



Installation Guide

COAX Converter 2

Pelco Coaxitron & VCL Up The Coax protocol converter



Building Block Video Ltd www.bbvctv.com
17 Apex Park, Diplocks Way, Hailsham, East Sussex, BN27 3JU, UK
Tel: +44 (0) 1323 842727 Support: +44 (0) 1323 444600

STOP AND READ BEFORE INSTALLING!

AS 3RD PARTY PROTOCOLS ARE NOT UNDER THE CONTROL OF BBV, WE CANNOT GUARANTEE THAT THIS UNIT WILL PROVIDE THE EXACT FUNCTIONALITY REQUIRED.

IT IS STRONGLY RECOMMENDED THAT OPERATION IS CONFIRMED DURING PREBUILD TESTING BEFORE INSTALLING ON SITE.

PLEASE CONTACT OUR CUSTOMER SUPPORT DEPARTMENT IF YOU HAVE ANY QUESTIONS/ISSUES:

Tel: ++ 44 (0) 1323 444600

Email: support@bbvcctv.com



**Scan for a quick tour of the
BBV Website www.bbvcctv.com**

Table of content.

Compatible Protocols	6	Meyertech ZVR-510 receiver with VICTA	17
In bound commands	7	Molynx D-Type	18
Data connection information	8	PANASONIC WV-CS850/860/950/960	19
Menu Information	9	PELCO P and PELCO D	20
Test and debug information	10	Philips 485 / Bosch	21
AD422 Sensormatic Domes	11	PHOTOSCAN FIXED SPEED PAN/TILT	22
BBV422	12	Samsung SCC641/643 dome and SCC421	23
CONWAY	12	Ultrak	23
COP PELCO D or PELCO P	13	VCL TP	24
DENNARD (OCP)	14	Vicon RS422	24
FORWARD VISION MIC-1300/400	14	VIDECON VCP451 CAMERA (PELCO D, 2400,N,8,1)	25
COP PELCO D or PELCO P	15	VIDECON VHSD 860 DOME (Pelco P 9600,N,8,1)	26
JVC TK-C676	15	VIDEOTEC ULISSE	26
LG DOME (PELCO D)	16	Vista PowerDome/ Baxall	27
MARK MERCER	17	360 Vision	27

Protocols compatible with the BBV COAX CONVERTER2:

Inbound					
Pelco Coaxitron					
VCL Coax					
Outbound					
			Page		Page
AD422 (Ultradome)	4800,N,8,2		11		
Baxall	9600,N,8,1			Pelco P	2400,4800,9600,N,8,1 2400,4800,9600,E,8,1 2400,4800,9600,O,8,1
BBV422	9600,N,8,1	11			
Conway	9600,N,8,1	12			
COP (Pelco D or P)	2400, 9600,N,8,1		13	Bosch / Philips 485	
Dennard 20xx	9600,N,8,1		13	Photoscan fixed speed pan/tilt	
Forward Vision Mic1-300/400	9600,O,8,1		14	Samsung 641/643 dome 421P camera	22
JVC 676	9600,E,8,1		15	Ultrak	23
LG dome (Pelco D)	9600,N,8,1		16	VCL	23
Mark Mercer	9600,N,8,1		17	Videotec Ulisse	26
Meyertech ZVR510 VICTA protocol	9600,N,8,1		17	Vicon Surveyor & V1305DC	24
Molynx D-TYPE	9600,E,8,1		18	Videcon VPC451 Camera	(Pelco D-2400,N,8,1) 25
Panasonic CS850/860	9600,19200,N,8,1		19	Videcon VHSD860 Dome	(Pelco P-9600,N,8,1) 25
Pelco D	2400,4800,9600,N,8,1		20	Vista PowerDome	27
	2400,4800,9600,E,8,1			360 Vision	27
	2400,4800,9600,O,8,1				

BBV COAX CONVERTER2 Manual Version History

Version	Date	Changes
V2.00	28 04 16	The Coax Convert 2 now receives Pelco C

The COAX Converter 2 has been designed to work using standard goto & save preset commands. The manual will refer to Function 1 to 5, Aux 1 to 3, Tours 1 to 3 and Options 1 to 4.

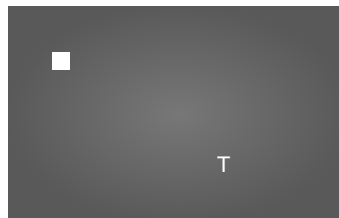
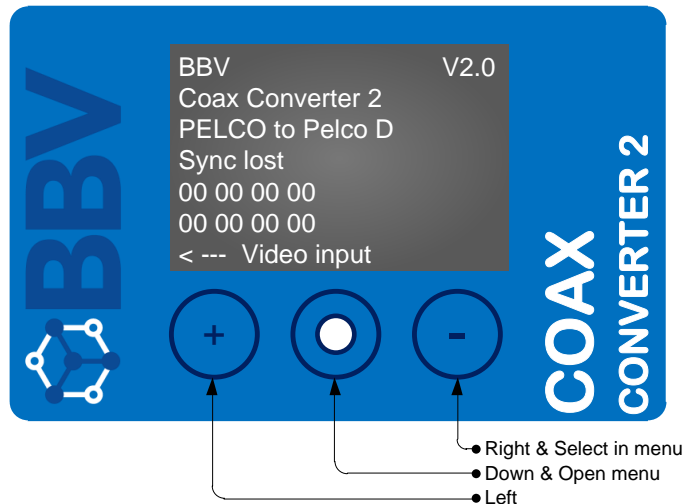
The table below shows the preset number needed to achieve the desired Function, Aux & Tour. The options are on the specific page for the output protocol.

		VCL Coax	Pelco C	Notes
Function 1		Goto Preset 95 Save Preset 95 Goto Preset 61	Goto Preset 95 Save Preset 95 Goto Preset 61	
Function 2		Goto Preset 62	Goto Preset 62	
Function 3		Goto Preset 63	Goto Preset 63	
Function 4		Goto Preset 64	Goto Preset 64	
Function 5		Goto Preset 69	Goto Preset 69	
Tour 1		Goto Preset 66	Goto Preset 66	
Tour 2		Goto Preset 67	Goto Preset 67	
Tour 3		Goto Preset 68	Goto Preset 68	
Aux 3 On	Goto 81	Goto Preset 81	Goto Preset 81	
Aux 3 Off	Goto 82	Goto Preset 82	Goto Preset 82	
Aux 2 On	Goto 83	Goto Preset 83	Goto Preset 83	
Aux 2 Off	Goto 84	Goto Preset 84	Goto Preset 84	
Aux 1 On	Goto 85	Goto Preset 85	Goto Preset 85	
Aux 1 Off	Goto 86	Goto Preset 86	Goto Preset 86	
Iris Open		Iris Open	Iris Open	
Iris Close		Iris Close	Iris Close	
Zoom In		Zoom In	Zoom In	
Zoom Out		Zoom Out	Zoom Out	
Focus Near		Focus Near	Focus Near	
Focus Far		Focus Far	Focus Far	

Cable connection information

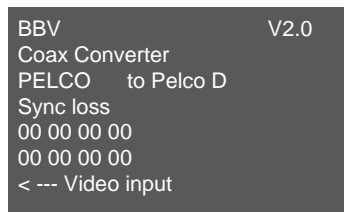


Menu information

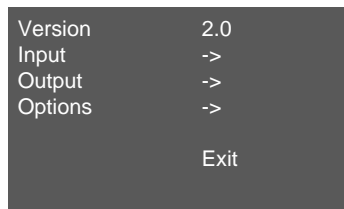


■ Indicates that the converter is powered but dormant

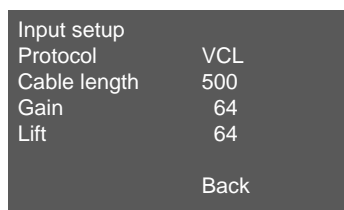
T Indicates that the converter is transmitting



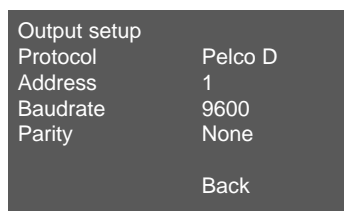
On power up or pressing the middle button the screen will display:
Software version
Sync loss status
In bound protocol
Out bound protocol
Video Input (only shows when there is no sync)



If the middle button is pressed again it will enter the menu. The root of the menu allows the selection of In bound protocol, the out bound protocol & any protocol specific options.

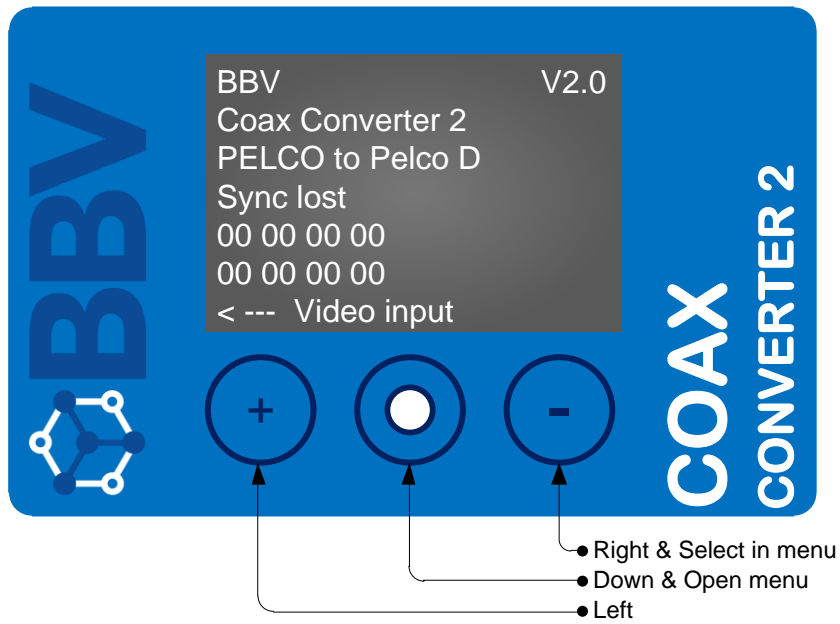


Press the 'right' button when the arrow next to input is flashing it will enter the input setup. Protocol options are Pelco or VCL. Cable length is adjustable between 100 to 600m (this is for VCL only). GAIN-varies the overall signal level. LIFT-boosts the high frequency component of the video signal. If the high frequency component is too low, picture appears 'washed out' and lacking detail.



Press the 'right' button when the arrow next to input is flashing it will enter the input setup.

Test and debug information

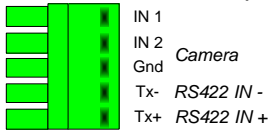


By pressing the right or left button the converter will send a pan right and pan left command

Protocol specific information

AD422 control of a Sensormatic Ultra Domes (4800,N,8,2)

Connect the twisted pair as follows:



View with screws away from you!

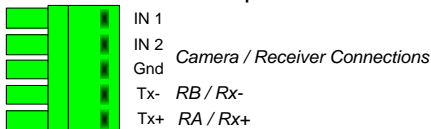
The following functionality is provided.
 Variable speed Pan/Tilt
 Zoom/Focus/Iris
 32 preset positions.
 Menu access and navigation
 Pattern record and playback

Additional Dome features

In Function	Dome Action
Function 1	DISPLAY DOME MENU Navigate with joystick Focus near or far is ENTER and ZOOM in or out toggles options.
Function 2	PATTERN RECORD Function 2 - start recording Move dome pan/tilt/zoom Function 2 - end recording (Note the dome does not support variable speed pan/tilt when recording a pattern)
Tour 3	PATTERN #1 PLAYBACK

BBV 422 (9600,N,8,1)

Connect the twisted pair as follows:

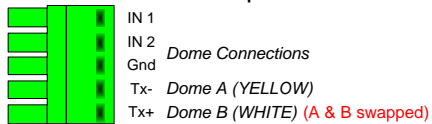


View with screws away from you!

Function	BBV Action
Function 1	#1
Function 2	#2
Function 3	#3
Function 4	#4
Tour 1	Patrol 1
Tour 2	Patrol 2
Tour 3	Autopan

CONWAY (9600,N,8,1)

Connect the twisted pair as follows:



View with screws away from you!

The following functionality is provided:

Variable speed Pan/Tilt

Zoom/Focus/Iris

32 preset positions

Preset tour 1 & 2 playback only

Wash/WIPE/LIGHTS (IR Filter ON/OFF)

Privacy enable, disable

Additional dome features

In Function	Camera Action
Function 2	ENABLE PRIVACY
Function 3	DISABLE PRIVACY
Tour 1	TOUR 1 PLAYBACK
Tour 2	TOUR 2 PLAYBACK
AUX 1	IR CUT FILTER ON/OFF

Note:

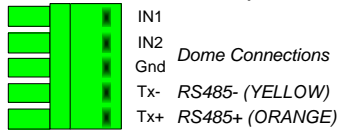
The Data connections A/B are crossed when using this dome so please connect the dome A to green connector Tx- and dome B to green connector Tx+.

Preset tours programming is NOT supported. These must be defined first using a CONWAY controller.

For more information please refer to the dome handbook.

COP PELCO D or PELCO P (2400 or 9600,N,8,1)

Connect the twisted pair as follows:



View with screws away from you!

Option Number	OFF (Default)	ON
Option 1	2400	9600
Option 2	PELCO D	PELCO P

Set the dome for protocol and baud rate. The default is 2400 baud and Pelco D telemetry.

The following functionality is provided:

Variable speed Pan/Tilt

Zoom/Focus/Iris

32 preset positions.

Menu access and navigation

Pattern record and playback+

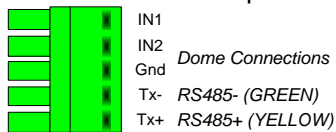
Preset patrol 1 and 2 playback

Additional Dome features

In Function	Camera Action
Function 1	DISPLAY DOME MENU navigate using the joystick and IRIS keys
Function 3	PATTERN RECORD START
Function 4	PATTERN RECORD STOP
Tour 1	PATROL 1 PLAYBACK
Tour 2	PATROL 2 PLAYBACK
Tour 3	PATTERN PLAYBACK

DENNARD 20xx (9600,N,8,1)

Connect the twisted pair as follows:



View with screws away from you!

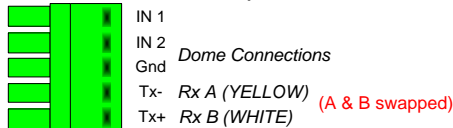
To enter when in menu send a '**GOTO PRESET 1**'

In Function	Camera Action
Function 1	Display Dome Menu
Function 2	Display User Menu
Function 3	Display Technicians Menu
Tour 1	Start current dome's Sequence 001
Tour 2	Start ALL DOMES Sequence 001

Navigate through the dome menu using pan/tilt and issue GOTO PRESET 1 to select current line.

FORWARD VISION MIC-1300/400 (9600,O,8,1)

Connect the twisted pair as follows:



View with screws away from you!

The following functionality is provided:

Variable speed Pan/Tilt

Zoom/Focus/Iris

32 preset positions.

Patrol (sequence) record. 8 positions of presets 1 – 16

Autopan

Additional dome features

In Function	Camera Action
Function 1	SPECIAL PROGRAMMING (see below)
Function 2	DIGITAL ZOOM ON/OFF
Function 3	MANUAL/AUTO EXPOSURE
	IR FILTER IN/OUT
Function 1, Program 1 Preset	ENABLE ALL SCENE
Function 1, Program 2 Preset	DISABLE ALL SCENE
Function 1, Program 3 Preset	TOGGLE CURSOR ON/OFF
Function 1, Program 4 Preset	ENABLE AROUND CURSOR
Function 1, Program 5 Preset	DISABLE AROUND CURSOR

PROGRAM PRESET PATROL

The CCTV Protocol Converter supports a single preset patrol per dome with a programmable dwell time and up to 8 preset positions. Please ensure that you program the preset positions first using the normal procedure. The keystrokes used will depend on the controller used. The procedures shown below.

To PROGRAM PRESET PATROL

- a. **Function 1** then **Tour 1** (patrol programming mode)
- b. **1 – 64PRESET** (dwell time 1 – 64 seconds)
- c. **1 – 64PRESET** (first preset position)
- d. repeat step C for up to 8 preset positions in total
- e. **Tour 1** (save the dome patrol)

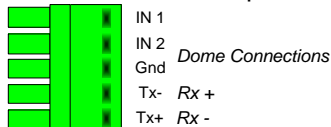
In addition, the following dome features are supported. First either 1# from TX1500 or **Function 1** then program the following presets:

Camera Action	PROGRAM PRESET
PAN REVERSE ON/OFF (PRESET 194/195)	6 ON, 7 OFF
AUTO IR ON/OFF (PRESET 196/197)	8 ON, 9 OFF
INTERMITANT WIPE ON/OFF (PRESET 198/199)	10 ON, 11 OFF
SOFTLIMIT TOP LEFT (PRESET 200)	12
SOFTLIMIT BOTTOM RIGHT (PRESET 201)	13
NONE DWELL TOP LEFT (PRESET 202)	14
NONE DWELL BOTTOM RIGHT (PRESET 203)	15
AUTOHOME PRESET 1 (PRESET 204)	16
AUTOHOME SEQUENCE (PATROL) (PRESET 205)	17
AUTOHOME OFF (PRESET 206)	18
MULTI ALARM ON/OFF (PRESET 207/208)	19 ON, 20 OFF
DIGITAL ZOOM ENABLE/DISABLE (PRESET 209/210)	21 ON, 22 OFF
SET TOUR1,2,3,4,5,6 (PRESET 211-216)	23 – 28
AUTOFLIP ON/OFF (PRESET 217/218)	29 ON, 30 OFF
WASHWIPE ON/OFF (PRESET 219/220)	31 ON, 32 OFF
PRIVACY SET CURSOR (PRESET 221)	33

PRIVACY INIT PARAMETER (PRESET 222)	34
PRIVACY LOAD PARAMETER (PRESET 223)	35
PRIVACY SAVE PARAMETER (PRESET 224)	36
PRIVACY HIDE CURSOR (PRESET 225)	37
PRIVACY SHOW CURSOR (PRESET 226)	38
PRIVACY CLEAR CENTRAL (PRESET 227)	39
PRIVACY SET CENTRAL (PRESET 228)	40
PRIVACY SET STYLE (PRESET 229)	41
PRIVACY HIDE STYLE (PRESET 230)	42
PRIVACY SHOW STYLE (PRESET 231)	43
PRIVACY REPLACE ALL (PRESET 232)	44
PRIVACY UNCOVER ALL (PRESET 233)	45
PRIVACY CLEAR WHOLE (PRESET 234)	46
PRIVACY SET WHOLE (PRESET 235)	47
AUTO ALARM ON/OFF (PRESET 236/237)	48 ON, 49 OFF
AUTO LOWLIGHT ON/OFF (PRESET 238/239)	50 ON, 51 OFF)
CAMERA RECALIBRATE (PRESET 251)	52
RESET PRESETS (PRESET 255)	53

JVC TK-C676 – (9600,E,8,1)

Connect the twisted pair as follows:



View with screws away from you!

Option Number	OFF (Default)	ON
Option 1	AUTOFOCUS Standard	AUTOFOCUS sent after a zoom action
Option 2	Camera tilting OFF	Camera tilting ON

In Function	Camera Action
Function 1	Display menu and EXIT
Function 2	SET (whilst in menu)
Function 3	Toggle Extended DynamicRange
Function 4	CycleBW mode, ON/OFF/AUTO
Tour 1	Start dome AUTO PATROL
Tour 2	As above for ALL DOMES
Tour 3	Start dome AUTOPAN
Option 1 ON Will force the dome to AUTOFOCUS after a zoom stop command. This is useful when used with 675BE domes.	Force AUTOFOCUS after zoom

Notes:

The dome must be set to Multi-drop, Simplex mode by setting dome switch 4 & 5 ON. Set the dome address using the dome rotary switches

To display the current dome's menu, **Function 1**. Use standard PAN/TILT and where required ZOOM to navigate through the menus. To simulate the SET key to navigate into sub-menus **Function 2**. To exit the **Function 1**.

Addition functions.

Tour 3 to start an AUTOPAN.

Tour 1 dome to start an AUTOPATROL.

Extended Dynamic Range can be toggled ON/OFF **Function 3**.

B/W Mode can be cycled between ON/OFF/AUTO **Function 4**.

Camera mode display. Protocol CCTV Protocol Converter **Option 2**

If protocol CCTV Protocol Converter **Option 2** is set to ON then each time the Extended Dynamic Range or BW mode is changed or AUTOPATROL is selected then the dome title is altered to display these settings. If

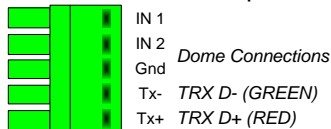
it is preferred to use the dome camera title for titling then set switch Option 2OFF. The settings will still be changed but will not be shown.

Presets

The dome home preset position is preset 0. As most control systems do not directly support preset 0, preset 1 is used instead. This means that in practice, preset 1 is home, preset 2-32 are preset 2-32 and the dome's preset 1 is not used. This could only be an issue when programming alarms directly into the dome. Do not use preset position 1 unless this is programmed from within the dome menu.

LG DOME PELCO D (9600,N,8,1)

Connect the twisted pair as follows:



View with screws away from you!

- Dome SW301 – 1 OFF, 2 ON, 3 ON, 4 OFF (Selects Pelco D)
- Dome SW304 – ALL OFF (9600 baud)
- Dome SW302 – Address – set to match the matrix camera input

The following functionality is provided:

- Variable speed Pan/Tilt
- Zoom/Focus/Iris
- 32 preset positions
- Menu access and navigation
- Pattern record and playback
- Preset patrol 1

Additional Dome features

In Function	Dome Function
Function 1	DISPLAY DOME MENU navigate using the ZOOM and FOCUS keys
Function 2	180 DEGREE PAN FLIP
Function 3	PATTERN RECORD START
Function 4	PATTERN RECORD STOP
Tour 1	PATROL 1 PLAYBACK
Tour 3	PATTERN PLAYBACK

Note:

When navigating the dome menu ZOOM IN moves the cursor UP and ZOOM OUT moved the cursor DOWN. The FOCUS keys are used to ENTER and change values.

For more information please refer to the dome handbook.

MARK MERCER (9600,N,8,1)

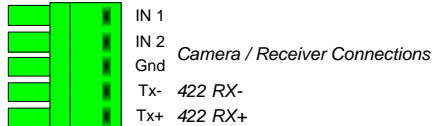
Connect the twisted pair as follows:

Please refer to the individual camera manual

In Function	Camera Function
Function 1	180 Pan U turn
Tour 1	Start current dome's patrol
Tour 2	Start ALL DOMES patrol

Meyertech ZVR-510 receiver with VICTA (9600,N,8,1)

Connect the twisted pair as follows:



View with screws away from you!

Option Number	OFF (Default)	ON
Option 1	NA	Menu access enabled for ZVC530

The following functionality is provided.

Variable speed Pan/Tilt – 8 speeds

Zoom/Focus

WASH, WIPE, LIGHTS auxiliary outputs

32 preset positions.

Menu access and navigation

The Meyertech protocol supports 8 speeds for pan and tilt. If the head is to pan and tilt simultaneously then the same speed is used for both axis. For example if the head is moving left at say speed 4 and then the joystick is moved up the head will now move left at the new tilt speed. This is not a problem with the CCTV Protocol Converter but a limitation of the Meyertech protocol.

Receiver Menu Access and navigation.

In Function	Camera Action
Function 1	RECEIVER MENU ON Once the receiver menu is displayed the joystick is used to navigate the cursor.
Function 2	MENU ENTER Select the flashing item
Function 3	MENU TOGGLE ITEM Used to cycle options displayed in [] brackets.
Function 4	EXIT MENU MODE – ALLOW PTZ This must be sent when the menu has been exited to allow normal pan/tilt control with the joystick.
AUX1	AUX A1 ON/OFF
Presets 1 – 9 PRESET = number 1 – 9 10 PRESET = number 0	ENTER NUMBERS 0 – 9

Molynx D-Type (9600,E,8,1)

Connect the twisted pair as follows:

Please refer to the individual camera manual

Option Number	OFF (Default)	ON	
Option 1	Disables this feature	enables this feature	To enable CAMERA POWER Aux to be operated from AUTOPAN allowing AUTOPAN control of AC receivers.

In Function	Camera / Dome Action
	WASH, WIPE, LIGHTS
Function 1	TOGGLE MENU ON/OFF
Function 2	TOGGLE JOYSTICK (PTZ/MENU CONTROL)
Function 3	SET IN MENU
Function 4	DEFINE PRESET PATROL
PROGRAM 99 PRESET	RESET RECEIVER

Notes:

Control of the receiver auxiliary relays is possible using the matrix Wash, Wipe and Lights keys.

Up to 32 preset positions can be programmed and recalled.

Dome mono/colour selection is possible using the **LIGHTS** button once the mono/colour switching has been set to MAN in the dome menu.

Preset Patrol Definition.

A single preset patrol can be defined which can contain up to 16 preset positions. The patrol speed and delay can be programmed as a global for each preset position. Use the following keystrokes.

In Function 1

1 – 32 PRESET This is the delay in seconds for all preset positions

1 – 32 PRESET This is the speed to move between preset positions
1 is very slow and 32 is full speed

Next up to 16 preset positions, eg for patrol presets 1, 3, 6 and 17

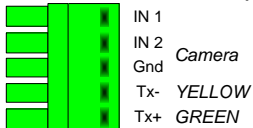
1 PRESET, 3 PRESET, 6 PRESET, 17 PRESET

MOVE JOYSTICK This ends the definition.

To start the preset patrol send **Tour 1**

PANASONIC WV-CS850/860/960(9600 or 19200,N,8,1)

Connect the twisted pair as follows:



View with screws away from you!

Option Number	OFF (Default)	ON
Option 1	850 Special 2	960 Dome reset

In Function	Camera Action
Function 1	Show/Hide dome Menu
Function 2	ENTER (whilst in menu)
Function 3	ESCAPE (whilst in menu)
Function 4	SPECIAL2 (whilst in menu)
Tour 1	Send PATROL RUN
Tour 2	Send PATROL RUN to ALL DOMES
	Send AUTOPAN
89 PRESET	BW MODE ON
88 PRESET	BW MODE OFF
87 PRESET	BW MODE AUTO

Switch and dome settings:

Ensure that each dome is configured BEFORE installation.

Output baud rate must be set to 19200,N,8,1 or 9600,N,8,1 with SW4.

The dome must be set to Panasonic CONVENTIONAL protocol and the address set accordingly.

The 4 way dome switch must be set to 4 wire telemetry with switches 2, 3, 4 OFF. The RS485 cable requires termination at the end of the run by setting switch 1 ON.

*To use this function firstly highlight and select camera on ""** SET UP MENU**" screen
Then highlight "RET" on ""**SET UP**" screen.
Finally pan right to highlight "Special 2"

PELCO P and PELCO D (2400, 4800 or 9600 Even Odd or None)

Connect the twisted pair as follows:

Please refer to the individual camera or receiver manual

Option Number	OFF (Default)	ON
Option 1	AUX 1 = 1	AUX 1 = 2
	AUX 2 = 2	AUX 2 = 1
	AUX 3 = 3	AUX 3 = 3

In Function	Camera Action
Function 1	Display Dome Menu
Function 2	PATTERN DEFINE (START)
Function 3	PATTERN DEFINE (STOP)
Function 4	Reset Camera
Tour 1	Start Random Scanning
Tour 2	Start Frame Scanning
Tour 3	PATTERN PLAYBACK

Use Iris open as Enter in menu.

This allows control of Pelco P and Pelco D units. Please ensure that the baud rate and parity are set correctly. Generally Pelco P uses 9600,N,8,1 and Pelco D uses 2400,N,8,1.

The Esprit wiper can be controlled using the BBV TX1500 wiper function when **Option 1** is ON. With **Option 1** OFF the LIGHTS button is used. This is due to functions for each auxiliary number.

Function	Aux number Option 1 ON	Aux number Option 1 OFF
WASH	3	3
WIPE	1	2
LIGHTS	2	1

Additional of zone definition to allow zone blanking of Esprit PTZ heads. Three steps are required to define and enable privacy zones.

1. Move the camera to the left edge of required privacy zone then program preset 71 – 78. 71 for zone 1, 72 for zone 2 etc up to 78 for zone 8.
2. Now move the camera to the right edge of required privacy zone the program preset 81 – 88. 81 for zone 1, 82 for 2 etc up to 88 for zone 8
3. Next display the head menu and enable zone blanking for the required zone.

Bosch / Philips RS485 (9600,N,8,1)

Connect the twisted pair as follows:

Please refer to the individual camera or receiver manual

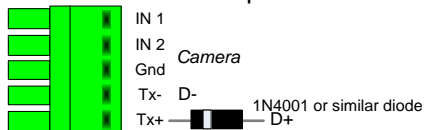
Depending on the exact model type, Philips domes can be controlled using RS232 or RS485 and bi-phase telemetry.

If the dome only supports FastAddress™, a Philips controller must be used to set the dome address before installation. The CCTV Protocol Converter will not set the FastAddress™.

In Function	Dome Action
Function 1	DISPLAY DOME MENU (AUX 46 ON)
Function 2	PROGRAM ZONE TITLE (AUX 63 ON)
Function 3	AUTOPLAY RECORD (AUX 100 ON/OFF)
Function 4 TWO times	DISPLAY SOFTWARE VERSION (AUX 66 ON)
Function 4 FOUR times	RESET DOME (SET 899) <i>(This will erase all preset positions and load default dome settings – use with care!)</i>
Tour 1	START DOME PRESET TOUR (AUX 8 ON)
Tour 3	START AUTOPLAY PLAYBACK (AUX 50 ON)
PROGRAM 99 PRESET	DISPLAY PRESET TOUR MENU (SET 900)
PROGRAM 98 PRESET	DISPLAY PRESET TOUR PERIOD (AUX 15 ON)
PROGRAM 97 PRESET	DISPLAY PRESET MENU (SET 100)

PHOTOSCAN FIXED SPEED PAN/TILT(2400,E,8,1)

Connect the twisted pair as follows:



View with screws away from you!

The following functionality is provided:

Fixed speed Pan/Tilt

Zoom/Focus/Iris

WIPE drives the W1 aux output

WASH drives the WA aux output

AUTOPAN drives the A2 output

LIGHTS has not been tested

Photocan receivers are driven using current loop telemetry.

The output of CCTV Protocol Converter must have a diode fitted to each output as shown in the diagram on the left to allow control of the Photocan units.

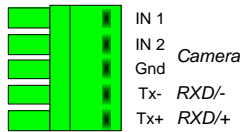
It is possible for the receivers to function without the diode but it is recommended that the diode is fitted to reduce the reverse voltage on the receiver's opto isolator input.

It is possible to connect multiple receivers to each star output this is not recommended.

Samsung SCC641/643 dome and SCC421 (9600,N,8,1)

SCC641/643 dome

Connect the twisted pair as follows:



View with screws away from you!

Set the dome address using the SW500 switch. SW501 all off apart from 3 and 5 to select 9600 BAUD, SAMSUNG protocol and FULL duplex.

Ensure that any dome at the end of a daisy chained RS485 run are have switches SW401/1 and SW401/2 ON to terminate the RS485 terminated and the intermediate domes have the SW401/1 and SW401/2 OFF.

The following functionality is provided.

Manual pan/tilt control with 16 speed steps.

Zoom with Manual Focus override.

Operating the Zoom will re-enable auto focus after manual adjustment

32 preset positions.

AUTOPAN can be started with the **Tour 3**

PRESET SCAN can be started using **Tour 1**

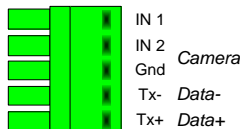
PATTERN 2 can be started using **Tour 2**

The patterns are defined from the dome menu which is accessed using 1 # as below.

In Function	Camera Action
Function 1	Dome Menu ON
Function 2	Dome Menu OFF
Function 3	Dome Menu ENTER
Tour 1	Start PRESET SCAN
Tour 2	Start PATTERN 2
Tour 3	Start AUTOPAN

SCC421P Static camera

Connect the twisted pair as follows:



View with screws away from you!

Ensure that BAUD RATE is set to 9600 and RS485. The buttons on the rear of the camera allow menu access.

The following functionality is provided.

Zoom with Manual Focus override.

To allow manual focus set AUTO FOCUS in the menu to either ONEAF for MF.

ONEAF will cause an AUTOFOCUS after a zoom and MF is permanently in manual focus mode.

Iris Open/Close.

Ultrak (9600,E,8,1)

Connect the twisted pair as follows:

Please refer to the individual camera or receiver manual

In Function	Camera Action
Function 1	Dome Menu (preshot 90)
Function 2	Auto Exposure(<i>auto-iris</i>) toggle (preshot 92)
Function 3	Program PTZ Tour1toggle (preshot 83/86)
Function 4	Start PTZ Tour1 (preshot 80)
Tour 1	Start PRESET SCAN
Tour 2	Start PATTERN 2
Tour 3	Start AUTOPAN

VectorScan 0 is started by pressing **Tour 3** and is programmed using the dome menu (see notes).

The dome must be configured as follows:

Select 9600 Baud communications. To use the dome's advanced features including the menu, select MAXPRO telemetry. The exact switch setting for MAXPRO telemetry depends on the dome's internal firmware version as below:

Version	S4-1	S4-2	S4-3	S4-4
J/K	closed	open	open	open
H	open	closed	open	open
G	closed	open	open	closed

Three rotary switches set the dome address to 000. S1 = '0', S2 = '0', S3 = '0'.

The dome menu allows setting of several internal dome features. Once activated using **Function 1**, navigate using the pan/tilt direction keys/joystick. Generally the IRIS OPEN key is used as a ENTER key and the IRIS CLOSE key is used as an ESCAPE key. The dome manual should explain in greater detail.

On screen text can be enabled using the dome menu.

It is recommended that the dome is operated with the auto exposure set to ON to allow automatic compensation for varying lighting conditions.

VCL TP (9600,N,8,1)

Connect the twisted pair as follows:

Please refer to the individual camera or receiver manual

The following functionality is provided.

Manual pan/tilt control

Operating the Zoom will re-enable auto focus and iris after manual adjustment
32 preset positions.

The following functionality is provided.

Manual pan/tilt control with 16 speed steps from 1 to 127, (slowest to fastest)

Zoom with Manual Iris and Focus override.

Operating the Zoom will re-enable auto focus and iris after manual adjustment
32 preset positions.

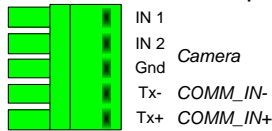
2 sequential preset tours of preset positions 1 - 16, tour 1 maximum speed and tour 2 speed 32. The dwell time is fixed at 10 seconds per preset position. Preset positions can be removed from the tours.

All 28 privacy zones can be programmed and disabled if required.

In Function	Camera Action
Function 1	Enter manual on the Acuix dome
Function 2	Program a privacy zone
Function 3	Clear a privacy zone
Function 4	Dome remote reset (power cycle)
PROGRAM 50 PRESET followed by 1-16 PRESET	Remove a preset from the tours
Tour 1	Start preset patrol
Tour 3 (must be defined with PROGRAM 56 PRESET as below)	Start Learned tour 5
PROGRAM 55 PRESET followed by PROGRAM 55 PRESET	Reset dome to factory. USE CAUTION!! (This command will clear all dome configuration including preset positions)
PROGRAM 56 PRESET	Define learned tour 5 – START
PROGRAM 57 PRESET	Define learned tour 5 – STOP
PROGRAM 58 PRESET	Enable AUTO180 pan flip

Vicon RS422 (4800 or 9600,N,8,1)

Connect the twisted pair as follows:



View with screws away from you!

The following functionality is provided.

Manual pan/tilt control with 16 speed steps.

Zoom with Manual Focus override.

Operating the Zoom will re-enable auto focus after manual adjustment

32 preset positions.

3 tours can be started, tour 81 and 82 using 1 PATROL and 2 PATROL and tour 80 with AUTOPAN.

The tours are defined from the dome menu.

Option Number	OFF (Default)	ON
Option 1	Standard Dome control	Support for earlier V1305DC DC telemetry receivers AUX 2 = 1 These receivers use 4800 baud

Select VPS telemetry using dome DIP DIL.

In Function	Camera Action
Function 1	Display dome menu
IRIS OPEN	MENU AP – ENTER
IRIS CLOSE	MENU AI – ESCAPE
WASH	AUX 1
WIPE	AUX 2
LIGHTS	AUX 3
Tour 1	Start TOUR 81
Tour 2	Start TOUR 82
Tour 3	Start TOUR 80

It is very important that once you have exited the dome menu you send a 1 PRESET to inform the CCTV Protocol Converter that you are out of the dome menu.

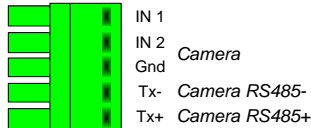
Support for earlier V1305DC DC telemetry receivers.

Option 1 ON

These receivers use 4800 baud.

VIDECON VCP451 CAMERA (PELCO D, 2400,N,8,1)

Connect the twisted pair as follows:



View with screws away from you!

The following functionality is provided:

ZOOM, FOCUS

Menu Access

Advanced Dome features

In Function	Camera Action
Function 1	DISPLAY MENU Use the joystick to navigate the menu or zoom for up/down and focus for left/right

Note:

Use the MENU switch on the camera to set the following before connecting to the CCTV Protocol Converter.

CAMERA ID – This must match the camera input of the matrix

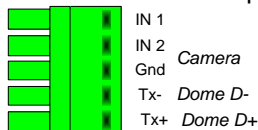
PROTOCOL – P/D to allow control (PELCO D, 2400,N,8,1)

The camera uses the zoom and focus functions whilst navigating the menu to make it easier to use the joystick. Pan generates zoom and tilt generates focus even when not displaying the dome menu. This is NOT a fault!

For more information please refer to the camera handbook.

VIDECON VHSD 860 DOME (Pelco P 9600,N,8,1)

Connect the twisted pair as follows:



View with screws away from you!

The following functionality is provided:

Variable speed Pan/Tilt

Zoom/Focus/Iris

32 preset positions

Menu Access (Iris open – Enter Iris Close – Exit)

Privacy Menu Access

Pattern Tour 1 define and playback, Auto Patrol playback, Frame Scan playback

In Function	Dome Action
Function 1	DISPLAY MENU
Function 2	DISPLAY PRIVACY MENU
Function 3	DEFINE PATTERN 1 START
Function 4	DEFINE PATTERN 1 STOP
Tour 1	AUTO PATROL PLAYBACK *
Tour 2	FRAME SCAN PLAYBACK
Tour 3	PATTERN 1 PLAYBACK
ON (MONO) 89 PRESET OFF (COLOUR) 88 PRESET	IR FILTER ON/OFF

Note:

Please ensure the three dome switches are set as follows:

Dome back plate 4 way switch – ALL OFF to select PELCO P

Dome 2 way switch – BOTH ON to select 9600 BAUD

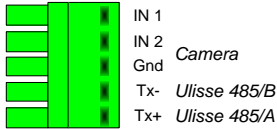
Dome 8 way switch – set the address to match the camera input of the matrix

*Please note Auto Patrol Playback outputs goto preset 70 but our dome does nothing.

For more information please refer to the dome handbook.

VIDEOTEC ULISSE (PELCO D 9600,N,8,1)

Connect the twisted pair as follows:



View with screws away from you!

Option Number	OFF (Default)	ON
Option 1	AUX 3 = Aux1	Support for earlier V1305DC DC telemetry receivers AUX 2 = 1 These receivers use 4800 baud

Ulisse Switch settings

BAUD RATE – 4 ON, 3 OFF, 2 ON, 1 OFF

PROTOCOL – 1 ON, 4 ON, ALL OTHERS OFF

ADDRESS – 9 ON, 1-8 SETS THE ADDRESS AS ULISSE MANUAL

The following functionality is provided:

Variable speed Pan/Tilt

Zoom/Focus/Iris

32 preset positions.

Start Patrol

Start AUTOPAN

Menu access and navigation

Additional Dome features

In Function	Camera Action
Function 1 Then navigate using the joystick and ZOOM IN = ENTER, OUT = BACK	DISPLAY MENU
Aux 3 with Option 1 = OFF (factory default)	AUTO WASH/WIPE
Aux 3 Option 1 = ON	RELAY O1/C1
AUX 2	WIPE
AUX 1	LIGHTS O2/C2
Tour1	START PATROL
Tour 3	AUTOPAN

Note:

WASH function can either control Ulisse relay output O1/C1 or to start the head auto wash/wipe feature.

Option 1 is used to switch between these modes. The factory setting is with **Option 1** OFF = WASH starts the auto wash/wipe function.

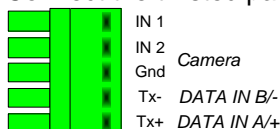
Head moves to Preset 1, the WASH is activated for a time set in the head menu and then the Wiper operates for another time configured in the head menu before returning the head to the original position.

If this feature is not required the O1/C1 relay can be controlled instead by switching **Option 1** ON.

For more information please refer to the Ulisse handbook.

Vista PowerDome (9600,N,8,1)

Connect the twisted pair as follows:



View with screws away from you!

The following functionality is provided.
 Manual pan/tilt control with 16 speed steps.
 Zoom with Manual Focus override.
 Operating the Zoom will re-enable auto focus after manual adjustment
 32 preset positions.
 3 tours can be started:
Tour 1 starts TOUR 1
Tour 2 starts TOUR 2
Tour 3 starts LEARN TOUR 1

The tours are defined from the dome menu.

In Function	Camera Action
Function 1	Display dome menu
Function 2	Menu – ENTER
Function 3	Menu – ESCAPE
Tour 1	Start TOUR 1
Tour 2	Start TOUR 2
Tour 3	Learn 1 playback

360 VISION (9600,N,8,1)

Connect the twisted pair as follows:










View with screws away from you!

The following functionality is provided:
 Manual pan/tilt control with 16 speed steps from 1 to 127, (slowest to fastest)
 Zoom with Manual Iris and Focus override.
 Operating the Zoom will re-enable auto focus and iris after manual adjustment
 32 preset positions.
 2 sequential preset tours of preset positions 1 - 16, tour 1 high speed and tour 2 slow speed. The dwell time is fixed at 10 seconds per preset position. Preset positions can be removed from the tours.
 All 32 privacy zones can be programmed and disabled if required.









In Function	Camera Action
Function 1	180 degree pan flip (U turn)
Function 2 followed by PROGRAM 1-32 PRESET	Program a privacy zone
Function 3 followed by PROGRAM 1-32 PRESET	Clear a privacy zone
Programming a preset position adds the preset into the tour. (1 – 16 only)	Add preset position to the tours
PROGRAM 50 PRESET followed by	Remove a preset from the tours

1-16 PRESET	
Tour 1 (max speed with 10 second dwell)	Start preset tour 1 – high speed
Tour 2 (speed 32 with 10 second dwell)	Start preset tour 2 – slow speed
PROGRAM 51 PRESET followed by 1 PRESET = autoflip OFF 2 PRESET = ON tilt at down limit 3 PRESET = ON when at limit	Set autoflip mode
PROGRAM 52 PRESET followed by IRIS CLOSE/OPEN to increase/decrease GAIN FOCUS NEAR/FAR to increase/decrease LIFT ZOOM IN/OUT to advance/retard timing Move joystick when finished.	Set Video Gain/Lift and Sync timing
PROGRAM 53 PRESET followed by 1 PRESET = mono mode/auto off 2 PRESET = colour mode/auto off 3 PRESET = auto/kill colour 4 PRESET = auto/don't kill colour	Set IR Filter mode
PROGRAM 54 PRESET followed by 1-5 PRESET = Function (1=enable,2=disable,3=preset 1,4=tour1,5=mimic 1) 1-60 PRESET = timeout in minutes	Set Home functions
PROGRAM 55 PRESET followed by PROGRAM 55 PRESET	Unit Reset. This simulates powering the dome off/on
PROGRAM 56 PRESET (start definition) 1 or 2 PRESET – Tour number 1 – 64 PRESET (tour point number) 1 – 32 PRESET (preset number) 1 – 64 PRESET (speed) 1 – 64 PRESET (dwell in seconds) repeated for each point apart from last PROGRAM 57 PRESET (last point) 1 – 64 PRESET (tour point number) 1 – 32 PRESET (preset number) 1 – 64 PRESET (speed) 1 – 64 PRESET (dwell in seconds)	Preset Tour Definition Example to program tour 1 Step 1 – define tour. PROGRAM 56 PRESET Step 2 – tour 1 or 2. 1 PRESET Step 3 – 4 presets for each preset point 1 PRESET (point 1) 1 PRESET (PRESET 1) 64 PRESET (max speed) 10 PRESET (10 seconds dwell) Repeat step 3 for each point until the last point Step 4 – last tour point. PROGRAM 57 PRESET 3 PRESET (point 3) 4 PRESET (PRESET 4) 32 PRESET (middle speed) 2 PRESET (2 seconds dwell) The tour is now defined
PROGRAM 58 PRESET (start definition) Use joystick and zoon to move dome around required tour. PROGRAM 59 PRESET (end definition)	Mimic Tour Definition (AUTOPAN will replay the mimic tour)
PROGRAM 60 PRESET	Fast Shutter ON (ANPR mode)
PROGRAM 61 PRESET	Fast Shutter OFF (normal mode)

1000		<p>The Tx1000 MK2 series combines a video switch with the simplicity of installation associated with coax controlled systems. These combinations provide a flexible, cost-effective control solution for both internal and external pan / tilt / zoom and dome applications. Like all BBV products, simplicity of use and aesthetic casework are inherent in the design. The Tx1000 series supports coaxial telemetry and BBV422 telemetry as standard and 20mA twisted pair operation as an option, allowing integration with infrared, microwave and fibre-optic links, IP links an optional factory-fitted alarm card with programmable functions is available for connection to up to 16 external detection devices.</p>
Tx1500		<p>The Tx1500 series combines a state-of-the-art-video matrix with the simplicity of installation associated with coax controlled systems. This combination provides a flexible and cost-effective control solution for internal and external pan / tilt / zooms and dome applications.</p> <p>The Tx1500 series supports BBV up-the-coax and BBV 422 twisted pair Telemetry as standard, allowing integration with IR, microwave and fibre-optic Links IP. Modules can be added allowing control of several different domes or receiver types on one system. 20mA telemetry available via add-on optional Tx/MK2/TPO Additional 16-way alarm cards with programmable functions are available for connection of up to 16 external detection devices per card. Up to 6 alarm cards can be added, either local to the Tx1500, or distributed around the site allowing up to 96 inputs. System features include variable sequence dwell time, advanced alarm options including multiple events per alarm and keypad programmed to limit access to cameras and monitors</p>
FBM		<p>Available from 16 to 512 camera inputs and 16, 32, 48 or 64 monitor outputs. Distributed units allow systems of up to 4,096 cameras to be designed Up to 16 keypads Up to 512 alarm inputs</p> <p>The FBM series combines a state-of-the-art video matrix with the simplicity of installation associated with all BBV products. This combination provides a flexible and cost-effective control solution for both internal and external pan / tilt / zooms and dome applications.</p> <p>The FBM series supports BBV422/485 twisted pair telemetry as standard, allowing integration with IR, microwave and fibre-optic links. Modules can be added, allowing control of several different domes or receiver types on one system. Coaxial output cards are available for up-the-coax control of PTZ and domes.</p> <p>Additional alarm cards with programmable functions are available for connection of up to 16 external detection devices per card. Up to 32 alarm cards can be added either locally to the FBM or distributed around the site, allowing up to 512 inputs. Programmable features include variable sequence dwell time, multiple events and programmable alarm text per alarm upon activation. Keyboards can be programmed to limit access to cameras and monitors.</p>
Star Repeater 16		<p>The Star Repeater 16 provides a simple and cost-effective solution in the installation of RS422/485 telemetry systems. The Star repeater 16 takes RS422/485 data from one source and repeats it across 16 isolated outputs, which can be wired in a star format. This unit is optimized for camera systems that only require unidirectional commands.</p>
Starcard		<p>The Starcard provides a simple and cost-effective solution in the installation of RS485/422 telemetry systems. The Starcard takes RS485/422 data from one source and distributes it across 8 isolated outputs which can be wired in a star format or allow up to 31 cameras to be daisy chained.</p> <p>8 RS422/485 outputs to allow star wiring of telemetry systems and Tx1500 Keyboards and alarm Cards can also be used when star wiring is required for other systems</p>
Starcard Converter		<p>The Starcard Converter is designed to provide simple and cost effective RS485/422 protocol conversion. The Starcard converter accepts RS485/422 Data from one source converts it to one of a wide range of possible RS485/422 protocols and distributes it across eight isolated outputs. The outputs can be wired in a star format or a daisy format to allow up to 31 cameras to be controlled from each output.</p>
ASGARD HD Decoder		<p>The Asgard HD Decoder is a 30fps, 1080p standalone unit, which facilitates the streaming of camera images from one or more media servers, without the need of a PC. This enables display monitors to be mounted remotely around the premises or network. The unit can be additionally controlled by simple CGI commands from control workstations or hand held devices.</p>

BBV design and manufacture a wide range of CCTV products, specialising in protocol conversions. If you can't see what you require, please call for assistance.

01323 444600

Rx10X		<p>The Rx10X is designed to offer a simple solution for applications where there is a need to control one of a variety of 3rd Party Dome Cameras. The receiver offers considerable opportunities for upgrading existing BBV telemetry systems as it is now possible to add a wide range of integrated domes into the system.</p>
Rx200/WBX		<p>The Rx200 offers control of AC driven pan only or wash / wipe / lights for static cameras. The compact dimension of this PCB allows it to be fitted within a camera housing or dome as an alternative to the more usual weather-proof enclosure.</p>
Rx300/WBX		<p>The Rx300 offers control of AC driven pan, tilt and zoom cameras, whether mounted externally or internally. This gives you entry level control of AC Pan/Tilt/Focus with 1 auxiliary output. Controlled by BBV up-the-coax and 20mA twisted pair. The compact dimensions of the PCB allow it to be fitted within camera housing as an alternative to the more usual weather-proof enclosure.</p>
Rx400/WBX		<p>The Rx400P Telemetry Receiver is ideal for controlling full function ac pan/tilt/zoom Cameras in an external environment where accessories such as wiper, washer etc. are the norm. The Rx400P offers up to 16 full scene presets. These may be used as a method of visually patrolling large areas of a site. They may be interlinked with detection devices in automated system designs. Presets effectively reduce reliance on the operator.</p>
Rx25X		<p>The Rx25X Multiple Protocol Auxiliary Relay Receiver is designed to offer a simple, cost effective solution to activate an auxiliary output, for example to activate a Washer, Wiper or Lights in a static Camera application via a twisted pair cable. The compact dimensions of the PCB allows fitting within the camera housing.</p>
Rx35X/WBX		<p>The Rx35X is a telemetry receiver with ac pan and tilt outputs. It supports BBV RS422, Pelco P, Pelco D, Molyx D type, Sensormatic RS422, Vista RS485 & VCL RS485 telemetry and it allows entry level control of ac pan/tilt and zoom/focus with a wiper auxiliary output. The compact dimensions of the PCB allow it to be fitted within a camera housing as an alternative to the more usual weather proof enclosure. The unit is suitable for 230V mains operation. As a factory fitted option, the receiver can be supplied to operate from 24Vac or 110Vac. This option must be specified at the time of order.</p>
Rx45X/WBX		<p>The Rx45X MK5 is designed to control fixed speed AC pan & tilts heads from BBV and Baxall up-the-coax telemetry and a range of BBV485/422 telemetry protocols. The receiver offers system designers the option of using traditional P/T/Z heads for applications where it is necessary to specify a range of camera / lens combinations.</p>
Rx55X/WBX		<p>The Rx55X MK5 is designed to control variable speed DC pan & tilts heads from BBV and Baxall up-the-coax, and a range of RS485/422 telemetry protocols. The receiver offers system designers the option of using traditional P/T/Z heads for applications where it is necessary to specify a range of camera / lens combinations.</p>