN MENU > **ALARMS>ENABLE ALARMS**
- ➔ MOVE ◀ ▶ TO SELECT ALARM NUMBER 1 TO 16
- ➔ MOVE ▲▼ TO ENABLE(BLOCK) /DISABLE (CLEAR)
- ➔ MOVE ◀ TO SAVE & EXIT

12.2 ALARM OVER-RIDE

On alarm activation the Camera automatically switches to the preset view of the most current alarm. The alarm overide is the time the Camera will wait before over-riding the operator's joystick commands and moving to alarm action. The over-ride time can be set to between 1 and 20 seconds.

- ➔ LOGIN > MAIN MENU > **ALARMS > ALARM OVERIDE TIME**
- ➔ MOVE ▲▼ TO CHANGE VALUE 1 -20 SECS
- ➔ MOVE ◀ TO SAVE & EXIT

12.3 ALARM CYCLE TIME

The alarm cycle time programmed in seconds is the time it takes to tour the presets of still active alarms. Default is 3 seconds. This function will be ignored if alarms are connected directly to third party control equipment rather than the Redvision Alarm Module (RVX-PSU-ALM16) & (RVX-PSU-ALM16-W)

- ➔ LOGIN > MAIN MENU > **ALARMS > NEW ALARM CYCLE TIME**
- ➔ MOVE ▲▼ TO CHANGE VALUE 1 -20 SECS
- ➔ MOVE ◀ TO SAVE & EXIT

12.4 EDIT ALARMS

Use this menu to program how alarms are configured e.g. Create a weekday time schedule when alarms are automatically enabled or disabled and the type of action required when an alarm is enabled & subsequently activated etc. Alarm dwell (12.4.7) time can also be programmed in the menu.

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16**

12.4.1 ACTIVE TIME WEEKDAYS

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > ACTIVE TIME WEEKDAYS**
➔ MOVE ◀ ▶ TO SELECT HOUR TIME BLOCKS*
➔ MOVE ▲▼ TO SELECT ENABLE(SOLID) DISABLE (CLEAR)
➔ MOVE ◀ TO SAVE & EXIT

*Note: This is a global setting for Monday through Friday.

12.4.2 ACTIVE TIME WEEKENDS

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > ACTIVE TIME WEEKEND**
➔ MOVE ◀ ▶ TO SELECT HOUR TIME BLOCKS*
➔ MOVE ▲▼ TO SELECT ENABLE(SOLID) DISABLE (CLEAR)
➔ MOVE ◀ TO SAVE & EXIT

*Note: This is a global setting for Saturday and Sunday.

12.4.3 ACTION WHEN ACTIVE

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > ACTION WHEN ACTIVE**
➔ MOVE ▲▼ TO SELECT 'GO TO PRESET', MESSAGE ONLY, SILENT OR RUN TOUR
➔ MOVE ◀ TO SAVE & EXIT

12.4.4 ACTION NUMBER

TECH SUPPORT COMMENT: **The 'Action Number' is the number of the preset or tour to go to depending on which option is selected**

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > ACTION NUMBER**
➔ MOVE ▲▼ TO SELECT NUMBER BETWEEN 1- 100
➔ MOVE ◀ TO SAVE & EXIT

12.4.5 ACTION WHEN MASKED

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > ACTION WHEN MASKED**
➔ MOVE ▲▼ TO SELECT 'GOTO MESSAGE ONLY OR SILENT
➔ MOVE ◀ TO SAVE & EXIT

12.4.6 TITLE

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > TITLE**
➔ MOVE ▲▼ TO SELECT ALPHNUMERIC CHARACTERS
➔ MOVE ◀ TO SAVE & EXIT

12.4.7 NEW ALARM DWELL

The Camera will move to a corresponding preset when a new alarm occurs.

On multiple alarms, presets will be called up in sequence. the dwell time (in seconds) between each alarm can be programmed. This function will be ignored if alarms are connected directly to third party control equipment rather than the Redvision alarm module.

TECH SUPPORT COMMENT: **See ALARM OVER-RIDE 12.2 and ALARM CYCLE TIME 12.3 - the new alarm dwell defines how long the Camera will stay on a new alarm when cycling through the active alarms list.**

- LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > NEW ALARM DWELL TIME**
- MOVE ▲▼ TO CHANGE VALUE BETWEEN 1 – 20 SECONDS
- MOVE ◀ TO SAVE & EXIT

12.4.8 SHOW ALARM INFO

TECH SUPPORT COMMENT: **ALSO INCLUDES NUMBER OF ACTIVATIONS WHICH COULD BE USEFUL FOR TRACKING DOWN 'CHATTERING' ALARMS**

- LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > SHOW ALARM INFO**
- ALARM INFO INCLUDES: ALARM NUMBER, 'ENABLED Y/N, ACTIVE Y/N, MASKED Y/N, ACTION WHEN ACTIVE, LAST ACTIVATION
- MOVE ◀ TO SAVE & EXIT

12.4.9 CLEAR COUNTERS

- LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > CLEAR COUNTERS**
- MOVE ▲▼ TO SELECT YES OR NO
- MOVE ◀ TO SAVE & EXIT

12.5 AUX RELAY FUNCTION

- OFF > ACTIVE ALARMS > **NIGHT MODE**
- MOVE ◀ TO SAVE & EXIT

12.6 ALARM SILENCE INPUT

- NOT SET > **ALARM 1 - 16**
- MOVE ◀ TO SAVE & EXIT

12.7 ALARM ACTION WHEN SILENCED

- MASKED ACTION > **SILENCE**
- MOVE ◀ TO SAVE & EXIT

13 CONTACT TECHNICAL SUPPORT

Redvision Technical Support Helpline

tel: +44 (0) 1420 448 448
email: support@redvisioncctv.com
web: www.redvisioncctv.com/support

14 TECHNICAL SPECIFICATION

CAMERA

Image sensor	18:1 Hitachi 1/3" CCD / 28:1 & 40:1 Sony 1/4" CCD		
Model	VKS888EN	FCB-EX985 E/P	FCB-EX2700P
Optical zoom	RVX18x Optical	RVX28x Optical	RVX40x Optical
Digital zoom	n/a	12x	12x
Horizontal resolution	550TVL	550TVL	670TVL
Angle of view	2.8° - 48°	2.1° - 55.8°	1.6° - 60.0°
Focal Length	4.7 - 84.6mm (F1.6 to F2.8)	3.5 - 98.0mm (F1.6 to F3.8)	3.06 - 122.4mm (F1.6 to F4.6)
Min illumination colour	0.25lx (F1.6, 50IRE)	0.3lx (f1.35, 50IRE)	0.6lx (F1.6, 50IRE)

INFRA RED ILLUMINATION (RVX-IR version)

IR wavelength	850nm (semi covert) 940nm covert wavelength available to special order
IR range	Tested to 100m (850nm)

ENVIRONMENTAL & PHYSICAL

Camera head material	Die cast aluminium
Window	Flat toughened glass
Operating temperature	-35˚C to 50˚C heater/fan
Camera head Weight	6.5 Kilos
Paint finish	Powder coat
IP Rating	IP67

WIPER (Optionally available on all models)

Intermittent and Wiper Time Out

POWER CONSUMPTION

Input	110V to 240Vac, 50MZ @ 0.3A
Output	24V DC @ 2.5A output
Power Consumption	2.5A at 48VA

TELEMETRY

RS485	Pelco P, Pelco D, Vista, Dennard & Bosch Forward Vision
Coax	BBV 422
Addressing	DIP switch
Baud rate	2400, 4800, 9600 & 19200

MECHANICAL

Left & Right Pan Limits	Programmable
Pan & Tilt	Continuous 360° Pan (0.1-200 per second). Tilt +60° to -90° depending on set up

KEY FEATURES

Presets/Tours	100 presets with programmable titles & 8 tours with programmable titles
Password protection	Yes (three levels)
Camera titles	16 alphanumeric characters
Preset titles	16 alphanumeric characters
Privacy zones	RVX18: 4 zones, RVX28 & RVX40: 24 zones
Alarm handling	Weekend/weekday time schedules for enabling/disabling alarms
Video launch amplifier	0-6dB 8 steps
Heater	Yes
Fan	Yes

OPTIONAL ALARM MODULE

Features	16 Alarm inputs (volt free). 3 Relay Outputs: AUX, ALARM & WASH

MOUNTING BRACKETS

Type	Swan, pedestal (tower mount) wall, corner, pendant & pole clamp

This product is CE marked and has been fully tested and complies with:

- 2004/108/eec Electromagnetic Compatibility
- 73/23/eec Low Voltage Directives
- 60950: 2006 Safety Standards



WARNING: THIS IS A CLASS A PRODUCT. IF INSTALLED IN A STATIC ENVIRONMENT RADIO INTERFERENCE MAY BE CAUSED IN WHICH CASE THE USER MAY BE REQUIRED TO TAKE ADEQUATE MEASURES.

15 WARRANTY INFORMATION

Redvision CCTV Limited (Redvision) warrants the buyer that the product will, on the date of shipment be free from defects in material & workmanship and will conform to Redvision's specifications provided to the buyer. If any defect in material or workmanship appears in the product, Redvision will at its option, either repair or replace the defective product without charge at Redvision's customer service centre or serviced authorised repair facility or credit or refund the purchase price of the defective product provided;

- The defect appears within 24 months from the date of purchase by the end user
- Examination of the product confirms that the claimed defect actually exists.

Buyer shall follow Redvision's instructions regarding return of the defective product and no product will be accepted for repair, replacement, credit or refund without the written authorisation of Redvision or in accordance with Redvision's written instructions. In the case of any such return the buyer shall bear the risk of loss or damage and shall prepay all transportation charges to Redvision. Repaired or replacement product will be shipped with freight prepaid by Redvision and the buyer shall bear the risk of loss or damage. The replaced product shall become Redvision's property.

In no event shall Redvision be responsible for de-installation or reinstallation of the product or for the expenses thereof. If it is determined that product is not defective, the buyer shall pay Redvision all costs of handling, inspection, repairs and transportation at Redvision's then prevailing rates.

Repairs and replacements covered by the above warranty are warranted to be free from defects as set forth above except that the defect must appear;

- Within three (3) months from the date of repair or replacement; or
- Prior to the expiration of the above twenty four (24) month period, whichever is later.

With respect to product not manufactured by Redvision, to the extent permitted, extends the warranties and affords the remedies to the buyer given to Redvision by its vendor of said products. The foregoing warranties do not extend;

- To expendable items
- To experimental or development products
- To product which has been subjected to misuse, neglect, accident or abuse;
- To the unauthorised repair or alteration by anyone other than Redvision;
- To improper installation, storage or maintenance by anyone other than Redvision;
- To product used in material violation of Redvision's instruction; or
- To product which has had its serial numbers or month and year of manufacture or shipment removed, defaced or altered or
- To software.

The term "software" means a set of logical instructions and table of information which guide the functioning of a processor. Such set may be contained in any medium whatsoever including, without limitation, hardware containing a pattern of bits representing such set, provided, however, the term "software" does not mean or include the medium.

Redvision shall charge for the repair of all product returned out of warranty.

call Redvision Customer Service **+44 (0) 1420 448 448** for an RMA number.

or visit www.redvisioncctv.com for more information.

Due to a policy of continuous product development the content of this manual may change without notice. Redvision CCTV Limited will endeavour to ensure the latest version is made available through the download section on its website www.redvisioncctv.com. Copyright © 2008 - 2011 Redvision CCTV Limited. All rights reserved. Redvision CCTV, the Redvision Logo, Redvision X-series™ RV Camera Series™, Redzone™ IR Illuminator are trademarks or registered trademarks of Redvision CCTV Limited.

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NOTES

X-SERIES

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