

User's Guide

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OCP 400

Operational Control Panel

Declaration of Conformity

We, Grass Valley Nederland B.V., Kapittelweg 10, 4827 HG Breda, The Netherlands, declare under our sole responsibility that this product is in compliance with the following standards:

- EN60065 : Safety
- EN55103-1: EMC (Emission)
- EN55103-2: EMC (Immunity)

following the provisions of:

- a. the Low Voltage directive 2006/95/EC
- b. the EMC directive 2004/108/EC

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This product generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause interference to radio communications.

It has been tested and found to comply with the limits for a class A digital device pursuant to part 15 of the FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

Operation of this product in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

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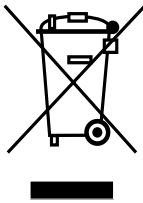
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End-of-life product recycling



Grass Valley's innovation and excellence in product design also extends to the programs we've established to manage the recycling of our products. Grass Valley has developed a comprehensive end-of-life product take back program for recycle or disposal of end-of-life products. Our program meets the requirements of the European Union's WEEE Directive and in the United States from the Environmental Protection Agency, individual state or local agencies.

Grass Valley's end-of-life product take back program assures proper disposal by use of Best Available Technology. This program accepts any Grass Valley branded equipment. Upon request, a Certificate of Recycling or a Certificate of Destruction, depending on the ultimate disposition of the product, can be sent to the requester.

Grass Valley will be responsible for all costs associated with recycling and disposal, including freight, however you are responsible for the removal of the equipment from your facility and packing the equipment ready for pickup.

For further information on the Grass Valley product take back system please contact Grass Valley at + 800 80 80 20 20 or +33 1 48 25 20 20 from most other countries. In the US and Canada please call 800-547-8949 or 530-478-4148. Ask to be connected to the EH&S Department. In addition, information concerning the program can be found at:

www.grassvalley.com/environment

Important information

Read this information carefully before installing this equipment and retain them for future reference. Read and comply with the warning and caution notices that appear in the manual. Any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.



Caution

Do not plug in the power cable connector into the Ethernet connector. Plugging the power cable connector into the Ethernet connector of the OCP 400 will damage the connector.

Safety Summary

This information is intended as a guide for trained and qualified personnel who are aware of the dangers involved in handling potentially hazardous electrical/electronic equipment. It is not intended to contain a complete list of all safety precautions which should be observed by personnel in using this or other electronic equipment.

During installation and operation of this equipment, local building safety and fire protection standards must be observed. Before connecting the equipment to the power supply of the installation, the proper functioning of the protective earth lead of the installation needs to be verified.

Whenever it is likely that safe operation is impaired, the apparatus must be made inoperative and secured against any unintended operation. The appropriate servicing authority must then be informed.

Warnings

Warnings indicate danger that requires correct procedures or practices to prevent death or injury to personnel.

- Do not modify this equipment;
- Installation of this equipment must only be performed by qualified personnel;
- Do not use any accessories other than those recommended by the manufacturer;
- In case of an emergency ensure that the power is disconnected;
- Mount equipment so that power lead can be accessed to disconnect power;
- To prevent fire or shock hazard, do not expose the unit to rain or moisture;
- There are no user servicable parts inside. Refer servicing to qualified personnel only or contact your local Grass Valley representative.

Cautions

Cautions indicate procedures or practices that should be followed to prevent damage or destruction to equipment or property.

- Do not subject the unit to severe shocks or vibration;
- Do not expose the unit to extremes of temperature;
- To prevent risk of overheating, ventilate the product correctly.

Chapter 1

Introduction

1.1 Application

The OCP 400 is a compact operational control panel for all Grass Valley cameras. Control of both HD and SD cameras is supported. The user interface is designed for convenience, with menu accessible functions for detailed set-up and a clear display of settings and values.

The OCP 400 operates within an Ethernet-based camera control network using TCP/IP as communication protocols. The OCP 400 not only controls all camera functions, it can also be used to change the menu values of the Grass Valley camera base stations. Extensive set-up parameters for the OCP itself, the camera and base station are all available.

1.2 Features

- Standard IEEE 802.3 10/100 Mb Ethernet;
- IP connectivity;
- Off-the-shelf IT-network infrastructure;
- Communicates with other Grass Valley products (e.g. NetConfig);
- Remote Diagnostics;
- Software upgradable;
- Improved ergonomics and large flexibility;
- Comfortable, slimline and clean design;
- Hard style buttons;
- Menu display for detailed setup.

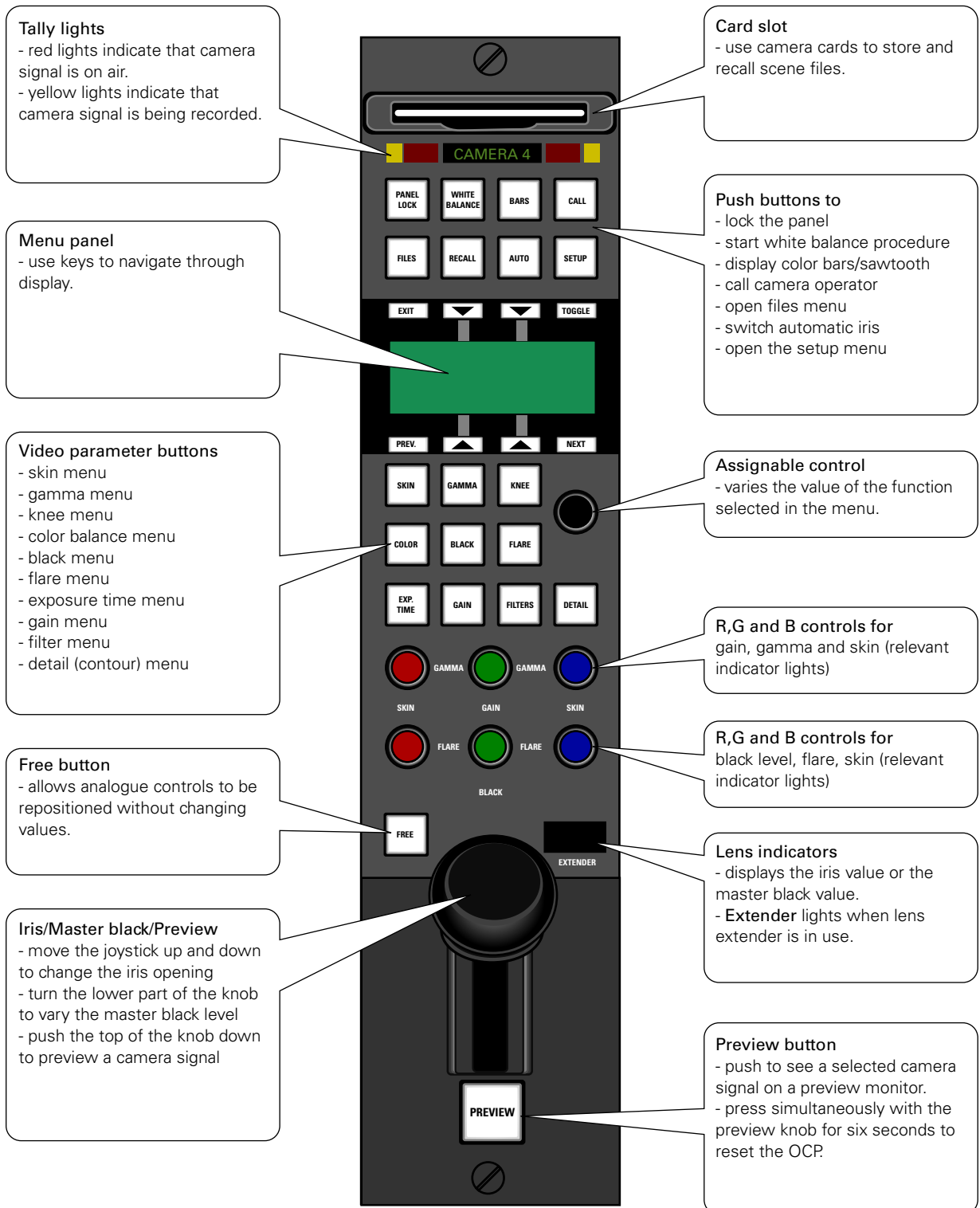
1.3 Using this guide

The OCP 400 can control many different types of camera. This guide includes all possible menu items and functions. Depending on the type of camera to which the OCP is connected, not all of these items and functions may be available. The values available are also camera dependent. The menu system only displays the relevant items.

In the tables on the following pages that list menu items, the Level column indicates the control level at which an item is displayed:

- An **S** (simple) indicates an item that is always shown.
- A **B** (basic) indicates items that are shown in addition to simple items when the control level is set to basic.
- An **F** (full) indicates items that are shown in addition to basic and simple items when the control level is set to full.

1.4 Location of controls



1.5 Using the OCP controls

1.5.1 Button lights

When the OCP is powered its buttons are illuminated. The normal colour of a button is dim green. The light shines brighter when a button is selected. You can set the illumination levels in the OCP set-up menu.

1.5.2 Non-standard indication

When a value for one of the video parameters is changed by the user its status will become 'non-standard'. The button for its function group will lit up bright yellow when it is selected and dim orange when it is not. A changed value is indicated by a *-symbol in the text-display.

All changes are relative to the user's reference settings which are the last stored OR recalled settings. By recalling (full or partial) or storing a scene file all non-standard indications are reset. You can find more information about file handling in the section 'Using files' of this guide.



Note

Analogue values are being regarded as *changed* when they vary more than 10% of their reference value.



Note

Functions that are blocked or disabled by another function or that are not part of the current function set (simple, basic or full) will not be indicated 'non-standard' even if they are changed.

1.5.3 Momentary buttons

Two buttons on the OCP – the **Free** button and the **Preview** button – are momentary buttons. These type of buttons only operate as long as they are held down. The **Files** button operates both selective and momentary.

1.5.4 Assignable rotary controls

The single assignable rotary control varies the value of the function selected in the display. When no function is selected, this control varies Detail.

- The upper Red, Green and Blue assignable rotary controls vary either:
 - the gain levels of the red, green and blue signals individually (default),
 - the gamma levels of the red, green and blue signals individually, or
 - the skin contour colours.

The function selected for adjustment and its value is shown in the menu display and the relevant indicators light.

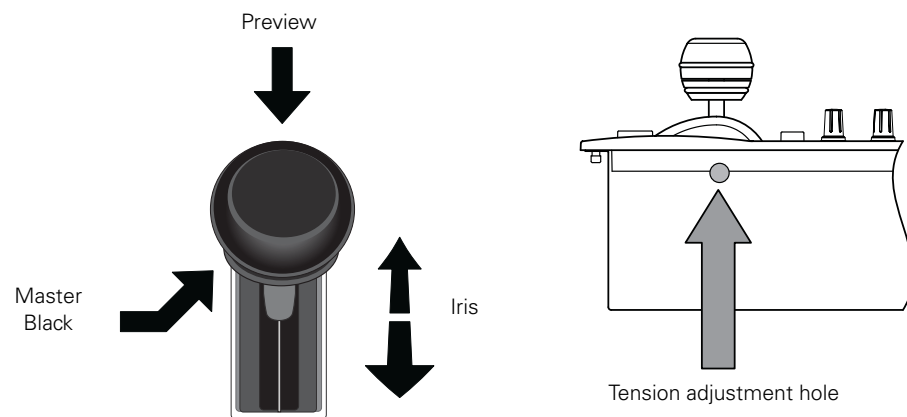
The lower Red, Green and Blue assignable rotary controls vary either:

- the black levels of the red, green and blue signals individually,
- the flare levels of the red, green and blue signals individually, or
- the skin contour colour width.

The function selected for adjustment and its value is shown in the menu display and the relevant indicators light. Black level or Flare can be set as default.

1.5.5 Joystick

This three-in-one control is used to vary the master black level, to control the iris and to preview the connected camera signal on a preview monitor.



Operation

- Press the top of the knob to get a preview of the connected camera signal.
- Turn the lower knob to vary the master black level.
- Move the joystick up and down to open and close the iris. The joystick direction, range and sensitivity can be set in the OCP setup menu.

Tension adjustment

When the joystick's movement becomes too loose or too tight it may be necessary to adjust its tension spring. Use a long Torx-10 type screwdriver to adjust the tension screw of the joystick. The screw is located in a hole at the side panel of the OCP casing. Turn the screw and move the joystick at the same time to find the right adjustment.

1.5.6 Lens indicators

The display shows the current F-number of the iris. When the master black is changed, or when the **Free** button is pressed, the value of the master black level is displayed for five seconds.

The Extender indication lights when the range extender function of the lens is selected.

1.5.7 Panel lock button

Push the **Panel Lock** button to lock the operation panel of the OCP. This button lights when the panel is locked (On). When off, all functions of the OCP can be used. When on, limited control is possible by using the **Free** button.

1.5.8 Free button

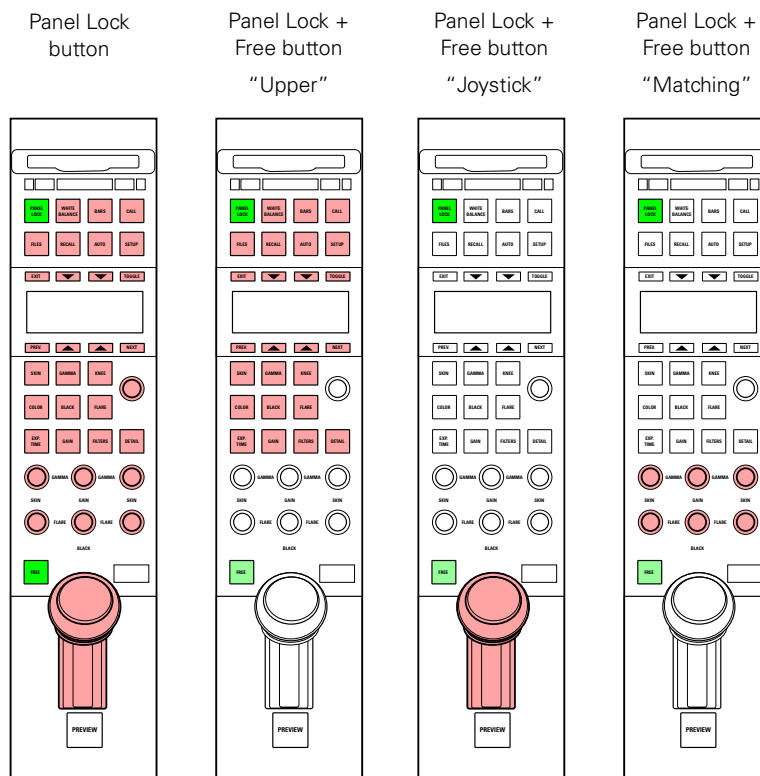
Hold down the **Free** button and change the position of all the rotary controls without affecting the value of the function assigned to them. Use this button to position the joystick without affecting the value of the iris or the master black.

Panel lock with Free button

The **Free** button can be used together with the **Panel Lock** button to control partial access to panel functions. When the panel lock function is selected (the **Panel Lock** button is lit), the **Free** button also lights.

With panel lock engaged, push the **Free** button to allow partial access to the panel. The "Lock + Free" item in the OCP Setup menu defines which part of the operation panel stays locked when the **Panel Lock** with the **Free** button is used. Refer to [Section 3.2 on page 20](#) for more information about the OCP setup menu. The following settings can be selected:

- **Upper (default)**: all buttons in the upper operation field stay locked;
- **Joystick**: master black and iris control functions stay locked;
- **Matching**: six colour matching rotary controls in the middle section stay locked.



Red color means that the button or control is locked.

1.5.9 Bars button

Push the **Bars** button to switch on the colour bar test signal in the connected camera. Push the button again to select a sawtooth test signal.

- The button lights (green) when Bars are on.
- The button lights (yellow) when the sawtooth test signal is on.

1.5.10 Call button

Push the **Call** button to send a signal to the connected camera calling for attention.

- The **Call** button lights when it is activated or when a call is received from another system part.
- If active, push again to switch off.

DMC remote recording

When the OCP controls a DMC camcorder *and* the camcorder's Remote Recording option is turned on, the **Call** button acts as a recording button.

Push the **Call** button to start a recording on the camcorder.

- The Tally indication on the OCP lights.
- When a recording is in progress, push again to stop the recording. The Tally lights extinguish.

1.5.11 Using the menu panel

The menu panel contains a display and eight buttons for selecting items in the menu system. The main operational tasks of the menu panel are:

- to provide access to parameters for setting up the OCP, the base station (BS) and the camera.
- to display function menus and values when a direct video parameter button is pushed.
- to display the status of a set of functions.

Selection buttons

The function of the four arrow buttons in the centre of the menu panel is determined by the item appearing next to them on the display. Push the button associated with the item displayed to select this item.

Toggle button

This buttons is used in some submenus to toggle between two values.

Previous / Next button

Push these buttons to move up and down through the various menu pages.

Exit button

Push this button to exit the current menu and return to the status page.

Illumination

The menu panel buttons are illuminated to indicate their state:

- not lit: no function for that button
- low light: function available; push to change or to assign to rotary control.
- bright light: function is assigned to rotary control.

Opening menu pages

There are several ways of opening a menu page. You can use:

- the **Setup** button
- the **Files** button
- the **Recall** button
- the video parameter buttons

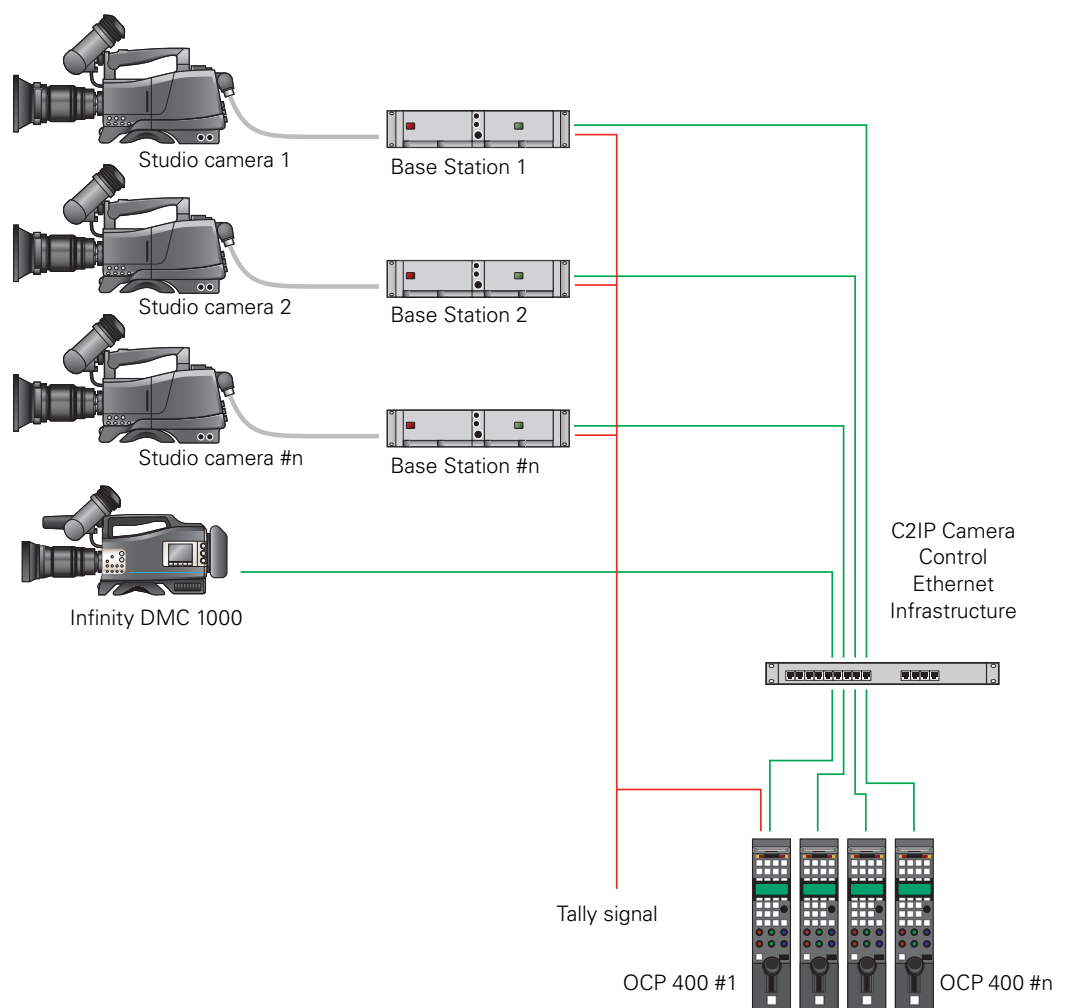
Push an activated button to exit that particular menu function.

Chapter 2

Configurations

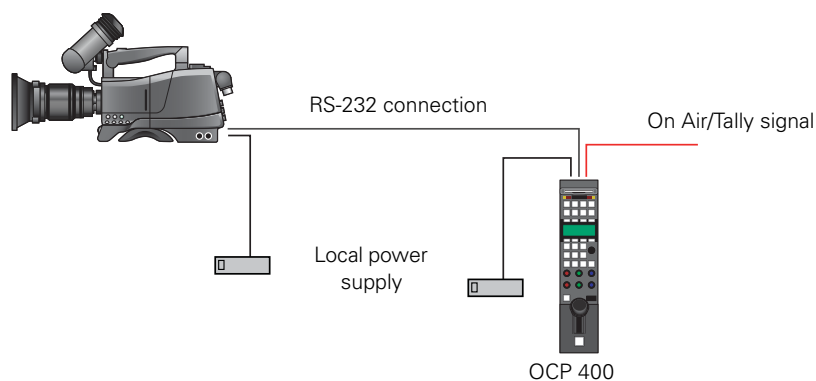
2.1 Studio camera network

One or more OCP 400 control panels are connected to the C2IP camera control network. The IP address and other options for the Ethernet connection can be set up in the OCP Setup menu. Connect LDK camera's with Base Stations or DMC camcorders in studio mode.



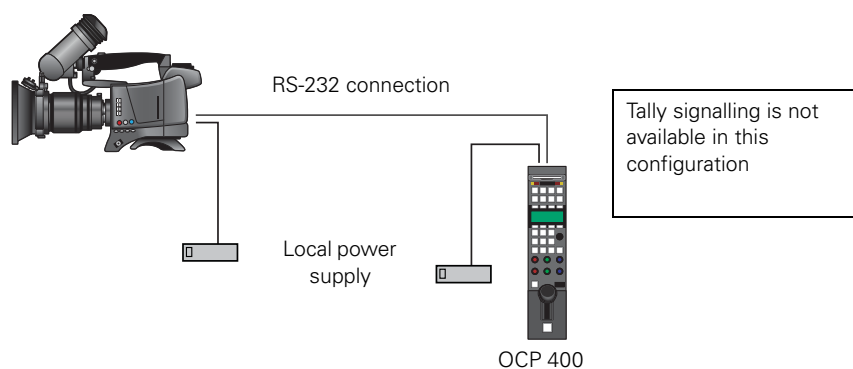
2.2 Studio camera in local mode

In local mode, the OCP 400 is directly connected to the serial RS-232 connector at the front of the camera. Both the camera and the OCP 400 must be powered locally. Video signals are available at the camera's adapter.



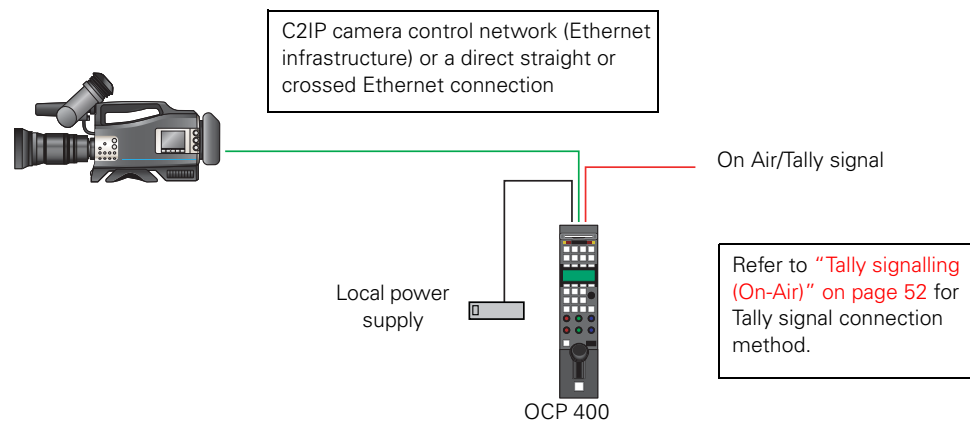
2.3 Viper LDK 7500 camera

To connect the OCP 400 with an LDK 7500 Viper camera a serial RS-232 connection is used:



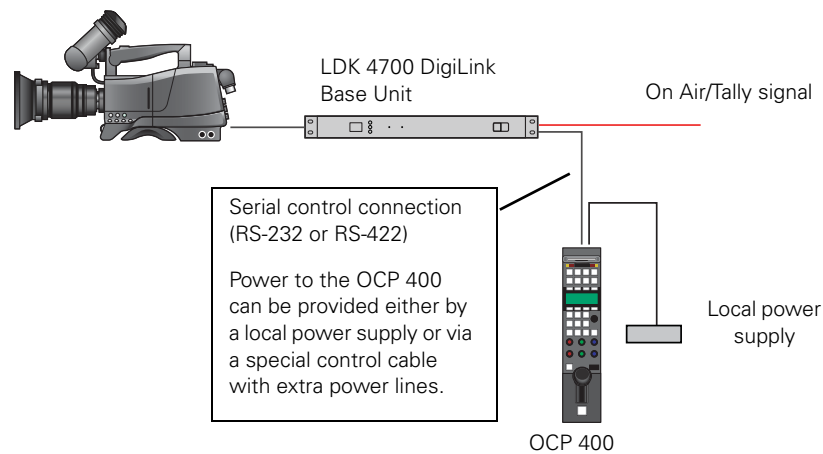
2.4 DMC camcorder

To connect the OCP 400 with a DMC Infinity camcorder an Ethernet connection is used. The OCP 400 must be locally powered while the camcorder is powered by its battery or a local power supply.



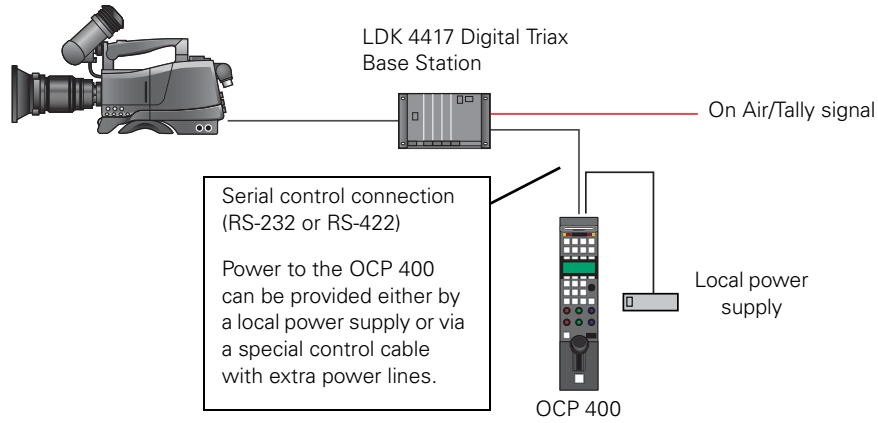
2.5 DigiLink system

To connect an OCP 400 with a DigiLink (SD) camera system:



2.6 Digital Triax system

To connect an OCP 400 to a Digital Triax camera system:



Chapter 3

Setup




3.1 Checking system status

To check that Base Station and camera are connected correctly go to the Diag submenu of the setup menu.

- Push the **Setup** button to open the menu.

| Menu | Selections | Function | Level | Possible values |
|-------|------------|-------------------------|-------|-----------------|
| Setup | Diag | Diagnostic menu | S | |
| | OCP | OCP setup menu | S | |
| | BS | Base station setup menu | S | |
| | Cam | Camera setup menu | S | |

- Push the **Selection** button to choose the Diag submenu. The Diag submenu appears.

| Menu | Selections | Function | Level | Possible values |
|---|---------------|------------------------------|-------|---|
| Diag | Camera | Camera Connection | S | No camera, [Camera Type] |
| | Gen Lock | GenLock Status | S | Locked, Not Locked, No sync |
| | Triax St. | Triax Status | S | OK, Open, Short, DC Power |
| | - | | | |
|  | Cam 12NC | Camera software 12NC | S | |
| | Cam SW Status | Camera software status | S | |
| | BS 12NC | Basestation software 12NC | S | |
| | BS SW ST | Basestation software status | S | |
|  | OCP Appl | Application software version | S | |
| | OCP BootSw | Boot software version | S | |
| | OCP FirmW | Firmware version | S | |
| | OCP Type | OCP device type | S | OCP 400/00 or OCP 400/10 |
|  | Ethernet MAC | OCP Ethernet MAC address | S | Mac-address is displayed as: XX:XX:XX:XX:XX:XX |
| | Address | | | |
| | Link Type | Ethernet link speed | S | 10 Mbit/100 Mbit Full/Half Duplex |
| | Link State | Ethernet connection status | S | Connected / Not Connected |


| Menu | Selections | Function | Level | Possible values |
|---|------------|----------|-------|-----------------|
| <div> <div>NEXT</div> <div>↑</div> </div> | Ser Recv | | F | |
| | Ser Sent | | F | |
| | Frame Err | | F | |
| | Sum Err | | F | |

3.2 Setting up the OCP

Various aspects of the OCP can be set to suit your work methods. To open the menu which lets you set up these preferences proceed as follows:

- Push the **Setup** button to open the menu.
- Push the **Selection** button to choose the OCP submenu.
- The first page of the OCP setup menu appears. Use the **Next** button to find the page with the item you wish to change and then select this item with its selection button.

| Menu | Selections | Function | Level | Possible values |
|---|-------------|--|-------|---|
| OCP | Cam Nr | Camera number | S | 1..99 |
| | SELECT | Connect to selected camera | S | Press button to connect to the selected camera |
| | Conn.Mode | OCP Connection mode | S | Ethernet, Serial |
| | Serial | Select type of serial connection | S | RS-232, RS-422 (when available) |
| <div> <div>NEXT</div> <div>↑</div> </div> | IP CONFIG | Go to IP config menu | F | |
| | IRIS | Go to Iris menu | S | |
| | BlackPot | Black rotary controls assignment | B | Black , Flare |
| | CLOCK | Go to clock menu | F | |
| <div> <div>NEXT</div> <div>↑</div> </div> | LCD BackL | LCD display backlight adjust | B | 0..99 (50) |
| | LCD Contr | LCD display contrast adjust | B | 0..99 (50) |
| | Buzzer | OCP audio signal with Call | B | On, Off |
| | Txt Bright | Brightness of dot matrix textdisplays | B | 1..20 (20) |
| <div> <div>NEXT</div> <div>↑</div> </div> | Tally Leds | Tally LEDs intensity level | B | Low, Medium, High, Full |
| | Text Leds | Rotary text-LEDs intensity | B | 0..99 |
| | LED Low | Button Low-Level illumination | B | 0..99 |
| | LED High | Button High-Level illumination | B | 0..99 |
| <div> <div>NEXT</div> <div>↑</div> </div> | MB Res | Master black rotary resolution | F | Vfine, fine, normal, coarse, Vcoarse |
| | MB Mode | Master black mode | F | Linear, Mixed |
| | ETH CONFIG | To Ethernet configuration menu | F | |
| | Preview | On Air status to Preview button | F | On Air On, On Air Off |
| <div> <div>NEXT</div> <div>↑</div> </div> | TallyOnOff | Select local tally input mode (only when an Infinity camera is connected) | F | High/Low , Open/High, High/ Open, Low/High |
| | - | | | |
| | - | | | |
| | Lock + Free | Defines which part of the panel stay locked when Free button is pushed (in Locked mode). | B | Upper , Joystick, Matching |

| Menu | Selections | Function | Level | Possible values |
|---|------------|---|-------|---------------------------------|
|  | OCP Set | OCP Menu set | S | Simple (S), Basic (B), Full (F) |
| | - | | | |
| | - | | | |
| | Reset OCP | Resets all local functions to their default values. | F | Press button to execute reset |

**Note**

To access some of these settings it may be necessary to set the OCP control level to *Full*.

Setting the OCP control level

The OCP menu system has three levels of control; Simple, Basic and Full. These levels determine which functions are displayed. In the OCP setup menu move to the OCP control set item and select S (simple), B (basic) or F (full).


- Select the simple level to reduce the number of functions displayed to a minimum. Use this level to protect against unintentional changes to critical parameters.
- Select the basic level as the normal operational mode of the OCP. Use this level to prevent set-up parameters from being displayed.
- Select the full level to access all functions available on the OCP.

Camera assignment

The OCP can be assigned to a Base Station/Camera combination by moving to the CamNum item of the OCP setup menu. Select the camera number of the camera that you want to control using the assignable rotary control. Press SELECT to confirm.

IP Configuration

For the OCP to operate in a network environment it must have a unique identification. By default, an IP address is assigned automatically. To set the IP address manually use the IP CONFIG and ETH CONFIG submenus.

| Menu | Selections | Function | Level | Possible values |
|---|-------------|-----------------------|-------|--|
| IP Config | IP Mode | IP address assignment | F | Auto, Manual |
| | Apply | Set IP mode | F | Press button to activate the new IP settings |
| | Subnet Mask | Subnet mask address | F | 255.255.0.0 |
| | - | | | |
|  | IP Byte 1 | IP address 1st byte | F | 1..250 (192) |
| | IP Byte 2 | IP address 2nd byte | F | 0..255 (168) |
| | IP Byte 3 | IP address 3rd byte | F | 0..255 (0) |
| | IP Byte 4 | IP address 4th byte | F | 1..254 (2) |

| Menu | Selections | Function | Level | Possible values |
|-----------------|------------|------------------------------|-------|-------------------------|
| Ethernet Config | Eth Speed | Ethernet speed setting | F | 10 Mbit, 100 Mbit, Auto |
| | Duplex | Ethernet duplex-mode setting | F | Full, Half, Auto |
| | - | | | |
| | - | | | |

Display and button brightness

The text brightness and contrast of the display and the brightness of the low and high levels of the button lights can be set in the OCP setup menu. Select the item you wish to change and then use the assignable rotary control to adjust its value.


Iris (joystick) set-up

The range over which the iris opening can be controlled by the joystick and its sensitivity are set in the Iris submenu of the OCP Setup menu. The direction of control can also be set in the IRIS submenu.

| Menu | Selections | Function | Level | Possible values |
|------------|------------|----------------------------------|-------|---|
| Iris Setup | Iris Mode | Select Iris joystick mode | S | Normal, Reverse |
| | Range | Set Iris joystick control range | S | 0..99 |
| | Center | Set Iris joystick control center | S | 0..99 |
| | IRIS CALIB | Calibrate joystick | S | Move the joystick to the most upper and lower position. |

Clock

The time for the internal clock is set in the CLOCK submenu of the OCP setup menu. The assignable rotary control is used to set the hours, minutes and seconds.

| Menu | Selections | Function | Level | Possible values |
|---|------------|---------------------------|-------|-----------------|
| Clock | Hour | Hour selection function | F | 0..23 |
| | Minute | Minute selection function | F | 0..59 |
| | Second | Second selection function | F | 0..59 |
| | - | | | |
|  | Year | Year selection function | F | 2000..2099 |
| | Month | Month selection function | F | <months> |
| | Day | Day selection function | F | 0..31 |
| | - | | | |



Default values

The default values of the OCP are stored in the OCP and are restored when the Reset OCP item is selected. When the OCP is powered up or reset, a connection to the last camera number used is made.

The default values for the camera and base station parameters are stored in the Camera and Base Station default files. The camera parameters and their values that are shown on the OCP depend on the camera connected to OCP. If you select a different camera number, a different set of parameters and values can appear.

3.3 Setting up the Base Station

- Push the **SETUP** button to open the menu.
- Push the **Selection** button to choose the BS submenu. The BS menu appears. Use the **Next** button to view subsequent pages.

| Menu | Selections | Function | Level | Possible values |
|---|------------|----------------------------|-------|--------------------------------------|
| BS | Monitoring | Picture monitor selection | S | CVBS,R,G,B,Y,EXT1,EXT2,Y/EXT1,Y/EXT2 |
| | - | | | |
| | - | | | |
| | Menu | BS internal menu enable | S | |
|  | H PHASE | Adjustment H-Phase | B | 0..99 |
| | SC COARSE | Adjustment SC-Phase coarse | B | 0,90,180,270 |
| | - | | | |
| | SC FINE | Adjustment SC-Phase fine | B | 0..99 |
|  | Notch Lvl | Notch Depth | B | 0..99 |
| | Notch | Notch function | B | On, Off |
| | - | | | |
| | - | | | |

Accessing the BS internal menu





Select the Menu item of the BS menu to access the internal menu of the base station. The menu appears on the Base Station text and monitoring output.






| Menu | Selections | Function | Level | Possible values |
|------------------|------------|-----------|-------|-----------------|
| BS internal menu | Up | Up menu | S | |
| | - | | | |
| | Down | Down menu | S | |
| | Select | Select | S | |

3.4 Setting up the camera

- Push the **SETUP** button to open the menu.
- Press the **Selection** button to choose the Cam(era) submenu. The initial camera menu depends on whether a studio or Infinity camera is connected and whether an SD or HD video format is selected.





For studio cameras

| Menu | Selections | Function | Level | Possible values |
|---|--------------|------------------------------------|-------|--|
| CAM | Videomode | Select video mode | S | <various video modes> |
| | SELECT | | | Press button to activate selected video mode |
| | - | | | |
| | OutputMode | Output Mode selection (Viper only) | S | RGB, YCrCb, Filmstream, HD stream |
|  | HD Ratio | HD Aspect Ratio | S | 16:9, SW |
| | SD Lbox | Select Letterbox function | S | 14:9, 10:9, 16:9, Off |
| | SD Ratio | Select SD Aspect Ratio | S | 4:3, 16:9 |
| | Ratio Sel | Aspect Ratio Selection | S | Extern, MCP |
|  | Freeze | Freeze picture | S | On, Off |
| | - | | | |
| | Reverse Scan | Reverse Scan | S | On, Off |
| | Mode | Reverse Scan Mode | S | Horizontal, Vertical, Both |
|  | Lens Ctrl | Lens control point | S | Local, Remote |
| | - | | | |
| | Focus | Remote Focus | S | 0..99 |
| | Zoom | Remote Zoom | S | 0..99 |
|  | Iris Pk/Av | Iris Peak/Average level | F | 0..99 |
| | Paint Rng | Painting range setting | F | 3dB, 6dB |
| | - | | | |
| | VF MENU | Go to VF MENU control | F | |

| Menu | Selections | Function | Level | Possible values |
|---|--------------|--|-------|--|
|  | Matrix | Matrix selection | B | EBU, Skin, B/W, RAI, BBC, 1:1, CoolFL, Var1, Var2, XGL |
| | Mtrx SEQ | Matrix sequence | F | M->G, G->M |
| | VAR Mtrx | Go to VAR MATRIX menu | F | |
| | SHADING | Go to SHADING menu | F | |
|  | Max User LVL | Sets maximum User level | F | 0, 1, 2, 3, 4 |
| | OnAir LAMP | Front On Air indicator | F | On, Off |
| | OnAir LVL | On Air indicator level | F | 0..99 |
| | Power | Camera remote power | S | On, Off |
|  | DiskRec IF | Disk recorder interface (LDK 8300 only) | S | EVS, Std |
| | Combine | Selects method of combining high-speed phases for the viewing output (LDK 8300 only) | S | Field, 2-line, 4-line |
| | Tally Lock | Tally lock | S | On, Off |
| | Ext. Iris | Extended Iris | S | On, Off |
|  | V-Shift | Vertical Shift | S | On, Off |
| | V-Shift Lvl | Vertical Shift Level | S | 0..99 |
| | Cam Disable | Camera Disable | S | On, Off |
| | - | | | |
|  | Rem Audio | Remote Audio Select | S | Loc/Rem |
| | - | | | |
| | Audio1 Lvl | Audio 1 Level | S | -22 .. -64dB |
| | Audio2 Lvl | Audio 2 Level | S | -22 .. -64dB |

| Menu | Selections | Function | Level | Possible values |
|-----------------|------------|------------------------------|-------|-----------------|
| VF MENU control | UP | Up menu (also with rotary) | S | |
| | - | | | |
| | DOWN | Down menu (also with rotary) | S | |
| | SELECT | Select | S | |


For Infinity (DMC) cameras




| Menu | Selections | Function | Level | Possible values |
|---|------------|---------------------------------------|-------|--|
| CAMERA | Videomode | Select HD Format | S | <various video modes> |
| | SELECT | | | Press button to activate selected video mode |
| | - | | | |
| | - | | | |
|  | - | | | |
| | - | | | |
| | - | | | |
| | SD Ratio | Select SD Aspect Ratio | S | 4:3, 16:9. LB |
|  | Iris Pk/Av | Iris Peak/Average level | F | 0..99 |
| | Paint Rng | Painting range setting | F | 3dB, 6dB |
| | - | | | |
| | - | | | |
|  | Matrix | Matrix selection | B | EBU, Skin, B/W, RAI, BBC, 1:1, CoolFL, Var1, Var2, XGL |
| | Mtrx Seq | Matrix sequence | F | M->G, G->M |
| | VAR MTRX | Go to Var Matrix menu | F | |
| | SHADING | Go to Shading menu | F | |
|  | V. Timing | Vertical timing adjustment | F | 1..<Vertical resolution> |
| | Hph Coarse | Horizontal timing adjustment (coarse) | F | 1..<Horizontal resolution> |
| | CVBS SCph | CVBS subcarrier phase adjustment | F | 0..99 (0) |
| | Hph Fine | Horizontal timing adjustment (fine) | F | 0..99 (50) |

**Note**

The VF menu control is not available when an Infinity camera is connected.

The Variable Matrix and Shading menus are submenus of the CAMERA setup menu.

| Menu | Selections | Function | Level | Possible values |
|---|------------|-------------------------------|-------|-----------------|
| Variable Matrix | G->R | Sets the green to red ratio. | F | 0..99 (50) |
| | B->R | Sets the blue to red ratio. | F | 0..99 (50) |
| | R->G | Sets the red to green ratio. | F | 0..99 (50) |
| | B->G | Sets the blue to green ratio. | F | 0..99 (50) |
|  | R->B | Sets the red to blue ratio. | F | 0..99 (50) |
| | G->B | Sets the green to blue ratio. | F | 0..99 (50) |
| | - | | | |
| | - | | | |

| Menu | Selections | Function | Level | Possible values |
|---|------------|--|-------|-----------------|
| Shading | Shading | Turns shading on or off | F | On, Off |
| | - | | | |
| | - | | | |
| | - | | | |
|  | R-SAW H | Sets the horizontal sawtooth value (red) | F | |
| | R-PAR H | Sets the horizontal parameter (red) | F | |
| | R-SAW V | Sets the vertical sawtooth value (red) | F | |
| | R-PAR V | Sets the vertical parameter (red) | F | |
|  | G-SAW H | Sets the horizontal sawtooth value (green) | F | |
| | G-PAR H | Sets the horizontal parameter (green) | F | |
| | G-SAW V | Sets the vertical sawtooth value (green) | F | |
| | G-PAR V | Sets the vertical parameter (green) | F | |
|  | B-SAW H | Sets the horizontal sawtooth value (blue) | F | |
| | B-PAR H | Sets the horizontal parameter (blue) | F | |
| | B-SAW V | Sets the vertical sawtooth value (blue) | F | |
| | B-PAR V | Sets the vertical parameter (blue) | F | |

Chapter 4

Operation

4.1 Camera control

4.1.1 Setting white balance

The **White Balance** button starts the automatic white balance process. The camera measures a white area in the middle of the picture and stores a colour temperature setting in the AW1 or AW2 memory positions.

The **White Balance** button only operates if the colour temperature function is in a preset position (AW1 or AW2) and the colour bars are switched off.

1. Press the **White Balance** button once to display the measurement window in the camera viewfinder.
 - The button lights.
2. Press the **White Balance** button a second time to start the measurement process.
 - The button flashes.

If the measurement is successful, the light in the button and the measurement window are switched off. If the measurement is unsuccessful, the light in the **White Balance** button is orange.

If the button is pressed during the measurement process or at the end of an unsuccessful measurement, the value stored in AW1 or AW2 is reset.

4.1.2 Iris control

Press the **Auto** button to switch on the automatic iris control system.

- The **Auto** button lights to show that the automatic iris control system is in operation.

Even when the auto iris is activated the manual control can still be used to vary the iris opening by +1 or - 1 F-stop.

4.1.3 Changing camera video parameters

There are several ways of changing the video parameters of the camera. You can use:

- scene files
- standard values
- the direct video parameter buttons

Scene files

Scene files can be stored and recalled to immediately change a complete set of parameters.

Standard values

Different set of standard values can be recalled to immediately reset the video parameters.

Direct video parameter buttons

A direct video parameter button when selected brings its associated menu to the display where you can navigate, select and vary the applicable values.

4.2 Camera status pages

Up to three different pages can be used to check the status of various camera functions. Status page 1 is displayed when the **Exit** button is used to leave the menu system. There are two more status pages. To see them use the **Next** button.

Status page 1

| | | | |
|-------------------------|------------|---------|-------------------------|
| Filter wheel 1 position | ND - / - 4 | LDK8000 | Camera type |
| Filter wheel 2 position | 4PSTAR | 1080I60 | Format |
| Color temperature | CTEMP | 3200K | Color temperature value |
| Saturation | SATU | 90 | Saturation value |

Status page 2

| | | | |
|-----------------------------|-----------|-----------|---------------------|
| Knee value | KNEE ON | BLKSTR 54 | Black stretch value |
| Knee slope and point values | SL85 PT80 | SKIN 1+2 | Skin detail usage |
| Gamma value | GAMMA V76 | SD 16:9 | Aspect ratio |

Status page 3

| | | | | | |
|-------------------------|--------|-----|---------|-----|-------------------------|
| Gain R, G and B values | GAIN | R50 | G50 | B50 | |
| Black R, G and B values | BLAC | R50 | G50 | B50 | |
| Detail value | 50 | | +14DB | | Color temperature value |
| Detail | DETAIL | | VARGAIN | | Saturation value |

4.3 Using files

4.3.1 Storing and recalling scene files

The scene file function is used for storing and recalling scene settings for the camera. Four scene files can be stored in memory positions 1 to 4 of the camera.


- To recall a scene file, push the **FILES** button to open the menu.
- Select a memory position 1 to 4. The values stored in this file are then recalled.

To create a scene file, set up the values for all the functions on the OCP, push the **FILES** button to open the menu. Push the **Next** button to open the store page and then select a memory position. The values are stored in this position.



Note

When a scene file is recalled, the values only take effect if the camera is not On Air (except for DMC camcorders).

| Menu | Selections | Function | Level | Possible values |
|---|------------|---------------------|-------|-----------------|
| SCENE FILES | RECALL 1 | Recall Scene File 1 | S | Ready, Failed |
| | RECALL 2 | Recall Scene File 2 | S | Ready, Failed |
| | RECALL 3 | Recall Scene File 3 | S | Ready, Failed |
| | RECALL 4 | Recall Scene File 4 | S | Ready, Failed |
|  | STORE 1 | Store Scene File 1 | S | Ready, Failed |
| | STORE 2 | Store Scene File 2 | S | Ready, Failed |
| | STORE 3 | Store Scene File 3 | S | Ready, Failed |
| | STORE 4 | Store Scene File 4 | S | Ready, Failed |

4.4 OCP File Management

4.4.1 Introduction

Use OCP File Management to manage settings and scene files for your camera. Up to four scene files can be stored in the camera while more Card scene files can be stored on an OCP storage card.

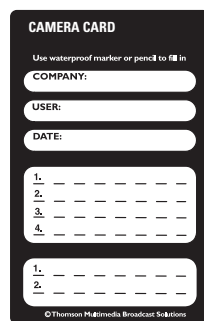
- To access OCP File Management functions, push the **FILES** button to open the menu.



Note

OCP File Management is supported in software version 8 and higher. It is recommended to update both OCP and camera to the latest software version.

4.4.2 Formatting OCP storage cards



Before OCP File Management can be used you need to format an OCP storage card. Empty cards can be obtained from Grass Valley in a set of 10 cards (LDK 5210). Follow these steps for to format a card:

1. Insert the card into the slot at the top of the OCP and push the **Files** button.
2. Push the **Next** button until the OCP 400 CARD item appears.
3. Select the Format option and wait a few seconds.
4. Your OCP storage card is now ready for use.



Note

Make sure not to format your camera owner's card: this will make the owner's card unusable.

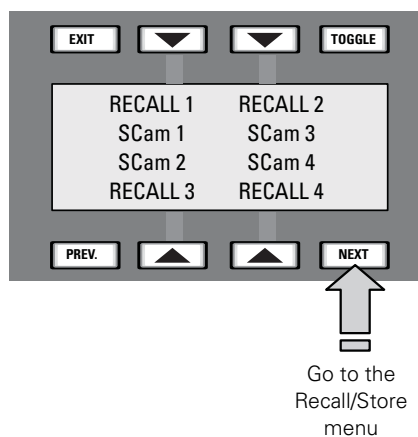


Note

Camera user's cards and OCP storage cards look identical, but they are not interchangeable.

4.4.3 Fast Recall menu

This menu offers fast access to your camera's scene files. Select a scene file and the settings in this file are recalled. To recall a card scene file push the **Next** button to go to the Recall/Store menu.

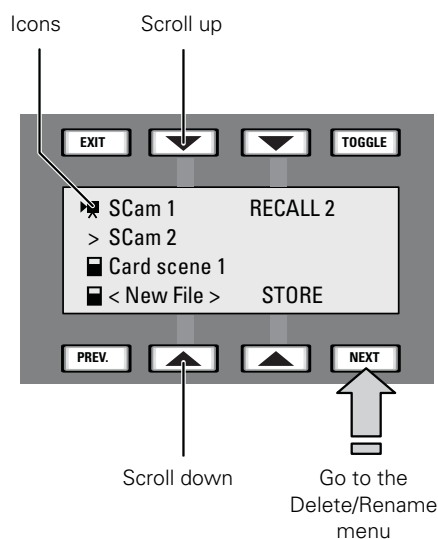


Note

When a scene file is recalled, the values only take effect if the camera is not On Air (except for DMC camcorders).

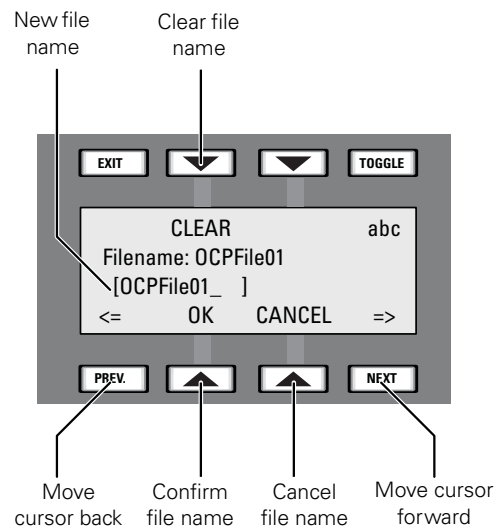
4.4.4 Recall/Store menu

At the left side of the menu panel a list of available scene files is shown. The first four items are camera scene files. They are followed by the card scene files stored on your OCP storage card. Use the left menu buttons or the **Assignable rotary control** to scroll up and down the list. Camera scene files are indicated with a *camera* icon and card scene files with a *card* icon. The arrow indicates the currently selected scene file.



Select the RECALL function to recall the settings in the selected scene file. Select the STORE function to store the current settings of the camera into the selected scene file.

The last item in the scene file list is <New File>. Select this item to create a new file on your card and store the current camera settings to the new file.



The default name appears for your new file. You can change it by using the Rotary Control to select a character and the PREV and NEXT buttons to move the cursor back and forward.

- Use the Toggle button to select a different character set (abc - 123 - #!@ - ABC).
- Select the CLEAR function to clear the file name.
- Select OK to use the new filename. The file will be added to the card and the current settings are stored in this file.
- Select CANCEL to cancel the operation and return to the Recall/Store menu.

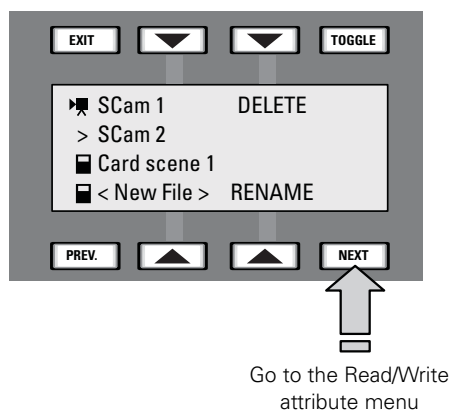


Note

File names can have up to ten characters.

4.4.5 Delete/Rename menu

Select a scene file from the list. Select the DELETE function to delete the selected scene file. Select the RENAME function to change the name of the selected scene file. Refer to the Recall/Store section to enter a new filename.



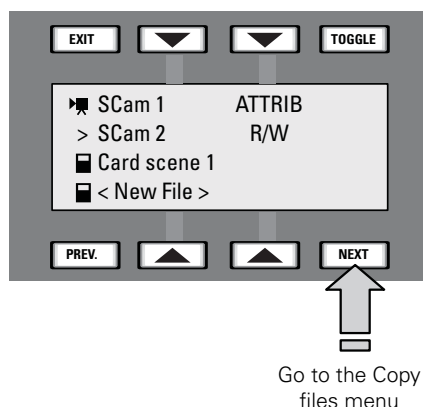
Note

Camera scene files can not be deleted.

Renaming files is not available on DMC camcorders.

4.4.6 Read/Write attribute menu

Select a scene file from the list. Select the ATTRIB function to change the Read/Write status of the selected scene file. A scene file can have a Read Only (R) status and a Read/Write (R/W) status.



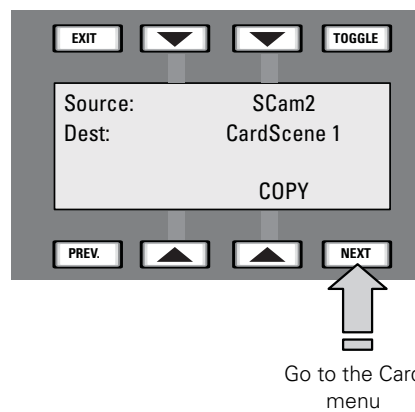
**Note**

Read/Write attributes of a camera scene files can not be changed.

Changing file attributes is not available on DMC camcorders.

4.4.7 Copy Files menu

To copy one file to another, select the scene file in the source field by using the cursor up/down keys or the Assignable rotary control. Use the Toggle button to switch between the Source and Dest(ination) fields. Select the COPY function to copy the selected source scene file to the selected destination scene file.

**Note**

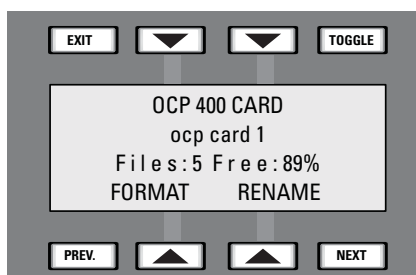
The original contents of the destination file will be overwritten.

When the item <New File> is selected in the destination field the source file is copied to a new file. You will be prompted to enter a file name. Refer to the Recall/Store menu for the naming procedure.

4.4.8 Card menu

This menu displays the name of the inserted OCP storage card, the number of scene files stored on the card and the percentage of space used.

Select the **FORMAT** function to format a card. Select the **RENAME** function to enter a new name for the card. Refer to Recall/Store menu for the naming procedure.



4.4.9 Partial file recall

Partial file recall can be used to undo changes on a group of video parameters. Groups that can be recalled are Gain, Filters, Detail, Exposure Time, Color, Black, Flare, Skin, Gamma and Knee.

To recall a group of parameters press and hold the **Files** button and at the same time press the button for the function group you want to recall. All functions of this group are restored to the user's reference settings.

While the **Files** button is pressed the last recalled or restored file is displayed on the menu panel.



Note

A partial recall of the Gain function set will also recall the RGB Gain values and a partial recall of the Black function set will also recall the RGB Black values and the master black value.

Partial file recall is not available on DMC camcorders.

4.4.10 Recalling standard files

- Push the **RECALL** button to open the menu.
- Select either a factory or a customised file for recall.
- Select Recall

| Menu | Selections | Function | Level | Possible values |
|---------------|-------------------|---|-------|-----------------|
| RECALL STD | RECALL | Recall standard file | S | |
| | STD CUST/ FACT | Select factory or customer file to recall | S | Factory, Custom |
| | - | | | |
| | - | | | |


4.5 Adjusting video parameters


4.5.1 Skin button

- Press the **SKIN** button to open the skin menu.

When the skin colour and width pages are selected, the upper and lower red and blue rotary controls are assigned to these parameters. The **SKIN** lights light.

| Menu | Selections | Function | Level | Possible values |
|------|------------|--|-------|-----------------|
| SKIN | SKIN SEL | Turns skin detail off or on and selects the memory position. | B | Off, 1, 2, 1+2 |
| | - | | | |
| | SET 1 | Go to SET SKIN 1 page | B | |
| | SET 2 | Go to SET SKIN 2 page | B | |

| Menu | Selections | Function | Level | Possible values |
|---|------------|--|-------|---------------------|
| SET SKIN 1 PAGE | SKIN SEL | Select SKIN | B | Off, 1, 2, 1+2 |
| | SKIN LVL | Sets SKIN detail level | B | 0..99 |
| | SKIN VIEW | Turns on to view the selected SKIN detail area | B | On,Off |
| | SKIN AUTO | Starts Auto Skin procedure | B | Off, Win, Run, Fail |
|  | COLOR1 R | Adjust SKIN 1 Color R Level | B | 0..99 |
| | COLOR1 B | Adjust SKIN 1 Color B Level | B | 0..99 |
| | WIDTH1 R | Adjust SKIN 1 Width R Level | B | 0..99 |
| | WIDTH1 B | Adjust SKIN 1 Width B Level | B | 0..99 |

| Menu | Selections | Function | Level | Possible values |
|---|------------|--|-------|---------------------|
| SET SKIN 2 PAGE | SKIN SEL | Select SKIN | B | Off, 1, 2, 1+2 |
| | SKIN LVL | Sets SKIN detail level | B | 0..99 |
| | SKIN VIEW | Turns on to view the selected SKIN detail area | B | On,Off |
| | SKIN AUTO | Starts Auto Skin procedure | B | Off, Win, Run, Fail |
|  | COLOR2 R | Adjust SKIN 2 Color R Level | B | 0..99 |
| | COLOR2 B | Adjust SKIN 2 Color B Level | B | 0..99 |
| | WIDTH2 R | Adjust SKIN 2 Width R Level | B | 0..99 |
| | WIDTH2 B | Adjust SKIN 2 Width B Level | B | 0..99 |

4.5.2 Setting skin detail

Skin detail is set up to select a particular color range. The detail level within this color range can then be set independently of the rest of the picture.

Skin detail is predominantly used to reduce the level of detail in a person's skin tone to produce a more attractive picture. Decreasing the detail level of a person's skin softens the skin tones only.

The skin detail function is not limited to a particular color and so can also be used to achieve various effects in selected color areas. For example, decrease the detail level of a soccer field to accentuate the players or increase the skin detail level to accentuate a rough surface.

The color range to which the skin detail level is applied can be selected automatically or manually. Two skin detail ranges can be independently defined; both can be used at the same time.

Auto skin detail

Carry out the Auto skin detail procedure as follows:

1. In the Skin menu, select the item Set 1 to open the skin 1 page.
2. Select SKIN Auto.
3. Point the two small black boxes that appear in the viewfinder at the intended surface (color).
4. Select SKIN Auto again to start the measurement procedure (the iris is set to Auto). The process running message appears in the viewfinder.
5. When the process is completed (within a few seconds) the OK message appears in the viewfinder.
6. Adjust the skin detail level with the Skin Lvl item. Decrease the value below 50 to soften the selected area. Increase the value above 50 to add extra detail.

Repeat the steps for the Skin 2 position if required.

Set the menu item Skin View to On to show the affected area. The color range set by the automatic procedure can be adjusted manually if required.

Manual skin detail

Set the skin detail color range manually as follows:


1. In the Skin menu, select item Set 1 to open the skin 1 page.
2. Push the Next button.
3. Adjust the color 1 red and blue, and the width 1 red and blue parameters with the assigned rotary controls. The higher the number, the broader the range.
4. Push the Previous button.
5. Adjust the skin detail level for the selected color range with the Skin Lvl item. Decrease the value below 50 to soften the selected area. Increase the value above 50 to add extra detail.

Repeat the steps for the Skin 2 position if required.

4.5.3 Gamma button



- Press the **GAMMA** button to open the gamma menu.

When variable gamma is selected and the **Next** button is pressed, the upper row of rotary controls are assigned to changing the gamma R, G and B values. The **GAMMA** lights light.

| Menu | Selections | Function | Level | Possible values |
|---|------------|----------------------|-------|-------------------------------------|
| GAMMA | GAMMA SEL | Gamma selection | B | 1, 2, Var, Lin |
| | GAMMA CRV | Gamma Curve preset | B | ARD, CCIR, RAI, BBC04, BBC05, BBC06 |
| | - | | | |
| | GAMMA LPF | Gamma LowPass Filter | B | |
|  | GAMMA M | Gamma Master | F | 0..99 |
| | GAMMA R | Gamma Red | F | 0..99 |
| | GAMMA G | Gamma Green | F | 0..99 |
| | GAMMA B | Gamma Blue | F | 0..99 |


4.5.4 Knee button


- Press the **KNEE** button to open the knee menu.

| Menu | Selections | Function | Level | Possible values |
|---|------------|--------------------------------|-------|-----------------|
| KNEE | KNEE SEL | Knee function | S | Auto, Var, Off |
| | KN POINT | Knee Level/set point | S | 0..99 |
| | KN SLOPE | Knee Slope | S | 0..99 |
| | KN SOURCE | Knee source selection | B | Y, NAM |
|  | KNEE DESAT | Knee desaturation function | B | On, Off |
| | DESAT LVL | Knee desaturation level | B | 0..99 |
| | KN SOURCE | Knee source selection | B | Y, RGB, Max |
| | - | | | |
|  | WHITE CLIP | Turns White Clipping on or off | B | On, Off |
| | WCLIP LVL | Sets White Clip Master Level | B | 0..99 |
| | - | | | |
| | - | | | |

4.5.5 Color button

- Press the **COLOR** button to open the color menu.

| Menu | Selections | Function | Level | Possible values |
|---|------------|---------------------------------|-------|---------------------------------|
| COLOR | COL TEMP | Color Temperature | S | AW1,AW2, AWC, 3200K..7800K, VAR |
| | VAR CTEMP | Variable Color Temperature | S | 2000K .. 21000K |
| | SATURATION | Saturation Level | S | 0..99 |
| | CHROMA | Chroma Function | S | On,Off |
|  | Corrector | Turns Color Corrector on or off | S | On,Off |
| | COLCORR | Go to ColCorr menu | S | |
| | | | | |
| | | | | |

| Menu | Selections | Function | Level | Possible values |
|---|-----------------|---|-------|--------------------------|
| COLCORR | CC SET: n | Select color correction set | S | 1..6 |
| | ON | Turns color corr. set on or off | S | On, Off |
| | Color Width | Sets Color and Color Width | S | 0 .. 360° 22.5 .. 360° |
| | HUE SAT LUM | Sets new Hue, Saturation and Luminance for the selected color | S | 0..99 0..99 0..99 |
|  | CC View | View color area | S | On,Off |
| | | | | |
| | Smoothing | Transition between corrected and uncorrected area | S | Sharp, Medium, Smooth |
| | Reset CC | Reset all color correction sets | S | (execute) |

4.5.6 Black button

- Press the **BLACK** button to open the black menu.
- The lower row of rotary controls are assigned to changing the black values. The BLACK light lights.

| Menu | Selections | Function | Level | Possible values |
|-------|------------|------------------------|-------|-----------------|
| BLACK | BLACK STR | Black Stretch Function | S | On,Off |
| | AUTO BLACK | Auto Black Function | S | Press to start |
| | BLKSTR LVL | Black Stretch Level | S | -99..99 |
| | BLKSTR TYP | Black Stretch type | B | Press, Stretch |


4.5.7 Flare button

- Press the **FLARE** button to open the flare menu.
- The lower row of rotary controls are assigned to changing the flare values. The FLARE lights light.

| Menu | Selections | Function | Level | Possible values |
|-------|------------|-------------------|-------|-----------------|
| FLARE | FLARE FUNC | Flare function | F | On, Off |
| | FLARE R | Red Flare Level | S | 0..99 |
| | FLARE G | Green Flare Level | S | 0..99 |
| | FLARE B | Blue Flare Level | S | 0..99 |

4.5.8 Exposure time button

- Press the **EXP. TIME** button to open the exposure time menu.

| Menu | Selections | Function | Level | Possible values |
|---|------------|--|-------|--------------------------------------|
| EXPOSURE TIME | Shutter | Selects shutter preset (Viper only) | S | 90, 180, 216, VAR, MAX etc. |
| | Angle | Sets variable shutter angle (Viper only) | S | 90° .. 315° |
| | Motor | Turns shutter motor on or off (Viper only) | S | On, Off |
| | - | | | |
|  | Exp. Sel | Exposure time selection | S | Nom, CRT, 50, 60, 1/100..1/2000, Var |
| | AutoLight | Auto Lighting function | S | On, Off |
| | Var Exp | Variable exposure time function | S | 50..103 (PAL), 60..150 (NTSC) |
| | Lighting | Lighting adjustment | S | -10..+10 |



4.5.9 Gain button



- Press the **GAIN** button to open the gain menu.
- Select Gain+ or Gain- to increase or decrease the gain in steps.

| Menu | Selections | Function | Level | Possible values |
|------|------------|----------------------|-------|------------------|
| GAIN | Gain + | Increase Gain | S | +++, ++, +, 0, - |
| | VAR MGain | Variable Master Gain | S | x, xdB |
| | Gain - | Decrease Gain | S | -, 0, +, ++, +++ |
| | StudioMode | | S | On, Off |



4.5.10 Filters button


- Press the **FILTERS** button to open the filters menu.
- The optical filter wheels are controlled with the ND and FX up and down selection buttons.

| Menu | Selections | Function | Level | Possible values |
|---|------------|-------------------------------------|-------|-----------------------------------|
| FILTERS | ND UP | Increase ND Filter position | S | CLR, ND 1/4, ND 1/16, ND 1/64 |
| | FX UP | Increase FX Filter position | S | CLEAR, 4 Star, 6 Star, Soft Focus |
| | ND DOWN | Decrease ND Filter position | S | |
| | FX DOWN | Decrease FX Filter position | S | |
|  | GRADIENT | Select electronic gradient filter | B | On, Off |
| | SET | Go to Set Gradient page | B | |
| | SOFT FCS | Select electronic soft focus filter | B | On, Off |
| | SET | Go to Set Soft Focus page | B | |
|  | MONOTONE | Select electronic monotone filter | B | On, Off |
| | SET | Go to set monotone filter page | B | |
| | - | | | |
| | - | | | |

| Menu | Selections | Function | Level | Possible values |
|---|------------|-----------------------------------|-------|-------------------------------------|
| SET GRADIENT FILTER | GRADIENT | Select electronic gradient filter | B | On, Off |
| | PRESET | Select gradient filter presets | B | ND0.3/0.6/0.9, Sunset, BlueSky, Var |
| | ZONE | Select area of gradient filter | B | Top, Left, Bottom, Right |
| | VIEW | Select view mode | B | On, Off |
|  | GRADIENT | Select electronic gradient filter | B | On, Off |
| | - | | B | |
| | CENTRE | Set center position | B | 0..99 |
| | WIDTH | Select transition width | B | 1,2,3,4,5,6,7 |
|  | GRADIENT | Select electronic gradient filter | B | On, Off |
| | DEPTH R | Set red color depth | B | 0..99 |
| | DEPTH G | Set green color depth | B | 0..99 |
| | DEPTH B | Set blue color depth | B | 0..99 |



| Menu | Selections | Function | Level | Possible values |
|-----------------------|------------|---------------------------|-------|--------------------|
| SET SOFT FOCUS FILTER | SOFT FCS | Select soft focus filter | B | On, Off |
| | PRESET | Select soft focus presets | B | Preset 1 .. 5, Var |
| | RADIUS | Set center spot radius | B | 15..99 |
| | VIEW | Select view mode | B | On, Off |

| Menu | Selections | Function | Level | Possible values |
|---|------------|--------------------------------------|-------|-----------------|
|  | SOFT FCS | Select soft focus filter | B | On, Off |
| | LEVEL | Set level of grayscale | B | 0..99 |
| | TRANSIT | Set transition level | B | 15..99 |
| | FADE | Set grayscale color (black to white) | B | 0..99 |
|  | X POS | Set X position of centre spot | B | 0..93 |
| | Y POS | Set Y position of centre spot | B | 0..99 |
| | REVERSE | Reverse filter | B | On, Off |
| | ASP RATIO | Change aspect ratio of centre spot | B | 24..99 |

| Menu | Selections | Function | Level | Possible values |
|---|------------|-----------------------------------|-------|-------------------------------------|
| SET Monotone FILTER | MONOTONE | Select electronic monotone filter | B | On, Off |
| | PRESET | Select gradient presets | B | ND0.3/0.6/0.9, Sunset, BlueSky, Var |
| | DEPTH | Adjust monotone filter depth | B | 0..99 |
| | - | | | |
|  | MONOTONE | Select electronic monotone filter | B | On, Off |
| | - | | | |
| | RED | Adjust Red monotone filter color | B | 0..99 |
| | BLUE | Adjust Blue monotone filter color | B | 0..99 |



4.5.11 Detail button

- Press the **DETAIL** button to open the detail menu.

| Menu | Selections | Function | Level | Possible values |
|---|------------|-------------------------------|-------|-----------------|
| DETAIL | DTL LEVEL | Detail level | S | 0..99 |
| | DTL FUNCT | Detail function | S | On,Off |
| | LEVEL DEP | Level dependency | B | 0..99 |
| | NOISESL | Noise slicer | B | 0..99 |
|  | V DETAIL | Vertical detail level | B | 0..99 |
| | C/FINE | Detail coarse/fine adjustment | B | 0..99 |
| | KNEE DTL | Knee detail | B | 0..99 |
| | - | | | |
|  | - | | | |
| | SOFT LEVEL | Soft detail level | B | 0..99 |
| | SOFT DTL | Soft detail function | B | On,Off |
| | DTL SOURCE | Detail source selection | B | Y,R,G,R+G |

SD detail (HD cameras)

On HD cameras the detail parameters have different values for the High Definition (HD) output and the Standard Definition (SD) output. On HD cameras press the **Next** button to open the second (SD output) set of parameters.

| Menu | Selections | Function | Level | Possible values |
|---|-------------|-------------------------|-------|-----------------------|
| SD DETAIL | SD DTL LVL | Detail Level | S | SD 0..99 |
| | SDDTL FUNCT | Detail Function | S | SD On, SD Off |
| | SDLVL DEP | Level Dependency | B | SD 0..99 |
| | SDNOISESL | NoiseSlicer | B | SD 0..99 |
|  | SDV DETAIL | Vertical detail level | B | SD 0..99 |
| | SDC/FINE | Detail fine adjustment | B | SD 0..99 |
| | - | | | |
| | - | | | |
|  | - | | | |
| | SDSOFT LVL | Soft detail level | B | SD 0..99 |
| | SD SOFT DTL | Soft detail function | B | SD On, SD Off |
| | SD SOURC | Detail source Selection | B | SD Y,SD R,SD G,SD R+G |

4.5.12 Non-standard indication

Normally if the menu of a function group is active, the button is illuminated high green. But in the case that the function group is non-standard and the menu is active, the button will be illuminated yellow (mix of orange and high-green).

When a button is illuminated as non-standard, it is possible to see which individual function or functions is/are nonstandard. This is indicated with a *-symbol behind every non-standard value in the menu.

Chapter 5

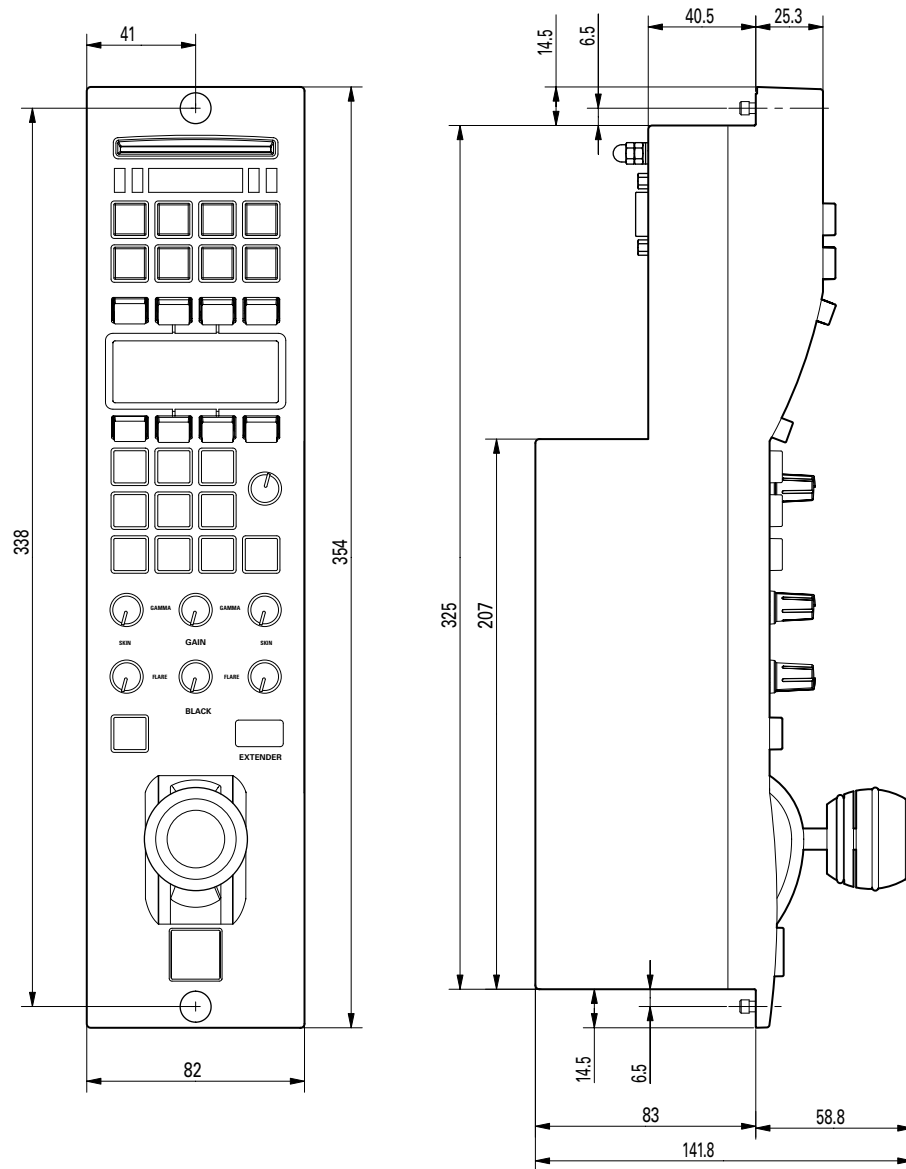
Specifications

5.1 Specifications for OCP 400

| Item | Value |
|-------------------------------------|---|
| Dimensions (Height x Width x Depth) | 354 x 82 x 85 mm (13.9 x 3.2 x 3.3 in) without joystick |
| Weight (approx.) | 2.5 kg (5.5 lbs) |
| Operating temperatures | 0 to +45° C (32 to 113° F) |
| Storage temperatures | -25 to +70° C (-13 to 158° F) |
| Power requirements | +12 VDC nom. |
| Power consumption | 8.5 W max. |
| Ethernet connection | RJ-45 connector; 10Base-T, 100Base-TX compliant with IEEE-802.3 |
| Serial connections | Sub D connector, RS-232 or RS-422 protocol |

5.2 Dimensions

Figure 5-1. Dimensions

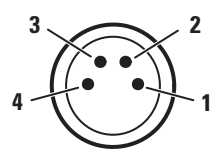


Chapter 6

Connectors

6.1 Power connectors

6.1.1 Power input connector (DC input)



XLR 4-pin male
(panel view)

| Pin | Description |
|-----|-------------------------|
| 1 | GND |
| 2 | no connection |
| 3 | no connection |
| 4 | +12 VDC input (nominal) |



Caution

The input voltage must not exceed +17 VDC.

6.1.2 Power output connector (DC output)



XLR 4-pin female
(panel view)

| Pin | Description |
|-----|----------------|
| 1 | GND |
| 2 | no connection |
| 3 | no connection |
| 4 | +12 VDC output |

This socket supplies the input DC voltage (+12 VDC nom.) for other Operational Control Panels.

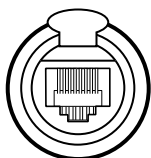


Note

Up to five Operation Control Panels can be looped through.

6.2 Communication connectors

6.2.1 Ethernet connector

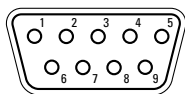


8-pin standard
RJ-45 ethernet
connector

| Pin | Description |
|-----|---------------|
| 1 | TX+ |
| 2 | TX- |
| 3 | RX+ |
| 4 | no connection |
| 5 | no connection |
| 6 | RX- |
| 7 | no connection |
| 8 | no connection |

10Base-T, 100Base-TX compliant
with IEEE-802.3 (edition 2000)

6.2.2 Serial interface connector (RS-232 or RS-422)



Sub-D connector
9-pin female
(panel view)

| Pin | RS-232 | RS-422 |
|-----|---------------|---------------|
| 1 | no connection | no connection |
| 2 | RXD | GO_A |
| 3 | TXD | RET_B |
| 4 | nDTR | reserved |
| 5 | DGND or +12 V | DGND or +12 V |
| 6 | nDSR | reserved |
| 7 | nRTS | GO_B |
| 8 | nCTS | RET_A |
| 9 | +12 V or DGND | +12 V or DGND |

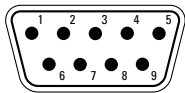
Select the connection type for the
serial interface in the OCP setup
menu (refer to 'Setting up the OCP'
in this user's guide).



Note

When used with the LDK 4417 base unit (part of the Digital Triax system) the OCP should be locally powered for correct working of the On Air signalling.

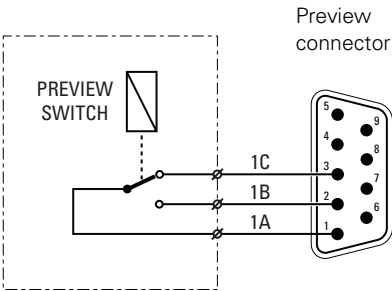
6.2.3 Preview connector



Sub D connector
9-pin male

| Pin | Description |
|-----|--------------------|
| 1 | Preview contact 1A |
| 2 | Preview contact 1B |
| 3 | Preview contact 1C |
| 4 | +REF external |
| 5 | GND |
| 6 | not used |
| 7 | not used |
| 8 | Tally input *) |
| 9 | shield |

*) Only used when an DMC camcorder is connected.



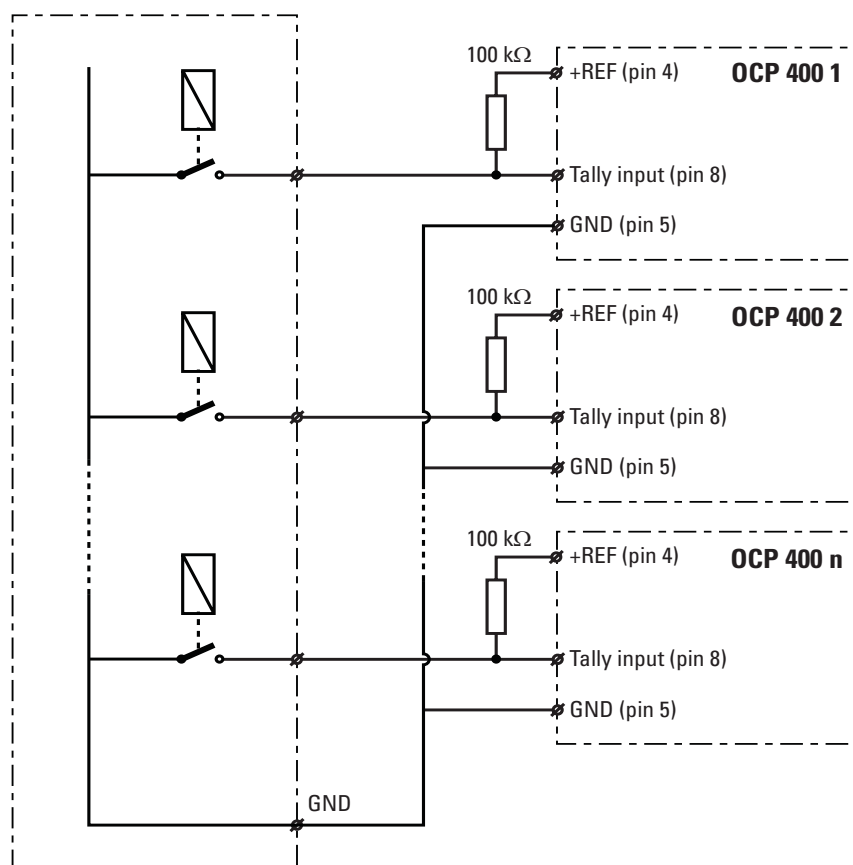
Preview switch not pressed:
1A is connected to 1C

Preview switch pressed:
1A is connected to 1B

6.3 Tally signalling (On-Air)

When used with a DMC camcorder, the OCP 400 accepts a local Tally signal applied to the preview connector. When the studio switches to On-Air, the control panel also switches a connected DMC camcorder to On-Air.

Use only external signalling with common ground contacts as shown in the following scheme:



The Tally input can be programmed to suit different methods of On-Air signalling. Follow these steps to change the Tally input settings:

- Push the **SETUP** button to open the menu.
- Push the **Selection** button to choose the OCP submenu.
- Push the **Next** button until the **TallyOnOff** item appears. The following settings are available:

| TallyOnOff setting: | On-Air <i>active</i> when input is: | On-Air <i>inactive</i> when input is: |
|---------------------|-------------------------------------|---------------------------------------|
| Low/High | < 1.0 V | Open or > 1.5 V |
| High/Low (default) | > 3.1 V | < 1.0 V |
| Open/High | Open or < 2.5 V | > 3.1 V |
| High/Open | > 3.1 V | Open or < 2.5 V |



Caution

Do not apply voltages higher than 4.0 VDC or voltages lower than -0.6 VDC to the Tally input as they may damage the internal circuits.



Note

This functionality is available from OCP 400 software version 16 or higher. Contact your local Grass Valley service representative if your control panel needs to be upgraded.
