grass valley
A THOMSON BRAND

User's Guide

3922 496 49931
version 5

OCP 400/10
OPERATIONAL CONTROL PANEL

Declaration of Conformity

We, Thomson Broadcast Solutions 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 Safety Directives 73/23//EEC and 93/68/EEC
b. the EMC Directives 89/336/EEC and 93/68/EEC

FCC Class A Statement

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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FCC Class A Statement

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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OCP400/10

Operational Control Panel

User's Guide

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Operational Control Panel - OCP 400

Introduction

The OCP 400 is a compact operational control panel for LDK type 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 not only controls all camera functions, it can also be used to change the menu values of the latest LDK base stations. Extensive set-up parameters for the OCP itself, the camera and base station are all available.

Features

- Standard IEEE 802.3 10/100 Mb Ethernet
- IP connectivity
- Off-the-shelf IT-network infrastructure
- Communicates with other Thomson 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

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.

Location of controls

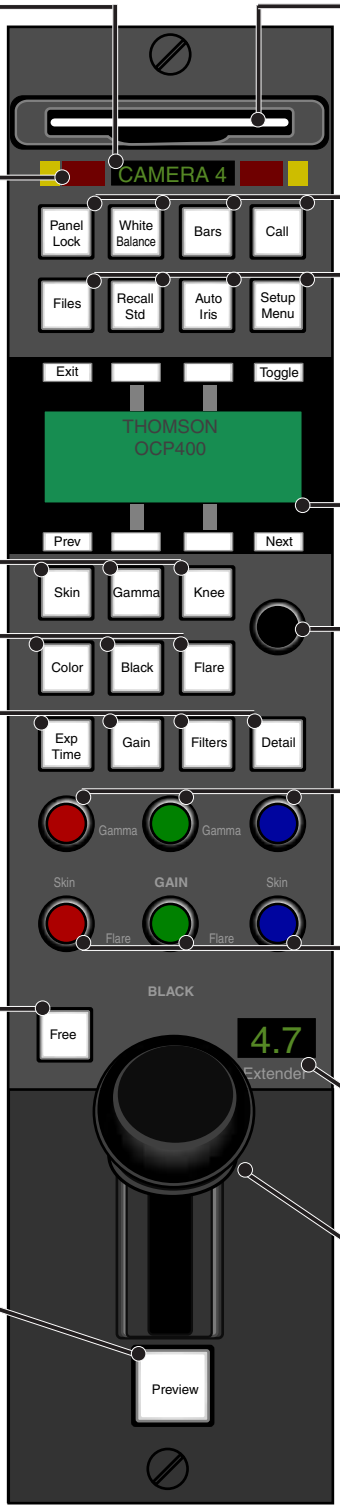
Camera name
- displays the number of the connected camera.

Tally lights
- red lights indicate that camera signal is on air.
- yellow lights indicate that camera signal is being recorded.

Video parameter buttons
- skin menu
- gamma menu
- knee menu
- color balance menu
- black menu
- flare menu
- exposure time menu
- gain menu
- filter menu
- detail (contour) menu

Free button
- allows analogue controls to be repositioned without changing values.

Preview button
- push to see a selected camera signal on a preview monitor.
- press simultaneously with the preview knob for six seconds to reset the OCP.



Card slot
- use camera cards to store and recall scene files.

Push buttons to
- lock the panel
- start white balance
- display colour bars/ sawtooth
- call camera operator
- open files menu
- open standard files menu
- switch automatic iris
- open the setup menu

Menu panel
- use keys to navigate through display.

Assignable control
- varies the value of the function selected in the menu.

R, G and B controls for
- gain
- gamma
- skin

(relevant indicator lights)

R, G and B controls for
- black level
- flare
- skin

(relevant indicator lights)

Lens indicators
- displays the iris value or the master black value.
- **Extender** lights when lens extender is in use.

Iris / Master black control / Preview
- move the stick up and down to change the iris opening.
- turn the lower part of the knob to vary the master black level.
- push the top of the knob down to preview a camera signal.

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.

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.

☞ **Note**
Functions that are blocked or disabled by another function OR that are not part of the current OCP function set (simple, basic of fill) will never be indicated 'non-standard' even if they are changed.

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.

Assignable rotary controls

The single assignable rotary control (4) 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 (5) 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.

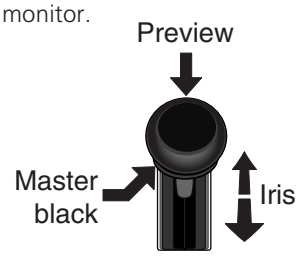
The lower Red, Green and Blue assignable rotary controls (6) vary either:

- 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.

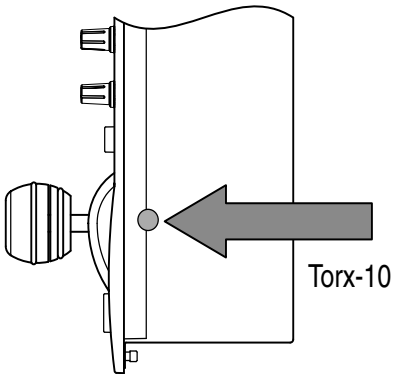
The function selected for adjustment and its value is shown in the menu display and the relevant indicators light. Black level or Flare can be set as default.

Joystick (8)

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.



- 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

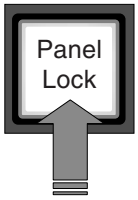
When the joystick's movement becomes too loose or too tight it may be necessary to adjust its tension spring. Use a long Torx-10 type screwdriver to adjust the tension screw of the joystick. The screw is located in a hole at the side panel of the OCP casing. Turn the screw and move the joystick at the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

Lens indicators (7)

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.

Panel lock button



Push the **Panel lock** button to lock the panel of the OCP.

- The **Panel lock** 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.

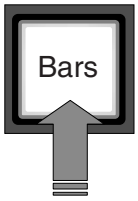
Free button

Hold down the **Free** button (10) to 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.

The **Free** button is also used together with the **Panel Lock** button to control access to panel functions. When the panel lock function is selected, the **Free** button also lights. With panel lock engaged, push the **Free** button to allow accesss to the following controls:

- Joystick
- Assignable rotary controls
- Preview button

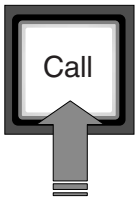
Bars button



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.

Call button



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

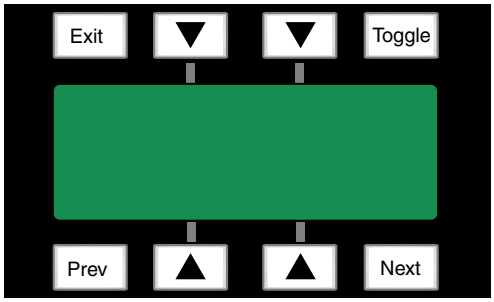
- The **Call** button lights when it is activated or when a call is received from another system part.
- If active, push again to switch off.

(A buzzer signal can be associated with the call signal.)

Using the menu panel (3)

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.

Menu arrow 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 button is for future use.

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.

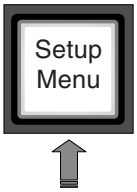
Opening menu pages

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

- the **Setup** button
- the **Files** button
- the **Recall Std.** button
- the video parameter buttons (11)

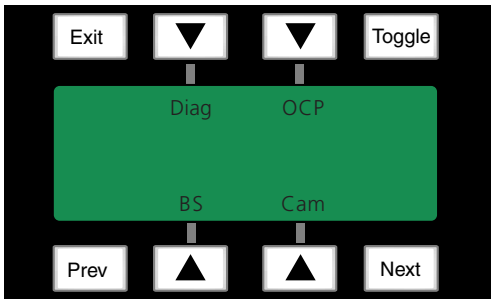
Push an activated button to exit that particular menu function.

Checking system status



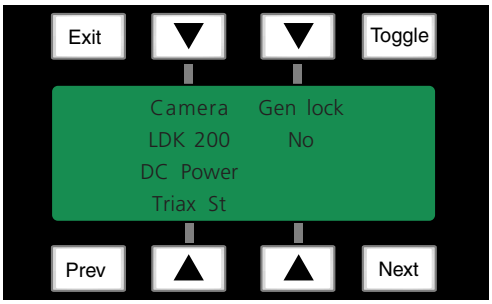
To check that BS (base station) and camera are connected correctly go to the **Diag** item of the set-up menu.

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



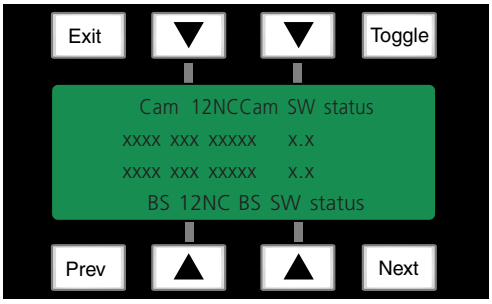
Push the selection button to choose the **Diag** submenu

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



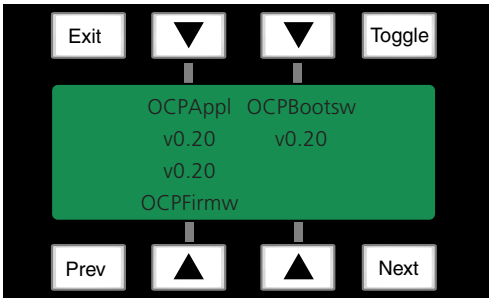
The Diagnose menu appears

Selections	Function	Level	Possible values
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
-			



Press the **Next** button for the following menu

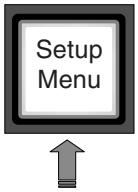
Selections	Function	Level	Possible values
CAM 12NC	Camera software 12NC	S	
CAMSWST	Camera software status	S	
BS 12NC	Basestation software 12NC	S	
BS SW ST	Basestation software status	S	



Press the **Next** button for the following menu

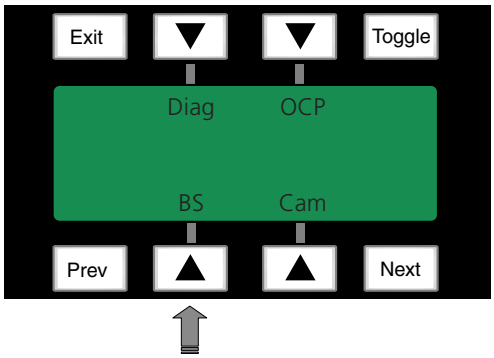
Selections	Function	Level	Possible values
OCPAppl.	Application software version	S	
OCPBootsw	Boot software version	S	
OCPFirmw	Firmware version	S	
OCPType	OCP device type	S	OCP400/00, OCP400/10

Setting up the Base Station



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

Push the selection button to choose the BS submenu.



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

The BS menu appears. Use the **Next** button to view subsequent pages.

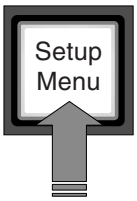
Menu		Selections	Function	Level	Possible values
BS		MONITORING	Picture monitor selection	S	CVBS,R,G,B,Y,EXT1,EXT2,Y/EXT1,Y/EXT2
		-			
		-			
		MENU	BS internal menu enable	S	
	Next	H PHASE	Adjustment H-Phase	B	0..99
		SC COARSE	Adjustment SC-Phase coarse	B	0,90,180,270
		-			
		SC FINE	Adjustment SC-Phase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

Select the **MENU** item of the BS menu to access the internal menu of the latest base stations. The internal menu appears on the Base Station test and monitoring output.

Menu	Selections	Function	Level	Values	Default
BS internal menu	UP	UP menu	S		
	-				
	DOWN	DOWN menu	S		
	SELECT	Select item	S		

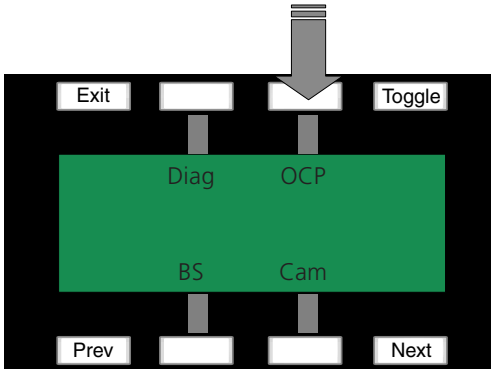
Setting up the OCP

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 Menu** 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 corresponding selection button. (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 BS/Camera combination by moving to the *Camnum* item of the OCP setup menu. Select a camera number with the assignable rotary control (4) and then press *Select*.

OCP identification

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* submenu.

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 (4) to adjust its value.

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*.

Clock

The time for the internal clock is set in the *Clock submenu* of the OCP setup menu. The assignable rotary control (4) is used to set the hours, minutes and seconds.

Default values

The default values of the OCP are stored in the OCP and are restored when the **Reset local** 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/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.

Menu	Selections	Function	Level	Values	Default
OCP	CAMNUM	Camera number	S	1..99	Last used
	SELECT	Connect to selected camera	S		
	CONN.TYPE	OCP Connection type	S	Ethernet, Serial	
	SERIAL	Select type of serial connection	S	RS-232, RS-422	
Next	IP CONFIG	Go to IP config. submenu	B		
	IRIS	Go to Iris submenu	B		
	BLACKPOT	Black rotary controls assignment	B	Black, Flare	Black
	CLOCK	Go to time submenu	B		
Next	LCD BACKL	LCD display backlight adjustment	B	0..99	50
	LCD CONTR	LCD display contrast	B	50..99	70
	BUZZER	OCP audio signal (Call)	B	On, Off	
	TEXT BRIGHT	Brightness of DotMatrix textdisplays	B		20
Next	TALLY LEDS	Tally Leds intensity level	B	Low, Medium, High, Full	
	TEXT LEDS	Assignable 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	
Next	MB RES	Master black resolution	F	Vfine, Fine, Normal, Coarse, Vcoarse	
	MB MODE	Master black mode	F	Linear, Mixed	
	ETHCONFIG	To Ethernet configuration menu	F		
	PREVIEW	On Air Status to Preview button	F	OnAir On, OnAir Off	
Next	MB RES	OCP Menu set	S	Simple (S), Basic (B), Full (F)	
	-				
	-				
	RESET OCP	Reset OCP local functions to default	F	PRESS button to execute reset	

Menu	Selections	Function	Level	Values	Default
IP CONFIG	IP MODE	IP address assignment	F	Auto, Manual	Auto
	APPLY	Set IP mode	F		
	SUBNET MASK	Subnet mask address	F	255.255.0.0	
	-				
Next	OCP IP	OCP source IP 1st byte	F	1..250	192
		OCP source IP 2nd byte	F	0..255	168
		OCP source IP 3rd byte	F	0..255	0
		OCP source IP 4th byte	F	1..254	2

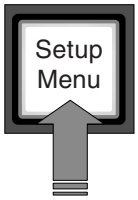
Menu	Selections	Function	Level	Possible values
VAR MATRIX	G->R	Variable Matrix Channel	F	0..99 / 0..99
	B->R	Variable Matrix Channel	F	0..99 / 0..99
	R->G	Variable Matrix Channel	F	0..99 / 0..99
	B->G	Variable Matrix Channel	F	0..99 / 0..99
Next	R->B	Variable Matrix Channel	F	0..99 / 0..99
	G->B	Variable Matrix Channel	F	0..99 / 0..99
	-			
	-			

Menu	Selections	Function	Level	Values	Default
IRIS SETUP	IRIS MODE	Set joystick direction for iris control	S	Normal, Reverse	Normal
	RANGE	Set joystick range for Iris	S	F X.X	
	CENTER	Set joystick center value for iris	S		
	IRIS CAL	Calibrate joystick range	S		

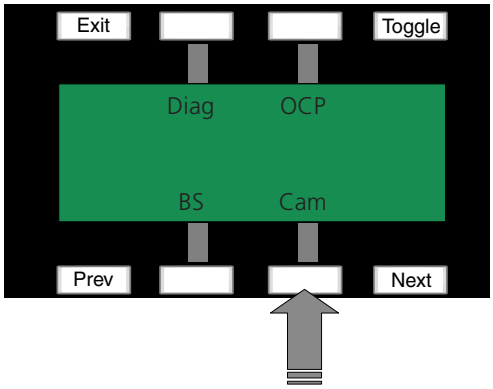
Menu	Selections	Function	Level	Possible values
VAR MATRIX	G->R	Variable Matrix Channel	F	0..99 / 0..99
	B->R	Variable Matrix Channel	F	0..99 / 0..99
	R->G	Variable Matrix Channel	F	0..99 / 0..99
	B->G	Variable Matrix Channel	F	0..99 / 0..99
Next	R->B	Variable Matrix Channel	F	0..99 / 0..99
	G->B	Variable Matrix Channel	F	0..99 / 0..99
	-			
	-			

Menu	Selections	Function	Level	Values	Default
IRIS SETUP	IRIS MODE	Set joystick direction for iris control	S	Normal, Reverse	Normal
	RANGE	Set joystick range for Iris	S	F X.X	
	CENTER	Set joystick center value for iris	S		
	IRIS CAL	Calibrate joystick range	S		

Setting up the Camera



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



Press the selection button to choose the Camera submenu. The initial camera submenu depends on whether an SD or HD camera is connected.

Menu	Selections	Function	Level	Possible values
CAMERA (SD)	-			
	SD LBOX	Select Letterbox function	S	14:9,10:9,16:9, off
	SD RATIO	Select Aspect Ratio	S	4:3, 16:9
or	RATIO SEL	Aspect Ratio Source	S	Local, remote
CAMERA (HD)	VIDEO MODE	Select HD Format	S	various HD-formats
	SELECT			
	-			
	-			
Next	LENS CTRL	Lens control selection	S	Local, remote
	-			
	FOCUS	Remote FOCUS	S	0..99
	ZOOM	Remote ZOOM	S	0..99
Next	IRIS PK/AV	Iris Peak Average	F	0..99
	-			
	-			
	-			
Next	MATRIX	Matrix selection	B	9-Positions
	MTRX SEQ	Matrix sequence	F	M->G, G->M
	VAR MTRX	Goto VAR MATRIX submenu	F	
	SHADING	Goto SHADING submenu	F	
Next	MAX USER LVL	Sets maximum User level	F	0, 1, 2, 3, 4
	ONAIR LAMP	Front on-air indicator	F	Enabled, Disabled
	ONAIR LVL	On-air indicator level	F	0..99
	POWER	Camera remote power	S	On, Off
Next	DISK IF	Disc recorder interface	S	EVS, Standard
	LIGHT COND	Lighting conditions	S	Optimal, Good, Fair, Poor, Extreme
	COMBINE	Normal scan output intepolation	S	On, Off
	-			

The VAR MATRIX and SHADING menus are submenus of the CAMERA setup menu.

Menu	Selections	Function	Level	Possible values
VAR MATRIX	G->R	Variable Matrix Channel	F	0..99 / 0..99
	B->R	Variable Matrix Channel	F	0..99 / 0..99
	R->G	Variable Matrix Channel	F	0..99 / 0..99
	B->G	Variable Matrix Channel	F	0..99 / 0..99
	R->B	Variable Matrix Channel	F	0..99 / 0..99
	G->B	Variable Matrix Channel	F	0..99 / 0..99
	-			
	-			

Menu	Selections	Function	Level	Possible values
SHADING MENU	SHADING	Switch shading on or off	F	On, Off
	-			
	-			
	-			
	R-SAW H	R Sawtooth Horizontal	F	
	R-PAR H	R Parabola Horizontal	F	
	R-SAW V	R Sawtooth Vertical	F	
	R-PAR V	R Parabola Vertical	F	
	G-SAW H	G Sawtooth Horizontal	F	
	G-PAR H	G Parabola Horizontal	F	
	G-SAW V	G Sawtooth Vertical	F	
	G-PAR V	G Parabola Vertical	F	
	B-SAW H	B Sawtooth Horizontal	F	
	B-PAR H	B Parabola Horizontal	F	
	B-SAW V	B Sawtooth Vertical	F	
	B-PAR V	B Parabola Vertical	F	

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.

Press the **White Balance** button once to display the measurement window in the camera viewfinder.

- The button lights.

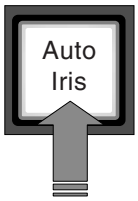
Press the **White Balance** button a second time to start the measurement process.

- 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.

Iris control



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

- The the **Auto iris** 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 stops.

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 (11)

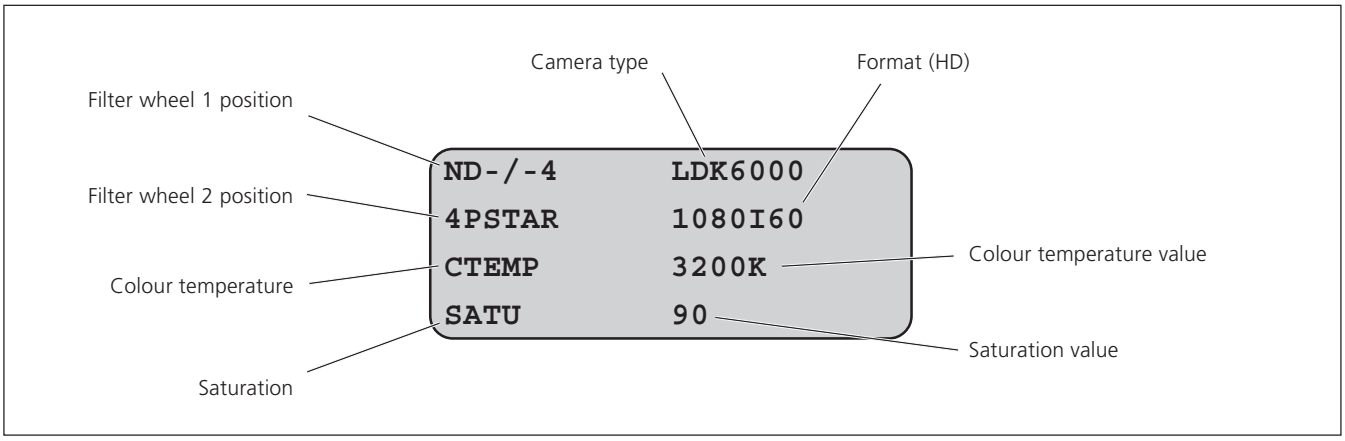
A direct video parameter button when selected brings its associated menu to the display where you can navigate, select and vary the applicable values.

Camera status pages

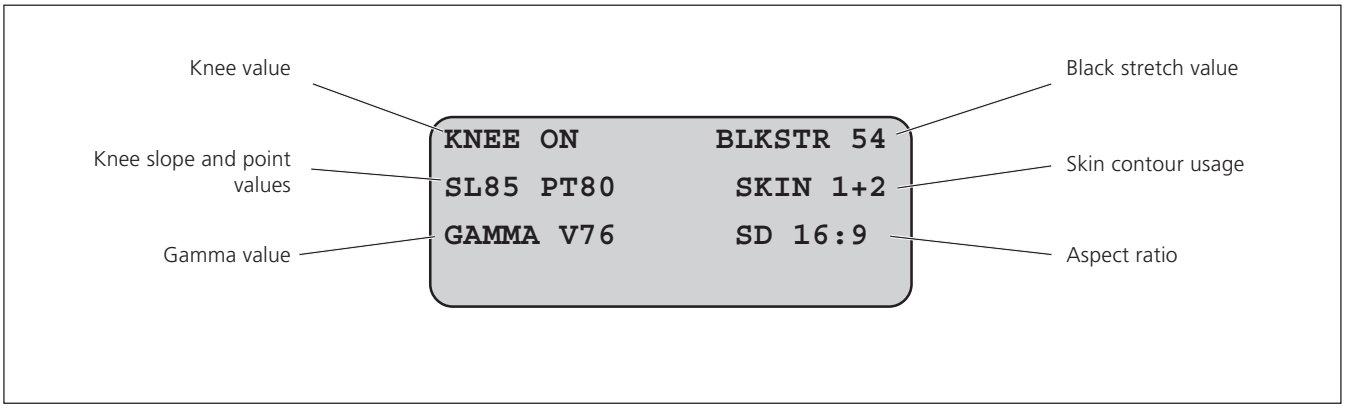
Up to three different pages can be used to check the status of various camera functions.

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.

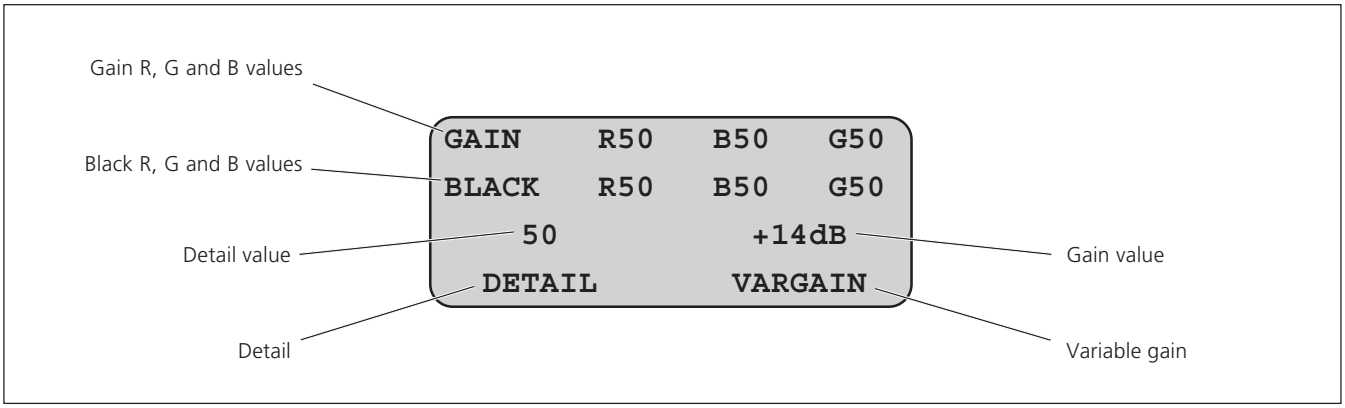
Status page 1



Status page 2

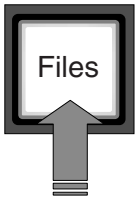


Status page 3



Storing and recalling scene files

The scene file function is used for storing and recalling 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.

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
Next	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

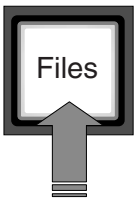
File Management

Introduction

File Management functions are used for managing settings and Scene Files for your camera. Four scene files can be stored in the camera while more Card Scene Files can be stored on an OCP Storage Card.

☞ **Note**

To use File Management you need at least application software version 8.00. Also be sure that your camera has the latest software



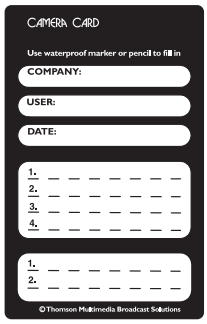
To access File Management functions, push the **Files** button to open the menu.

Using OCP storage cards

To use File Management you need to prepare one or more OCP storage cards. Obtain a set of user cards which can be ordered in a set of 10 pieces:

LDK 5210/00 Set of 10 user cards

Before using a card it needs to be formatted in the OCP. Insert the card in the slot at the top of the OCP and push the **Files** button. Push the **Next** button until the OCP 400 CARD message appears. Select the FORMAT option and wait a few seconds. Your card is now ready to use.



OCP Storage Card

CAUTIONS

⚠ **Do NOT try to format your camera's Owner's Card with the OCP. Formatting cannot be undone and it will make your owner's card useless!**

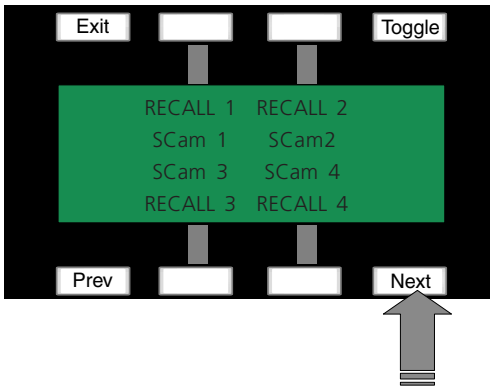
⚠ Camera user's cards and OCP storage cards look identical but they are NOT compatible. However you can use a camera user's card with the OCP after formatting it with the OCP. After this, the card can not be used with the camera.

Fast Recall menu

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

☞ **Note**

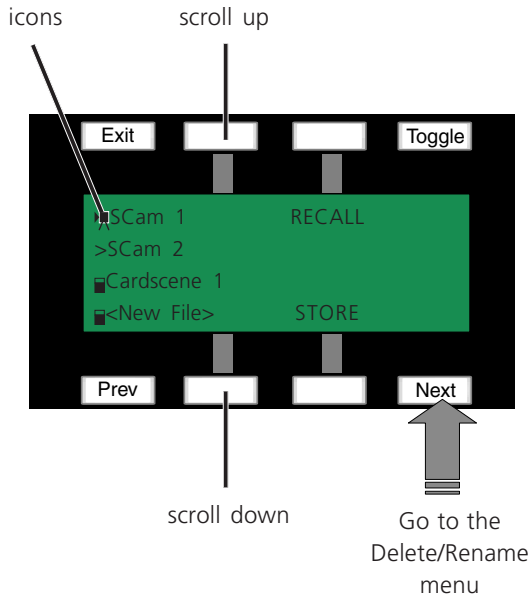
When a *scene file* is recalled, the values only take effect if the camera is not on-air.



Go to the Recall/Store menu

Recall/Store menu

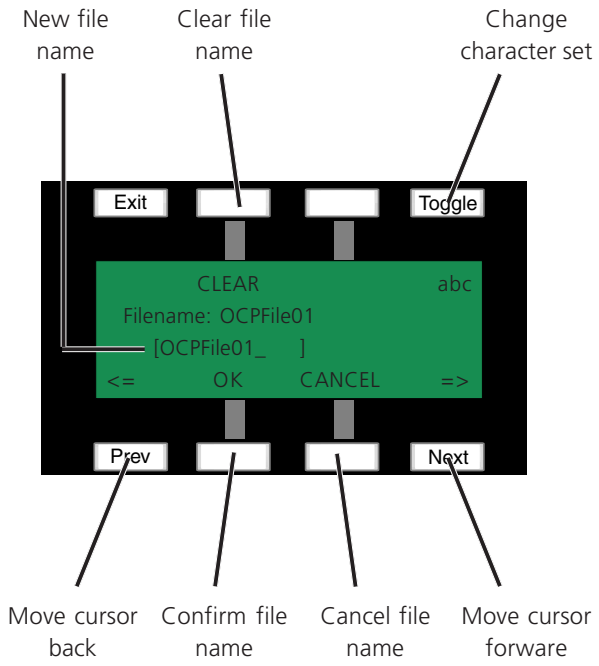
At the left side of the display panel a list of available *scene files* is shown. The first four items are *camera scene files*. They are followed by the *card scene files* stored on your *OCP storage card*. Use the left menu buttons or the **Rotary Control** to scroll up and down the list. *Camera scene 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 functionto 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. 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**

Filenames can have up to ten characters.

Delete/Rename sc

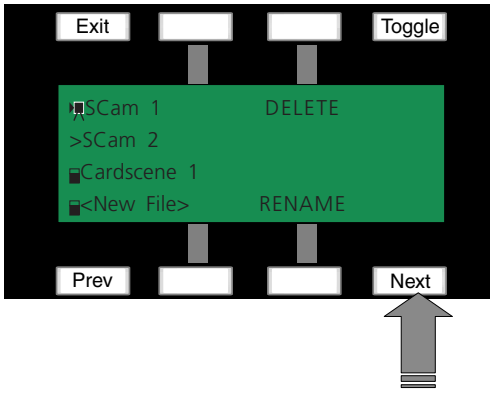
Select a *scene file* from the list.Select the DELETE function to delete the selected *scene file*.

☞ **Note**

Use this function very carefully because there is no confirmaion before deleting a file.

☞ **Note**

You can not delete a *camera scene file*.

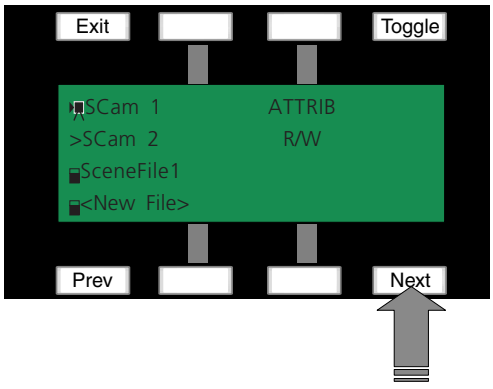


Go to the Read/ Write attribute menu

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

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.



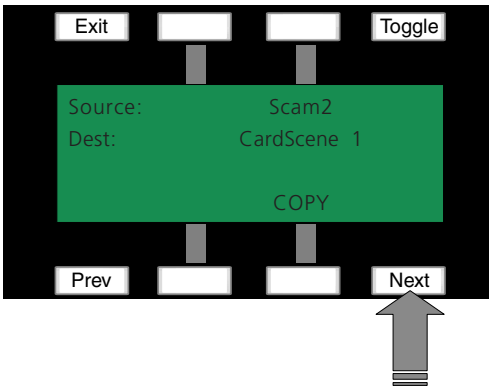
Go to the Copy Files menu

☞ **Note**

You can not change the Read/Write status of a *camera scene file*.

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 **Rotary Control**. Use the **Toggle** button to switch beteen the Source and Dest(ination) fields. Select the COPY function to copy the selected source scene file to the selected destination scene file.



Go to the Card menu

☞ **Note**

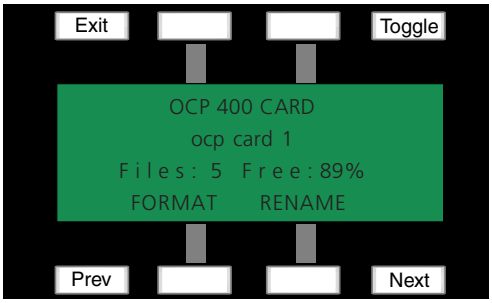
The original contents of the destination file will be overwritten.

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.

Card menu

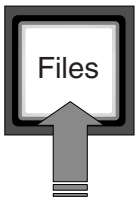
This menu displayes the name of the inserted OCP storage card, the number of scene files stored on the card and the percentage of space used.

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



Partial file recall

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



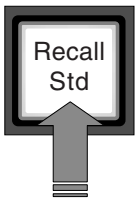
To recall a group of parameters press and hold the **Files** button and at the same time press the button for the function group you want to recall. All functions of this group are restored to the user's reference settings.

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.

Recalling standard files



Push the **Recall Std.** 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 customised file	S	Factory, Custom
	-			
	-			

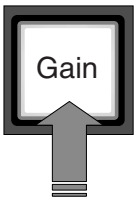
Adjusting video parameters

Direct menu access buttons

Exposure Time button

Press the **Exp Time** button to open the exposure time menu.

Menu	Selections	Function	Level	Possible values
EXP. TIME	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	S	50..103(PAL), 60..150(NTSC)
	LIGHTING	Lighting adjustment	S	-10..+10

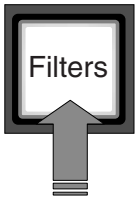


Gain button

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, +, ++, +++
	-			



Filters button

Press the **Filters** button to open the filters menu.

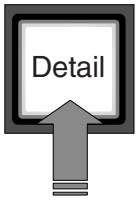
The optical filter wheels are controlled with the ND and FX up and down selection buttons.

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

Menu	Selections	Function	Level	Possible values
SET GRADIENT	GRADIENT	Select electronic gradient filter	B	On, Off
	PRESET	Select gradient presets	B	ND0.3/0.6/0.9, Sunset, BlueSky, Var
	ZONE	Select area of filter	B	Top, Left, Bottom, Right
	VIEW	Select view mode	B	On, Off
Next	GRADIENT	Select electronic gradient filter	B	On, Off
	-		B	
	CENTRE	Set centre position	B	0..99
	WIDTH	Select transition width	B	1,2,3,4,5,6,7
Next	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	SOFT FCS	Select electronic 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
	SOFT FCS	Select electronic 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 centrespot	B	0..93
	Y POS	Set y position of centrespot	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	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 Colour	B	0..99
	BLUE	Adjust Blue Monotone Filter Colour	B	0..99



Detail (contours) button

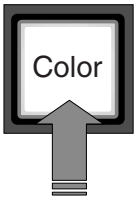
Press the **Detail** button to open the contour menu.

Menu	Selections	Function	Level	Possible values
MAIN DETAIL	DTL LEVEL	Detail Level	S	0..99
	DTL FUNCT	Detail Function	S	On,Off
	LEVEL DEP	Level Dependency	B	0..99
	NOISESL	NoiseSlicer	B	0..99
Next	V DETAIL	Vertical detail level	B	0..99
	C/FINE	Detail Coarse/fine adjustment	B	0..99
	KNEE DTL	Knee Detail	B	1..4,On,Off
	-			
Next	-			
	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

HD cameras SD detail

On HD cameras the detail (contour) 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.

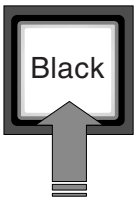
Menu	Selections	Function	Level	Possible values
SD DETAIL (HD only)	SD DTL LVL	Detail Level	S	SD 0..99
	SDDTL FUNCT	Detail Function	S	SD On,SD Off
	SDLVL DEP	Level Dependency	B	SD 0..99
	SDNOISESL	NoiseSlicer	B	SD 0..99
Next	SDV DETAIL	Vertical detail level	B	SD 0..99
	SDC/FINE	Detail fine adjustment	B	SD 0..99
	-			
	-			
Next	-			
	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



Color button

Press the **Color** button to open the colour 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

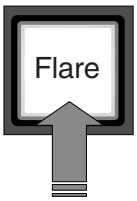


Black button

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
	BLKSTRTYP	Black Stretch type	B	Press, Stretch

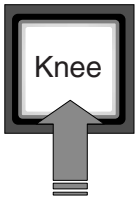


Flare button

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.

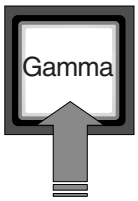
Menu	Selections	Function	Level	Posible values
FLARE	FLARE FUNC	Flare function	F	On,Off
	FLARE R	Red Flare Level	S	0..99
	FLARE G	Green Flare Level	S	0..99
	FLARE B	Blue Flare Level	S	0..99



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	B	Y, NAM
Next	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
	-			
Next	WHITE CLIP	White Clip Funtion	B	On, Off
	WCLIP LVL	White Clip Master Level	B	0..99
	-			
	-			



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	On, Off
Next	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

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	Select SKIN	B	Off, 1, 2, 1+2
	-			
	SET 1	Goto SET SKIN 1 page	B	
	SET 2	Goto SET SKIN 2 page	B	

Menu	Selections	Function	Level	Possible values
SKIN 1 PAGE	SKIN SEL	Select SKIN	B	Off, 1, 2, 1+2
	SKIN LVL	Adjust Skin Level	B	0..99
	SKIN VIEW	Shows SKIN View in video	B	On,Off
	SKIN AUTO	Starts Auto Skin procedure	B	Off, Win, Run, Fail
Next	COLOR1 R	Adjust Skin1 Color R Level	B	0..99
	COLOR1 B	Adjust Skin1 Color B Level	B	0..99
	WIDTH1 R	Adjust Skin1 Width R Level	B	0..99
	WIDTH1 B	Adjust Skin1 Width B Level	B	0..99

Menu	Selections	Function	Level	Possible values
SKIN 2 PAGE	SKIN SEL	Select SKIN	B	Off, 1, 2, 1+2
	SKIN LVL	Adjust Skin Level	B	0..99
	SKIN VIEW	Shows SKIN View in video	B	On,Off
	SKIN2 AUTO	Starts Auto Skin procedure	B	Off, Win, Run, Fail
Next	COLOR2 R	Adjust Skin2 Color R Level	B	0..99
	COLOR2 B	Adjust Skin2 Color B Level	B	0..99
	WIDTH2 R	Adjust Skin2 Width R Level	B	0..99
	WIDTH2 B	Adjust Skin2 Width B Level	B	0..99

Setting skin detail (contour)

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

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

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

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

Auto skin detail (contour)

Carry out the Auto skin detail (contour) procedure as follows:

a. In the *Skin* menu, select the item *Set 1* to open the skin 1 page.
b. Select the *Skin1 Auto* item.
c. Point the two small white boxes that appear in the viewfinder at the intended surface (colour).
d. Select the *Skin1 Auto* item again to start the measurement procedure (the iris is set to Auto). The process running message appears in the viewfinder.
e. When the process is completed (within a few seconds) the OK message appears in the viewfinder.
f. Adjust the skin contour level with the *Skin Lvl* item. Decrease the value below 50 to soften the selected area. Increase the value above 50 to add extra contour.

Repeat the steps for the *Skin 2* position if required.

Set the menu item *Skin View* to on to outline the affected area. The colour range set by the automatic procedure can be adjusted manually if required.

Manual skin detail (contour)

Set the skin detail (contour) colour range manually as follows:

a. In the *Skin* menu, select item *Set 1* to open the skin 1 page.
b. Push the **Next** button.
c. Adjust the colour 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.
d. Push the **Previous** button.
e. Adjust the skin detail (contour) level for the selected colour range with the *Skin Lvl* item. Decrease the value below 50 to soften the selected area. Increase the value above 50 to add extra contour.

Repeat the steps for the *Skin 2* position if required.

Non-standard indication

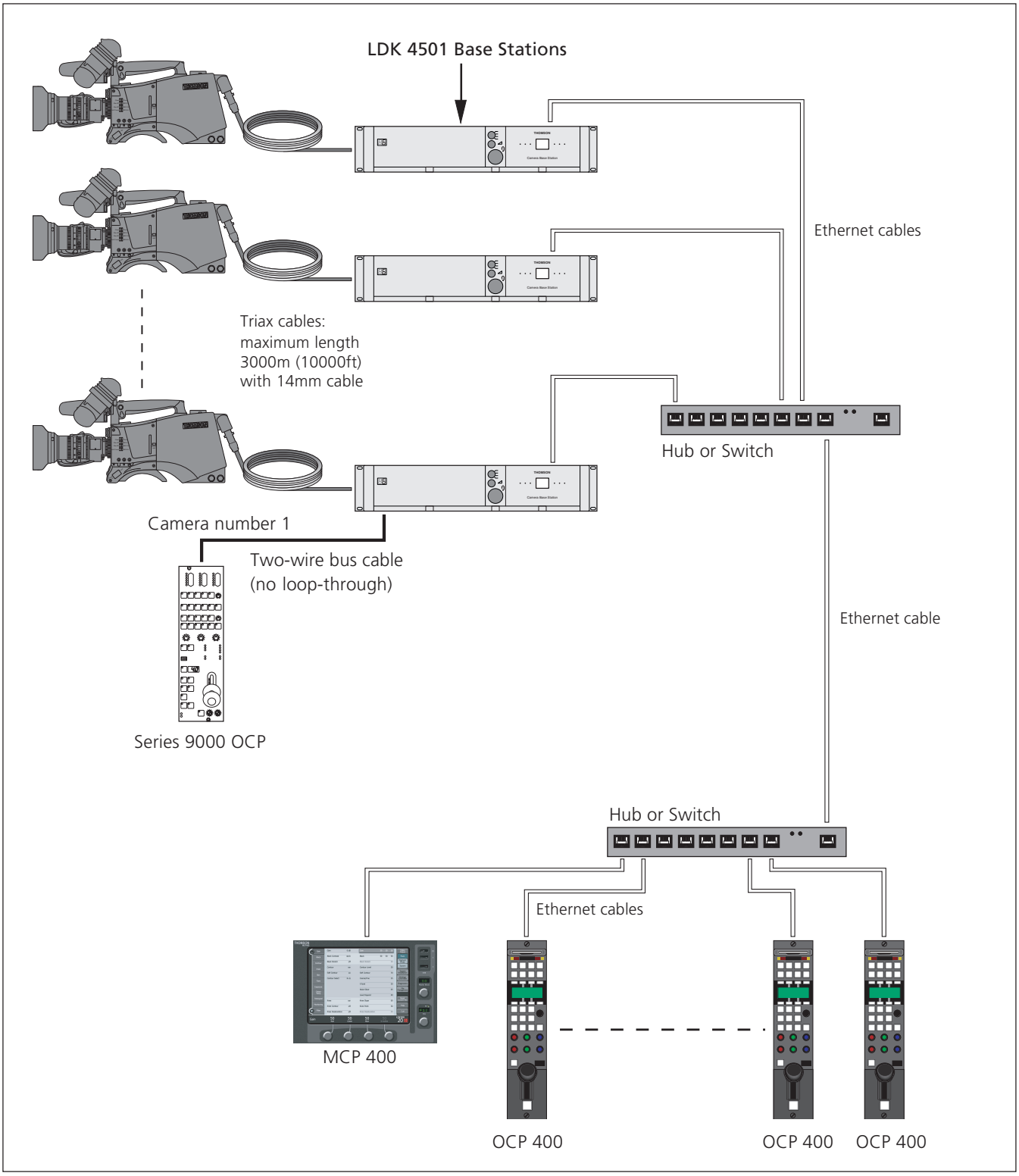
Normally if the menu of a function group is active, the button is illuminated high green. But in the case that the function group is non-standard ánd the menu is active, the button will be illuminated yellow (mix of orange and high-green).

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

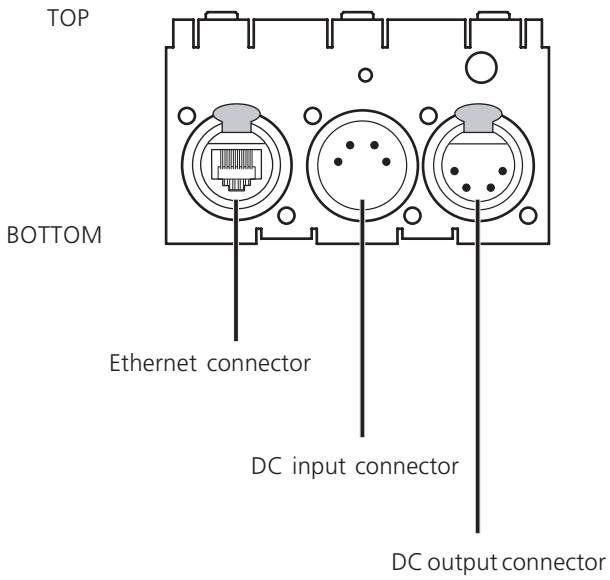
Control network

The OCP 400 is connected to an Ethernet control network (**C2IP**). The IP address and other options for the Ethernet connection can be set up in the *SETUP* / *OCP* / *IPCONFIG*. menu. These items can also be set up remotely using a network configuration tool such as NetConfig.

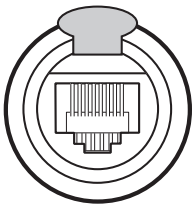
Typical setup of OCP 400 panels in a C2IP network



OCP connector panels



Ethernet connector

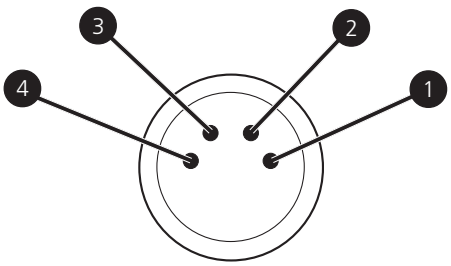


X100

8-pin Standard Ethernet RJ-45 connector

1. TX+
2. TX-
3. RX+
4. no connection
5. no connection
6. RX-
7. no connection
8. no connection

DC input connector



X102

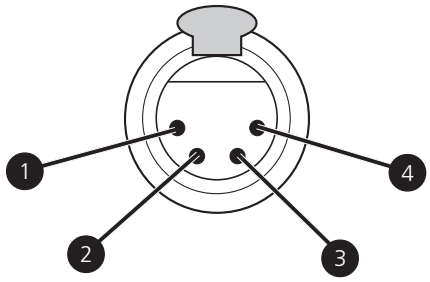
XLR 4-pin male; panel view

1. Ground
2. No connection
3. No connection
4. +12 Vdc input nominal (+11 Vdc to +17 Vdc)
   Current consumption max.: 0.7 Amp (typical 0.5 Amp)

CAUTION

⚠ The input voltage must not exceed +17 Vdc.

DC output connector

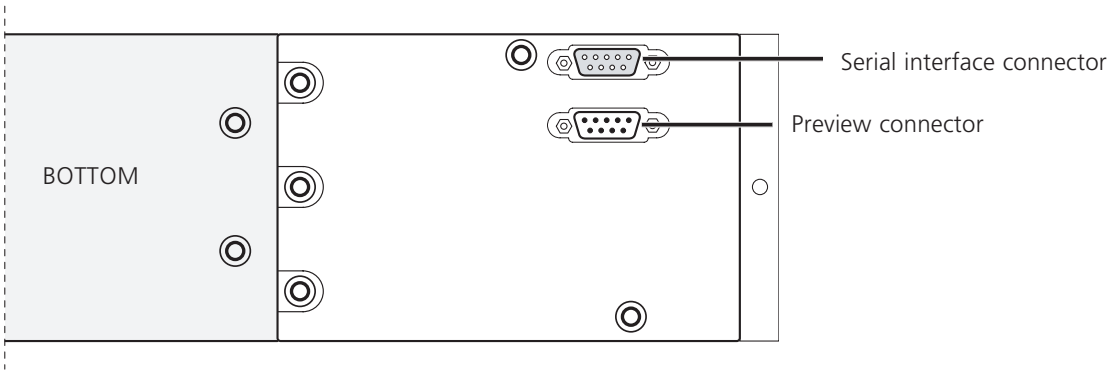


X103

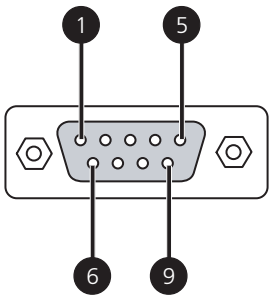
XLR 4-pin female; panel view

1. Ground
2. No connection
3. No connection
4. +12 Vdc output

This socket supplies the input DC voltage (12V nominal) for other OCPs. Maximum number of looped-through OCPs: 5.



RS-232/RS-422 interface connector



X807

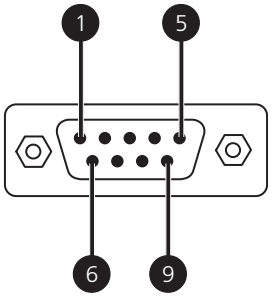
D-connector 9-pin female
Select the connection type for the serial interface in the OCP setup menu (refer to 'Setting up the OCP' in this manual).

RS-232 mode
1. nc
2. RXD
3. TXD
4. nDTR
5. DGND or +12V RS-232
6. nDSR
7. nRTS
8. nCTS
9. +12V RS-232 or DGND

RS-422 mode
1. nc
2. GO_A
3. RET_B
4. reserved
5. DGND or +12V RS-232
6. reserved
7. GO_B
8. RET_A
9. +12V RS-232 or DGND

Note:
When used with the DT500 CCU the OCP should be locally powered for correct working of the on air signalling.

Preview connector



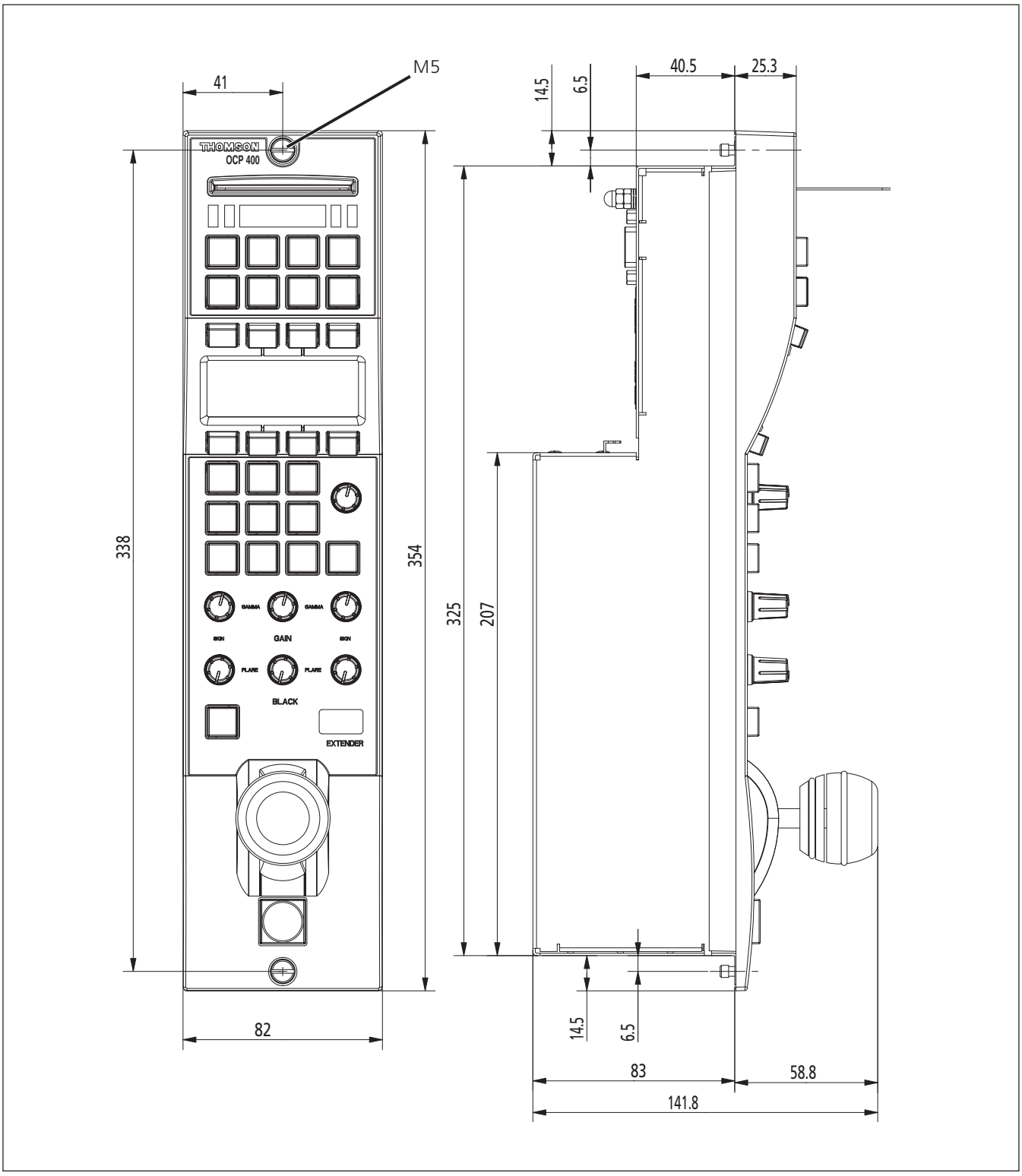
X703

D-connector 9-pin male
1. Preview 1A
2. Preview 1B
3. Preview 1C
4. +REF ext.
5. GND
6. Iris ext.
7. Master Black Ext.
8. nc
9. shield

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

9-pin female cable connector has part no. 2422 022 06216
cable hood for this connector has part no. 2422 021 02467

Dimensions


M5
41
THOMSON
OCP 400
338
354
82
GAMMA
GAMMA
SKIN
GAIN
SKIN
FLARE
FLARE
BLACK
EXTENDER
14.5
6.5
40.5
25.3
325
207
14.5
6.5
83
58.8
141.8