Receiver Installation Guide

Rx550 Mk2 shown

Models covered RX450 mk2 and RX550 mk2

Rx450 Mk2 230Vac Panasonic RS485

(24Vac or main output – link selectable)

Rx550 Mk2 24Vdc Panasonic RS485

Telemetry receivers

Software Version 16

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.bbvcctv.com

1. PRE-INSTALLATION CHECKS AND SAFETY PROCEDURES

UNPACKING

Check Packaging - Upon taking delivery of the unit, inspect the packaging for signs of damage. If damage has occurred, advise the carriers and/or the suppliers immediately.

Check Contents - Upon taking delivery of the unit, unpack the receiver carefully and check that all the items are present and correct. If any items are missing or damaged, contact your equipment dealer.

Retain Packaging - The shipping carton is the safest container in which to transport the unit. Retain undamaged packaging for possible future use.

IMPORTANT SAFETY PRECAUTIONS

Read Instructions - All relevant safety, installation and operating instructions should be read before attempting to install, connect or operate the unit.

Retain Instructions - All safety, installation and operating instructions should be retained for future reference.

Heed Warnings - All warnings on the unit and in any relevant safety, installation or operating instructions should be adhered to.

Cleaning - Unplug the unit from the power outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Attachments - Do not use attachments not recommended by the product manufacturer as they may cause hazards.

Water and Moisture - Do not expose the internal electronics of this unit to water or dampness; for example, in an unprotected outdoor installation, or in any area classified as a wet location. The unit as supplied conforms to ingress protection rating IP 67. This rating will be affected by any holes made in the enclosure. Cable entry points should be protected by the use of suitably rated glands and/or flexible conduit. It is not necessary to make further holes in the enclosure for mounting purposes, as mounting holes are provided at the corners of the enclosure outboard of the seal between enclosure and lid.

Accessories - Do not attach this unit to an unstable stand, bracket or mount. The unit may fall, causing serious injury to a person and serious damage to the unit.

Power Sources - This unit should be operated only from the type of power source indicated on the manufacturer's label. If you are not sure of the type of power supply you intend to use, consult your equipment dealer or local power company. For units intended to operate from battery power or other sources, refer to operating instructions.

Power Connector - This unit is equipped with connector mounted at the edge of the PCB for mains power input. Do not attempt to alter this connector in any way.

Power Cord Protection - Power supply cords should be routed so that they are not likely to be trapped, pinched or otherwise damaged by items in close proximity to them, whether inside the unit or outside it. Particular attention should be paid to cords at plugs, connection units and the point of exit from the unit.

Overloading - Do not overload outlets and extension cords, as this can result in fire or electric shock.

Object and Liquid Entry - Never push objects of any kind into the unit, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill liquid of any kind on or inside the unit.

Servicing - Servicing of the unit should only be undertaken by qualified service personnel, as opening or removing covers may expose you to dangerous voltages or other hazards.

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 and will often require extensive work by a qualified technician to restore the unit to normal operation;
(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 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.

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 on the receiver.

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.

DO NOT OPERATE THE UNIT WITH ANY INTERNAL COVERS REMOVED. DANGEROUS VOLTAGES ARE PRESENT ON THE POWER SUPPLY. THE UNIT MUST ONLY BE SERVICED BY QUALIFIED PERSONNEL.

2. INTRODUCTION

GENERAL

The Rx450 is designed to control 24Vac/230Vac operated pan/tilt mechanisms and the Rx550 is designed to control 24Vdc high/variable speed heads from a Panasonic RS485 telemetry control system.

The receivers can be connected using either a daisy chained or star wired RS485 network depending upon the model of Panasonic controller used. 4 wired star wired telemetry is preferred.

The receiver is supplied in an IP67 rated enclosure. It will be necessary to make suitable holes in the enclosure to permit cable entry and exit. Adequately rated cable glands and or flexible conduit should be used at all times to avoid compromising the protection afforded by the enclosure as supplied. Any holes made in the enclosure for any other purpose should be sealed with a non-hardening waterproof sealant, taking care to ensure that the internal electronics are not contaminated. Enclosure mounting holes are provided at the corners of the enclosure outboard of the seal between enclosure and lid.

3. Rx450 Technical Specification

Power Requirements 230Vac/110Vac solder link selectable or 24Vac as special from factory

Max Load 5A @ 230V (1150 W)

Receiver Current Draw 24VA max

Fuses Auxiliary fuse F2 5A T (20mm cartridge)

Outputs 8 single pole relays (snubbed)

1. Left Motor
2. Right Motor
3. Up Motor
4. Down Motor
5. Autopan (Interlocked with Pan)
6. Lights (1000W max)
7. Wash
8. Wipe

Facilities LED readout for continual system status.
Programming menu with On Screen Display.

REMOTELY ADJUSTABLE

Video launch amplifier provided with cable length adjustment
12Vdc/750mA camera power provided.
Colour coded outlets – live, neutral, earth and low voltage.

Telemetry Signal 2 or 4 wire Panasonic RS485

Auto Iris Output Returns to original setting 15 seconds after key release. Level programmable from controller.

Video Input 1v p-p 75Ω terminated input via BNC socket.

Video Output 1v to 4v p-p 75Ω impedance via BNC socket.

Lens Drive
REMOTELY ADJUSTABLE

Adjustable via menu between 6 – 12Vdc. Inching speed selectable via menu between 0 – 12Vdc. 1 second inching built in. Provides drive for Zoom & Focus. Each lens drive carries red and green LEDs to indicate direction and drive voltage.

Presets Inputs are provided for pan, tilt, zoom & focus preset feedback pots. These are 10 bit resolution. Up to 32 full-scene presets can be stored within the receiver, i.e. pan, tilt, zoom, focus.

Other Outputs RS485 Serial port available to drive advance features on selected cameras.

Additional Information Autopan or Random Pan
Sequential preset patrol. The preset dwell is programmable individually.
Datum - return to preset 1 after programmable duration of inactivity, start a preset patrol or start random pan.
Iris output - either direct drive for 3 motor lens or Autoiris override voltage for Seiko/Cosmicar lenses etc.
8 alarm inputs, volts free normally closed contacts. A single opening volts free contact sums the alarms either immediately or as the preset is approached. If a video transmission system is activated with the alarm output, then setting the alarm to delayed prevents unwanted frames being transmitted.

Boxed Dimensions Width: 380mm, Length: 190mm, Height: 130mm

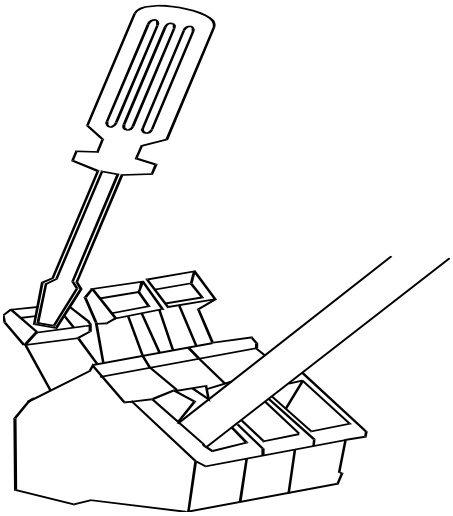
Options 24Vac/230Vac output is link selectable with link J3

Rx550 Technical Specification

Power Requirements	230Vac/110Vac solder link selectable or 24Vac as special from factory
Max Load	5A @ 230V (1150 W)
Receiver Current Draw	400VA max (including driving pan/tilt at approx 2A per axis)
Fuses	Auxiliary fuse F2 5A T (20mm cartridge)
Outputs	Linear 0-24Vdc output for pan & tilt motor drive Switched 24Vdc output to drive motor brakes. Lens drive adjustable between 5-12Vdc 150mA max Switched AC output to drive Wash/Wipe/Lights(1000W max)
Facilities	LED readout for continual system status. Programming menu with On Screen Display.
REMOTELY ADJUSTABLE	Video launch amplifier provided with cable length adjustment 12Vdc/750mA camera power provided. Colour coded outlets – live, neutral, earth and low voltage.
Telemetry Signal	2 or 4 wire Panasonic RS485
Auto Iris Output	Returns to original setting 15 seconds after key release. Level programmable from controller.
Video Input	1v p-p 75Ω terminated input via BNC socket.
Video Output	1v to 4v p-p 75Ω impedance via BNC socket.
Lens Drive ***REMOTELY ADJUSTABLE***	Adjustable via menu between 6 – 12Vdc. Inching speed selectable via menu between 0 – 12Vdc. 1 second inching built in. Provides drive for Zoom & Focus. Each lens drive carries red and green LEDs to indicate direction and drive voltage.
Presets	Inputs are provided for pan, tilt, zoom & focus preset feedback pots. These are 10 bit resolution. Up to 32 full-scene presets can be stored within the receiver, i.e. pan, tilt, zoom, focus for each preset.
Other Outputs	RS485 Serial port available to drive advance features on selected cameras.
Additional Information	Autopan or Random Pan Sequential preset patrol. The preset dwell is programmable individually. Datum - return to preset 1 after programmable duration of inactivity, start a preset patrol or start random pan. Iris output - either direct drive for 3 motor lens or Autoiris override voltage for Seiko/Cosmicar lenses etc. 8 alarm inputs, volts free normally closed contacts. A single opening volts free contact sums the alarms either immediately or as the preset is approached. If a video transmission system is activated with the alarm output, then setting the alarm to delayed prevents unwanted frames being transmitted.
Boxed Dimensions	Width: 380mm, Length: 190mm, Height: 130mm
Options	24Vac/230Vac auxiliary outputs are link selectable with link J3

CABLE CONNECTION METHOD

Cage clamp connectors



The cage clamp connector is a simple-to-use method of attaching cables to PCBs quickly and easily. Prepare cables as follows:

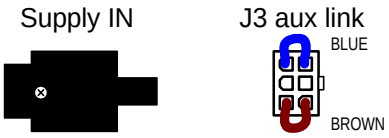
1. Use only cable between 0.08 and 2.5 mm²
2. Strip the cable to a length of 5 to 6 mm (0.23 in)

The correct method of attachment is as follows:
1. Press down the relevant terminal block lever with a suitable screwdriver;
2. Insert wire;
3. Remove screwdriver.

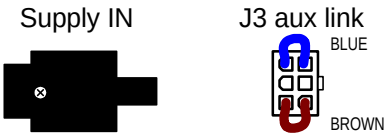
The procedure for detaching wires is the reverse of the 3 attachment steps, ensuring that **power is disconnected** before starting.

BBV RX450 - RX550 SERIES RECEIVER SUPPLY OPTIONS AND LINKS

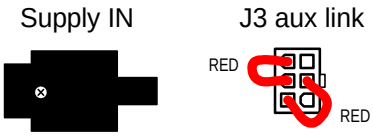
230Vac IN - 230Vac OUT



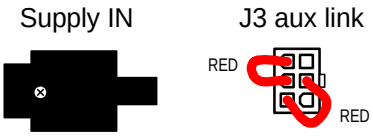
110Vac IN - 110Vac OUT (SEE MODIFICATION BELOW)



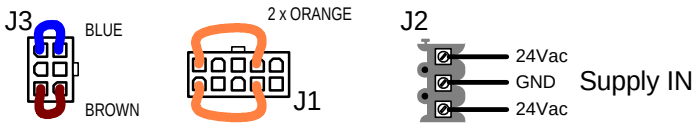
230Vac IN - 24Vac OUT



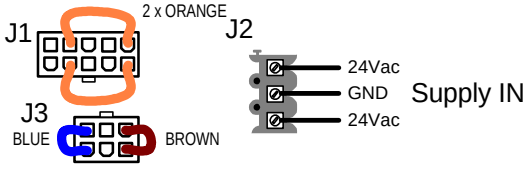
110Vac IN - 24Vac OUT (SEE MODIFICATION BELOW)



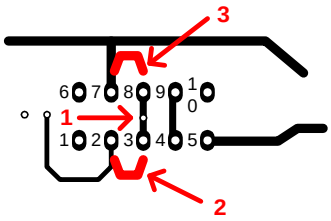
24Vac IN - 24Vac OUT RX450 Mk 2 SERIES (BBV Factory option only)



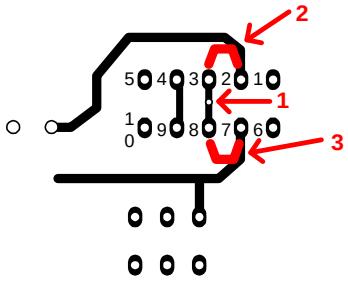
24Vac IN - 24Vac OUT RX550 Mk 2 SERIES (BBV Factory option only)



How to modify the receiver for 110Vac input.

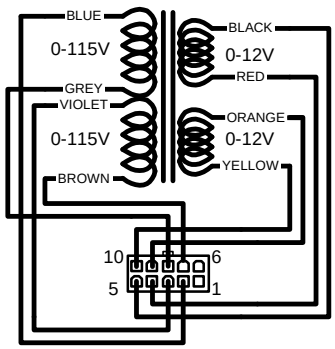


RX450 Mk2 SERIES SOLDER SIDE VIEW OF J1



RX550 Mk2 SERIES SOLDER SIDE VIEW OF J1

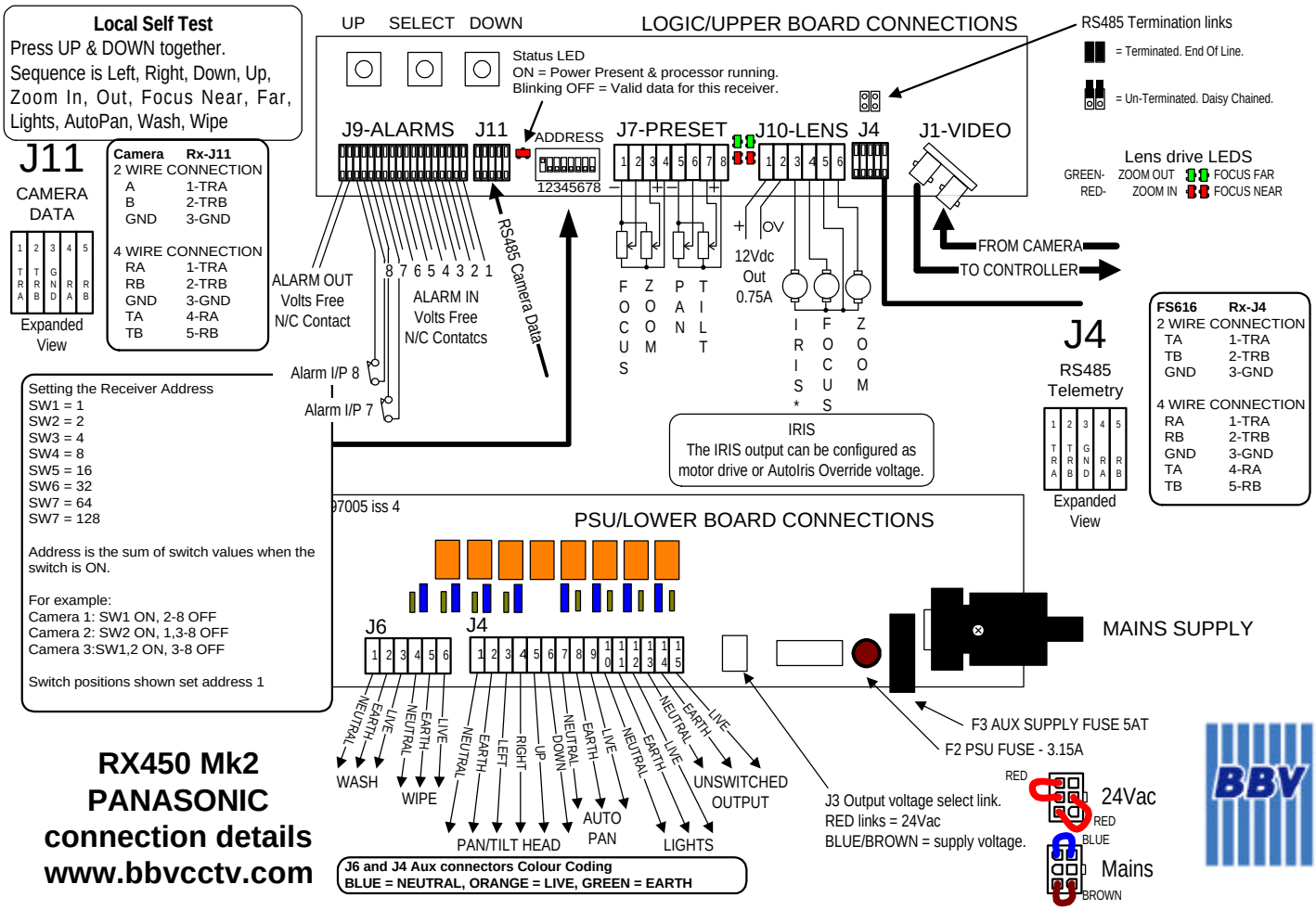
1. BREAK THE TRACK BETWEEN PIN 3 and 8 BY DRILLING OUT THE CENTRE HOLE
2. SOLDER WIRE LINK BETWEEN PIN 2 and 3.
3. SOLDER WIRE LINK BETWEEN PIN 7 and 8.



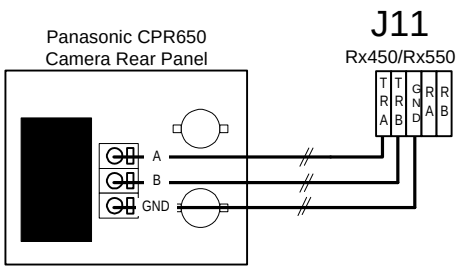
WIRING DETAILS
24V 100VA TOROIDAL TRANSFORMER

3. INSTALLATION

RX450 AC connection Details

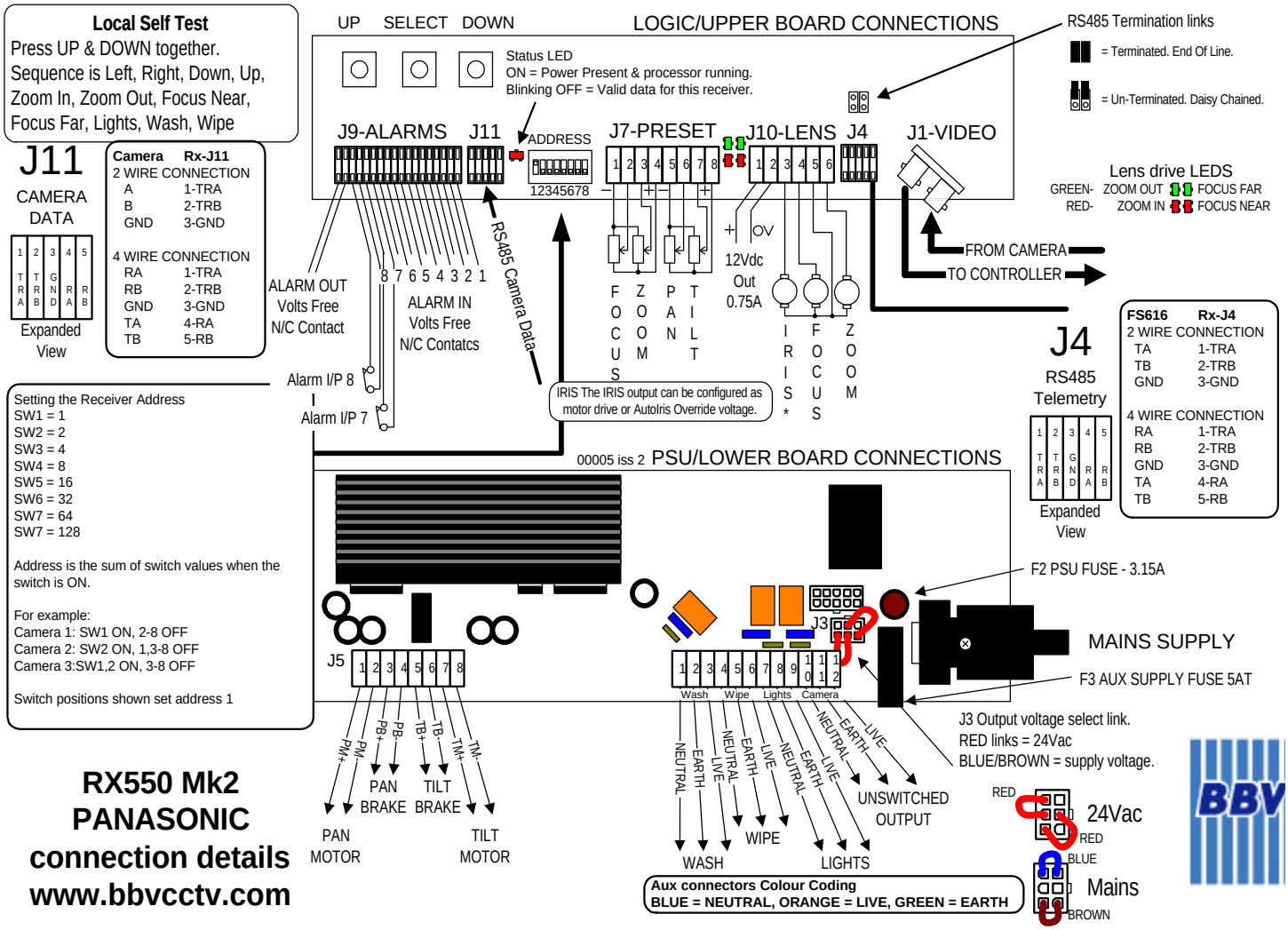


As shipped, the auxiliary and head drive outputs are set to 24Vac with the RED linked plug fitted to J3. To set the outputs to the same voltage as the receiver supply remove the red plug and replace with the plug with the BROWN and BLUE links as shown above.



Connecting Rx550 to Panasonic CPR650 Camera

RX550 24Vdc connection Details



As shipped, the auxiliary outputs are set to 24Vac with the RED linked plug fitted to J3. To set the outputs to the same voltage as the receiver supply remove the red plug and replace with the plug with the BROWN and BLUE links as shown above.

Table showing the polarity of pan/tilt head and lens outputs. Use in conjunction with head/lens manual to determine correct wiring. Ensure that the pan/tilt motor and brake wiring is correct and NOT crossed before powering up the receiver as damage could be caused.

Pin J5	Pan LEFT RED	Pan RIGHT GREEN
PM+	+ve	0v
PM-	0v	+ve
PB+	+ve	0v
PB-	0v	+ve

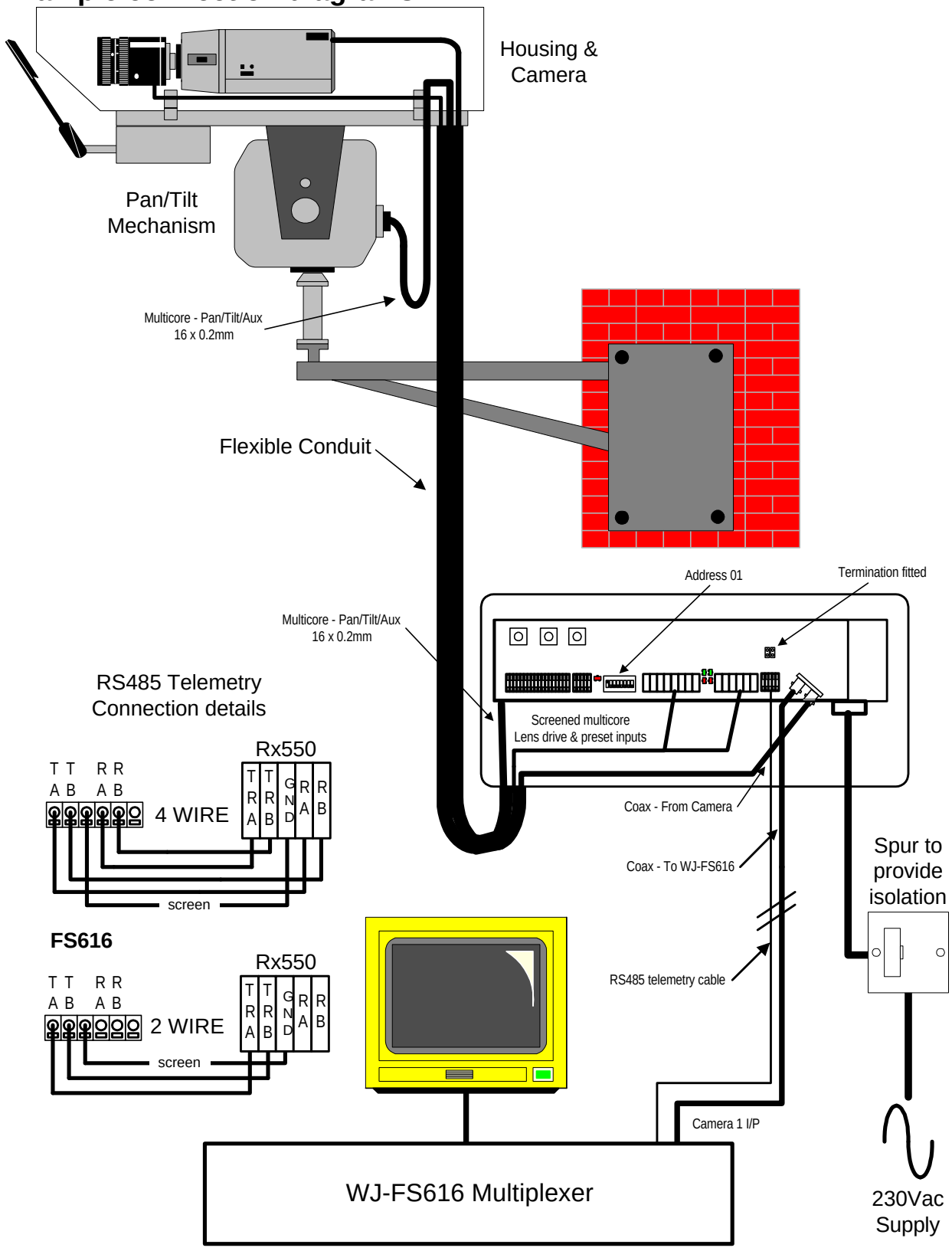
Pin J5	Tilt UP RED	Tilt DOWN GREEN
TM+	+ve	0v
TM-	0v	+ve
TB+	+ve	0v
TB-	0v	+ve

Pin J10	Zoom IN RED	Zoom OUT GREEN
ZM	-ve	+ve

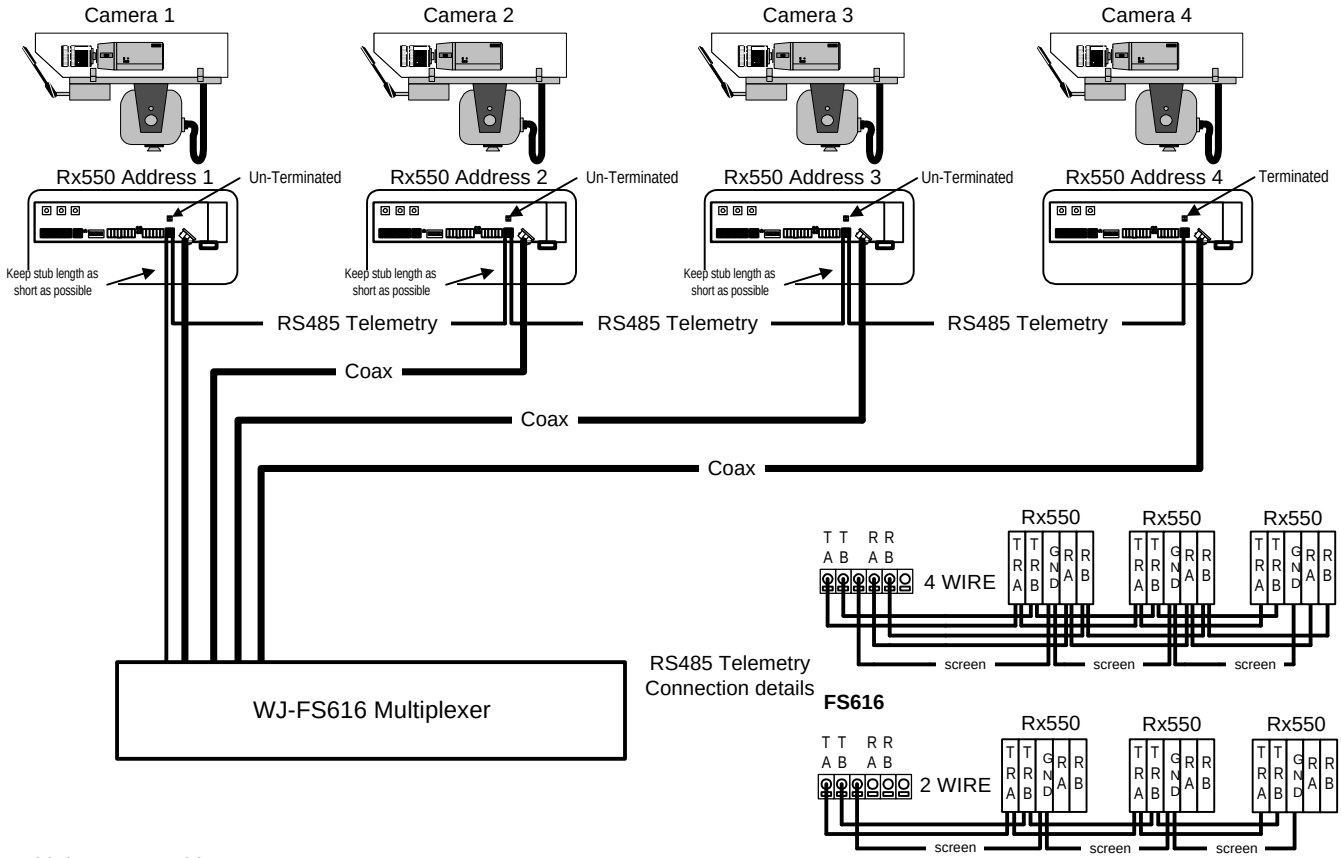
Pin J10	Focus FAR GREEN	Focus NEAR RED
FC	-ve	+ve

Pin J10	Iris OPEN	Iris CLOSE
IR	-ve	+ve

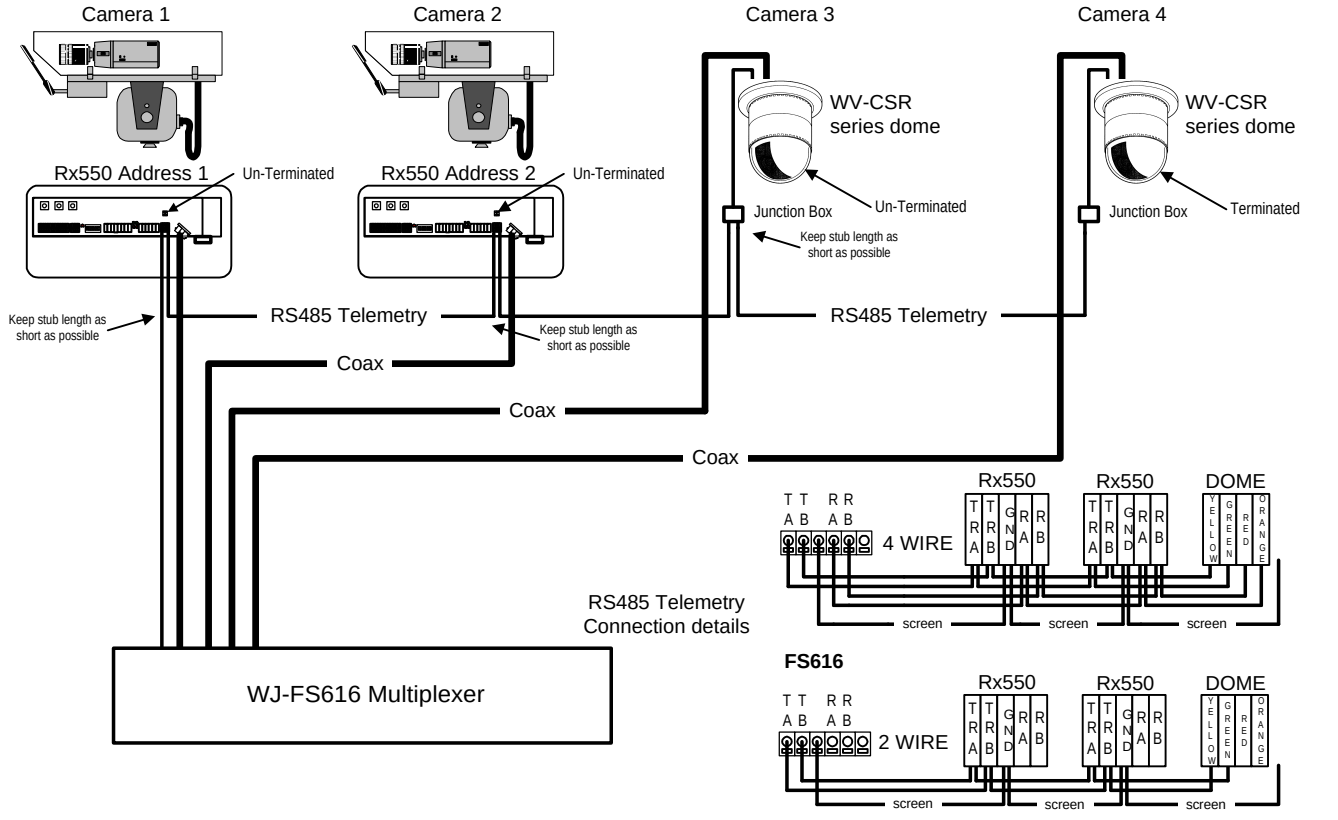
Example connection diagrams.



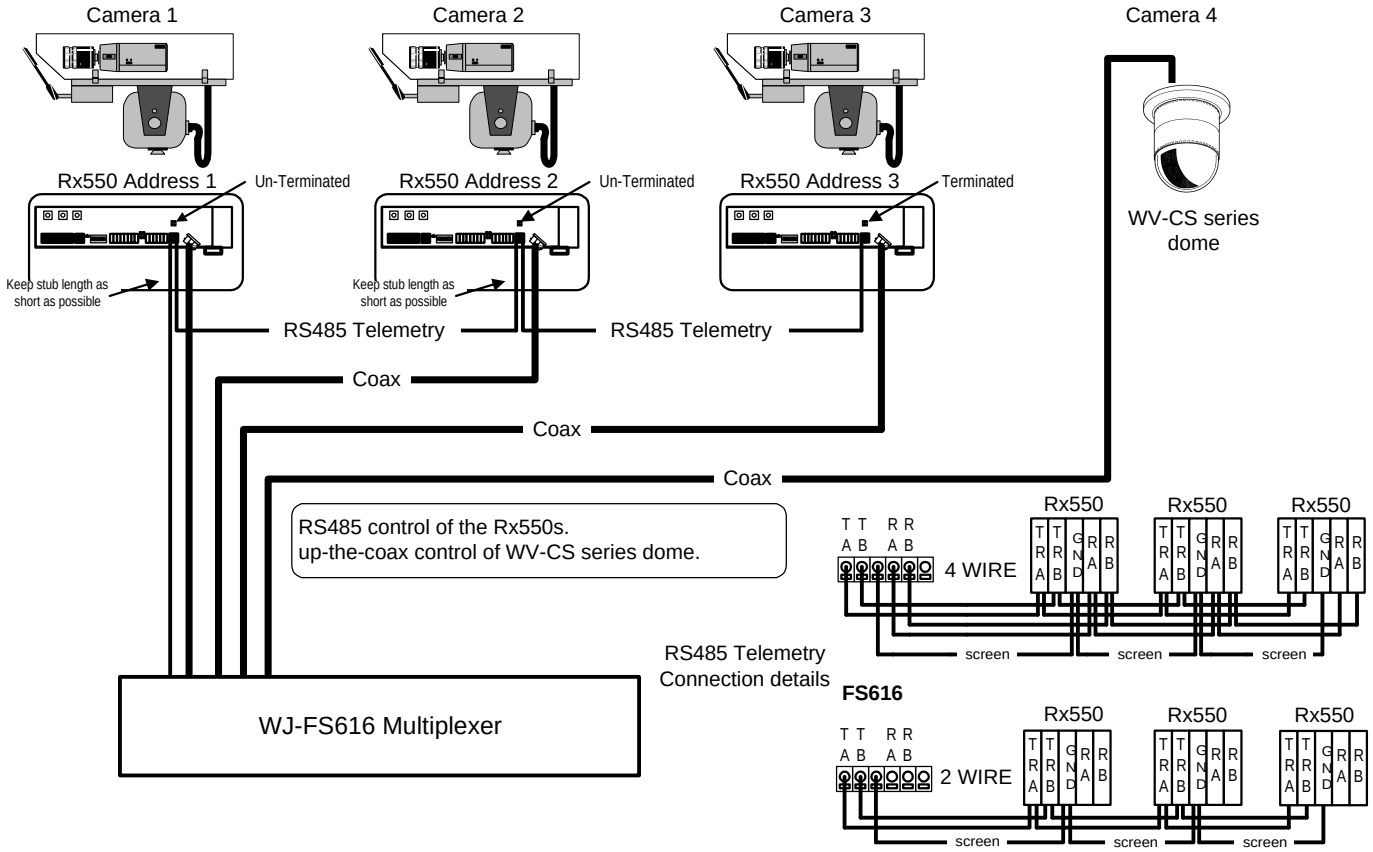
Single Rx550 with WJ-FS616



Multiple Rx550 with WJ-FS616



Multiple Rx550 and RS485 controlled domes with WJ-FS616



Multiple Rx550 and up-the-coax controlled dome with WJ-FS616

Notes:

When using a daisy chained RS485 system, the stubs must be kept as short as possible and no longer than 25cm. Intermittent and/or sluggish control can be the result of excessive stub lengths.

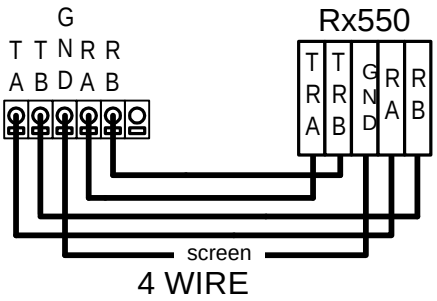
The receiver comprises of two pcbs mounted above an enclosed psu. The low voltage logic board is the top board whilst the 24Vdc head output and AC connections are on the middle board.

The low voltage connection can now be made to the logic board.

Each receiver on a network must have a unique address. The following table shows the switch settings for receiver address 1 - 32. The receiver can be addressed from 1 – 255.

ADDRESS	SW1 (1)	SW2 (2)	SW3 (4)	SW4 (8)	SW5 (16)	SW6 (32)	SW7 (64)	SW8 (128)
DONT USE	off	off	off	off	off	off	off	off
1	**ON**	off	off	off	off	off	off	off
2	off	**ON**	off	off	off	off	off	off
3	**ON**	**ON**	off	off	off	off	off	off
4	off	off	**ON**	off	off	off	off	off
5	**ON**	off	**ON**	off	off	off	off	off
6	off	**ON**	**ON**	off	off	off	off	off
7	**ON**	**ON**	**ON**	off	off	off	off	off
8	off	off	off	**ON**	off	off	off	off
9	**ON**	off	off	**ON**	off	off	off	off
10	off	**ON**	off	**ON**	off	off	off	off
11	**ON**	**ON**	off	**ON**	off	off	off	off
12	off	off	**ON**	**ON**	off	off	off	off
13	**ON**	off	**ON**	**ON**	off	off	off	off
14	off	**ON**	**ON**	**ON**	off	off	off	off
15	**ON**	**ON**	**ON**	**ON**	off	off	off	off
16	off	off	off	off	**ON**	off	off	off
17	**ON**	off	off	off	**ON**	off	off	off
18	off	**ON**	off	off	**ON**	off	off	off
19	**ON**	**ON**	off	off	**ON**	off	off	off
20	off	off	**ON**	off	**ON**	off	off	off
21	**ON**	off	**ON**	off	**ON**	off	off	off
22	off	**ON**	**ON**	off	**ON**	off	off	off
23	**ON**	**ON**	**ON**	off	**ON**	off	off	off
24	off	off	off	**ON**	**ON**	off	off	off
25	**ON**	off	off	**ON**	**ON**	off	off	off
26	off	**ON**	off	**ON**	**ON**	off	off	off
27	**ON**	**ON**	off	**ON**	**ON**	off	off	off
28	off	off	**ON**	**ON**	**ON**	off	off	off
29	**ON**	off	**ON**	**ON**	**ON**	off	off	off
30	off	**ON**	**ON**	**ON**	**ON**	off	off	off
31	**ON**	**ON**	**ON**	**ON**	**ON**	off	off	off
32	off	off	off	off	off	**ON**	off	off

RS485 Telemetry
Connection details



The RS485 telemetry data can operate over either 2 or 4 wire cable. The following diagram shows cable connections for 4 wire mode.

Ensure that the receiver is set to the same baud rate as the controller. The receiver default setting is 9600 baud. The receiver baud rate is set on the **BAUD RATE** line of the **MAIN/RECEIVER/COMMUNICATIONS/MENU**.

BBV recommend that 4 wire telemetry is used running at 9600 baud

4. SETUP

DIAGNOSTIC AIDS

A single diagnostic LED labelled POWER provides indication of presence of power and also data from the multiplexer.

When the receiver is powered, the LED illuminates.

The LED will blink when the receiver has received correct telemetry data with the same address as the DIP switch address. If the telemetry data is invalid or the data is addressed to another device, the LED will remain illuminated.

Additional diagnostic aids are available in the receiver's **MAIN/RECEIVER/DIAGNOSTICS** menu. (see later)

CABLE LENGTH COMPENSATION

The receiver incorporates a remotely adjustable high quality launch amplifier to compensate for video cable losses over extended cable distances.

The gain of the launch amplifier can be adjusted in the receiver **LAUNCH AMP GAIN** line of the **MAIN/RECEIVER/OPTIONS** menu. The gain can be varied from 0 - 255, the higher the number, the higher the gain. The default value is 4. As the amplifier gain is increased, high frequency lift is also increased.

SELF-TEST AND DIAGNOSTIC SEQUENCE

The diagnostic system and status check, which will activate each receiver function for two seconds in turn, is activated by selecting **SELF TEST** from the receiver **MAIN/RECEIVER/TEST** menu. The self test can also be activated by pressing both the **UP** and **DOWN** buttons on the receiver top pcb simultaneously, allowing local self test of a stand alone receiver. (Please refer to earlier diagram for button positions).

The receiver OSD displays the self test progress with two status lines as shown below.

FUNCTION ← this line will show the current function being driven.

Pxxxx Txxxx Zxxxx Fxxxx ← the xxxx indicate preset pot values for pan, tilt, zoom and focus. Each value should change smoothly as the corresponding function is driven.

Functions:	**Active output**
PAN LEFT	J7/PM+/- PB+/-
PAN RIGHT	J7/PM+/- PB+/-
TILT DOWN	J7/TM+/- TB+/-
TILT UP	J7/TM+/- TB+/-
ZOOM IN	J10/ZM
ZOOM OUT	J10/ZM
FOCUS NEAR	J10/FC
FOCUS FAR	J10/FC
AUX LAMPS	J6/LAMPS
AUX WASHER	J6/WASH
AUX WIPER	J6/WIPE
Diagnostic check complete, receiver will reset and continue normal operation.	

During the self test, the presence and sense of each preset input is recorded. The status of each preset is displayed on the **AXIS FLAGS** line of the **MAIN/RECEIVER/DIAGNOSTICS** menu. **P**, **T**, **Z** and **F** will be displayed if the Pan, Tilt, Zoom or Focus preset have been found.

PROGRAMMING THE RECEIVER

An easy to use menu structure allows programming of the receiver's advanced features. The menu can be accessed either local to the receiver using the three push buttons on the receiver logic pcb or remotely using a Panasonic telemetry controller.

The three buttons on the receiver logic board allow navigation through the menu structure. Pressing the **SELECT** button displays the **MAIN MENU**. Pressing the **UP** and **DOWN** buttons move the flashing highlight up or down. Pressing **SELECT** again allows the selected sub menu to be displayed or a value to be changed. To exit the menu structure, select **EXIT** from the **MAIN MENU**. The receiver will now reset and resume normal operation.

The receiver menu can also be accessed remotely using the Panasonic controller by using the procedure used to access a camera or dome setup menu. The exact operation will vary depending upon the model of Panasonic controller used however for the FS616 multiplexer press and hold the SETUP/ESC key then tap the camera number corresponding to the receiver. The UP and DOWN keys move the flashing highlight up and down whilst the LEFT or RIGHT key is used as the select key. When the receiver menu is accessed remotely, the RECEIVER menu does not display the EXIT line. To exit from the receiver menu again use the key strokes that correspond to camera/dome menu exit. With the FS616 press and hold the FUNCTION key and tap the SETUP/ESC key.

The receiver menu structure is shown on the following pages.

RECEIVER MENU STRUCTURE/RX550 VERSION SHOWN

```
RX550DC MAIN MENU

CAMERA

RECEIVER




EXIT
```

Notes:
Navigation: UP and DOWN to move selected line. LEFT or RIGHT is used to either select the submenu or cycle options.
NEXT will display the next screen of multi-screen menus and BACK will display the previous screen.
RETURN will display the previous menu.
EXIT quits the receiver programming allowing normal operation.

RECEIVER

```
RX550DC RECEIVER MENU

COMMUNICATIONS
PRESETS
ALARMS
OPTIONS
DIAGNOSTICS
DEFAULTS
TEST MENU

RETURN
```

COMMUNICATIONS

```
RX550DC COMMS MENU

BAUD RATE       9600
CONTROL DATA    4 WIRE
CAMERA DATA     2 WIRE
DELAY TIME      OFF

MENU UNLOCK     LOCKED

RETURN
```

PRESETS

```
RX550DC PRESET MENU

PATROL DWELL    OM 5
DISPLAY PAT     YES
PRESET NUMBER   1
  DELETE ?      ACTIVE
  PATROL A INC  IN
  INDIVID DWELL NA

RETURN
```

ALARMS

```
RX550DC ALARM MENU 1

ALARM 1         ON
ALARM 2         ON
ALARM 3         ON
ALARM 4         ON
ALARM 5         ON
ALARM 6         ON
ALARM 7         ON
ALARM 8         ON
NEXT
```

OPTIONS

```
RX550DC OPTIONS MENU

LAUNCH AMP GAIN 4
MAIN LENS VOLTS 12V0
INCH LENS VOLTS 12V0
IRIS TYPE       MOTOR
DC IRIS LEVEL   NA
ZOOM FOCUS IRIS N N N
DATUM DELAY     OM 0
WASH DELAY SECS 5
NEXT
```

DIAGNOSTICS

```
RX550DC DIAGNOSTICS

VERSION NO      1
AXIS FLAGS      PTZF
MAX TEMP        23
DISPLAY POTS    OFF
RESETS          3
WATCHDOGS       0
HOURS USE       2
PRESET CALLS    134
RETURN
```

DEFAULTS

```
RX550DC DEFAULTS MENU


RESET RECEIVER

CLEAR ALL PRESETS




RETURN
```

TEST MENU

```
RX550DC TEST MENU

SELF TEST
LENS OFFSET     12


MOTOR OPTIONS

NET TRAFFIC     ON

RETURN
```

PATROL DWELL

```
PATROL DELAY

MINUTES  0 SECONDS  5
```

NEXT

```
RX550DC ALARM MENU 2

DISPLAY ALARM   ON
DELAYED ALARM   OFF




BACK        RETURN
```

LAUNCH AMP GAIN

```
LAUNCH AMP SETTING

4
```

AXIS FLAGS

```
RX550DC AXIS LOCKED

PAN          PRESENT
TILT         PRESENT
ZOOM         ABSENT
FOCUS        ABSENT
PAN DIR      NORMAL
TILT DIR     REVERSED
ZOOM DIR     NORMAL
FOCUS DIR    NORMAL
RETURN  DO NOT ALTER
```

RESET RECEIVER

```
RX550DC DEFAULTS

ARE YOU SURE
RESET RECEIVER




CANCEL
```

LENS OFFSET

```
LENS STOP       12
```

PRESET NUMBER

```
ACTIVE PRESET    1
```

MAIN LENS VOLTS

```
LENS HIGH SPEED

12V0
```

CLEAR ALL PRESETS

```
ARE YOU SURE
CLEAR PRESETS




CANCEL
```

MOTOR OPTIONS

```
RX550DC MOTOR OPTIONS

MAX PAN         255
MIN PAN          15
MAX TILT        255
MIN TILT         50

MAX PRE PAN     255
MAX PRE TILT    255

RETURN
```

DELETE

```
CHECK DELETE

ARE YOU SURE
DELETE PRESET




CANCEL
```

INCH LENS VOLTS

```
LENS INCH SPEED

 6V0
```

INDIVID DWELL

```
PRESET DELAY IN PATROLA

  MINUTES  0 SECONDS  0
```

ZOOM FOCUS IRIS

```
RX550DC LENS DRIVE

ZOOM            NORMAL
FOCUS           NORMAL
IRIS            NORMAL




RETURN
```

DATUM DELAY

```
PATROL DELAY

MINUTES  0 SECONDS  0
```

NEXT

```
RX550DC OPTIONS MENU 2

RAND PAN DELAY  1

DISPLAY AUX OSD DISP
TEXT ON LINE    10




BACK        RETURN
```

The RX450 structure is similar but doesn't have the motor speed options as the motor speed is set by the internal gearing of the head.

THE RECEIVER MENU SYSTEM IN DETAIL

Please refer to the menu structure on the previous page to help navigation through the menu structure.

COMMUNICATIONS

RX550DC COMMS MENU		
BAUD RATE	**9600**	RS485 baud rate 1200/2400/4800/**9600**/19200
CONTROL DATA	**4 WIRE**	2 WIRE/**4 WIRE** RS485 network from Panasonic controller
CAMERA DATA	**4 WIRE**	**2 WIRE**/4 WIRE RS485 to camera port
DELAY TIME	**OFF**	TX/RX delay 10/20/40/100mS/**OFF** for use with RF links etc
MENU UNLOCK	**LOCKED**	Must be set to UNLOCKED to allow setting of above
RETURN		Return to RECEIVER menu

PRESETS

RX550DC PRESET MENU		
PATROL DWELL	**OM 5**	Dwell in minutes & seconds during preset patrol
DISPLAY PAT	**YES**	Display preset number during patrol (**YES**/NO)
PRESET NUMBER	**1**	Toggle current preset (1 - 32)
DELETE ?	**ACTIVE**	Delete current preset, DEL if preset not present
PATROL A INC	**IN**	Include preset in patrol (**IN**/OUT)
INDIVID DWELL	**NA**	Override patrol dwell for this preset minutes & seconds
RETURN		Return to RECEIVER menu

ALARMS

RX550DC ALARM MENU 1		
ALARM 1	**ON**	Each local alarm input can be disable or enabled
ALARM 2	**ON**	individually.
ALARM 3	**ON**	Setting to OFF disables the alarm input
ALARM 4	**ON**	and setting to ON enables the alarm input
ALARM 5	**ON**	
ALARM 6	**ON**	
ALARM 7	**ON**	
ALARM 8	**ON**	
NEXT		Display the ALARM MENU 2

NEXT

RX550DC ALARM MENU 2

DISPLAYED ALARM ON	Receiver displays ALARM message when alarm active if ON
DELAYED ALARM OFF	**OFF**/ON. When set to ON, the alarm message is generated as the head approaches it's preset position to prevent a triggered video transmission system from sending 'blurred' frames. When set to OFF, the alarm output is active as soon as an alarm occurs.
BACK RETURN	BACK displays ALARM 1 and RETURN displays RECEIVER menu

OPTIONS

RX550DC OPTIONS MENU

LAUNCH AMP GAIN 4	Coax cable compensation 0-255, 255 = maximum gain
MAIN LENS VOLTS 12V0	Lens drive voltage 3-12V, set to suite lens
INCH LENS VOLTS 12V0	Set the drive voltage for first second of travel.
IRIS TYPE MOTOR	Set lens iris type for autoiris override or 3 motor lens
DC IRIS LEVEL NA	Sets iris voltage range for Seiko or Cosmicar lens
ZOOM FOCUS IRIS N N N	Allow each lens function to be reversed
DATUM DELAY OM 0	Time in minutes/seconds to return to preset 1, 0=never
WASH DELAY SECS 5	Seconds that WASH output is active following WIPE
NEXT	Display the OPTIONS MENU 2

NEXT

RX550DC OPTIONS MENU 2

RAND PAN DELAY 1	Random pan delay,1=fast,10=slow,0=AUTOPAN which requires an optional card within the pan/tilt head.
DISPLAY AUX OSD DISP	DISP/HIDE: Display or Hide auxilliary output status
TEXT ON LINE 10	1-10. Position of status on screen, 1=top,10=bottom
BACK RETURN	BACK to OPTIONS 1 or RETURN to RECEIVER MENU

DIAGNOSTICS

RX550DC DIAGNOSTICS

VERSION NO 1	Receiver software version
AXIS FLAGS PTZF	Indication of preset input status - see AXIS FLAGS below
MAX TEMP 23	Maximum internal enclosure temperature in deg C
DISPLAY POTS OFF	Display preset pot values.Useful during diagnosis work
RESETS 3	Number of receiver power-ups.Useful diagnosis tool
WATCHDOGS 0	Number of processor watchdogs(supply glitches)
HOURS USE 2	Hours receiver powered
PRESET CALLS 134	Number of preset calls
RETURN	RETURN to RECEIVER MENU

AXIS FLAGS

```
RX550DC AXIS LOCKED

PAN           PRESENT
TILT          PRESENT
ZOOM          ABSENT
FOCUS         ABSENT
PAN DIR       NORMAL
TILT DIR      REVERSED
ZOOM DIR      NORMAL
FOCUS DIR     NORMAL
RETURN  DO NOT ALTER
```

Toggle to UNLOCK to alter settings.
During a self test, the receiver senses the presence and direction of preset input voltages. Should the receiver incorrectly sense the presence or direction then this menu allows manual setting. Toggle between PRESENT/ABSENT to enable/disable presets for each movement axis. The direction can be toggled between NORMAL or REVERSED if the head/lens drives in the wrong direction during a preset call.
Please use with caution to prevent mis-operation.
RETURN to DIAGNOSIS MENU

DEFAULTS

```
RX550DC DEFAULTS MENU


RESET RECEIVER

CLEAR ALL PRESETS




RETURN
```

These two items should be used with extreme caution!

Set receiver to factory defaults. All preset/patrol settings etc will be cleared.

Erase ALL preset positions only.

A second menu will be displayed to display an ARE YOU SURE message!

RETURN to RECEIVER MENU

TEST MENU

```
RX550DC TEST MENU

SELF TEST
LENS OFFSET     12


MOTOR OPTIONS

NET TRAFFIC     ON

RETURN
```

Starts receiver self test procedure

BBV use to zero the lens drive output. Using a DC volt meter on the ZOOM output, alter this value to give 0V.

Displays various pan/tilt speed options

BBV use to display RS485 telemetry commands

RETURN to RECEIVER MENU

MOTOR OPTIONS

```
RX550DC MOTOR OPTIONS

MAX PAN        255
MIN PAN         15
MAX TILT       255
MIN TILT        50

MAX PRE PAN    255
MAX PRE TILT   255

RETURN
```

These settings allow the receiver to be tailored to different pan/tilt motors. The MIN/MAX values set the minimum and maximum speeds during manual control
255 is maximum speed and 0 is minimum
If the minimum is too low, the head may stall at low speeds.
To increase pan/tilt head life, the pan and tilt speeds can be reduced during preset calls. Again take care that the head doesn't stall.

RETURN to TEST MENU

Receiver USER GUIDE

Select the camera to control using the Panasonic controller.

Manual control of the pan/tilt head and lens is accomplished by pressing the relevant key or moving the joystick. Multiple functions can be controlled simultaneously. E.g. Pan Left and Tilt Down.

To move the pan/tilt head to a preset position, refer to the Panasonic controller manual. The receiver supports preset 1 – 32.
If this preset has been programmed, the head/lens will move to show the preset position.

Note: preset functions require a preset head for pan/tilt positioning and a preset lens for zoom/focus positioning.

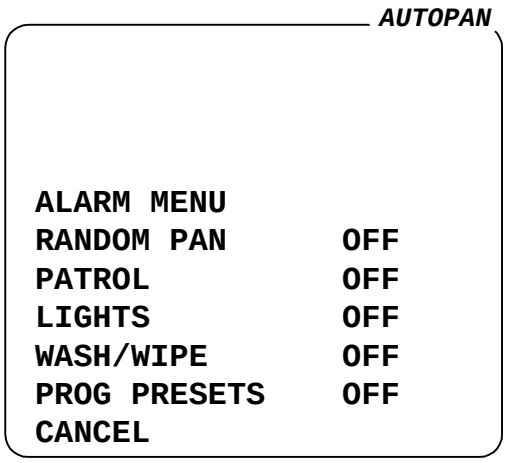
Receiver OSD displayed.

W Wipe auxiliary output is active

* Lights auxiliary output is active

 Random Pan is running

Auxiliary functions are accessed using the AUTOPAN menu. This is displayed when the AUTO key is pressed and appears as follows:




```
Pressing the AUTOPAN key displays this menu
Use the UP/DOWN keys to choose a line and LEFT or RIGHT
to either toggle ON/OFF or display ALARM MENU

Display ALARM menu to enable/disable alarm inputs
Start RANDOM
Start preset patrol
Toggle the LIGHTS auxilliary ON/OFF
Toggle WIPE & WASH auxilliary.WASH time set in OPTIONS
ON=Program presets, OFF=Normal
Quit menu
```

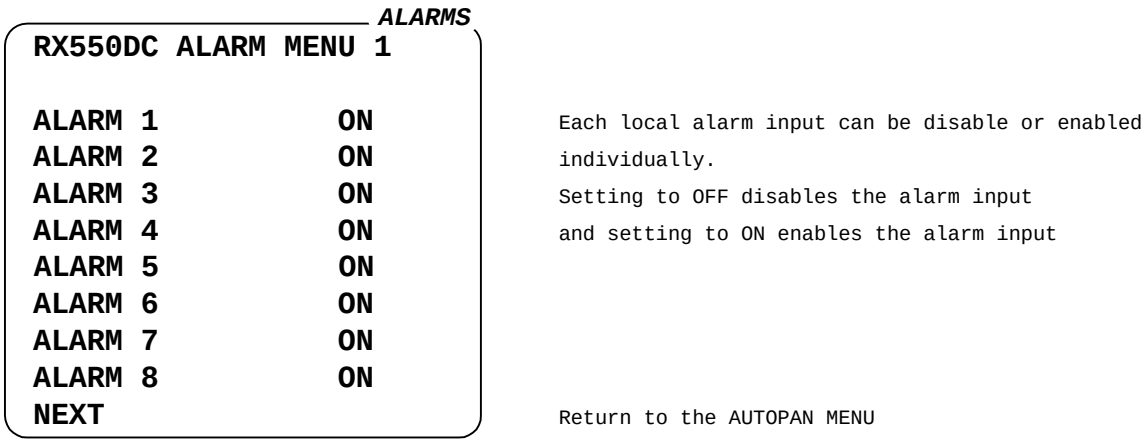
When RANDOM PAN is selected, the head starts a random panning sequence until either a manual command or a local alarm occurs. If DISPLAY AUX OSD is set to DISP in the OPTIONS 2 menu then an arrow is displayed showing the direction of pan travel.

PATROL: Starts the preset patrol. If DISPLAY PAT is set to YES the receiver displays PATROL and the current preset number. Pressing one of the pan/tilt keys will stop the patrol and manual control is resumed.

LIGHTS: The lights auxiliary output is turned on/off with this line. If DISPLAY AUX OSD is set to DISP in the OPTIONS 2 menu then the lights symbol is displayed whilst the lights are on.

WASH/WIPE: The WIPE auxiliary output is turned on and the WASH auxiliary output is activated for the time set in the OPTIONS menu. If DISPLAY AUX OSD is set to DISP in the OPTIONS 2 menu then an umbrella symbol is displayed whilst the wiper output is on.

ALARM MENU: This item displays the ALARM MENU allowing the local alarms to be enabled/disabled individually.



Use the UP and DOWN keys to select an alarm input. The Left or Right key will toggle the state from ON/OFF. When the alarms have are configured correctly, select the NEXT line to resume normal operation.

Alarm inputs are normally closed. The alarm is activated when contact open and the receiver drives the head to the preset position corresponding to the alarm input.

PROG PRESETS: Allows preset positions to be programmed. The receiver will display PROGRAM after the menu disappears. In this mode ‘goto preset’ commands are used to program a preset position. Move the pan/tilt head and lens to the scene to be saved.

Please ensure that all the directions ARE NOT AT A LIMIT STOP as intermittent preset operation could occur. Press PRE-POSI on the CURSOR/CAMERA CONTROL keypad followed by the preset number required on the CAMERA/PRESET POSITION keypad. Several preset positions can be programmed whilst PROGRAM is displayed. To return to normal operation, go into the menu and set PROG PRESET to OFF. The receiver no longer displays PROGRAM and normal control is resumed.

Note: preset functions require a preset head for pan/tilt positioning and a preset lens for zoom/focus positioning.