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Safety

Important information on the safe installation and operation of this product. Read this information before operating the product. For your personal safety, read these instructions. Do not operate the product if you do not understand how to use it safely. Save these instructions for future reference.

Warning Symbols Used in these Instructions
Safety cautions are included in these instructions. These safety instructions must be followed to avoid possible personal injury and avoid possible damage to the product.

WARNING!
Where there is a risk of personal injury or injury to others, comments appear supported by the warning triangle symbol. Where there is a risk of damage to the product, associated equipment, process or surroundings, comments appear supported by the word ‘Caution’.

ELECTRIC SHOCK
Where there is a risk of electric shock, comments appear supported by the hazardous voltage warning triangle.

Intended Use
The CP4 control panel is designed to remotely control robotic pan and tilt heads, servo camera lenses and elevation units. It is designed for use in TV studios and other applications including houses of worship, conference facilities, auditoriums, sports and OB truck applications, etc.

Health and Safety

WARNING! To avoid the risk of personal strain injuries caused by repetitive motion, the operator should take regular breaks when using the product.

Electrical Connection

CAUTION! This product must be connected to a power supply of the same voltage (V) and current (A) as indicated on the product. Refer to the Technical Specifications for the product.

CAUTION! We recommend that you use the power supply cable supplied with the product.

CAUTION! All connections to other devices must be made using shielded cables.

CAUTION! Using alternative power sources will invalidate the system EMC liability.

Mounting and Installation

WARNING! Always ensure that all power and auxiliary communications cables are routed so that they do not present any danger to personnel. Take care when routing cables in areas where robotic equipment is in use.

Water, Moisture and Dust

WARNING! Protect the product from water, moisture and dust. The presence of electricity near water can be dangerous.
Safety and About this Manual

Operating Environment

CAUTION! The product should not be used outside the operating temperature limits. Refer to the product Technical Specifications for the operating limits for the product.

Cleaning

WARNING! Risk of electric shock. Always disconnect and isolate the product from the power supply before cleaning.

CAUTION! Do not use solvent or oil-based cleaners, abrasives or wire brushes. Only use detergent-based cleaners.

Maintenance

WARNING! The fitting of non-approved parts and accessories, or the carrying out of non-approved alterations or servicing can be dangerous and could affect the safety of the product. It may also invalidate the terms and conditions of the product warranty.

Safety when Working with Robotic Equipment

In normal operation remote-controlled equipment can move suddenly and without warning. Since audible warnings are not suitable for use within the studio environment, it is recommended that only trained personnel be allowed to work in the active areas where remote-controlled heads and pedestals are located. The safe operating zone is a minimum of 1 m (3 ft).

Safety Notes for Operators

Operators must familiarise themselves with the working footprint of the robotic head, including all associated equipment (lens, zoom and focus controls, viewfinder, prompter, etc.) to prevent inadvertent collisions or injury to personnel.

If personnel are too close to a head or pedestal that is about to move, the operator should prevent the motion from starting or stop the motion if it has started.

We strongly recommend that the operator verifies visually that the active area is clear of hazards and personnel, both before and during remote operation.

About this Manual

The Vinten CP4 control panel has been designed to integrate with Fusion robotic pan and tilt heads, compatible servo camera lenses and elevation units. This manual covers the installation, configuration and operation of the CP4.
Components and Connections

**CP4 Front View**

1. Touchscreen display
2. Power ON/OFF button
3. Joystick
4. Zoom rocker switch
5. Focus wheel

**CP4 Rear View - Connections**

6. Power Connector
7. Ethernet connectors
8. USB connectors

---

1 Touchscreen display
2 Power ON/OFF button
3 Joystick
4 Zoom rocker switch
5 Focus wheel
6 Power Connector
7 Ethernet connectors
8 USB connectors
Components and Connections

CP4 Base View

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<td>CP4 control panel</td>
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<td>2</td>
<td>AC adaptor</td>
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</table>
**Mounting the CP4**

The CP4 has four rubber feet fitted to the base so that it can be used as a free standing unit on any level surface. However, the CP4 can also be permanently fixed to a desk.

1. Using a flat blade screwdriver, remove the four rubber feet from the base of the panel.
2. Using the dimensions shown, accurately measure and mark the locations of the hole centres onto the desk.
3. Drill 6 mm diameter holes through the work surface in the marked positions. Fix the panel into position using four M5 screws of a suitable length from underneath the desk into the panel mounting holes.

---

**CAUTION!** Risk of product damage. Only use M5 screws of a length that will not screw into the panel mounting holes by more than 5 mm. Do not over-tighten the screws.

The focus wheel drag adjustment is inaccessible when the CP4 has been permanently fixed to a desk. See **Operation** on page 22.
System Connections
The diagram below shows a typical CP4 system installation with cameras mounted onto Fusion FHR-35 pan and tilt camera heads. A preview monitor is required to view the video signal from the camera currently selected on the CP4.
**Power Connections**

Connect the CP4 to the AC supply using the AC adaptor provided.

The CP4 can also be powered using a compatible 12 volt external battery pack. The Anton Bauer battery gold mount (product no. V4110-1002) can be used with the CP4. Using an Anton Bauer battery pack provides battery life indication on the panel display.

**Powering Up**

Before powering up, ensure that all external cable connections have been secured correctly.

To power up, press the on/off power switch.

The power button will illuminate and the boot-up screen appears. From initial power up, the CP4 takes approximately 20 seconds to become fully operational.

---

**CAUTION!** When powering the CP4 from a battery pack, always ensure that there is sufficient charge to avoid power failure during a show or the loss of unsaved data.
**Touchscreen Interface**

**Using the Touchscreen**

The CP4 user interface consists of a touchscreen which is used to configure and operate the panel. The touchscreen is sensitive and only requires light finger pressure to register a response.

**Logging On**

When the CP4 is powered up for the first time, the **Login to Panel** window appears with **Default User** selected as the user name.

Tap **OK** to log into the CP4 **Home Screen**.

---

**Using the Onscreen Keyboard**

The CP4 has an onscreen keyboard utility to input and edit stored information.

The keyboard uses the Qwerty layout with additional special function keys:

- **Arrow keys**: Use the left and right arrow keys to move the cursor insertion point within an existing text field.
- **Back delete key**: Use to delete characters to the left of the cursor insertion point.
- **Forward delete key**: Use to delete characters to the right of the cursor insertion point.
- **Clear key**: Use to clear all contents in the text field.
- **Enter key**: Use to confirm the current contents of the text field and close the keyboard.
**CP4 Home Screen**

When login is complete, the **Home Screen** is displayed. This consists of the main camera selection and control functions, and provides access to configuration menus and other information on the top bar.

1. Main menu
2. User menu
3. Show menu
4. Battery indicator*
5. Panel lock/unlock button
6. Shot storage grid
7. Shot control buttons
8. Camera bin

* Anton Bauer battery pack only.
Configuration

CP4 Configuration
When the CP4 is used for the first time, it auto-detects all of the connected camera heads. Initially, some basic configuration is required to adjust parameters on the camera heads. Control settings and preferences can also be configured for the CP4 to suit the needs of the individual user.

Help Text
In configuration menus and windows, onscreen help text can be displayed as a guide to describe individual features and settings. This can be enabled by selecting the Show Help Text checkbox on the top bar in configuration screens.

Creating and Editing User Names
When the panel is used for the first time, the only user login is named Default User. The CP4 will hold a total of 4 users.

From the Home Screen, tap to open the User Menu and select Manage Users.

4. In the Manage Users window the following options are available:

- **Add User**: Create a new user name using the onscreen keyboard and tap OK.
- **Edit User**: Edit an existing user name with the onscreen keyboard.

Selecting the Auto login checkbox in the Manage Users window will automatically log on the user selected when the panel was last powered down.

5. Configuration settings, shots and shows are stored under each user name.

CP4 Network Settings
The network settings of the CP4 must be correctly configured to ensure it will connect to camera heads in the system.

1. From the Home Screen, tap to open the Main Menu and select Configuration > Network.

2. In the Panel Network Settings panel the following options are available:

- **Use DHCP**: If DHCP is selected the panel will automatically assign an IP address and configure the network settings.
- **Manual Settings...**: Tap to open the Edit Network Settings window to configure settings manually.
Manually Configuring Network Settings

Network settings are configured in the Edit Network Settings window. Settings can be configured manually if this is a requirement of the network the CP4 is connected to.

CP4 Control Settings

The control settings of the CP4 can be configured to suit the requirements of the individual operator or system installation. This includes changing the characteristics of the camera head controls (pan, tilt, zoom, height and focus) and the brightness of the touchscreen display.

1. From the Home Screen, tap to open the Main Menu and select Configuration > Controls.

2. In the Controls panel the following sections are available:

- **Display**: Adjust the brightness of the touchscreen.
- **Pan and Tilt**: Change the characteristics of the camera joystick control.
- **Zoom**: Change the characteristics of the camera lens zoom control.
- **Focus**: Change the characteristics of the camera lens focus control.
- **Height**: Change the characteristics of the camera height control.
- **Miscellaneous**: Other configurable settings relating to camera control.

Display Brightness

Tap and drag the scroll bar to adjust the brightness of the touchscreen display.
## Configuration

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<th>Zoom Settings</th>
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<td><strong>Zoom Control</strong></td>
</tr>
<tr>
<td>Affects how the camera head responds to the Joystick. Tap to select Linear, Exponential or Compound from the drop down menu.</td>
<td></td>
</tr>
<tr>
<td><strong>Pan Orientation</strong></td>
<td><strong>Orientation</strong></td>
</tr>
<tr>
<td>Changes the direction the camera head moves in the pan (horizontal) axis when the joystick is used. Tap to select Normal or Reverse from the drop down menu.</td>
<td></td>
</tr>
<tr>
<td><strong>Tilt Orientation</strong></td>
<td><strong>Sensitivity</strong></td>
</tr>
<tr>
<td>Changes the direction the camera head moves in the tilt (vertical) axis when the joystick is used. Tap to select Normal or Reverse from the drop down menu.</td>
<td></td>
</tr>
<tr>
<td><strong>Deadband</strong></td>
<td><strong>Deadband</strong></td>
</tr>
<tr>
<td>The deadband setting represents the minimum amount the joystick has to be moved before it starts to move the camera head. Tap the arrow buttons to raise or lower the value (between 0 and 50). The higher the number, the more the joystick has be moved before the selected camera head moves.</td>
<td></td>
</tr>
<tr>
<td>Tap to select from the drop down menu how the camera zoom can be controlled. The options available are Joystick Only, Rocker Switch Only or Both*.</td>
<td></td>
</tr>
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</table>

*Zoom Control: If Joystick Only is selected, the rocker switch will default to height, if Rocker Switch Only is selected the joystick twist will default to Height. If selecting Both the height control will be disabled.
### Focus Settings

**Orientation**
Changes the direction the lens focus moves when the focus wheel is used. Tap to select Normal or Reverse from the drop down menu.

**Sensitivity**
Tap to select Normal or Fine from the drop down menu. The Fine setting gives four times less focus response for the same degree of control movement.

**Deadband**
The deadband setting represents the minimum amount the focus wheel has to be moved before it starts to move the camera lens focus. Tap the arrow buttons to raise or lower the value (between 0 and 50). The higher the number, the larger the deadband area on the focus wheel.

### Height Settings

**Height Control**
Tap to select from the drop down menu how the camera height can be controlled. The options available are Joystick or Rocker Switch.

**Profile Selection**
Affects how the camera head responds to the Joystick or Rocker. Tap to select Linear, Exponential or Compound from the drop down menu.

### Miscellaneous Settings

**Take Rudely**
Selecting the checkbox allows this CP4 to take control of a camera head currently being operated by another CP4 in the system.

**Default Fade Time**
A time (in seconds) entered in the field here will be used as the default fade time for all future stored shots.

Settings changed in the Controls window are only applied and saved for the user name currently logged in.

Changes how the elevation unit responds when either the joystick or rocker switch are used. Tap to select Normal or Reverse from the drop down menu.

The deadband setting represents the minimum amount the Joystick has to be moved before it starts to move the camera lens focus or height drive. Tap the arrow buttons to raise or lower the value (between 0 and 50). The higher the number, the larger the deadband area on the focus wheel.

**Height Control:** If Joystick is selected, the rocker switch will default to zoom, if Rocker Switch is selected the joystick will default to zoom.
Configuration

Camera Heads Configuration
The CP4 will auto-detect all available camera heads connected to the network. The camera heads can then be connected to the panel for configuration and control. The parameters of each individual camera head can be set up to suit the requirements of the individual user or the system installation.

Camera Management Window
From the Home Screen, tap to open the Main Menu and select Camera Management.

Adding and Managing Camera Heads
In Available Cameras (left hand panel) on the Camera Management screen, all available camera heads are listed. From here, camera heads can be added to the camera bin on the Home Screen.

Camera Head Connection and Control
When a camera head has been added to the camera bin, it can be controlled by the CP4. The parameters of each individual camera head can also be viewed and configured.

1. Tap to select the camera head from the Available Cameras list.

2. In the Head Connection area tap Connect. The selected camera head’s current status and identification information are displayed. Selecting the Joystick Control checkbox allows the CP4 to enable the camera head and give instant joystick control.

3. Tap to select the Head Management tab.
4. In the **Head Management** panel the following options are available:

- **Enable Head**
  - The camera head can be disabled by unchecking the box.

- **Lock Head**
  - Tapping to select the checkbox locks the head to prevent unintentional movement. The camera icon and any shots stored with the camera head will appear with a padlock symbol.

- **Reboot Head**
  - Tap to select the **Reboot** button after changing network parameters on the camera head.

- **Rename Camera**
  - Tap to rename camera. The new camera name will be displayed on the camera buttons and will be retained for future sessions.

**Head Parameters**
The following settings can be configured when the **Head Parameters** tab is selected:

- **Set to Default**
  - Tap the **Set to Default** button to reset the head parameters to factory defaults.

**Axes Settings**
Axis limit values restrict the range of movement on a camera head in pan, tilt, zoom and focus. The minimum and maximum limit values can be changed in the **Axes Settings** area. The midpoint of an axis can also be changed in the **Zero Offsets** fields column. Individual axes can also be set to inverted control.

Tap to select a field and enter a new limit value using either the arrow buttons or the onscreen number keypad. Limit values can also be set back to the factory defaults by tapping the **Reset** button.

**Normalise Invert Axes**
Selecting the checkbox reverses the effect of the joystick control if the camera head is mounted upside down from the ceiling. (Pan and Tilt only).

**Lens Type**
Select the appropriate lens model type from the drop down menu for the camera installed on the camera head.
Head Network Settings

The following settings can be configured when the **Network Settings** tab is selected:

- **Set to Default** button to reset the head network settings to defaults. (Returns to DHCP)
- **Automatic (DHCP)** and **Manual** options:
  - The camera head network settings will be setup automatically if **DHCP** is selected. Alternatively select **Manual** to enter specific network address settings.
- **Edit** button to change the IP address, subnet and gateway details.

Software Upgrades

**CAUTION!** Always ensure that the CP4 is powered with the AC adaptor during a software upgrade.

Occasionally, it may be necessary to upgrade the software on the CP4 control panel. This is managed with a USB memory stick.

1. Insert the USB memory stick into one of the two USB sockets on the rear of the CP4.

2. From the **Home Screen** tap to open the **Main Menu** and select **Configuration > System**.
3. Tap to select the **Update Software...** button. The **Select File** window opens and lists the files on the USB memory stick. Select the `update.bin` file and tap **OK**.

4. The software upgrade may take several minutes to complete. On completion, the CP4 will automatically reboot. The new software application version is displayed with the model and serial numbers under the **System** tab.
Operation

Operating Camera Heads

When camera heads have been correctly connected and configured, the CP4 can control them. Camera heads can be selected and moved to different positions using the joystick. The CP4 can control a camera head in pan (horizontal movement), tilt (vertical movement) and height (elevation unit). The joystick control is very sensitive to the amount of pressure applied to give the operator optimum on-air control.

The CP4 can also control the zoom and focus adjustments on a compatible camera servo lens connected via the camera head.

Camera head and camera lens positions can then be stored as shots on the shot grid. Collectively, a series of shots are stored to create a show. The show can be saved to a USB memory stick and loaded back onto the CP4 at any time. A total of five shows may be saved.

Selecting Cameras

Camera heads added to the system during configuration are available for selection from the camera bin on the main Home Screen.

Tap to select a camera head from the camera bin. The camera button turns green and the camera head can now be controlled by the joystick and lens controls.

Alternatively, camera head management and configuration options can also be accessed by tapping and holding a camera button.

Controlling Camera Head Movement

Pan
Press the joystick left or right to move the camera head in the pan (horizontal) axis.

Tilt
Press the joystick up and down to move the camera head in the tilt (vertical) axis.
Joystick Profiling

The response of the camera heads to joystick movement can be changed to suit the requirements of the user.

1. From the Home Screen, tap to open the Main Menu and select Configuration > Controls.

2. In the Pan and Tilt section the following options are available from the Profile Selection drop-down menu.

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compound</td>
<td>Select for a combination of linear and exponential response to joystick control.</td>
</tr>
<tr>
<td>Linear</td>
<td>Select for a linear response to joystick control.</td>
</tr>
<tr>
<td>Exponential</td>
<td>Select for an exponential response to joystick control.</td>
</tr>
</tbody>
</table>

Changes made to the joystick profiling only apply to the user currently logged in.

Controlling Camera Lens Movement

Zoom

Press the rocker switch or twist the joystick (depending on the user configured settings. See Zoom Settings on page 14) to adjust the position of the zoom on the camera lens. The controls are sensitive to the amount of movement applied.

Focus

Move the focus wheel to adjust the focus of the camera lens.
Operation

Adjusting the Focus Wheel
The drag resistance of the focus wheel can be increased or decreased to suit the requirements of the operator. The focus wheel drag adjustment screw is accessible on the underside of the control panel. Using a Torx T-20 screwdriver, turn the drag adjustment screw clockwise to increase or counter clockwise to decrease the drag resistance of the focus wheel.

Height Control
Twist the joystick or press the rocker switch (depending on the user configured settings. See Height Settings on page 15) to adjust the height position of the elevation unit. Any shot stored will also include the height position for recall.
**Storing Shots**

A camera head position can be stored as a shot in the shot grid so that the operator can recall it later as part of a show. The CP4 accurately saves the camera head positions of pan, tilt, zoom, focus and height under one stored shot and can then automatically drive the camera head back to that position when requested.

1. Select a camera from the camera bin on the **Home Screen**.

2. With the camera image selected on a preview monitor, use the joystick to drive the camera head to the required position. If required, adjust zoom and focus to achieve a good quality image.

3. Tap on an empty cell in the shot grid. The shot is assigned a number and the camera head used and fade time are displayed.

4. Auto store option: Tick the auto generated shot name and shots will store immediately on the grid.

**Shot Storage Capacity**

The shot storage capacity of the CP4 is 200. These are spread over five grid pages each consisting of 40 shot positions.

The grid pages are selected with number buttons on the top bar of the **Home Screen**.

The number buttons change status depending on whether there are stored shots present on a page or a shot is currently selected:

- **The currently selected grid page contains stored shots.**
- **The currently selected grid page also contains the currently selected stored shot.**
- **The grid page is not selected, but does contain stored shots.**
- **The page does not have any shots stored on it.**

---

Camera: Camera3

Status: Idle

Preview Image

Shot: Shot1

Camera: Camera3

Fade Time: 3.0
Operation

Playing Shots
When shots have been stored on the shot grid, the shot controls are used to move the camera heads automatically to shot positions (playing a shot).

There are shot control buttons for playing shots at the bottom of the Home Screen:

- **Fade**
  Moves the camera head to the selected shot in a preset period of time (fade time) stored with the shot.

- **Fade**
  Tapping and holding the Fade button toggles Latched Fade mode. Any selected shot will then be played as a fade move.

- **Cut**
  Moves the camera head to the shot in the fastest possible time.

- **Cut**
  Tapping and holding the Cut button toggles Latched Cut mode. Any selected shot will then be played as a cut move.

- **Stop**
  Immediately stops the camera head from moving when a cut or fade is being played.

- **Save**
  Re-stores the current position of the camera head to a selected shot. The previous stored shot will be lost.

Managing Shots

Editing a Shot

1. Tap and hold on the stored shot cell until the shot menu is displayed. Select **Edit Shot**.

2. The **Editing Shot** window is displayed. The following settings can be changed:

   - **Camera used in shot:** Assign the shot to a different camera head in the drop-down menu.
   - **Fade time (in seconds)** Enter a new fade time for the shot using either the arrow buttons or the onscreen number keypad.
   - **Use this as the default fade time** Select the checkbox to use the fade time stored for this shot on all future shots.

3. Press OK to save any changes and exit the window or Cancel to abort.
**Shot Naming**

Shots can be named to make them more relevant and easier to find on the grid.

1. Tap on an empty grid cell to create a new named shot. Alternatively, tap and hold on an existing shot to edit the name.

2. In either the Creating or Editing shot window, tap the checkbox to deselect the auto generated shot name option. A new shot name, up to 10 characters in length, can be entered into the Shot name field.

3. Tap OK to save the shot name. The shot name is displayed on the storage cell in the shot grid.

**Deleting a Shot**

1. Tap and hold on the stored shot cell until the shot menu is displayed. Select Delete Shot.

2. The shot is removed from the shot grid leaving an empty cell.

**Shot Status**

The colour of a stored shot changes, depending on its selection and current status.

- **Grey** - The stored shot is available for selection.
- **Dark blue** - The stored shot is the selected shot and also the current position of the camera head.
- **Light blue** - The selected shot is not the current position of the camera head, but can be moved to by selecting cut or fade. This is known as a cued shot.
- **Red** - The camera head is currently moving to the selected (cued) shot. A countdown of the time to reach the shot is also displayed.

**Managing a Show**

The stored shots representing different camera heads and camera positions on the shot grid can be saved as a collective setup called a show. The CP4 retains the show’s contents for use on the next power up. The show can also be named and saved onto a USB stick as a backup copy.
Operation

Up to five shows can be stored on the CP4 control panel.

When required, the show can be loaded back from the USB stick onto the same or another CP4 panel in the system. All the original shot details and assigned camera heads are retained and available for selection.

Naming a Show
1. From the Show Menu tap to select Rename Show.
2. Enter a new name for the show using the onscreen keyboard and tap Enter or OK to save.

Saving a Show
1. Insert a USB stick into either of the USB sockets on the rear of the CP4.
2. From the Show Menu tap to select Save Show As.
3. In the Select File window enter a file name for the show. This does not have to be the same name given to the show on the CP4.
4. Tap OK to save the show. After saving, there is no USB disconnection procedure and therefore the USB stick can be removed at any time.
### Operation

**Loading a Show**
1. Insert the USB memory stick with the saved show file into the CP4.
2. From the **Show Menu** tap to select **Load Show**.
3. In the **Select File** window tap to select the required show file and tap **OK** to load.

- **Select the name of the show file to load from the external drive**
  - Contents of: /media/sda
  - Folder: Morning Show.shw

**Clearing a Show**

- **CAUTION!** Using the **Clear Show** function will permanently delete all of the stored shots in the current show.

1. From the **Show Menu** tap to select **Clear Show**.
2. In the confirmation window tap **Yes** to delete all shots in the show or **No** to abort.

**Multiple Shows**
1. Tap to select the **Show Menu**. All five shows are displayed together with the user who created them. Tap on a show to select it. Any stored shots associated with the show are displayed in the shot grid. Only the user who created the show can make changes to the shows contents.

   The selected show can be renamed, saved or cleared. See the section **Managing a Show** on page 25.

**Camera Naming**

Camera heads can also be named to make them easier to identify in the camera bin.

1. From the **Home Screen**, tap to open the **Main Menu** and select **Camera Management**.
2. Under the **Head Management** tab, tap to select the **Rename**... button.
**Operation**

3. Enter a new name for the camera head, up to 10 characters in length, using the onscreen keyboard and tap **Enter** or **OK** to save.

![Image of camera head name entry](image)

The new camera head name appears in the camera bin and on any stored shots made with the camera head.

**Locking the CP4**

The CP4 can be temporarily locked and disabled to prevent accidental operation of the controls.

1. In the top right-hand corner of the touchscreen tap the padlock symbol and then tap to select **Lock Panel**.

2. The controls are disabled and the display screen blanks out, displaying unlock instructions. Tap and hold the touchscreen anywhere for two seconds to unlock the panel.

**Battery indicator**

When the CP4 is being powered by an external battery pack, the battery symbol is displayed in the top right-hand corner of the screen.

Tapping on the battery symbol displays the percentage of charge left in the battery and an estimate of the amount of operation time remaining.

Battery level indications will only be displayed when using compatible Anton Bauer battery packs.

**Powering Down**

To power down the CP4, press and hold the on/off power switch for approximately four seconds until the power switch light and the touchscreen turn off.
<table>
<thead>
<tr>
<th>Fault</th>
<th>Check</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>The CP4 is not powering up.</td>
<td>Check that the power cable is connected and secured.</td>
<td>See the section <strong>Power Connections on page 9</strong>.</td>
</tr>
<tr>
<td></td>
<td>If the CP4 is being powered by a battery pack, ensure that the battery is fully charged.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Check that mains power is being supplied to the PSU.</td>
<td></td>
</tr>
<tr>
<td>Intermittent or no communication with connected camera heads.</td>
<td>Check that the camera heads are receiving power and are switched on.</td>
<td>See the section <strong>System Connections on page 7</strong>.</td>
</tr>
<tr>
<td></td>
<td>Check that Ethernet cables between the CP4 and the camera heads are correctly connected and secured.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If an Ethernet hub is being used to connect camera heads, ensure that it is being powered.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Check that the network settings have been correctly configured on the CP4 and the camera heads.</td>
<td>See the sections <strong>Configuration on page 12</strong> and <strong>Configuration on page 16</strong>.</td>
</tr>
<tr>
<td>The CP4 becomes unresponsive during use.</td>
<td>Power cycle the CP4.</td>
<td>If the CP4 will not power down with the on/off switch, temporarily disconnect the power cable.</td>
</tr>
<tr>
<td>CP4 displays “connecting” when connecting to a head but never changes to “connected”.</td>
<td>Network configuration issue. Make sure the head and panel are set to the same IP range.</td>
<td>See the section <strong>CP4 Network Settings on page 12</strong>.</td>
</tr>
<tr>
<td>The device doesn’t see a head device.</td>
<td>Either a network issue, or head is running older firmware (pre v2). Upgrade head to latest firmware.</td>
<td></td>
</tr>
</tbody>
</table>
# Troubleshooting

## Panel Warning Messages

<table>
<thead>
<tr>
<th>Warning Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>! This show can only be edited by user “Morning Team”</td>
<td>Only the user who created the show can edit its contents. If the user name used to create the show no longer exists it can be reinstated. See <a href="#">Creating and Editing User Names</a> on page 12.</td>
</tr>
<tr>
<td>! Controller error</td>
<td>Applies to the currently connected camera head and is accompanied by a fault description. Check the connections on the camera head to the camera servo lens. Also check that the camera head is free to move within its mechanical limits and the tilt lock is disengaged.</td>
</tr>
<tr>
<td>! The head “Camera1” has been locked and cannot be driven by the panel</td>
<td>Appears if the current camera head has been locked in the Camera Management screen. See <a href="#">Adding and Managing Camera Heads</a> on page 16. Alternatively, the tilt lock may be engaged on the camera head preventing it from being driven.</td>
</tr>
<tr>
<td>! Camera “Camera1” is in use by another panel</td>
<td>Another CP4 in the system is currently controlling the head. Either ask the other CP4 user to disconnect from the head or use the Take Rudely function in the Configuration screen. See <a href="#">CP4 Control Settings</a> on page 13.</td>
</tr>
<tr>
<td>! A calibration error has been detected on the joystick</td>
<td>The joystick failed a calibration test and was not in its central position during power up. The joystick will be disabled until the problem is resolved. Try power cycling the CP4 without touching the joystick until the CP4 is fully operational.</td>
</tr>
</tbody>
</table>

### Persistent Errors

If a camera icon has a warning triangle displayed on it, there is a persistent error on the camera head which requires attention. Tap and hold on the camera icon and select Show Errors from the menu to display a window listing the errors. The window provides live updates of the errors to assist resolving the issues on a camera head.
Routine Maintenance

The CP4 requires minimal routine maintenance, apart from checking the connections and overall operation periodically.

Routine checks
During use, check the following:

- Check cables for signs of wear or damage. Replace as necessary.
- It is recommended that shows are saved onto a USB stick regularly as a back up.
- Check that all cables are connected properly.

Cleaning
During normal use the only cleaning required should be a regular wipe over with a dry, lint-free cloth. Dirt accumulated during storage or periods of disuse may be removed with a vacuum cleaner. Particular attention should be paid to all connection ports.

Cleaning the Touchscreen
The touchscreen should be cleaned regularly with a dry, lint-free cloth to help prevent a deterioration in performance. Only apply gentle pressure to the surface of the touchscreen when cleaning.

Technical Specification

Physical Data
- Weight: 2 kg (4.4 lb)
- Height (Including Joystick): 116.3 mm (4.6 in.)
- Length: 374.1 mm (14.8 in.)
- Width (including focus wheel): 282.6 mm (11.2 in.)

Environmental Data
- Operating temperature range: -10°C to +40°C (14°F to +104°F)

Electrical Data
- Power input: 12V DC
- Power consumption: 30W

Touchscreen Data
- Diagonal size: 264.1 mm (10.4 in.)
- Resolution: 1024 x 768 pixels

Software Data
- Operating system: Linux OS
- Software version: 1.2.0

Technical specifications are subject to change without notice.
FCC Certification

FCC Notice
This product complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on. The user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/television technician for assistance.

FCC Warning
Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

FCC Declaration of Conformity
This product complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This product may not cause harmful interference.
2. This product must accept any interference received, including interference that may cause undesired operations.

Declaration of Conformity
Vitec Videocom Limited declares that this product has been manufactured in accordance with BS EN ISO 9001:2008 and is in compliance with the essential requirements and other relevant provisions of the Machinery Directive 2006/42/EC. A copy of the Declaration of Conformity is available upon request.

Environmental considerations
ROHS Compliance Statement
Vitec Videocom Limited is compliant with the European Union Directive 2011/65/EU Restrictions of Hazardous Substances (RoHS) that restricts the use of hazardous substances in Electrical and Electronic Equipment.

This symbol marked on the product or its packaging indicates that this product must not be disposed of with general household waste. In some countries or European Community regions separate collection systems have been set up to handle the recycling of electrical and electronic waste products. By ensuring this product is disposed of correctly, you will help prevent potentially negative consequences for the environment and human health. The recycling of materials helps conserve natural resources.

Visit our website for information on how to safely dispose of this product and its packaging.

In countries outside the EU:
Dispose of this product at a collection point for the recycling of electrical and electronic equipment according to your local government regulations.

Pollution statement
This equipment is designed for operation in Pollution Degree 2 environments.