



Installation Guide



Building Block Video Ltd
17 Apex Park
Diplocks Industrial Estate
Hailsham, East Sussex, BN27 3JU, UK
Tel: + 44 (0) 1323 842727
Fax: + 44 (0) 1323 842728
Support: + 44 (0) 1323 444600
www.bbvctv.com

Contents

Important – Before you install	3	Fig 1. A simple system featuring the RX200	4
RX200 – Introduction	4	Fig 2. Unpacking	5
Unpacking	5	Fig 3. RX200 wiring diagram	7
Technical Specification	6	Fig 4. Connections table	8
Connectors	6	Fig 5. Setting your DIL switches	8
RX200 Wiring diagram	7	Fig 6. Setting SW3 & SW4 DIL switches	8
Installation instructions	8	Fig 7. Self test sequence	10
Status LEDs	9	Fig 8. Metalwork drilling table	11
Launch amplifiers	9		
Self test	10		
Retrofitting	10		
Installation Instructions for PCB based receivers	11		

IMPORTANT

Before you install:

Please read the following points before servicing or installing any telemetry receiver:

Pre-installation Checks - It is recommended that the unit be bench tested prior to installation on the site.

Safety During Installation or Servicing - Particular care should be taken to isolate the pan/tilt/head in order to prevent operation while engineering work is being carried out. In addition any ladder or other means of working on the receiver **MUST NOT** rest on the pan/tilt/head as it is possible for the head to move when not expected.

Safety Check - Upon completion of any service or repairs to the unit, safety checks should be performed to ensure that the unit is in proper operating condition.

Coax Grounding - If an outside cable system is connected to the unit, be sure the cable system is grounded.

Adhere to Safety Standards - All normal safety precautions as laid down by British Standards and the Health and Safety at Work Act should be observed.

WARNING - TO PREVENT DANGER OF FIRE OR SHOCK, DO NOT EXPOSE THE INTERNAL COMPONENTS OF THIS EQUIPMENT TO RAIN OR MOISTURE.

Damage Requiring Service - Servicing by qualified personnel should be carried out under the following conditions:

- (a) When the power supply cord or plug is damaged;
- (b) If liquid has been spilled or objects have fallen into the unit;
- (c) If the internal electronics of the unit have been exposed to rain or water;
- (d) If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as improper adjustment of other controls may result in damage;
- (e) If the unit has been dropped or the enclosure is damaged;
- (f) If the unit exhibits a distinct change in performance. This indicates a need for service.

Replacement Parts - If replacement parts are required, ensure that only replacement parts recommended by the product manufacturer are used.

SAFETY PRECAUTIONS

All normal safety precautions as laid down by British Standards and the Health and Safety at Work Act should be observed and servicing should be referred to qualified service personnel.

RX200 – Introduction

The RX200 telemetry receiver is a pan only unit which supports wash/wipe/lights/autopan for static cameras.

The unit is suitable for 230V mains operation. As a factory fitted option, the receiver can be supplied to operate from 24V ac or 110V ac. This option must be specified at the time of order.

Telemetry

It can be controlled by BBV coax and 20mA twisted pair.

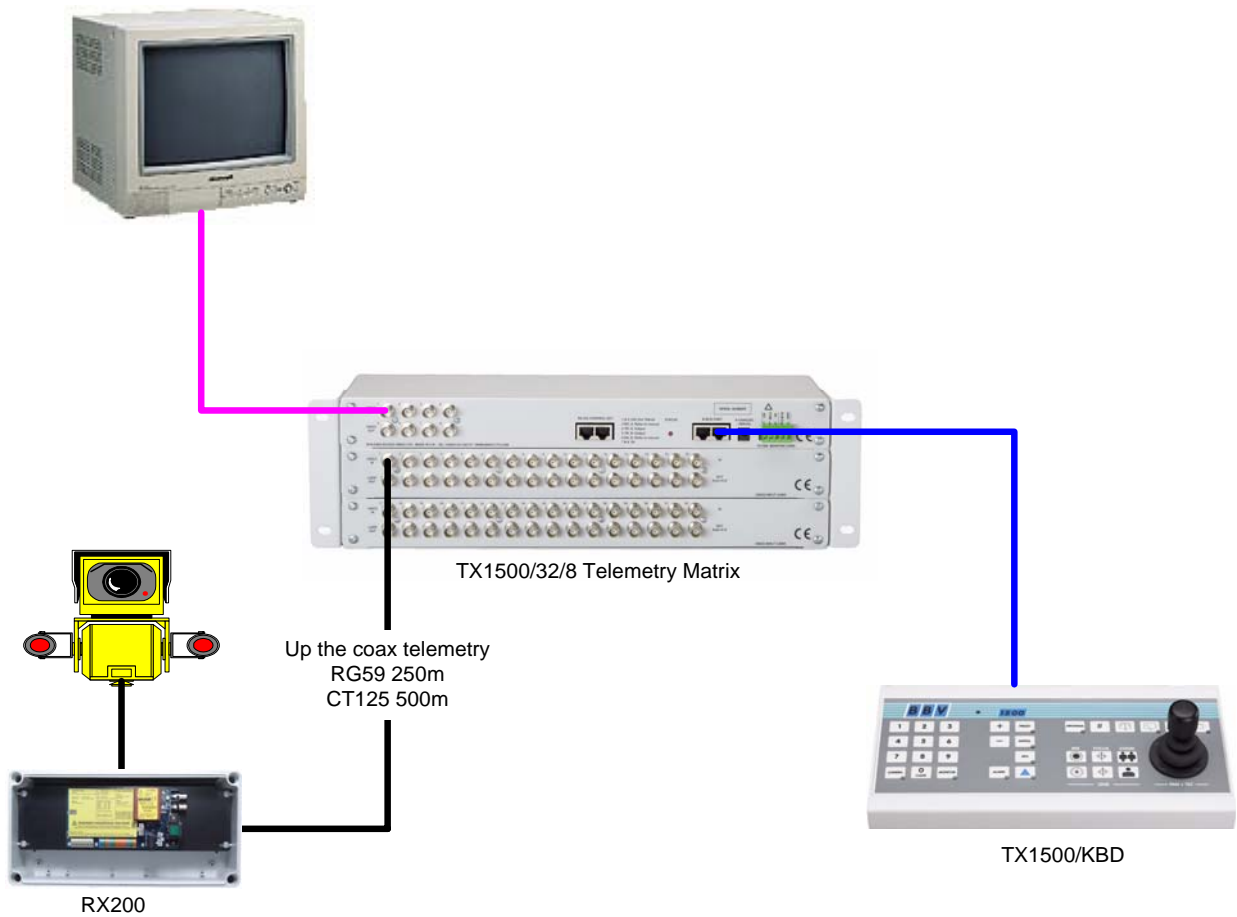


Fig 1. A simple system featuring the RX200

Unpacking

Inspect the packaging for signs of damage. If damage has occurred, advise the carriers and/or the suppliers immediately. Unpack the receiver carefully and check that all the items are included:

Part number	Description	RX200 PCB	Weather proof box	IEC connector	Manual	Warranty card
RX200	Telemetry receiver with ac output	X	X	X	X	X
RX200/PCB	Telemetry receiver with ac output, PCB only	X		X	X	X
RX200/24	Telemetry receiver 230V ac input 24V ac output	X	X	X	X	X
RX200/24/24	Telemetry receiver 24V ac input 24V ac output	X	X		X	X
RX200/24/24/PCB	Telemetry receiver 24V ac input 24V ac output PCB only	X			X	X
RX200/110/110	Telemetry receiver 110V ac input 110V ac output	X	X	X	X	X
RX200/110/110/PCB	Telemetry receiver 110V ac input 110V ac output PCB only	X		X	X	X
RX200/110/24	Telemetry receiver 110V ac input 24V ac output	X	X	X	X	X

Fig.2 Unpacking your RX200

Technical Specification

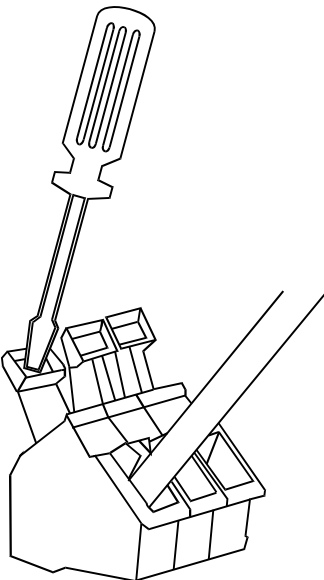
Power requirements	230V 50/60Hz (options are available for 24V ac or 110V ac supply)		
Load	5A at 230V max		
Current	6VA max		
F2: Auxiliary output fuse	Supply	Output	Fuse F2
	230	230	5A T
	230	24	315mA T
	110	110	5A T
	110	24	630mA T
	24	24	5A T
Outputs	5 single pole changeover relays (snubbed): 1. Left pan motor 2. Right pan motor 3. Wiper 4. Washer or Autopan (switch selectable) 5. Lights		
Telemetry	Up the coax:RG59: 250m CT125: 500m Twisted pair: 20mA loop (1200,E,8,1)		
Auto iris output	Returns to original setting 15 seconds after key release Level programmable from keypad To drive override input for Cosmicar, or Seiko style lens		
Video input	1V p-p 75R terminated input via BNC socket		
Video output	1V – 4V p-p 75R impedance via BNC socket		
Facilities	Unit auto-tunes to the coaxial telemetry signal LED readout for continual system status Video launch amplifier provided with Gain and Lift controls Camera power outlet provided Software random pan – doesn't require autopan card in head		
Cabling	Belden 8723 or CAT3 (minimum)		
Dimensions	RX200 PCB	RX200 Boxed	
Depth	108mm	190mm	
Width	203mm	380mm	
Height	38mm	130mm	
Weight	0.4kg	2.5kg	

CONNECTERS

BBV use cage clamp connectors with a simple to use method of attaching cables to PCBs quickly and easily. The correct method of attachment is as follows:

1. Use only cable between 0.08 and 2.5 mm²
2. Strip the cable to a length of 5 to 6 mm (0.23 in)
3. Press down the relevant terminal block lever with a screwdriver
4. Insert wire
5. Remove screwdriver

Detachment of wires is the reverse procedure of steps 3 to 5, ensuring that **power is disconnected** before starting.



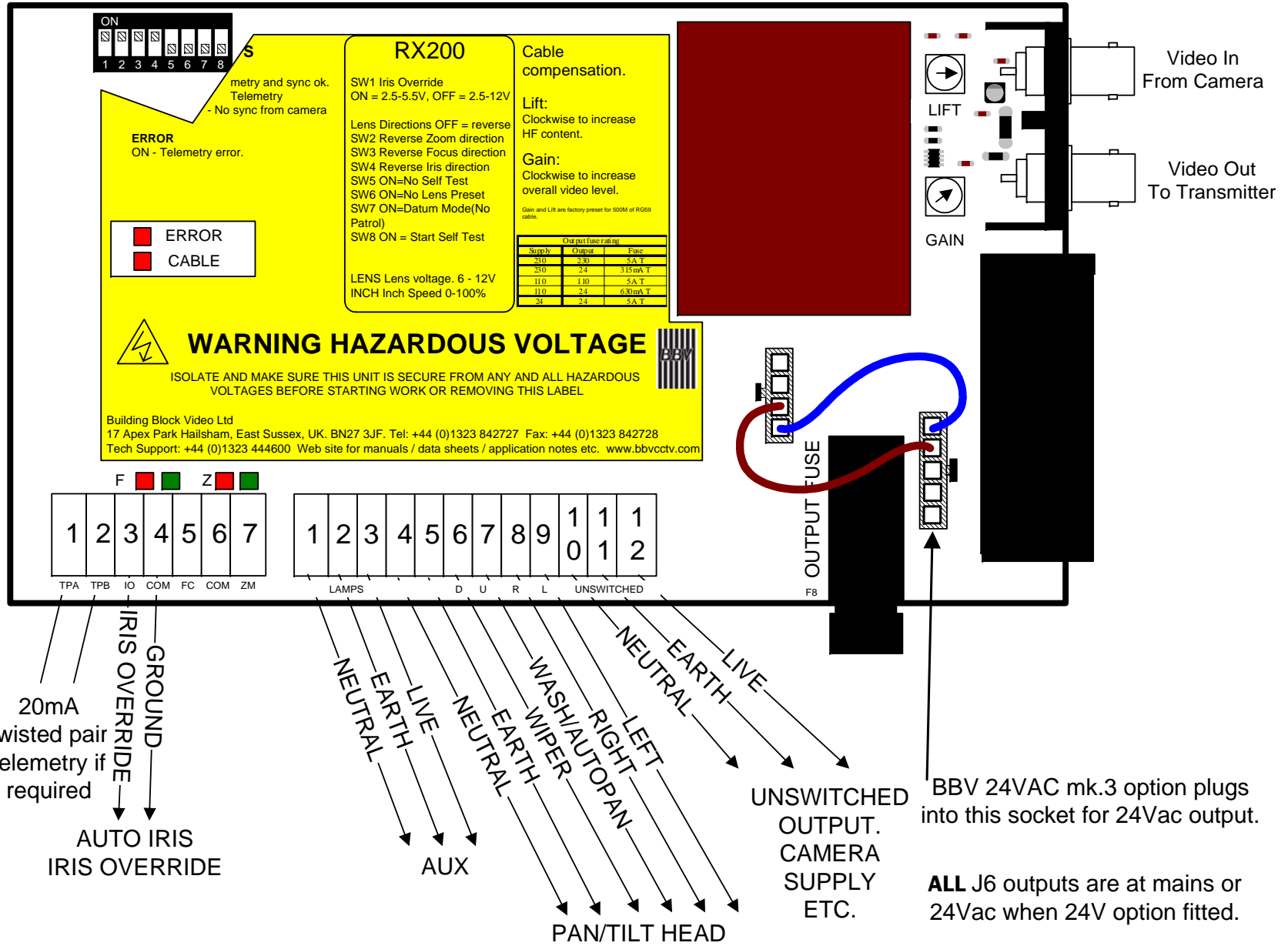


Fig 3 RX200 wiring diagram

RX200 INSTALLATION INSTRUCTIONS

All connections to the PCB must be via terminal blocks or by plug and socket. These connections are: power, video in, video out, and pan or auxiliary outputs. See table for correct connections:

Function	Connection
Camera Power Live	J6-12
Camera Power Ground	J6-11
Camera Power Neutral	J6-10
PAN LEFT (SWITCHED OUTPUT)	J6-9
PAN RIGHT (SWITCHED OUTPUT)	J6-8
WASH/AUTOPAN(SWITCHED OUTPUT)	J6-7
WIPER (SWITCHED OUTPUT)	J6-6
EARTH	J6-5
NEUTRAL	J6-4
LIGHTS LIVE (SWITCHED OUTPUT)	J6-3
LIGHTS EARTH	J6-2
LIGHTS NEUTRAL	J6-1
Auto Iris Override Ground	J3-4
Auto Iris Override	J3-3
20 mA Twisted Pair Connection	J3-2
20 mA Twisted Pair Connection	J3-1

Fig 4. Connections table

Connecting power

For mains voltage panning heads, the **110V ac or 230V ac** supply is made via the IEC socket J4.

When operating from a 24Vac supply, power connection is by means of a screw terminal replacing the IEC socket.

Setting your DIL switches:

Switch	On	Off
SW1	Unused	Unused
SW2 (Iris remote control features)	Cosmicar lens (2.5 – 5.5V)	Seiko/Video Technical lens (2.5 – 12V)
SW3	Select between WASHER or AUTOPAN (see table below)	
SW4		
SW5		
SW6		
SW7	Not used	
SW8	Activates self test	

Fig 5. Setting your DIL switches

SW3	SW4	Function
On	On	Washer
Off	Off	Autopan

Fig 6. Setting SW3 & SW4 DIL switches

Status LEDs

Error and cable LEDs are mounted on the board to give simple system status information. Their functions are as follows:

Cable LED

Regular Blinking - Telemetry and Sync signals OK

Blinking but mainly ON - No telemetry information from the transmitter

Blinking but mainly OFF - No sync information from the camera

What to do if your cable LED is OFF:

Check you have connected power to the RX200. If power is connected and the cable LED is still not on, please contact BBV technical support team (01323 444600)

Error LED

On - Transmission error (e.g. framing error, parity error)

Both LED's

Off - No power, or major PCB error

Note: As all BBV equipment is designed to auto tune and compensate for any discrepancies in the transmitter signal, there are no further adjustments that need to be made.

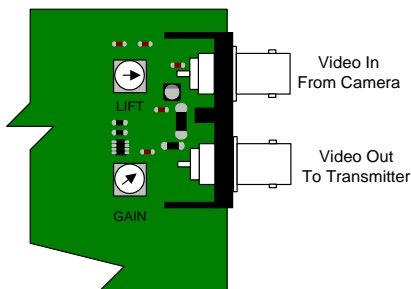
LAUNCH AMPLIFIER

There are two variable controls, Lift and Gain, situated close to the BNC connector J1. The purpose of each control is:

Lift: boosts the high frequency signal. Turn clockwise to increase HF content.

Gain: adjusts the gain of the video signal. Turn clockwise to increase overall video level.

These are pre-adjusted for a cable distance of 500m, and are adjustable to compensate for video detail or signal losses if and when longer or shorter cable lengths are used to connect the monitor to the receiver.



Default Position. For shorter cable lengths, turn the relevant control anti-clockwise until the required picture quality is obtained. For longer cable lengths, turn the relevant control clockwise until the required picture clarity is obtained.

ATTENTION: Ensure that the cable is terminated at the monitor end **ONLY**.

SELF TEST

The diagnostic and status check, is activated either locally from the PCB or remotely from a BBV keypad.

To activate the self test locally, turn SW8 ON momentarily. This activates each camera function for 2 seconds in turn.

The Cable LED should be on; ie either flashing or continuously. (If Cable LED is not on, please see the Status LED section of this manual on page ?)

The Error LED flashes at a two second rate during self test. (If the Cable LED fails to extinguish, then the unit is unable to self-tune and should be returned for repair.)

Order of function test:

PAN LEFT
PAN RIGHT
WIPER
WASHER/AUTOPAN
LIGHTS
Auto Iris Open
Auto Iris Close
Diagnostic Check Complete, unit resets and continues normal operation.

Fig 7 Self test sequence

Random Pan

The Random Pan feature allows the receiver to drive the head in a left or right direction at random for a random time. The head will pause for a random time between movements. Over a period of time, the head will move between the right and left end stops. This feature does not require an autopan card to be fitted to the head.

How to start Random Pan:

The Random Pan is started by issuing a PATROL 1 command from the telemetry controller. The key strokes required will vary depending upon the model of controller. Please refer to the controller handbook for details.

Retrofitting

When using 24V ac heads, if the receiver is operating from a 110V ac or 230V ac supply either a 230/24V ac kit or 110/24V ac kit is used. The jumper fitted to J5 is removed and the plug supplied with the kit is connected to J5. Fuse F2 is changed to the value shown in the Technical Specification.

INSTALLATION INSTRUCTIONS FOR PCB BASED RECEIVERS

WARNING: THIS EQUIPMENT MUST BE EARTHED.

1. **When mounting BBV receivers on metalwork, it is essential to maintain correct earthing**
2. **CORRECT CLEARANCE.** Metal spacers M3 x 10mm long should be used to mount the PCB on the metalwork. These should be earthed to ensure optimum performance. Spacers of the correct length will ensure that minimum air gaps are exceeded.
3. Use all of the mounting points to ensure adequate support with minimum flexing when connections are made to the unit. *See diagram.*
4. In case of queries, technical assistance is available on +44 (0)1323 444600.

Metalwork Drilling Details

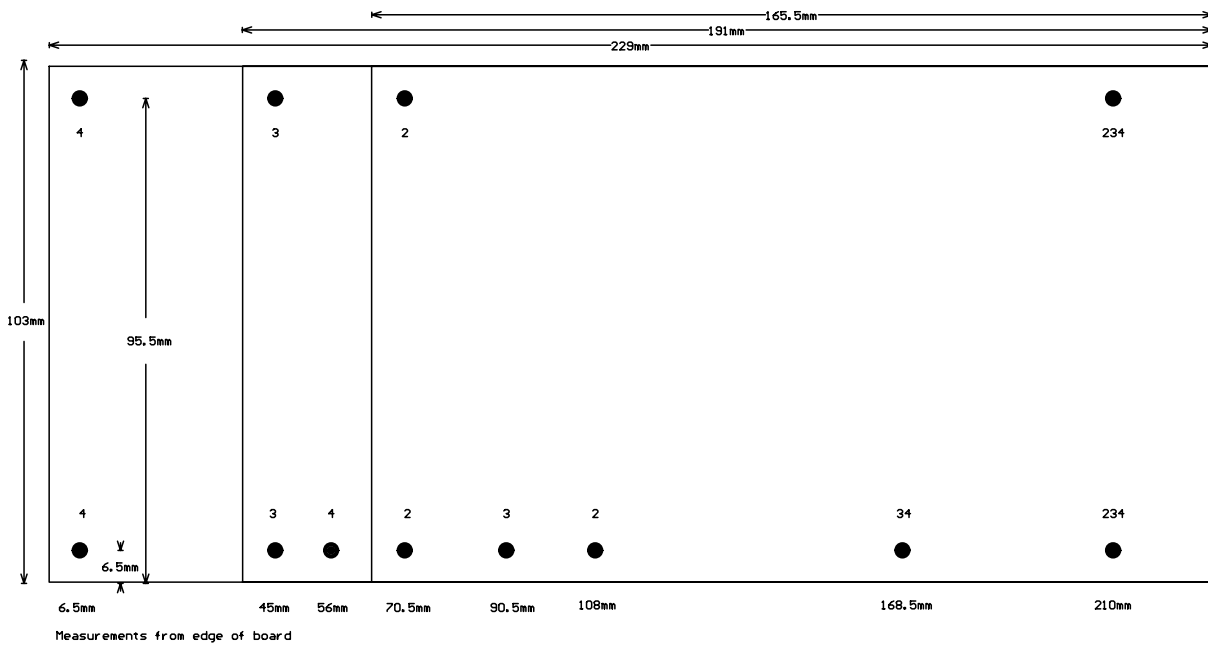


Fig 8. Metalwork drilling details (please note, this is not a template)

Extend your BBV Warranty from 12 months to 3 years

As of the 1st September 2008 BBV have offered our customers the opportunity to extend the standard 12 month warranty to 3 years.


You must register for the extended warranty within 12 months of the date of manufacture.

How to register for the 3 year warranty

Registering for the new, longer 3 year warranty term is quick and easy.

Either:

Complete the warranty application card that comes in the box with your BBV product, and return it FREEPOST to BBV:




BBV 3 Year Warranty

If this card is returned with the serial number of the product and the Installation company details BBV will extend the warranty period from 12 Months to 36 Months.

Number of Units, Start Serial No. Final Serial No.

Contact Name: _____
Company Name: _____
Phone Number: _____
Site Name: _____
Address 1: _____
Address 2: _____
Address 3: _____
Post Code: _____
e-mail address: _____

Please could you send me information especially on:
 Rx100s
 Rx45x & Rx55x
 FBM Video Matrices
 Tx1500 Video Matrices
 Starcard & Starcard Converters
 BBV Quad
 Pick A Point

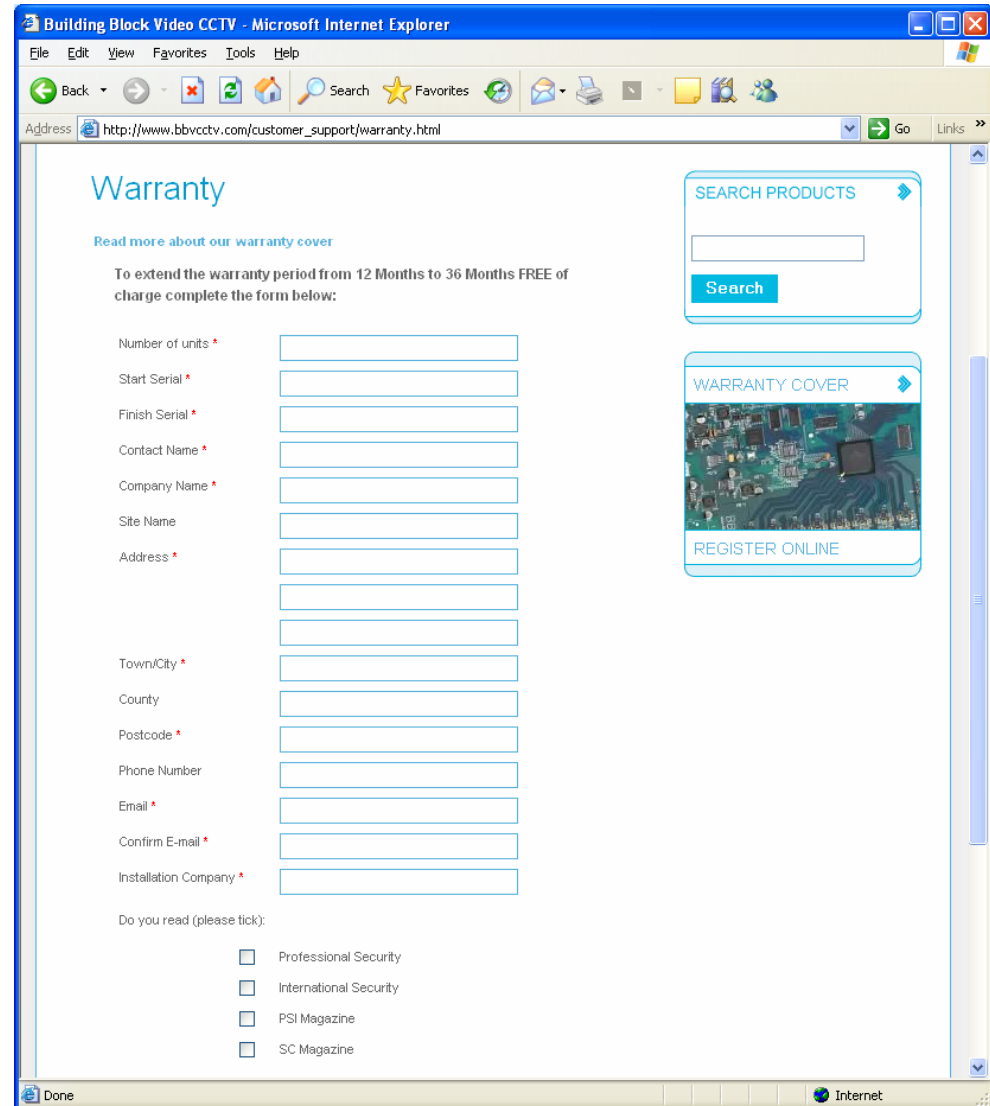
Do you read:  I do not require any other further product information.

Please refer to WWW.BBVCCTV.COM for terms, conditions & exclusions
VAT Reg. No. 621756439 Registered in England No. 2852921 Registered office: 17 Apex Park Diplocks Way Hailsham East Sussex UK BN27 3JU

Or alternatively:

Register online at: www.bbvctv.com

Simply enter your details on the 'Warranty Cover' page.



The screenshot shows a Microsoft Internet Explorer browser window displaying the BBV Warranty registration page. The address bar shows the URL: http://www.bbvctv.com/customer_support/warranty.html. The page title is "Warranty".

The main content area contains the following text: "Read more about our warranty cover" and "To extend the warranty period from 12 Months to 36 Months FREE of charge complete the form below:". Below this is a form with the following fields:

- Number of units *
- Start Serial *
- Finish Serial *
- Contact Name *
- Company Name *
- Site Name
- Address *
- Town/City *
- County
- Postcode *
- Phone Number
- Email *
- Confirm E-mail *
- Installation Company *

At the bottom of the form, there is a section titled "Do you read (please tick):" with four checkboxes:

- Professional Security
- International Security
- PSI Magazine
- SC Magazine

On the right side of the page, there is a "SEARCH PRODUCTS" box with a search input field and a "Search" button. Below it is a "WARRANTY COVER" box with a "REGISTER ONLINE" button and a small image of a circuit board.



Building Block Video Ltd

Tel: + 44 (0) 1323 842727

Fax: + 44 (0) 1323 842728

Support: + 44 (0) 1323 444600

www.bbvctv.com