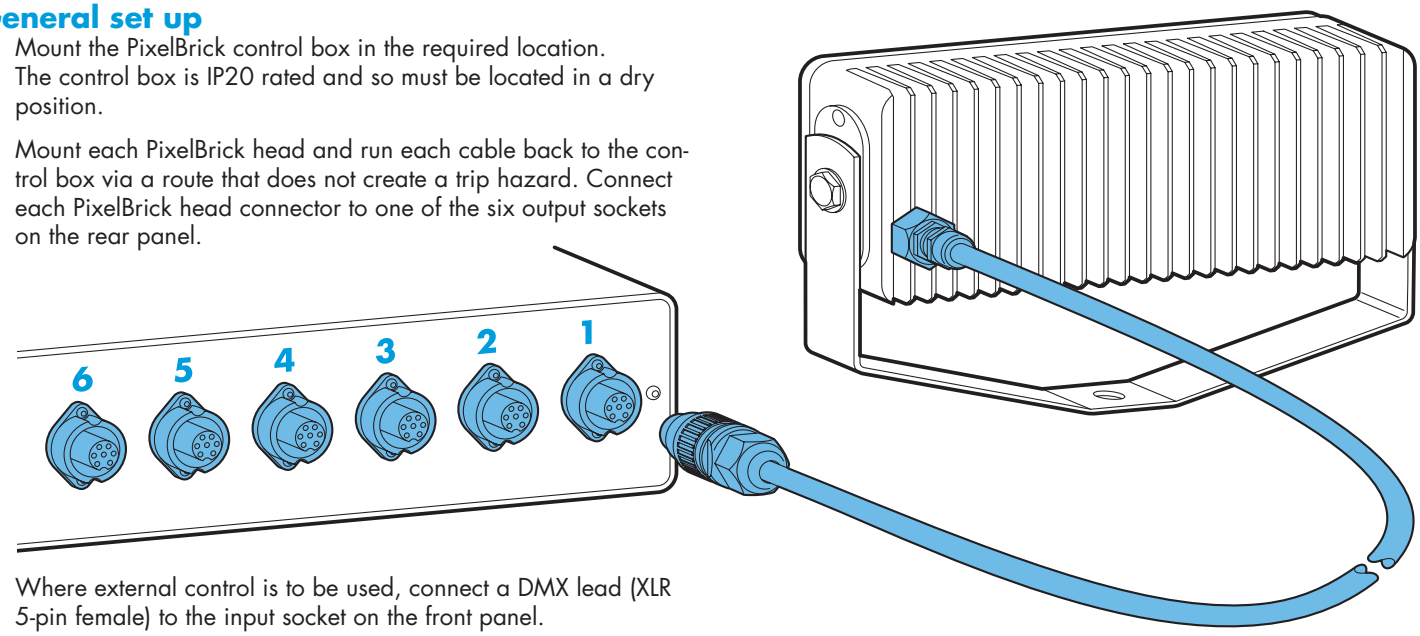
PixelBrick 22 User Manual

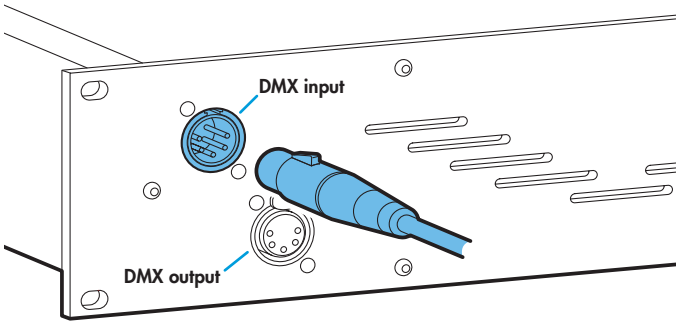
General set up

1 Mount the PixelBrick control box in the required location. The control box is IP20 rated and so must be located in a dry position.

2 Mount each PixelBrick head and run each cable back to the control box via a route that does not create a trip hazard. Connect each PixelBrick head connector to one of the six output sockets on the rear panel.



3 Where external control is to be used, connect a DMX lead (XLR 5-pin female) to the input socket on the front panel.



4 Where other fixtures are to be used in a control daisy-chain, connect a DMX lead (XLR 5-pin male) to the output socket on the front panel.

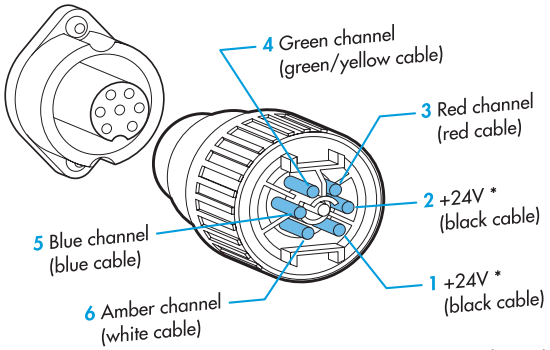
5 When all PixelBrick heads are connected, apply power to the control box.

6 Use the control panel to access the internal menu and choose the appropriate operation mode and related settings (see over).

- To optionally clear all previous settings: On the control panel, press the middle two buttons (◀ and ▼) while the DMX address is displayed (e.g. A001, A002, etc). The four digit display will show FACT then SET to indicate that the device has been returned to its default condition.

Cables and connectors

PixelBrick heads are supplied as standard with cable lengths of 1.5m (5 ft). However, alternative cables lengths up to 15m (50 ft) can be fitted to order at manufacture. Where cable lengths must be altered in the field, the head connector pin-out is as follows:



Warning
Double check connections. Serious damage can be caused to the control box and/or PixelBrick by incorrect wiring of the connector.

* Pins 1 & 2 do not both need to be used.

Important

- When PixelBrick heads are suspended off ground, always use safety wires rated to a minimum of 8kg (18lbs) around the yoke.

Operation modes

The PixelBrick system provides a range of operation modes. These are selected using the ModE section of the control menu:

dMX Allows RGBA control of all heads via DMX input. Using the RES (resolution) option you can determine the number of DMX channels required, from 24 channels down to just 3 (head groupings and colour permutations are adjusted accordingly). Internal chase effects are not available within this mode.

MANU Provides RGBA colour mixing independently of any external control. Use the internal control menu (MAN section) to select the required colour values.

EF M Allows the display of the dual internal chase effects, independently of any external control. Use the internal control menu (PRoG section) to select the required chase effects, speeds and cross fades.

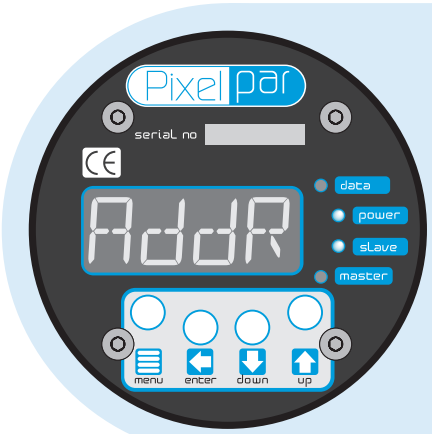
24+E Provides control of RGBA mixing on each of the 6 individual heads and selection of the dual internal chase effects via DMX input. Requires 31 DMX channels.

4+E Provides control of RGBA mixing (all 6 heads are combined) and selection of the dual internal chase effects via DMX input. Requires 11 DMX channels.

PixelBrick personalities are available for a variety of controllers. Please see **www.pixelrange.co.uk** for details.

General notes

- Ensure that only one DMX device in the chain is set as master (e.g. the lighting desk). This device is usually set to slave mode (slave).
- This device is shipped with the DMX address set to 001.
- If the device is used as a master, DMX transmission will only occur when the DMX address is displayed (e.g. A001, A002, etc).
- The four digit display can be set to fade out after 60 seconds, press ☰ to resume. To alter this mode: PERS > dISP.



Using the control menu

- When not in the menu, the four digit display shows the current DMX address e.g. A001
- Press ☰ to enter the menu. The four digit display will show AddR.
- Use ↓ and ↑ to move between menu options (or to change a value within an option).
- Press ← to enter an option (or to fix a changed value within an option and return to the previous option level). *Note: If you do not press ← to fix a value, operation will revert to the previously set mode at the next power on.*
- Press ☰ to exit from a menu option (and eventually exit the menu completely).

Chase effects

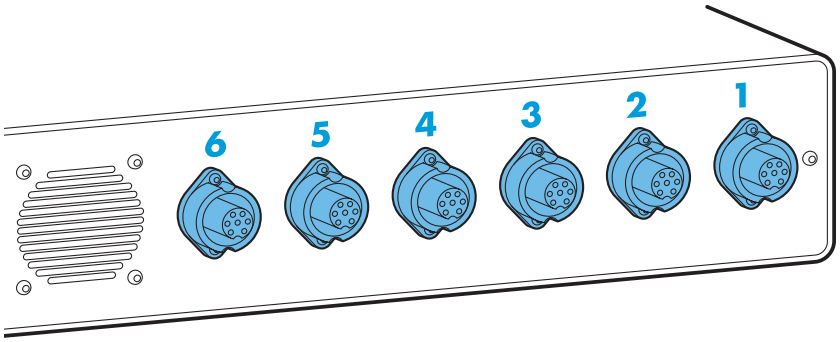
This section describes each of the 31 internal chase effects that are selectable either via the control menu (PROG > C 1/C2 > EFEC) or using DMX values sent from an external source. To use the internal effects, set the ModE option either to EF M (to control effects via the menu) or 4+E or 24+E (to control effects externally via DMX).

DMX value	EFEC value	Chase effect description
0-7	00	Off
8-15	01	Rainbow chase forward
16-23	02	Rainbow chase reverse
24-31	03	White single head chase forward
32-39	04	White single head chase reverse
40-47	05	Double head chase (1 to 6 and 6 to 1)
48-55	06	50/50 duty cycle strobe white
56-63	07	50/50 duty cycle strobe red
64-71	08	50/50 duty cycle strobe blue
72-79	09	50/50 duty cycle strobe yellow
80-87	10	50/50 duty cycle strobe green
88-95	11	Pulse strobe white
96-103	12	Pulse strobe blue
104-111	13	Pulse strobe rainbow
112-119	14	Pulse strobe red/green/blue
120-127	15	Primary/secondary chase
128-135	16	Rainbow chase
136-143	17	Yellow/blue chase
144-151	18	Red/green/blue wipe
152-159	19	Yellow/blue alternate head chase
160-167	20	Red/blue alternate head chase
168-175	21	Red/yellow chase
176-183	22	Red wipe across heads
184-191	23	Green wipe across heads
192-199	24	Blue wipe across heads
200-207	25	Static orange
208-215	26	Static yellow
216-223	27	Static light blue
224-231	28	Static purple
232-239	29	Static red
240-247	30	Static green
248-255	31	Static blue

DMX channel and cell layouts

This section shows the different ways, when using dMX mode, that the 6 heads can be mapped to varying numbers of DMX channels using the PERS > RES option.

The first channel of the PixelBrick system occurs at the DMX address selected using AddR and successive channels for the device follow from there.



Heads	PERS>RES= 24CH R	G	B	A	PERS>RES= 18CH R+A	G	B	PERS>RES= 4CH R	G	B	A	PERS>RES= 3CH R+A	G	B
1	1	2	3	4	1	2	3							
2	5	6	7	8	4	5	6							
3	9	10	11	12	7	8	9							
4	13	14	15	16	10	11	12	1	2	3	4	1	2	3
5	17	18	19	20	13	14	15							
6	21	22	23	24	16	17	18							
Master intensity*	25				19			5				4		

(* Mode dMX only, when PERS > MINT is set to ON)

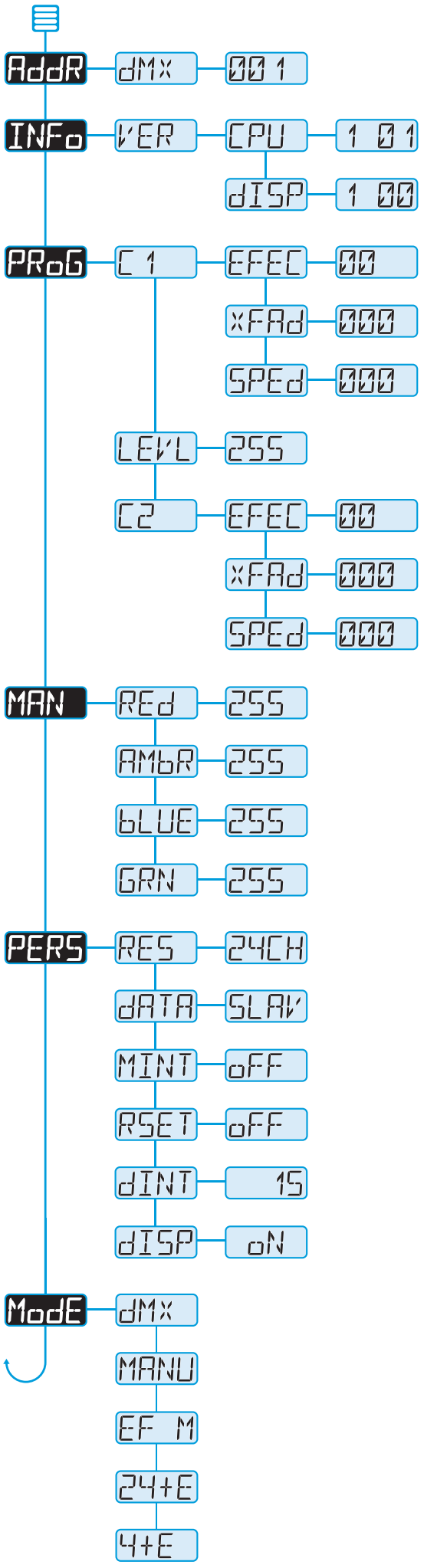
Mode 24+E uses the same RGBA mapping as the 24CH layout and mode 4+E uses the same RGBA mapping as the 4CH layout, however, the master intensity channels for these modes are different. The 24+E and 4+E modes also use additional channels for control of internal chase effects (see below).

Chase effects and master intensity channel layouts

The table below shows how the chase effects and master intensity controls are mapped to DMX channels for the 24+E and 4+E modes. Mode dMX does not use chase effects. The first channel of the PixelBrick system occurs at the DMX address selected using AddR and successive channels for the device follow from there.

Control	24+E	4+E
C 1 Effect	Ch25	Ch5
C 1 Speed	Ch26	Ch6
C 1 Xfade	Ch27	Ch7
C2 Effect	Ch28	Ch8
C2 Speed	Ch29	Ch9
C2 Xfade	Ch30	Ch10
Master intensity	Ch31	Ch11

Control menu contents



Sets the base DMX address from which the control channels will begin.

Shows the main processor software revision. No changes are possible within this option.

Shows the display controller software revision. No changes are possible within this option.

Selects the primary internal chase effect. See *Chase effects* for descriptions. Select ModE > EF M to show the selected chase.

Selects the cross fade speed between the steps of the selected C 1 chase effect.

Selects the speed of the selected C 1 chase effect.

Selects the master intensity level of chase effects C 1 and C2.

Selects the secondary internal chase effect. See *Chase effects* for descriptions. Select ModE > EF M to show the selected chase.

Selects the cross fade speed between the steps of the selected C2 chase effect.

Selects the speed of the selected C2 chase effect.

Sets the red intensity for all heads. Select ModE > MANU (manual) to show the result.

Sets the amber intensity for all heads. Select ModE > MANU (manual) to show the result.

Sets the blue intensity for all heads. Select ModE > MANU (manual) to show the result.

Sets the green intensity for all heads. Select ModE > MANU (manual) to show the result.

dMX mode only. Selects no. of DMX channels needed to control RGBA in all heads. Options range from 24 through 18, 4 & 3. Head groups & colours are adjusted to suit.

Determines whether this device will act as a master controlling others. When controlled via DMX this device must be set to SLAV.

dMX mode only. When set oN, this enables a master intensity at the channel that immediately follows the number set within the PERS > RES option.

When set oN, this option scrolls through the primary colours at power on to demonstrate correct operation.

Determines the intensity of the four digit control panel display and blue status indicators. Values range from 0 (dimmest) to 15 (brightest).

When set to AoFF, the control panel display will blank out 60 seconds after the menu is exited. The blue status indicators will remain active.

RGBA control for heads using variable DMX channels determined by PERS > RES setting. MINT set oN provides master intensity. No chase effects are selectable.

Displays the resulting RGBA levels (of all heads combined) that are set via the MAN section of the internal menu. External DMX control is not possible in this mode.

Displays the chase effect(s) determined within the PRoG section. External DMX control is not possible in this mode.

DMX Ch1 to 24: RGBA for individual heads, Ch25 to 27: C1 Effect, Speed & Xfade, Ch28 to 30: C2 Effect, Speed & Xfade, Ch31: Master intensity.

DMX Ch1 to 4: RGBA for all heads combined, Ch5 to 7: C1 Effect, Speed & Xfade, Ch8 to 10: C2 Effect, Speed & Xfade, Ch11: Master intensity.

Troubleshooting

Heads remain at blackout when illumination expected

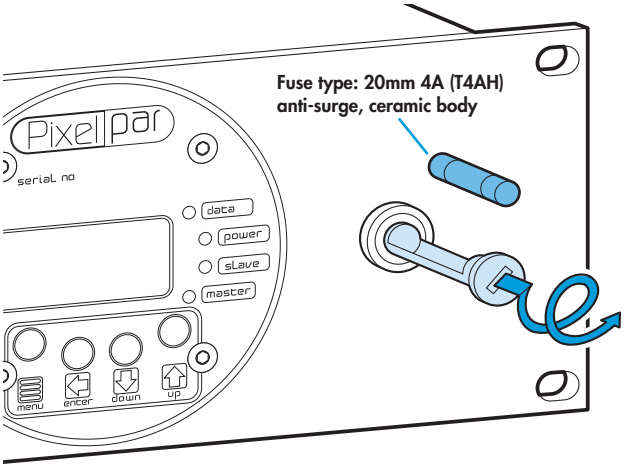
- The power indicator should be lit - if not, check the input power and fuse (see below).
- If live DMX is connected, the data indicator should be lit - if not, check the DMX cable and the desk output.
- Check that the selected ModE matches the desk personality being used.
- The master intensity channel for the current mode may be set at zero. For dMX mode, check the setting of PERS > MINT.
- Ensure that only one DMX device in the chain is set as master.
- Standalone chase effects: Effects programmed using PRoG > C 1 and C2 but the fixture is not in ModE > EF M mode. Check also that PRoG > LEVL is not set at zero.
- Standalone RGBA mixing: Colour values set within MAN section but the device is not in ModE > MANU mode.

Unexpected head illumination occurring

- When using dMX mode: Check the setting of PERS > RES. See the section "DMX channel and cell layouts" on page 2 for an explanation of the various resolution modes.

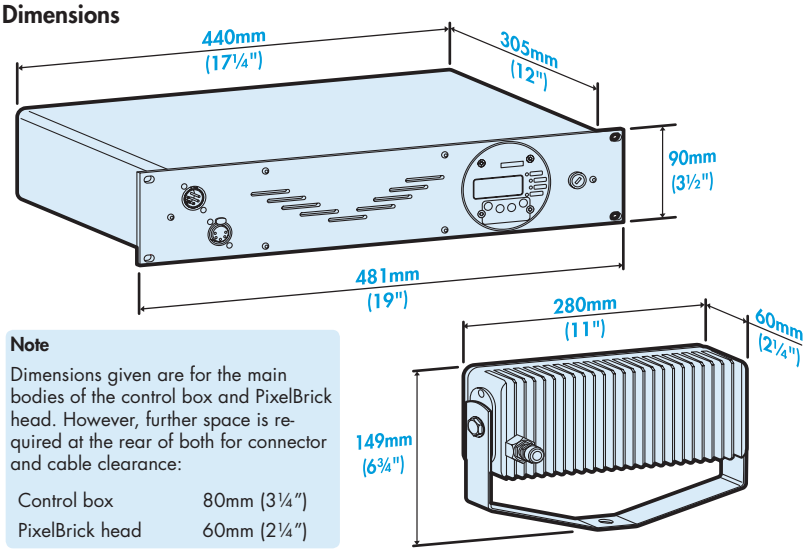
Fuse access

The single fuse is located on the front panel of the control box. Use a small flat blade screw driver to twist the fuse holder anticlockwise until the carrier can be extracted to reveal the fuse.



Specifications

Dimensions



Note

Dimensions given are for the main bodies of the control box and PixelBrick head. However, further space is required at the rear of both for connector and cable clearance:

Control box	80mm (3¼")
PixelBrick head	60mm (2¼")

Weight

Control box:	5kg (11 lbs)
PixelBrick head:	1.6kg (3.5 lbs)

Power

Input voltage:	100 to 250V AC, 50 to 60Hz autosensing	
Connector:	Supplied with cable only: live, neutral & earth	
Power requirements:	*@ 230V/50Hz*	*@ 120V/60Hz*
Standby	10 watts	10 watts
Maximum (const.)	360 watts	360 watts
Start up (peak)*	128 amps	64 amps

** The peak value occurs only at first power up and lasts only for a period measured in microseconds.*

Approvals

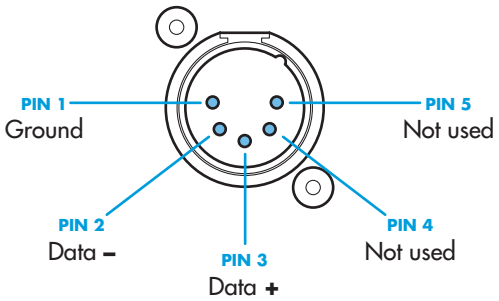
CE

Environmental ratings

Control box:	IP20 (not protected against moisture ingress)
Heads:	IP65 (low pressure water ingress protection)

Miscellaneous

Control input: USITT DMX512 (input connector pin out below)



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