General set up

1. Mount the fixture in the required position using the supplied combi yoke or optional floor plate set (p/n: SSFLP).

Important

- When suspended off ground, always use safety wires rated to a minimum of 53kg (117lbs) at both ends of the fixture through the safety wire holes.
- Do not position the fixture close to fog machines. The fog oil mist will be drawn in by the cooling fans and will short out important components. The warranty will be void for all fixtures returned in such a condition.

2. Connect the power in and DMX in connectors at the left end of the fixture.

3. Where multiple fixtures are to be daisy-chained, connect power out and DMX cables at the right end of the fixture.

Important

- When daisy-chaining fixtures, do not exceed a total load of 3kW in a single daisy chain (subject to supply and cabling restrictions). Each PixelLine 110 fixture has a maximum power requirement of 300 watts.

4. When all fixtures are connected, apply power.

5. 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: At the rear 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 fixture has been returned to its default condition.

Operation modes

The PixelLine 110 provides a range of operation modes. These are selected using the MODE section of the control menu:

- **DMX**: Allows RGBA control of all cells via DMX input. Using the RES (resolution) option you can determine the number of DMX channels required, from 20 channels down to just 3 (the cell sizes 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 (MANU section) to select the required colour values.

- **EF**: 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.

- **20+E**: Provides control of RGBA mixing on all 5 cells and selection of the dual internal chase effects via DMX input. Requires 27 DMX channels.

- **4+E**: Provides control of RGBA mixing (the whole fixture acts as a single cell) and selection of the dual internal chase effects via DMX input. Requires 11 DMX channels.

PixelLine 110 personalities are available for a variety of controllers. Please see www.pixellrange.com for details.
General notes
- Ensure that only one DMX device in the chain is set as master (e.g. the lighting desk). This fixture is usually set to slave mode.
- This fixture is shipped with the DMX address set to 001.
- The four digit display can be set to switch off when not in use. To restore, press and . To alter this mode use: PEPS > dISP.

Chase effects
This section describes each of the 31 internal chase effects that are selectable either via the control menu (PRoG > C1/C2 > EFFE) or using DMX values sent from an external source. To use the internal effects, set the AddDr option either to EF 11 (to control effects via the menu) or 4+E or 20+E (to control effects externally via DMX).

DMX channel and cell layouts
This section shows the different ways, when using the AddDr mode, that the 5 cells can be mapped to varying numbers of DMX channels using the PEPS > RES option.

Chase effect description

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

Chase & master intensity channel layouts
The table below shows how the chase effects and master intensity controls are mapped to DMX channels for the 20+E and 4+E modes. Mode 4+M does not use chase effects.

<table>
<thead>
<tr>
<th>Control</th>
<th>20+E</th>
<th>4+E</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 1 Effect</td>
<td>Ch21</td>
<td>Ch5</td>
</tr>
<tr>
<td>C 1 Speed</td>
<td>Ch22</td>
<td>Ch6</td>
</tr>
<tr>
<td>C 1 Xfade</td>
<td>Ch23</td>
<td>Ch7</td>
</tr>
<tr>
<td>C2 Effect</td>
<td>Ch24</td>
<td>Ch8</td>
</tr>
<tr>
<td>C2 Speed</td>
<td>Ch25</td>
<td>Ch9</td>
</tr>
<tr>
<td>C2 Xfade</td>
<td>Ch26</td>
<td>Ch10</td>
</tr>
<tr>
<td>Master intensity</td>
<td>Ch27</td>
<td>Ch11</td>
</tr>
</tbody>
</table>

The first channel of the fixture occurs at the DMX address selected using AddDr and successive channels for the fixture follow from there.

Using the menu
- When not in the menu, the four digit display shows the current DMX address e.g. 0ADD1. Some of the display’s decimal points are used to indicate status (see below).
- Press and to enter the menu. The four digit display will show RaddR.
- Use and to move between menu options (or to change a value within an option).
- Press and 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 and to exit from a menu option (and eventually exit the menu completely).

Notes:
- Ensure that only one DMX device in the chain is set as master (e.g. the desk).
- Use PEPS > dRAT to change between master and slave modes.
- When set to master mode, the fixture will scroll MASTER in place of a DMX address (when not within the menu).
- If the display has been set to auto off (dISP > RoFF), the data dot will remain active but at a lower brightness.
Control menu contents

**Addr**
- **dmx**: 00 1
  - Sets the base DMX address from which the control channels will begin.

**Info**
- **VER**: CPU 1 03
  - Shows the main processor software revision. No changes are possible within this option.
- **DISP**: 1 00
  - Shows the display controller software revision. No changes are possible within this option.

**Prog**
- **C1**: EFEC 00
  - Selects the primary internal chase effect. See Chase effects for descriptions. Select **Mode > EF M** to show the selected chase.
  - **xFAd**: 000
  - Selects the cross fade speed between the steps of the selected C1 chase effect.
  - **SPEd**: 000
  - Selects the speed of the selected C1 chase effect.
- **C2**: EFEC 00
  - Selects the secondary internal chase effect. See Chase effects for descriptions. Select **Mode > EF M** to show the selected chase.
  - **xFAd**: 000
  - Selects the cross fade speed between the steps of the selected C2 chase effect.
  - **SPEd**: 000
  - Selects the speed of the selected C2 chase effect.

**Level**
- **255**

**Man**
- **REd**: 255
  - Sets the red intensity for all cells. Select **Mode > MANU (manual)** to show the result.
- **AMbR**: 255
  - Sets the amber intensity for all cells. Select **Mode > MANU (manual)** to show the result.
- **GRN**: 255
  - Sets the green intensity for all cells. Select **Mode > MANU (manual)** to show the result.
- **BLUE**: 255
  - Sets the blue intensity for all cells. Select **Mode > MANU (manual)** to show the result.

**Pers**
- **RES**: 20Ch
  - **dAtA**: SLAV
  - **MINT**: off
  - **RSET**: off
  - **dINT**: 15
  - **DISP**: on
  - Options range from 20 through 15, 4 and 3. Cell sizes & colours are adjusted to suit.
  - **dAtA**: SLAV: mode only. Selects number of DMX channels required to control RGB in all cells.
  - **MINT**: off: when set **ON**, this enables a master intensity at the channel that immediately follows the number set within the **PERS > RES** option.
  - **RSET**: off: when set to **ON**, the control panel display will blank out 60 seconds after the menu is exited. The blue status indicators will remain active.
  - **dINT**: 15: determines the intensity of the four digit control panel display and blue status indicators. Values range from 0 (dimmest) to 15 (brightest).
  - **DISP**: on: mode only. Determines whether this fixture will act as a master controlling others. When controlled via DMX this fixture must be set to **SLAV**. When set to **AuFF**, this option scrolls through the primary colours at power on to demonstrate correct operation.
  - **RES**: 20Ch: sets the master intensity level of chase effects C1 and C2.

**ModE**
- **dmx**: 00 1
  - **MANU**: RGBA control for cells using variable DMX channels determined by **PERS > RES** setting. **MINT** set **ON** provides master intensity. No chase effects are selectable.
  - **EF M**: Displays the resulting RGBA levels (of all cells combined) that are set via the **MANU** section of the internal menu. External DMX control is not possible in this mode.
  - **20+E**: Displays the chase effect(s) determined within the **PROG** section. External DMX control is not possible in this mode.
  - **4+E**: DMX Ch1 to 20: RGBA for indiv. cells, Ch21 to 23: C1 Effect, Speed & Xfade, Ch24 to 26: C2 Effect, Speed & Xfade, Ch27: Master intensity.
  - DMX Ch1 to 4: RGBA for all cells, Ch5 to 7: C1 Effect, Speed & Xfade, Ch8 to 10: C2 Effect, Speed & Xfade, Ch11: Master intensity.
Using master mode to drive other units

This unit can control any number of other Pixel Range fixtures via DMX links, without the need for a control desk.

1. Set this unit as *master* (PEPS > dATA > MAST) and ensure all others are set to *slave* (PEPS > dATA > SLA*). Connect all fixtures via DMX daisy-chain.

2. Set each slave to $\text{M} \text{a} \text{s} \text{t} > \text{d} \text{E}$.  

3. Set each slave DMX address (using PERS > dE) according to the following:

   - 18 cells are output in groups of 3 DMX channels to give RGB values per cell (54 channels in total). Set the address of each slave fixture according to which of the 18 cells you want them to appear within, or to begin with (for multi-cell fixtures): (ADDR 1 for cell 1, ADDR 4 for cell 2, ... ADDR 18 for cell 18). Set RGBA slave fixtures to 3 channel mode (using PERS > RES > 3CH).

4. Set the master to $\text{M} \text{a} \text{s} \text{t} > \text{E} \text{F} ^ (1)$ (the master unit’s DMX address is ignored). On the master, choose the required effects to display and send to the slave fixtures using PERS > C1 and C2.

Troubleshooting

**Fixture remains at blackout when illumination expected**

- If the display panel is not showing any indication, even after a button press, check the input power and fuse.
- If live DMX is connected, the right hand decimal point on the display should flash - if not, check the DMX cable and the desk output.
- Check that the selected $\text{M} \text{a} \text{s} \text{t}$ matches the desk personality being used.
- The master intensity channel for the current mode may be set at zero. For $\text{d} \text{E} > \text{M} \text{A} \text{N}$, mode, check the setting of PERS > EMT.
- Ensure that only one DMX device in the chain is set as master.
- Standalone chase effects: Effects programmed using PERS > $C^1$ and $C^2$ but the fixture is not in $\text{M} \text{a} \text{s} \text{t} > \text{E} \text{F} ^ (1)$ mode. Check also that PERS > LEV > L is not set at zero.
- Standalone RGB mixing: Colour values set within MAN section but the fixture is not in $\text{M} \text{a} \text{s} \text{t} > \text{M} \text{A} \text{N}U$ mode.

**Unexpected cell illumination occurring**

- When using $\text{d} \text{E} > \text{M} \text{A} \text{N}$ 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 next to the power and DMX input connectors. Use a small flat blade screw driver to twist the fuse holder anticlockwise until the carrier can be extracted to reveal the fuse.

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**Specifications**

**Dimensions**

- [Diagram showing dimensions]

**Weight**

- Fixture alone: 10.5kg (23 lbs)
- With combi yoke: 11.7kg (25.8 lbs)

**Power**

- Input voltage: 90 to 264V AC, 47 to 63Hz autosensing
- Earth leakage: 1.61mA
- Connectors: 16 amp CEE Form 2Pole+Earth (input & output)

- Power requirements:
  - @ 230V/50Hz 20 watts
  - @ 115V/60Hz 20 watts
  - Maximum (const.) 300 watts
  - Start up (peak*): 128 amps
  - * The peak value occurs only at first power up and lasts only for a period measured in microseconds. Adjustments may need to be made to supply circuit breakers when multiple fixtures are daisy-chained, causing them all to draw the peak simultaneously.

**Approvals**

- Enclosure rating: IP20 (not protected against moisture ingress)
- Control input: USITT DMX512 (input connector pin out below)

**Miscellaneous**

- Fuse type: 20mm 4A (T4AH) anti-surge, ceramic body

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