LDK 4629/00

Operational Control Panel

Operator's Manual

THOMSON MULTI MEDIA
BROADCAST SOLUTIONS

Declaration of Conformity

We, Thomson Broadcast Solutions 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 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 computing device pursuant to Subpart J of part 15 of 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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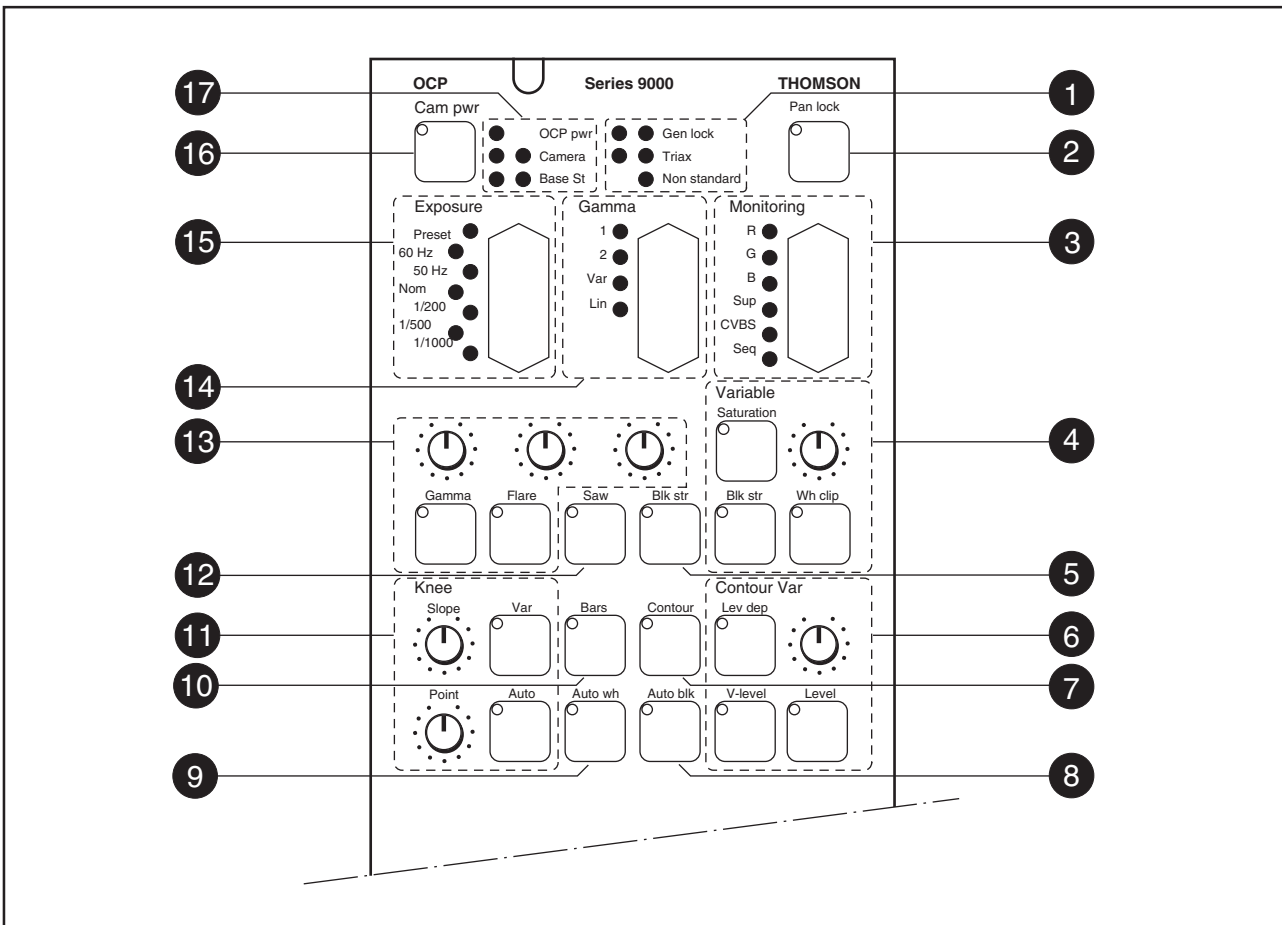
Switches

The switches on the operational control panel (OCP) are touch activated membrane switches. Pressing the switch turns on the function. Pressing the switch again turns the function off. A LED in the corner of the switch lights when the function is switched on.

Six switches of the OCP operate as rocker type switches. Pressing the top half of the switch selects the listed items in ascending order. Pressing the lower half of the switch selects the listed items in descending order. A LED lights to indicate the selected item.

❶   Status Indicators

These indicators light to show the status of the following functions:

Gen lock
    Green LED   - Pulse generator locked
    Red LED   - Pulse generator not
                         locked

Triax
    Green LED   - Triax connection OK
    Red LED Flashing - Triax connection open
    Red LED   - Triax cable short circuit
                          or cable power error

Non standard
    Red LED lights if any one of the following functions is as follows:

                    - matrix off
                    - chroma off
                    - contour off
                    - knee off
                    - gamma linear
                    - exposure not nominal
                    - filter not clear.
                    - master gain not 0dB
                    - colour bar on
                    - sawtooth on

❷ Panel Lock Switch

A two-way switch to select panel lock on or off. The LED lights when panel is locked (on).

When off, all functions of the OCP can be used.

When on, limited control is possible. Set in the MCP Maintenance menu the OCP Lock item to Total or Upper. If set to Upper all controls above the RGB Gain controls are locked. If set to Total only free, call and preview can be Used.

❸ Monitoring Selection Switch

This rocker switch is used to select one of six monitoring output signals available from the base station for display on the picture monitor and the waveform monitor.

	PXM Output	WFM Output
R -	R	R
G -	G	G
B -	B	B
SUP. -	CVBS	R/G/B Superimposed
CVBS -	CVBS	CVBS
SEQ. -	CVBS	R/G/B Sequential

❹ Variable Functions

The variable function allows the variable control of saturation, black stretch or white clip (not LDK 91/910) functions by means of an assignable potentiometer.

Three mutually exclusive on/off switches select either the saturation, black stretch or white clip function for variable control. The LED in the switch lights to indicate which function has been selected.

The rotary knob is used to vary the value of the selected function.

❺ Black Stretch Switch

The black stretch on /off switch gives a choice between normal black level reproduction or enhanced visibility in the darker areas of the picture. The LED in the switch lights when the black stretch circuit is switched on.

❻ Variable Contours

Three mutually exclusive on/off switches select either the level dependency, the V-level or the level contour function for variable control. The LED in the switch lights to indicate which function has been selected. When selected the contour is switched to variable. The rotary knob is used to vary the value of the contour function (LDK 91/910 only level).

❼ Contour Switch

This switch allows the contours to be switched between on/var and off. The LED in the switch lights to show that the contours are on (LDK 91/910 switches between extra/norm/var and off).

❽ Automatic Black Switch

The automatic black switch sets the black level of the R, G and B black level controls to a standard setting. The LED lights for 1 second when the standard levels are set.
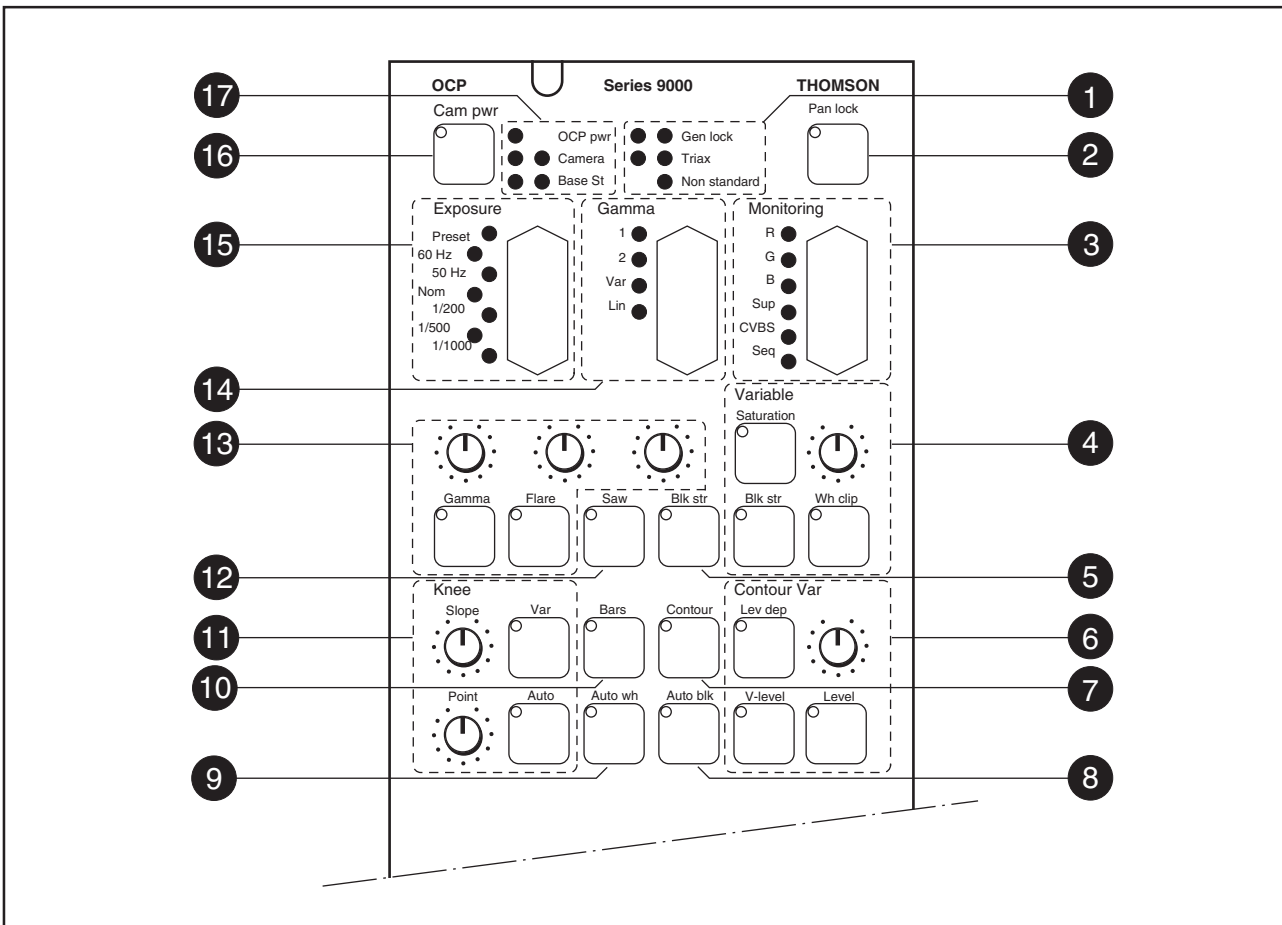
9 **Automatic White Switch**

The AUTO WH. switch is used to start 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 AUTO WH. switch only operates if the colour temperature switch is in a preset position (AW1 or AW2) and the colour bars are switched off.

When the switch is pressed once the measurement window is displayed in the camera viewfinder. The LED in the switch lights. If the colour temperature is changed to the colour temperature presets 3k2, 5k6 or 7k5 the AW LED and window will be switched off. When the switch is pressed a second time the measurement process starts. The LED in the switch and the AW1 or AW2 LED flashes.

If the measurement is successful, the LED in the switch and the measurement window are switched off. The AW1 or AW2 LED lights. If the measurement is unsuccessful, the LED in the AUTO WH. switch

flashes after approximately 10 seconds.

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

For LDK 91/910 the auto white automation starts at once and it is not possible to stop or reset of the auto white automation.

10 **Colour Bars Switch**

The bars switch switches the colour bar test signal on and off. The LED in the switch lights when the colour bars are switched on.

11 **Knee Function**

The VAR switch, when switched on, allows the master slope and the master knee point function to be varied with the rotary controls. The LED in the switch lights to indicate that the function is on (no LDK91/910

function).
The AUTO switch when pressed switches on the automatic knee function. The LED in the switch lights to indicate that the function is on. Pressing the switch again switches the knee off.

⑫ Test Sawtooth Switch

The SAW switch is used to switch the test sawtooth signal on and off. The LED in the switch lights when the test sawtooth signal is switched on.

⑬ Variable Gamma and Flare

Two mutually exclusive on/off switches allow either the gamma or flare to be selected for variable control. The LED in the switch lights to indicate which function has been selected (no LDK 91/910 functions).
Three rotary knobs are used to vary the value of the function for red, green and blue.

Note:
These functions are not available if disabled in the MCP Maintenance Menu Var. Flare = No or Var. Gamma = No.

⑭ Gamma Selection Switch

This rocker switch allows a choice between the following:
- Gamma 1
- Gamma 2
- Variable gamma (no LDK 91/910 function)
- Linear gamma (no LDK 91/910 function)

⑮ Exposure Time Selection Switch

This rocker switch allows a choice between the following:
- Preset (No LDK91/910 function)
- 60 Hz
- 50 Hz
- nominal exposure time
- 1/200 sec. exposure time
- 1/500 sec. exposure time
- 1/1000 sec. exp. time (no LDK 91/910 function).

When shooting with fluorescent or HMI lighting, select either 50Hz or 60Hz whichever corresponds to the supply frequency of the lighting. The preset position is for future use.

⑯ Camera Power Switch

Switches the power to the camera on and off. The LED lights when the power is switched on. To switch off the camera the switch must be pressed twice within two seconds (the LED will flash during this period).

⑰ Power Supply Indicators

The OCP indicator lights to show that the operational control panel is receiving power.
The green CAMERA LED lights to show that there is a connection with the camera. The RED LED lights to indicate that there is no connection with the camera. The green BASE ST. LED lights to show that there is a connection with the base station. The RED LED lights to indicate that there is no connection with the base station.
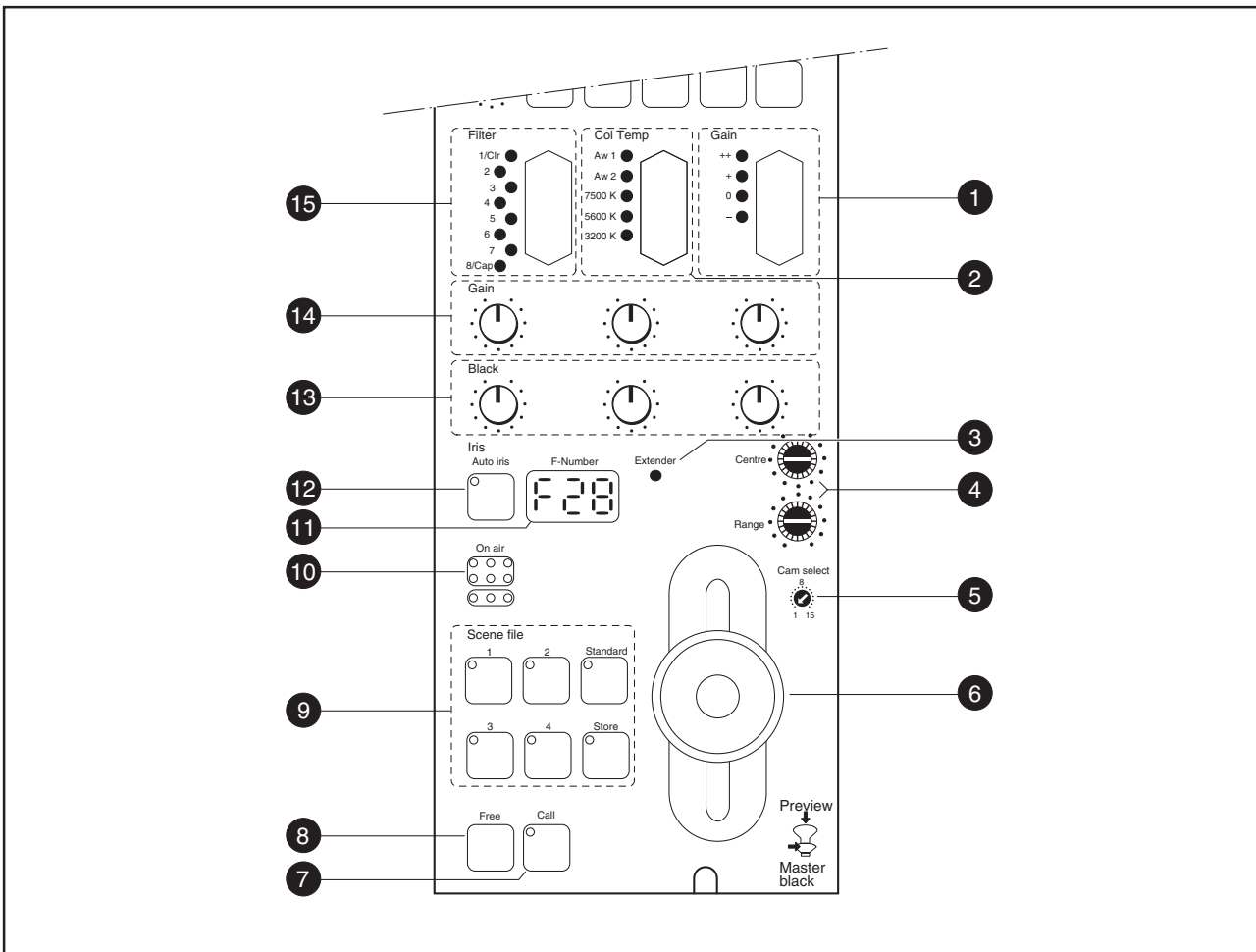
❶ Gain Selection Switch

This rocker switch gives a choice between five master gain settings; -, +, ++ and +++. Consult the Operator's Manual of your camera as required to change the master gain settings values.

❷ Colour Temperature Switch

The 5-position colour temperature rocker switch gives a choice between three preset colour temperatures:
- 3200K (3.2K)
- 5600K (5.6K)
- 7500K (7.5K)

and two memory settings AW1 and AW2.

❸ Lens Extender Indicator

This yellow LED lights to indicate that the range extender of the lens is switched on (no LDK 91/910 function).

❹ Iris Range Selection Controls

The range control is used to set the range over which the iris opening can be controlled.
The centre control is used to choose the central position of the selected iris range.

⑤ Camera Selection Switch

This switch is used during installation to assign the OCP to a particular camera in a multicamera environment. The number set with this switch corresponds to the number set in the base station of the camera to be controlled.
When the switch is changed the number will be displayed in the F-number display. Will not be handled when panel lock is on.

⑥ Mono-Knob Control

A three-function knob which is used to vary the master black level, to control the iris and to preview the connected camera signal on a preview monitor.

Moving the mono-knob stick up and down varies the iris opening.

Turning the lower knob varies the master black level.

Pressing the top of the knob gives a preview of the connected camera signal.

⑦ Call Switch

Pressing this switch sends a signal to the camera calling for attention.
This indicator lights when the call switch is activated or when a call is received from another system part.

⑧ Free Switch

The free switch when held down allows all the analogue control knobs to be rotated without affecting the value of the function. Also the camera number will be displayed.

⑨ Scene File Selection and Storage

The scene file function is used for storing and recalling OCP settings for the camera.

Four scene files can be stored in memory positions 1 to 4. A fifth memory position contains a file with predetermined standard settings. (See the back of this guide for a list of the standard settings.)

To create a scene file, set up the values for all the functions on the OCP, press the store switch and then select a memory position by pressing one of the switches marked 1 to 4.

To recall a scene file, select a memory position by pressing **(twice within two seconds)** one of the switches marked 1 to 4 or standard. The values stored in this file are then restored. The LED in the selected switch lights.

If a function is changed after a recall operation, the scene file LED flashes. The flashing is stopped after 10 seconds or by pressing the store switch.

⑩ On-air Indicators

The red indicator lights to show that the signal from the connected camera is being broadcast.

The yellow indicator lights to show that the signal from the connected camera is being recorded.

⑪ F-Number Display

This indicator shows the F-number of the iris. At switch on or when the Free switch is pressed the display shows the camera number. If connected to a camera with no Remote Iris it shows 93 or 910 instead.

If the OCP is not connected it shows the number of the OCP along with the 'connection interrupted' symbol -l l- .

⑫ Automatic Iris Switch

Pressing this switch turns the automatic iris control system on. The LED in the switch lights to show that the automatic iris control system is in operation. Press the switch again to switch the function off.

Even when the auto iris is activated the manual control can be used to vary the iris opening by + or - 1 F stop.
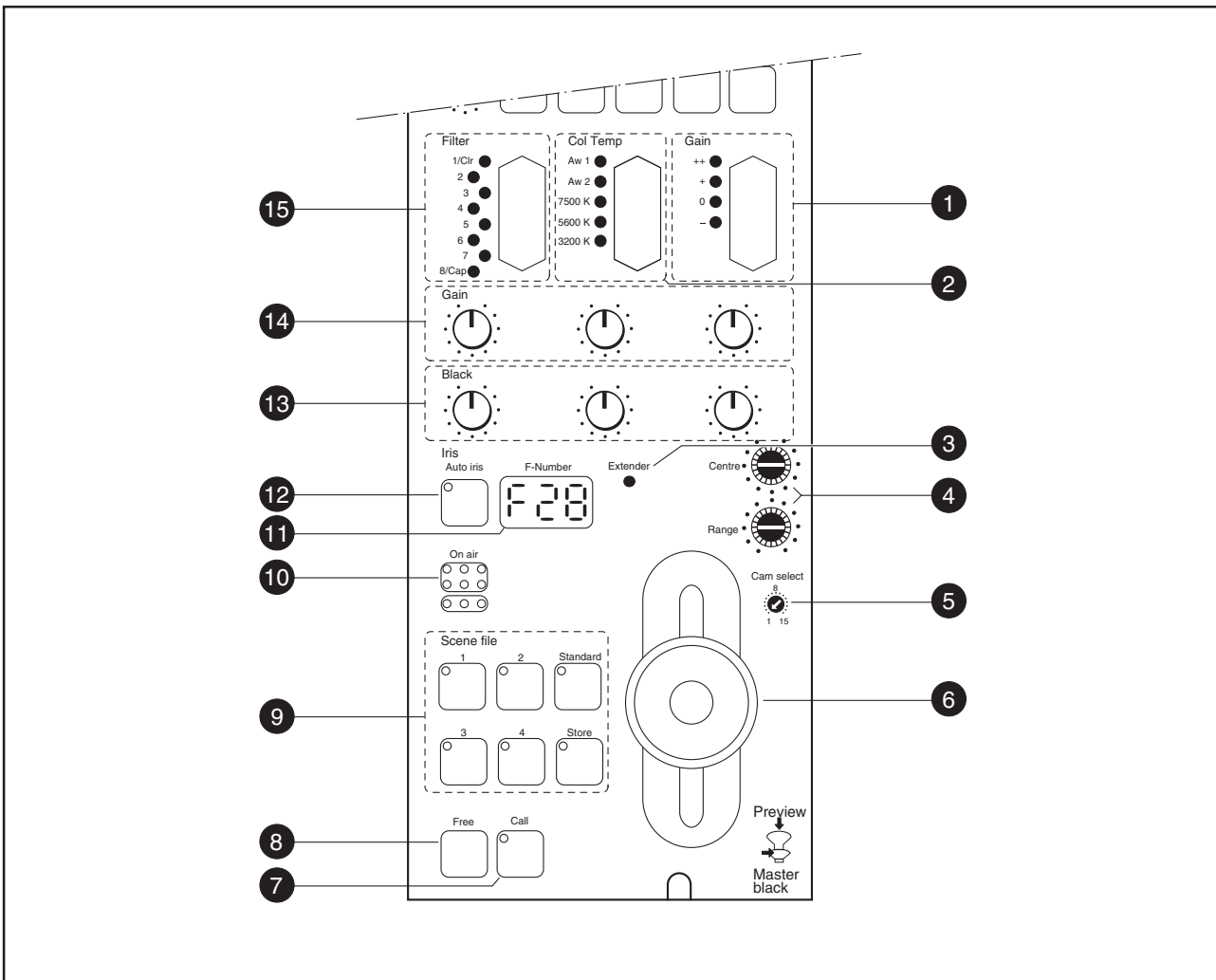
13. Red, Green and Blue Black Controls

These three controls vary the black levels of the red, green and blue signals individually.

14. Red, Green and Blue Gain Controls

These three controls vary the gain of the red, green and blue signals individually.

15. Filter Selection Switch

This rocker switch allows a choice of eight different optical filters:
LDK 91:   no filter
LDK 910:   only position 1 to 4.

LDK 10 / LDK 10p / LDK 20 / LDK 20p:
Position 1:   Clear Filter
Position 2:   ND 0.6 Filter
Position 3:   ND 1.2 Filter
Position 4:   ND 1.8 Filter
Position 5:   Four Point Star Filter 3mm
Position 6:   Six Point Star Filter 3mm
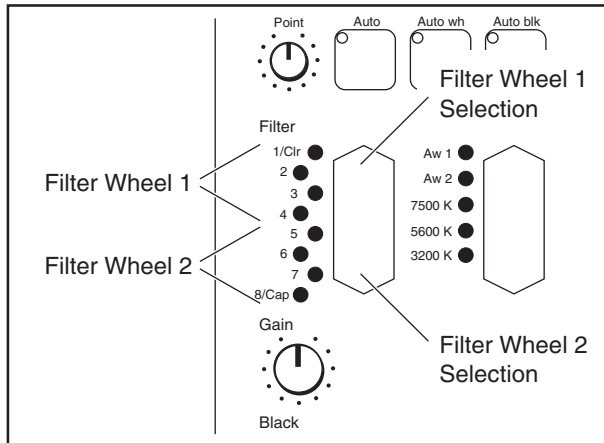Position 7:   -
Position 8:   Cap

The LED of the selected filter flashes until the filter is in place. It then lights continuously.

LDK 100:   Not remote controlled
Position 1:   Clear Filter
Position 2:   ND 1/4 Filter
Position 3:   ND 1/16 Filter
Position 4:   ND 1/64 Filter

LDK200:
The LDK 200 optical filter wheels are controlled with the Filter Selection Switch. The top controlles the first Filter Wheel, the bottom controlles the second Filter Wheel.

Filter Wheel 1:
      Position 1:   Clear Filter
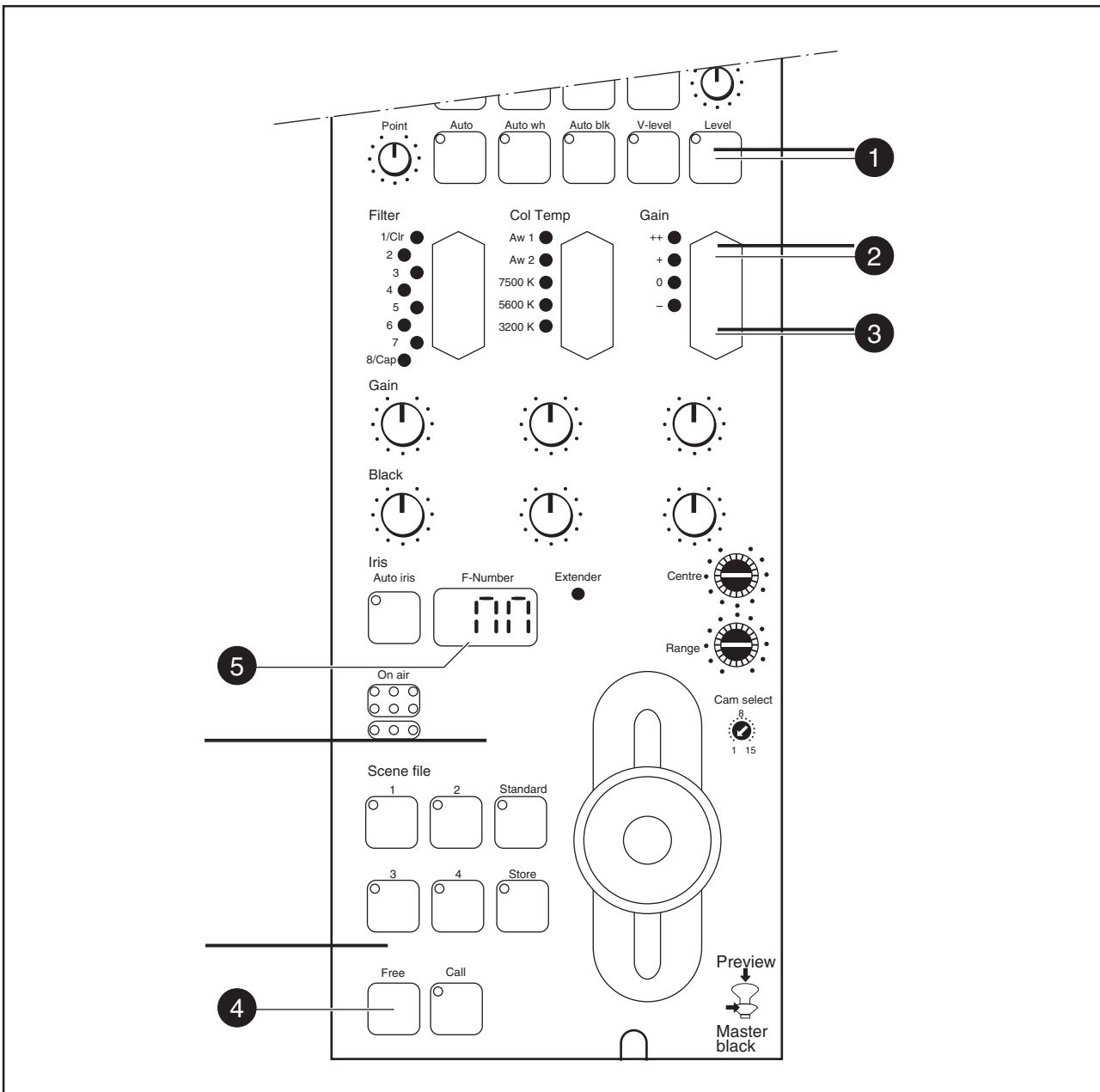   Position 2:   ND 1/4 Filter
      Position 3:   ND 1/16 Filter
      Position 4:   ND 1/64 Filter

Filter Wheel 2:
      Position 5:   Clear Filter
      Position 6:   Four Point Star Filter
      Position 7:   Six Point Star Filter
      Position 8:   Soft Focus Filter

The LED of the selected filter flashes until the filter is in place. It then lights continuously.

Base Station Menu Control mode

The LDK 45XX system menu is accessible using the LDK 4628/05 OCP as follows:

a. Press the Free button (4) three times within one second to access the Base Station system menu. The F-number display (5) displays "nn" when the OCP is in Base Station Control mode. The Menu text appears on the video monitor.

b. A cursor shows your position in the menu. Use the Gain Up (2) and Down (3) button to move the cursor through the menu items.

c. If a double arrow (>>) is visible. Press the Contour level button (1) to navigate lower into the system menu.

d. Select with the Contour Level button (1) an item.

e. Use the Gain Up (2) and Down (3) button to change the current setting of the selected item.

f. Deselect the item with the Contour Level button (1).

g. Leave the system menu by selecting the Menu Off item located on top of the root level. (If you stop navigating the menu will time out and disappear after a few seconds)

note:

Consult the Base Station User's Guide for detailed information about the system menu and video text display options.

File Functions

Scene File Functions

The scene files store the values for the following functions:

- Iris
- Auto Iris
- Saturation
- Master Black
- Black R, G, B
- Chroma
- Master Gain
- Gain R, G, B
- Monitoring
- Contour position:
  - level
  - coarse/fine
  - noise slicer
  - level depend
  - V-level
- Knee positon point R, M, B
- Knee position slope R, M, B
- Colour Bar
- Exposure
- Black Stretch
- Filter
- Colour Temp.
- Gamma R, M, B, position
- Flare R, G, B
- Matrix
- Test Sawtooth
- White Shading Position
- Rem. Zoom/Focus
- Zoom position
- Focus Position
- Auto White 1,2 settings

Standard File Contents

The standard file stores the following values:

Function	Value	
Contour:	- position:	variable
	- level:	mid-pos
	- coarse/fine:	25%
	- noise slicer:	mid-pos
	- level depend:	25%
	- V-level:	mid-pos
Knee:	- knee:	variable
	- slope R:	mid-pos
	- slope M:	0%
	- slope B:	mid-pos
	- point R:	mid-pos
	- point M:	10%
	- point B:	mid-pos
Gamma:	Gamma 1	
Gain R, G, B:	Mid-position	
Master Gain:	0	
Exposure:	Nominal	
Saturation:	Mid-position (100%)	
Chroma:	On	
Matrix:	Matrix 2 (on)	
Black Stretch:	Off	
Black R, G, B:	Mid-position	
Master Black:	Mid-position	
Colour Balance:	3200 K	
Filterwheel:	1 (clear)	
Colour Bars:	Off	
Test Sawtooth:	Off	
Monitoring:	CVBS	
Iris:	Mid-position	
Auto Iris:	On	
White Clipper:	On	
Wh. Clipper R,M,B:	60%	
Rem. Zoom/Focus:	Local	
System/Iso:	System	
White Shading:	On	

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