



**Pyramid DC Receiver
Installation Instructions**

Use this manual in conjunction with

- Manual 1 - Operating Instructions
- Manual 2 - Network Wiring
- The manuals supplied with the separate items in your system

IMPORTANT

The first few pages of these instructions contain important information on safety and product conformity. Please read, and ensure that you understand this information before continuing.

CONTENTS

Product Safety	4
Product Reliability	4
Electromagnetic Compatibility (EMC)	4
Manufacturer's Declaration of Conformance	4
Unpacking	4
These Instructions	5
Bar Coding	5
Connections	6
Power Connections	7
Testing	7
Replacing the Lid	8
Maintenance	8
Specifications	9

PRODUCT SAFETY

Please follow these instructions as you install your pyramid module and keep them for future use. If you have any problems contact your Baxall agent.

⚠ WARNING

Installation is only to be carried out by competent, qualified and experienced personnel. Wire in accordance with your national wiring regulations. Failure to do so can result in injury or death by electric shock. Use a class 2 isolated power supply for the 12V DC.

PRODUCT RELIABILITY

⚠ CAUTION

Your module is susceptible to damage from Electrostatic Discharge (ESD). Take normal ESD precautions when handling your network card. ESD prevention kits are available from most electronics distributors.

Do not exceed the voltage and temperature limits given in the specification.

Switch off the power before fitting a network card.

ELECTROMAGNETIC COMPATIBILITY (EMC)

⚠ CAUTION

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

This product is intended for use in general purpose CCTV applications in a residential, commercial or light industrial EMC environment, refer to Baxall Limited before using the product in an industrial EMC environment.

The product must be installed in accordance with good installation practice for EMC to enable the product to function as intended and to prevent EMC problems.

Contact the Baxall Technical Support Department to obtain a specification defining the acceptable levels of product degradation with regard to EMC immunity.

MANUFACTURER'S DECLARATION OF CONFORMANCE

The manufacturer declares that the equipment supplied with this manual is compliant with the essential protection requirements of the EMC directive 89/336 and the Low Voltage Directive LVD 73/23 EEC. Conforming to the requirements of standards EN 55022 for emissions, IEC801 parts 2, 3 and 4 for immunity and EN 60950 for Electrical Equipment safety.

UNPACKING

Keep your packaging for use if your DC receiver is stored for a time or needs to be returned for whatever reason. The packaging should contain:-

- PY-DCW, DC receiver
- An A4 Module Description Sheet (for installation details)
- These Instructions
- Two identical bar-codes

Check the product code on the serial number label. If you have an incorrect item or it is damaged then inform the suppliers and carriers immediately. If this is the case then do not attempt to use your DC receiver.

THESE INSTRUCTIONS

These instructions allow you to install your Pyramid DC receiver, they do not contain any application information. As the installer you are assumed to have a sound knowledge of how receivers operate, if you have not then contact a CCTV installation company for advice.

If you are replacing a receiver on a network which is already operational then see Manual 1 - Operating Instructions for instructions on connecting a new receiver using the keyboard.

The connection diagram is shown in Figure 1. Using this, follow the instructions. The instructions are listed by connector and describe wiring your DC receiver to the P/T head, the lens, the network and the power supply.

At the end of the connections section is a description of the on-board test routine. Once the tests are complete and all the connections are correct, your DC receiver needs no maintenance.

To vary the speed of your Pan/Tilt head, the Pyramid DC receiver uses PWM (Pulse Width Modulation) of the 24V DC supply to the head. Check that your DC Pan/Tilt head operates by the same method.

BAR CODING

All the Pyramid modules are supplied with two identical bar-codes, remove one and affix it to the module description sheet, remove the other and affix it to the module.

The bar code gives the unique 48-bit module address. Make a careful note on your module description sheet of all your installation details and the location of the module. Then during subsequent installations using the Windows™ installation tool, the module address can be entered with the description.

We recommend that during a system installation you store the module description sheets in a ring-bound file and keep them for reference after the installation is complete.

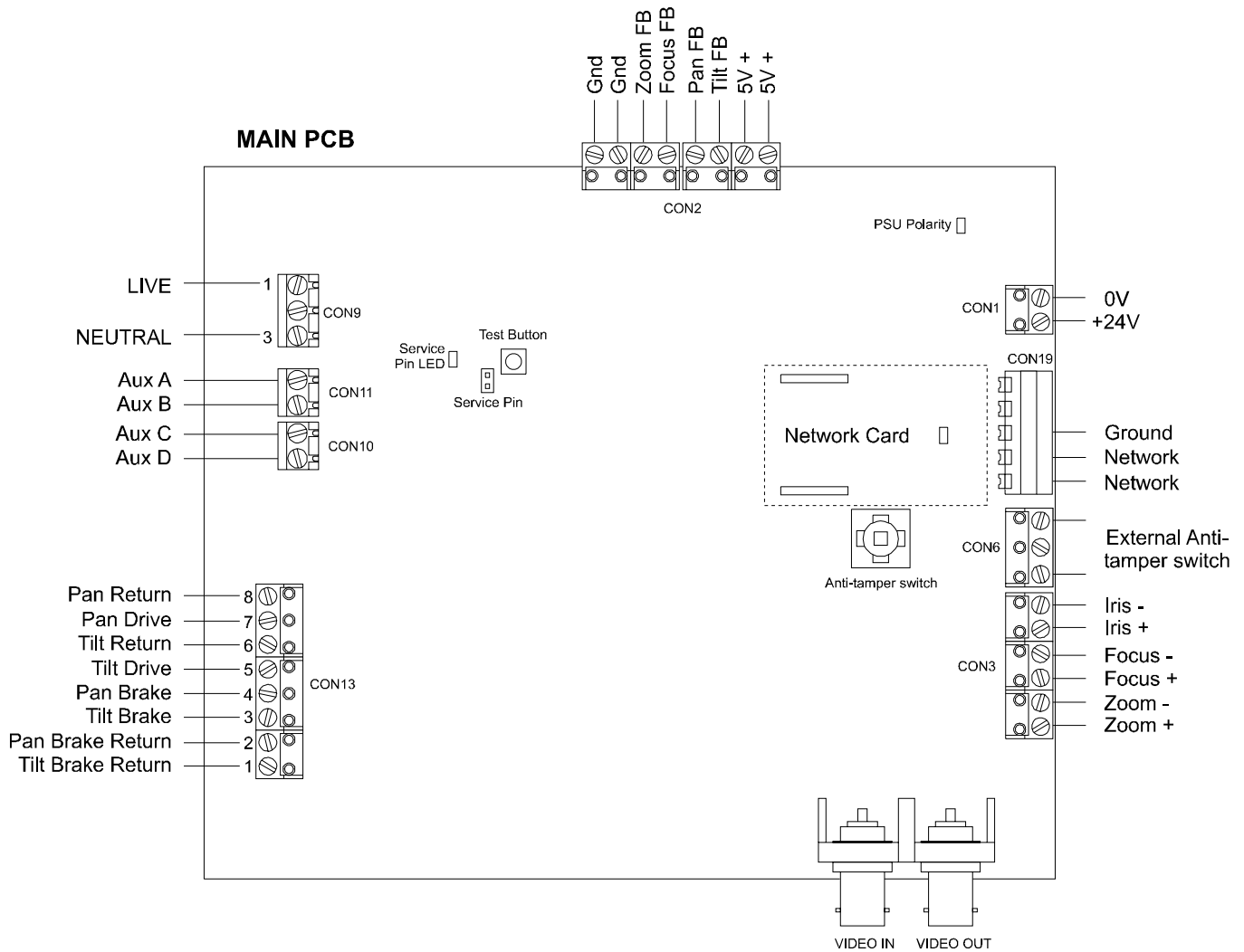


Figure 1. DC Receiver PCB Connections

CONNECTIONS

Below is a description of each of the connectors. The connections are described in numeric order, followed by video, network and power connections.

CON1

CON1 is for the 24V DC power connection. Your DC receiver requires a +24V DC, 65W class 2 power supply, this is already connected. If the polarity is correct when the power is switched on, LED1 (see figure 1) will illuminate green. If the polarity is incorrect, it will illuminate red.

CON2

If you are using a preset P/T head CON2 provides the supplies and feedback connections for the potentiometer wiper circuits. The direction of the DC feedback circuits are automatically calculated when the test routine is invoked by running the Pyramid DC Receiver's test routine. This means it is not necessary to wire the pots in a specific direction.

Referring to figure 1, connect CON2 to the preset pots on the P/T head and the lens. Connect any unused feedback inputs to ground. Make a note on your module description sheet of the preset connections and the type of lens.

CON3

CON3 provides the lens drive outputs for focus, iris and zoom. The drive voltage is +12V DC, maximum 100 mA. Refer to your lens instructions and connect up your lens according to figure 1.

CON6

CON6 is provided for the connection of an external anti-tamper switch. It is connected in parallel with the built-in anti-tamper switch shown in figure 1. The built-in anti-tamper switch has an actuation spring fitted which must be removed if you are using an external anti-tamper switch connected to CON 6. The switch must be a normally closed (N.C.) type.

CON9

CON9 accepts the power input which is switched to CON10 and CON11 for powering the auxiliaries. Maximum per auxiliary, 2A at 240V AC.

Referring to figure 1 connect CON9 to your auxiliary's power supply. The middle connection on CON9 is Not Connected

△ CAUTION

Connect lamps using a separate relay as they draw an initial surge current which may damage your DC receiver.

Always provide a separately fused mains spur for use with auxilliary devices.

CON10 and CON11

Referring to figure 1, connect Auxilliaries A to D as shown to CON10 and CON11. Each application must not draw more than 2A at 240V AC. Connect the return wires together on a spare terminal on the external terminal block. From there connect them back to CON9.

CON13

CON13 provides the power output connections for your P/T head. Referring to figure 1, connect your P/T head to CON13.

△ CAUTION

Your application must not draw more than 1A per drive output and 0.25A per brake output or it will damage your DC receiver.

VIDEO

All video must be via 75 ohm BNC connectors and video coaxial cable. Your DC receiver has an on-board video amplifier with gain and lift. Adjustment of gain and lift is done remotely, via the network. Referring to figure 1, connect the video from your camera to VIDEO IN, through your DC receiver, then from VIDEO OUT to the matrix.

CONNECTIONS

NETWORK

Network cards come pre-fitted to your Pyramid DC Receiver and in normal circumstances there will be no need to disconnect the network card. If you need to remove or refit a network card, proceed as follows.

⚠ CAUTION

To avoid damaging your module switch off the power before fitting the network card

Switch off the power, fit a network card in the position indicated on figure 1. Connection details for the network card are included on the sheet provided with the network card.

POWER CONECTIONS

⚠ WARNING

Ensure that the power is switched off before connecting the mains wires.

Your PY-DCW module must be earthed.

If you are using mains, connect the Live, Earth and Neutral wires from the mains supply to Live, Earth and Neutral on the terminal block fitted to the baseplate.

Check that all the wiring is correct and switch on the 24V DC power and the power supply for your auxiliaries.

⚠ WARNING

YOUR DC RECEIVER PCB MAY NOW CONTAIN LIVE VOLTAGES

TESTING

Your DC receiver has an on board test procedure which steps through the outputs in the sequence shown in table 1. The test push button is shown in figure 1. The test takes 55 seconds.

⚠ WARNING

YOUR DC RECEIVER PCB CONTAINS LIVE VOLTAGES

⚠ CAUTION

Ensure that the mechanical endstops are set before running the test routine. This will prevent the P/T head crashing.

Press the test push button with an appropriate tool

Step	Action	Time	Step	Action	Time
1	Right and Down	5s	13	Pause	2s
2	Pause	2s	14	Zoom Out	3s
3	Pan Left	3s	15	Zoom In	3s
4	Pause	1s	16	Pause	2s
5	Pan Right	3s	17	Iris Close	3s
6	Pause	2s	18	Iris Open	3s
7	Tilt Up	3s	19	Pause	2s
8	Pause	1s	20	AUX A	2s
9	Tilt Down	3s	21	AUX B	2s
10	Pause	2s	22	AUX C	2s
11	Focus Near	3s	23	AUX D	2s
12	Focus Far	3s	24	Exit	

REPLACING THE LID

⚠ WARNING

Refit the lid securely to prevent unauthorised access

Tighten the four securing screws with an appropriate tool until they cannot be undone by hand. Do not exceed a torque of 4 Nm.

MAINTENANCE

Once your DC receiver is correctly installed and commissioned it requires no further maintenance.

Features

Bar coding for ease of installation

Automatic configure and remote setup

Anti Tamper switch detects opening of lid, also external connection provided.

128 Presets, all functions. Preset resolution, 10-bit

Random Pan / Patrol / Electronic end stops

Test button

Pan and Tilt Drives

Speed Control using Pulse Width Modulation (PWM) of 24V DC

4, 6, 7 and 8-wire configuration using a link on the PCB

Max drive 1A per motor, 0.25A per brake.

Lens Drives

Zoom, focus and iris, 12V DC (max 100mA)

Network

Plug in network PCB, RS485 (standard), FTT10 and Fibre options

Relays

4 auxiliary relays for wash, wipe, lamps and camera power

Relay outputs 240V AC or 24V DC at 2A max. per relay

Fuse 10 Amp Anti-Surge

Video

Via BNC connectors

Video 1V pk-pk, PAL/NTSC

Max Gain >5dB

Max Lift >4dB at 4MHz

Power

Relay Power Supply 240V AC or 24V DC at 2A max per relay.

Board Power Supply 24V DC \pm 10%, 65W class 2

Power Consumption 65 Watts (48 Watts for motors)

Physical

Weight 5 kg PCB weight 0.5 kg

IP65 case

Board size 136 x 160 x 40mm (excluding mounting pillars)

Box Size 280 x280 x130mm

Temperature Specification

Operational temperature limits:-

-10°C to +50°C at 10% to 80% relative humidity (non-condensing)

Storage temperature limits:-

-20°C to +60°C at 10% to 95% relative humidity (non-condensing)

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