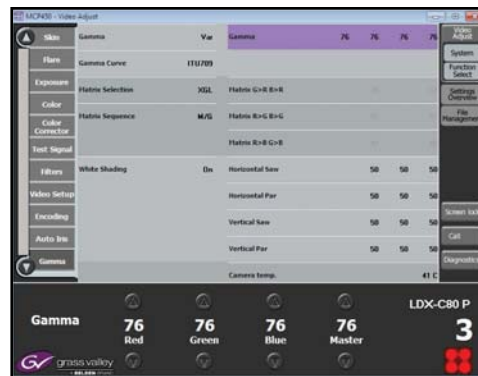


User's Guide

3922 496 32291 February 2018 v1.1

Software v1.3.0.0



MCP 450

Master Control PC

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www.grassvalley.com

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Recycling

Visit www.grassvalley.com for recycling information.

Packing for return

If a unit is being returned to Grass Valley for servicing, try to use the containers and materials of the original packaging. Attach a tag indicating the type of service required, return address, model number, full serial number and the return number which will be supplied by your Grass Valley service centre.

If the original packing is not available or can no longer be used contact your regional Grass Valley service representative to have a return package provided.



Chapter 1

Introduction

1.1 Application

The MCP 450's centralized camera control and network monitoring allow you to get more done in less time. Interpret and log all your network activity between cameras and control panels.

Efficient data-gathering capabilities and a spreadsheet-like interface enables you to review all camera settings and make across-the-board or camera-by-camera adjustments. The save and share camera and production capabilities allow you to take advantage of standard USB storage media—just save, email and upload settings from one event or venue to the next.

The MCP 450 allows you to control up to 99 Grass Valley cameras. The compact and ergonomic MCP 450 operates within a standard Ethernet-based camera control network using TCP/IP as its communication protocol.

The MCP 450 not only controls all camera functions, it can also be used to change the menu settings of all Grass Valley XCU/Base Stations. Extensive setup functions for the MCP 450 itself, the camera and XCU/Base Station are available.

The user interface is designed for convenience, with menu accessible functions for detailed setup and a clear display of current values.



Note

The MCP 450 can control many different types of camera. Depending on the type of camera to which the MCP 450 is connected, not all functions may be available. The values available are also camera and configuration dependent.

1.2 Embedded Box Computer

The MCP 450 Master Control PC application runs on a compact and powerful Embedded Box Computer. All hardware is built into a small form factor, ruggedized housing that allows for easy installing or embedding in any application or situation. The solid and heavy-duty case offers vibration and dust resistance while also providing a passive cooling (fan-less) solution.

**Note**

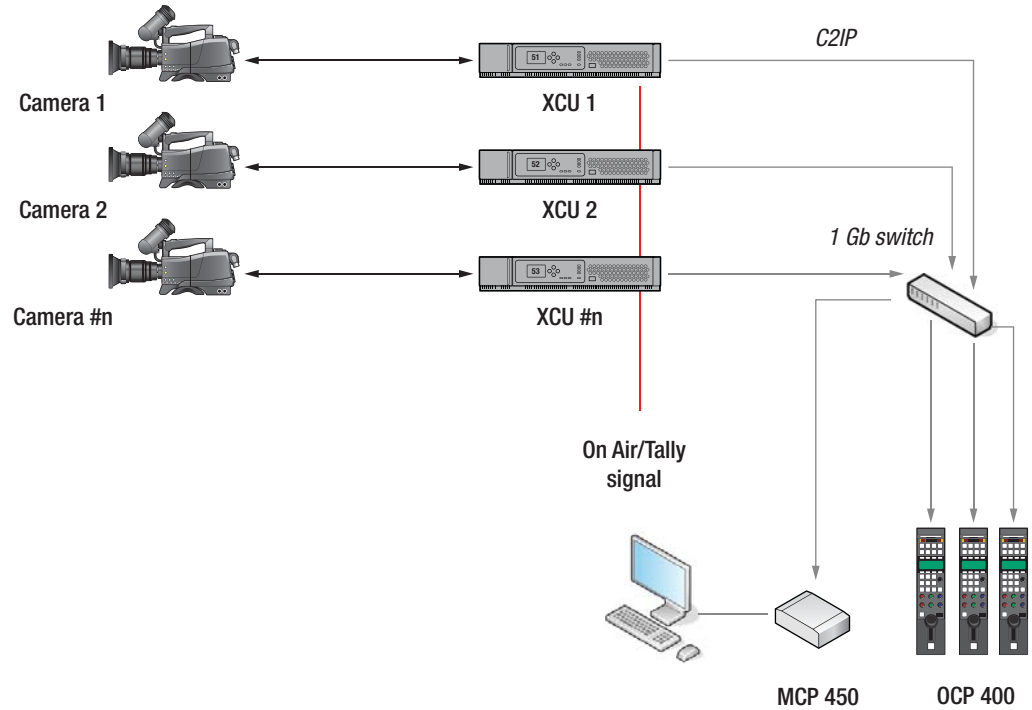
Do NOT install any other applications onto the Embedded Box Computer and do NOT change the Windows settings as this may reduce the reliability of the MCP 450.

1.3 Features

- Supports C2IP camera control interface protocol supported by all Grass Valley LDX Series, LDX Compact and LDK cameras;
- Fast and full graphical control of all camera and XCU/Base Station functions;
- Matrix function provides full overview of all cameras connected to the C2IP network simultaneously and supports the control of multiple cameras at the same time;
- Uses off-the-shelf IT-network infrastructure. Based on IP connectivity - standard IEEE 802.3 10/100 Mb Ethernet;
- Ability to define sets of camera and control-function groups make it very easy to have the right set within reach during any stage of the production;
- Direct access to camera system diagnostics, including warning dialog functionality;
- Transfer of operational parameters between cameras;
- Connects to any VGA or HDMI monitor (or a DVI-D monitor with a HDMI to DVI-D cable) or touchscreen display.

1.4 Configuration

Typically, a single MCP 450 can control the full C2IP camera network. The IP address and other options for the Ethernet connection can be set up in the MCP setup menu.



Note

When an MCP 450 is present in a C2IP network, up to three more Operational Control Panels (OCPs) can be connected to the same camera.

1.5 Screen layout

1.5.1 Single camera mode

The single camera mode can be used to control one specific camera in the system. At the top right of the screen, tap **Video Adjust** in the main menu to switch to single camera mode.

Function groups
- displays function groups of the selected set

Function field
- displays functions and their values

Main menu
- selects camera operation mode
- manages groups of functions
- manages files

Screen lock
- locks screen

Call button
- sends Call signal to camera operator

Diagnostics
- provides a quick status overview of the system

Selected function
- displays the current function

Analog settings and value controls
- displays the analog settings for the selected function
- change the value of a function by clicking/tapping the up and down arrows or click and use the mouse scroll wheel

Camera selection
- displays currently selected camera
- select a camera
- define and maintain groups of cameras

Function Group	Function Name	Setting	Value
Black	Black Stretch	OFF	50
	Auto Black	OFF	50
	Black Contrast	STRCH	47
	Detail	ON	30
	Soft Detail	ON	70
	Detail Source	R+G	05
	Knee Detail	OFF	10
	Level Depend		40
	Vertical		50
	Master Black		50

LDX-C80 P
3

76 Red 76 Green 76 Blue 76 Master

1.5.2 Multiple camera mode

The multiple camera mode can be used to control more than one camera at the same time. At the top right of the screen, tap **Settings Overview** in the main menu to switch to multiple camera mode.

Camera selection
- displays the selection of cameras

Functions
- displays available functions and their settings

Main menu
- selects camera operation mode
- manages groups of functions
- manages files

	Black Stretch	Auto Black	Black	Master Black	Black Contrast	Black Stretch	Black Stretch	Auto Black
5.	50	ON	50 50 50	47	STRCH	ON	99	OFF
8.	50	OFF	50 50 50	47	STRCH	OFF	50	OFF
11.	50	OFF	50 50 50	47	STRCH	OFF	50	OFF

Function matrix
- view and modify settings for one or more camera(s)

Screen lock
- locks screen

Call button
- sends Call signal to camera operator

Diagnostics
- provides a quick status overview of the system

Selected function
- displays the current function

Analog settings and value controls
- displays the analog settings for the selected function
- change the value of a function by clicking/tapping the up and down arrows or click and use the mouse scroll wheel

Camera selection
- displays currently selected camera
- select a camera
- define and maintain groups of cameras

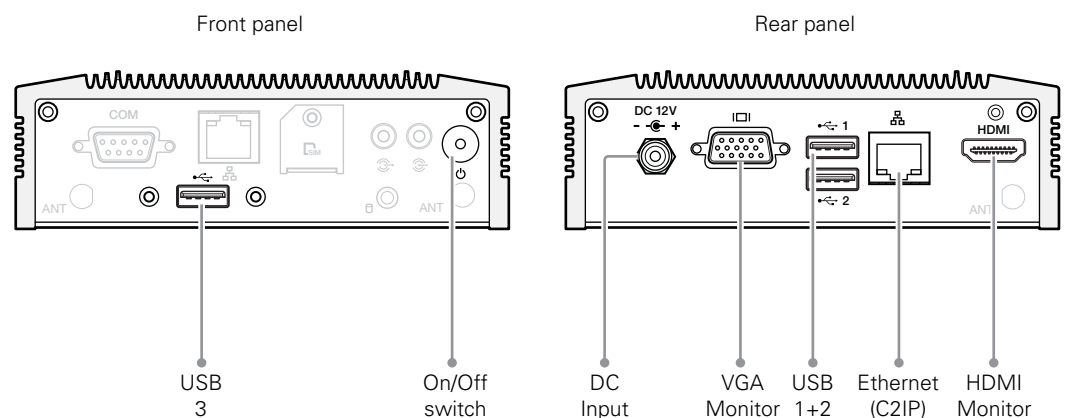
Chapter 2

Installation

2.1 Connecting the embedded box computer

The MCP 450 can be operated by using either a monitor and a keyboard and mouse OR a touchscreen.

- Connect a VGA compatible or HDMI monitor to the VGA and/or HDMI output. It is possible to use two monitors simultaneously.
- For mouse, keyboard and monitor operation:
 - Connect a USB mouse and keyboard to two of the three available USB connectors.
- For touchscreen operation:
 - Connect the USB touch connection of the monitor to one of the three available USB connectors.
- Connect the Ethernet cable from the camera control (C2IP) network to the Ethernet port at the rear panel.
- Connect the (supplied) power supply unit to the DC input socket at the rear panel of the Box Computer.
 - When power is applied to the DC Input socket the box computer starts up automatically. After a short time the MCP 450 is ready for use.



2.2 Setting up the embedded box computer

2.2.1 Power up configuration

You can change the power up configuration of the box computer in the BIOS setup:

- Connect a USB keyboard to one of the USB ports of the box computer.
- Power the box and enter the BIOS setup by pressing the <F2> or key on the keyboard.
- In Main Setup go to the **Chipset** tab at the top of the menu.
- Go to the **South Bridge** item.
- Go to the **Restore AC Power Loss** item. The default value for this item is [Power On]. This means that the box computer always starts up after power is connected.
- When [Power Off] is selected the box computer can be switched on or off by pushing the power switch at the front panel.
- Press <F4> to save the configuration and exit setup.

2.2.2 Screen resolution

The MCP 450 application runs in a fixed resolution of 800 x 600 pixels. Even though you can change the screen resolution of the box computer it is recommended to use a screen resolution of 800 x 600 pixels, which is the default factory setting.



Note

The Box Computer needs to be restarted after changing the screen resolution.

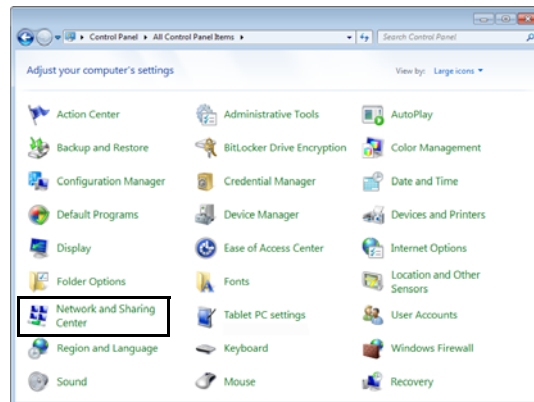
2.2.3 Changing network settings



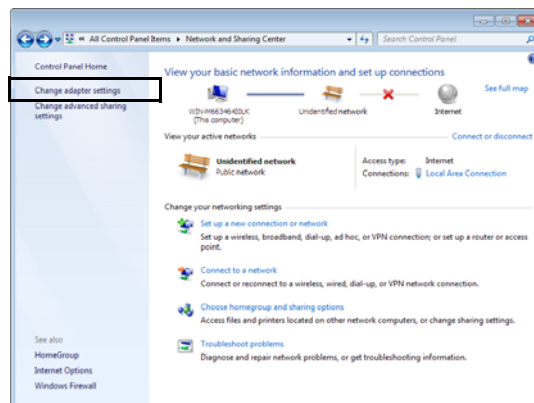
Note

By default, Auto IP mode is turned on. In most cases, manual setting of the IP address is not necessary. When you still need to change the default settings, follow the procedure below.

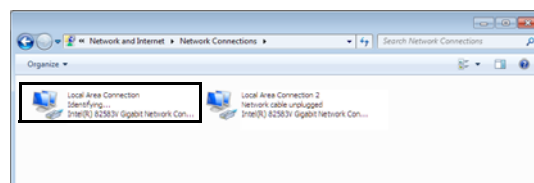
- Go to the Windows desktop, click **Start** and then click **Control Panel**.



- In the Control Panel, click **Network and Sharing Center**.



- At the left side of the window click **Change adapter settings**.



- Right-click **LAN 1 C2IP** and select **Properties** from the context menu. The following dialog box appears:



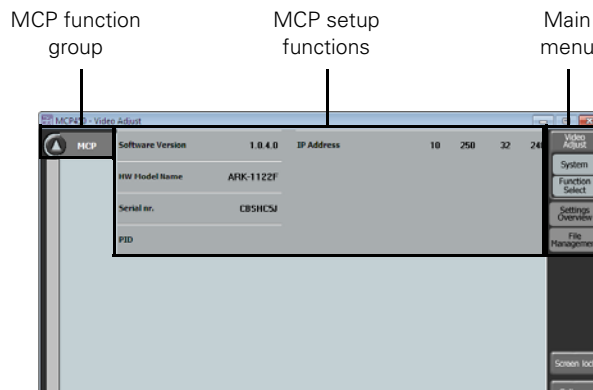
- Select the **Internet Protocol Version 4 (TCP/IPv4)** item from the list and click **Properties**. You may have to scroll down in the list to see all items. The Internet Protocol version 4 (TCP/IPv4) Properties dialog box appears:



- Now you can choose between manual and automatic IP address assignment. Click the option button of your choice. For public Ethernet networks, manual IP addressing is recommended. You may need to ask your network administrator for the appropriate settings.
- When you chose to use manual IP addressing, enter the IP address, the Subnet mask and the Default Gateway address.
- Click **OK** and **OK**.

2.3 Setting up the MCP application

1. Click or tap the **Video Adjust** button in the main menu to enter single camera mode.
2. Click or tap the **System** button inside the menu. A group of functions appears at the left.
3. Click or tap the MCP function group. The MCP setup functions are shown.



2.3.1 Software Version

Displays the current version of the MCP 450 application software.

2.3.2 HW Model Name

Displays the hardware model name of the Embedded Box Computer.

2.3.3 Serial nr

Displays the serial number of the Embedded Box Computer.

2.3.4 PID

Displays the Grass Valley Product Identification (PID) code of the MCP 450.

2.3.5 IP Address

Displays the IP address that is used by the MCP 450 to connect to the C2IP network.

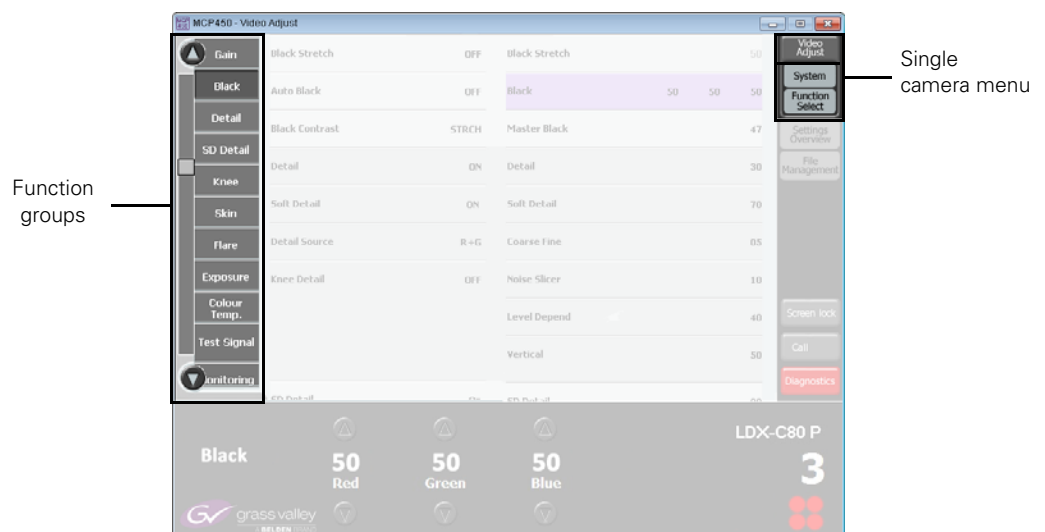
Chapter 3

Operation

3.1 Operating a single camera

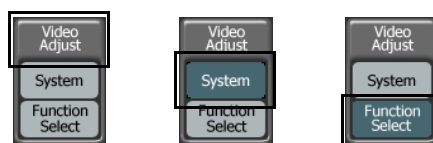
3.1.1 Switching to single camera mode

To switch to single camera mode click or click or tap the **Video Adjust** button in the main menu. The main menu opens and three buttons are shown, one of which is the **Video Adjust** button, the other two are **System** and **Function Select**.



3.1.2 Function sets

Each of the three buttons selects a set of function groups that are displayed at the left side of the screen. If the selected set contains more groups than will fit on the screen use the round scroll buttons on the top and bottom to scroll through the groups:



Video Adjust set

Contains all main video function groups. Note that the available groups depend on your camera type and version.

System set

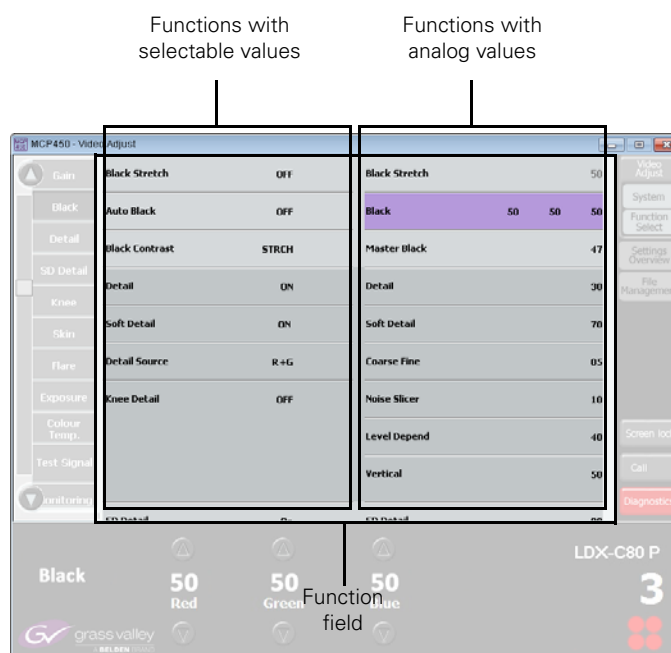
Contains all system function groups including setup functions for the MCP 400 and camera, diagnostics and scene files.

Function Select set

A user programmable set of functions. When you click or tap this button a function select dialog will appear. For more information about defining your own set of function groups refer to ["Selecting functions" on page 26](#).

3.1.3 Function field

The centre of the screen shows a part of the function field that holds all the functions and values of the selected function set. All functions in the function field are associated with the groups in left side menu.

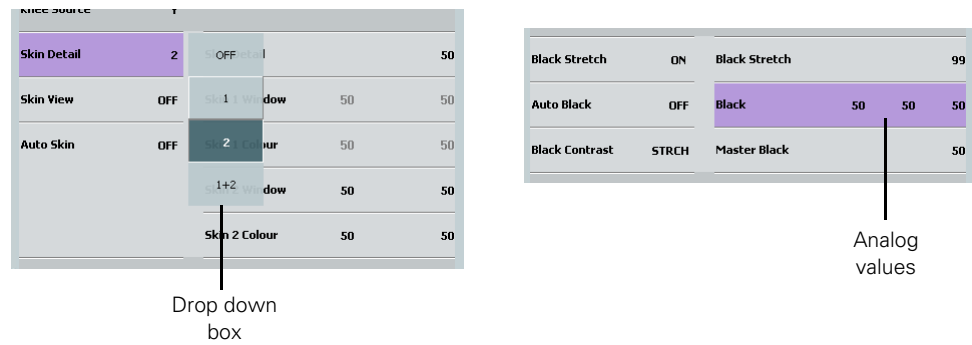


Note

The function field can be larger than the displayed area. Functions that are out of view can be accessed by selecting the groups at the left. The visible window will scroll up or down to the selected function group.

3.1.4 Changing values

Functions that have selectable values are at the left side of the function field while functions with analog values are at the right side.



Click or tap a value displayed next to a function to change it. If there are only two possible values, clicking or tapping the value toggles between the two values. If there are more than two values, a drop down list of values appears. Click or tap the value you want in the list.

If you select an analog function, the values to be changed are shown above the rotary controls at the bottom of the screen. Use the corresponding rotary control to change the value.



Note

If an item is unavailable it is shaded. For example, if a switch function is turned off, its associated analog controls are shaded.

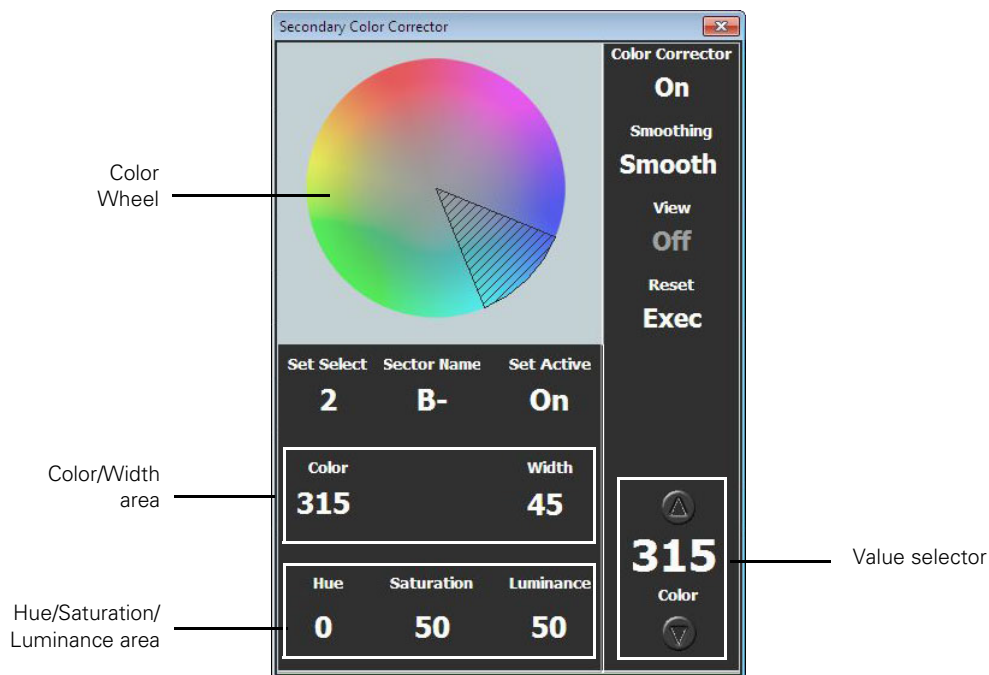
3.1.5 Secondary color corrector

Click or tap the Color Corrector button at the left side to display two items in the function field: Color Corrector On/Off and Color Corrector Config. Click or tap **Config** to open the Color Corrector window.



Tip

Use color correction to adjust hue, saturation and luminance of partial areas of the color spectrum of the image. Typical applications include live sports or news productions.



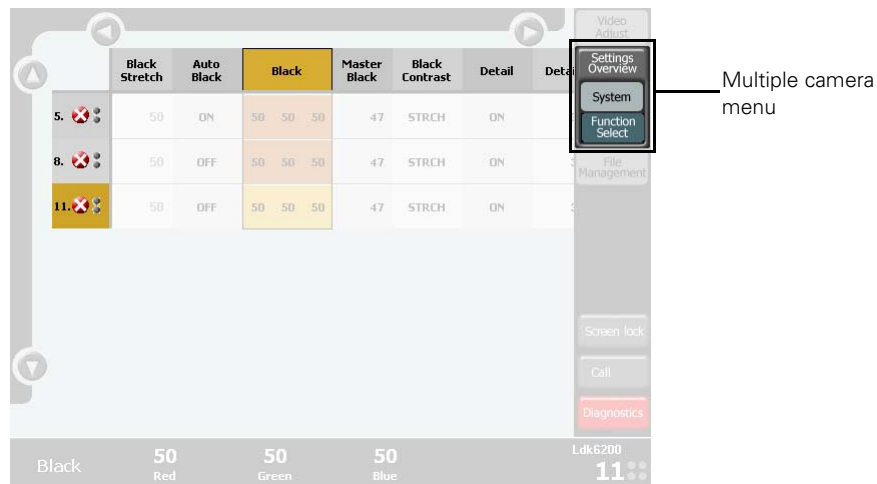
Carry out the following steps to set up the Color Corrector:

1. Click or tap **Color Corrector** at the top right of the screen.
2. Click or tap **Set Select** and select a color correction set.
3. Click or tap **Set Active** to activate (or de-activate) the selected set.
4. Click or tap **Color** and use the Value Selector at the right to select a color. Click or tap **Width** and use the Value Selector to select an area on the color wheel. The color width can be varied between 22.5° and 360°.
5. To view the selected color area, click or tap **View**. Turn view mode off before going on air.
6. Click or tap **Hue**, **Saturation** or **Luminance** and use the Value Selector to change hue, saturation and luminance and the selected color area.
7. The transition between the corrected and uncorrected color area can be set to *sharp*, *medium* or *smooth* using the **Smoothing** setting (top right).
8. To reset all color corrector settings to their initial/default values, click or tap **Reset** at the top right.
9. Click or tap **X** at the top-right to close the window.

3.2 Operating multiple cameras

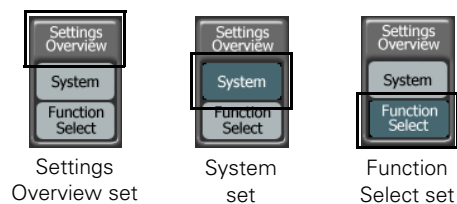
3.2.1 Multiple camera mode

To switch to the multiple camera mode click or tap the **Settings Overview** button in the main menu. The menu opens and three buttons are shown, one of which is the **Settings Overview** button, the other two are **System** and **Function Select**.



3.2.2 Function sets

Each of the three buttons selects a set of functions that are displayed at top centre of the screen. If the selected set contains more functions than will fit on the screen use the round scroll buttons on the top and bottom to scroll through the functions.



Settings Overview set

Contains all main video functions. Note that the available functions depend on your camera type and version.

System set

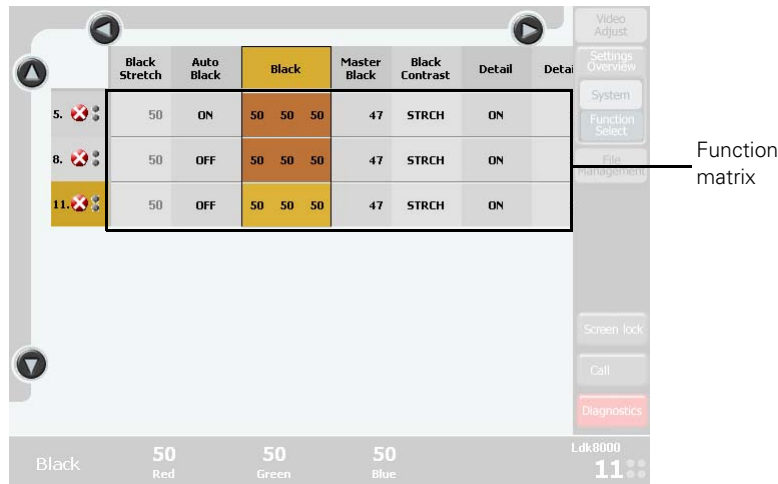
Contains all system function groups including setup functions for the MCP 400 and camera, diagnostics and scene files.

Function Select set

A user programmable set of functions. When you click or tap this button a function select dialog box is shown. For more information about defining your own set of function groups refer to ["Selecting functions" on page 26](#).

3.2.3 Function matrix

The middle part of the screen shows (a part) of the function matrix that holds all functions and values within the selected function set.



Note

The function matrix can be larger than the displayed area. Functions that are out of view can be accessed by scrolling through the functions using the scroll buttons at the top.

The number of cameras can be larger than will fit on the screen. Camera numbers that are out of view can be accessed by scrolling through the cameras using the scroll buttons at the top.

3.2.4 Changing values

Click or tap the value displayed next to a switch function to change it. If there are only two values, Clicking or tapping the value toggles between the two values. If there are more than two values, a list of values appears. Click or tap the value you want in the list.

If you select an analog function, the values to be changed are shown above the rotary controls at the bottom of the screen.

Note

If an item is unavailable it is shaded. For example, if a switch function is off, its associated analog controls are shaded.

3.2.5 Operating combined functions

The matrix function setup in the multiple camera mode makes it possible to combine a function and operate it for multiple cameras simultaneously.

Click on a function at the top of the matrix. If you have selected more than one camera the row of values underneath the function is selected:

	Gain	Gain	Variable Gain	Black Stretch	Black Stretch	Auto Black	
3.	+	50 60 50	6.0 dB	ON	99	OFF	50
11.	0	50 50 50	0.0 dB	OFF	50	OFF	50

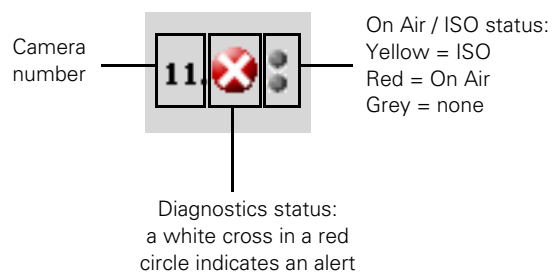
Click on one of the values in the row: this value will become the master value, the values of all other cameras will follow its settings:

	Gain	Gain	Variable Gain	Black Stretch	Black Stretch	Auto Black	
3.	+	50 60 50	6.0 dB	ON	99	OFF	50
11.	0	50 60 50	0.0 dB	OFF	50	OFF	50

Analog functions can be changed using the Rotary Controls at the bottom. Select or toggle functions will be set to the same value for all cameras.

3.2.6 Monitoring cameras

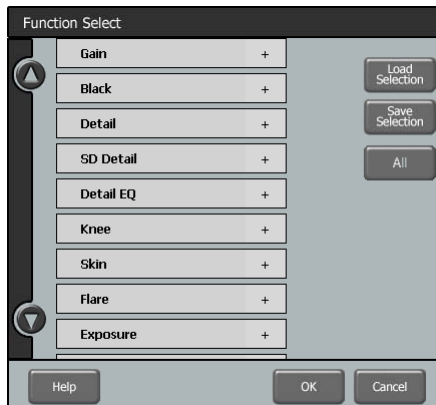
At the left side the cameras are listed with their number, diagnostic and On Air status. Click or tap the Diagnostics button at the right side of the screen to see detailed information.



3.3 Selecting functions

3.3.1 Opening the Function Select window

Define your own set of functions by clicking or tapping the **Function Select** button (in single or the multiple camera mode). A selection window opens, showing a list of all functions that can be controlled by the MCP 400.

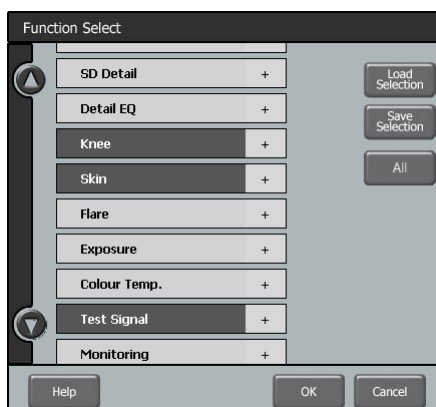


Note

When the function selection window opens the existing selection is discarded. Reload your selection by clicking or tapping the **Load Selection** button.

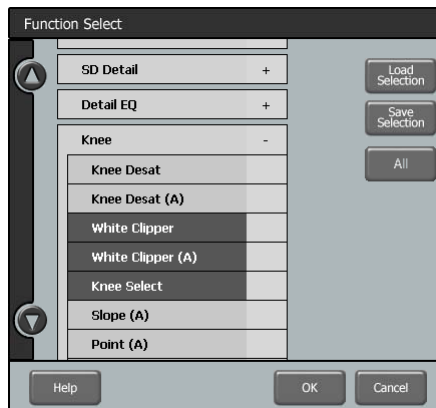
3.3.2 Selecting function groups

Make a selection of function groups by clicking or tapping the name of the group in the list. Use the scroll button to go through the entire list. Clicking or tapping a selected item again unselects that item.



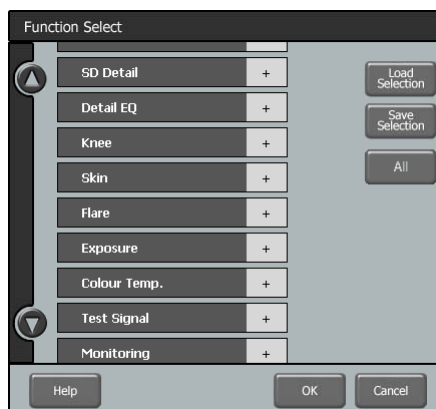
3.3.3 Selecting single functions

You can also select single functions within a group. Click or tap the '+'-sign at the right side of an item to expand a group. Now you can select and unselect functions by clicking or tapping their names.



3.3.4 Selecting all functions

If you want to control all available functions click or tap the **All** button and the list of function groups will be selected.



When you are done selecting functions and groups click or tap the **Save Selection** button and then the **OK** button to close the window.



Note

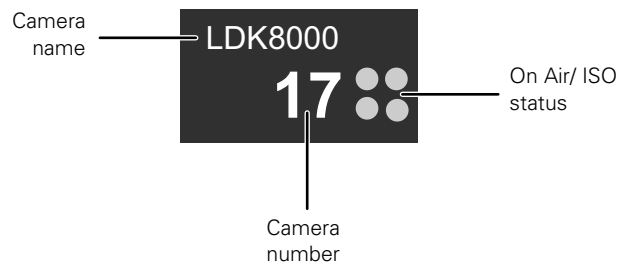
Always save your selection by clicking or tapping the **Save Selection** button.

After closing this window the **Function Select** button will be highlighted and your selection of functions is now active.

3.4 Selecting cameras

3.4.1 Information display

In the lower right corner of the screen information about the selected camera is shown:



Camera number

Logical system number of the current camera that is set in the base station.

Camera name

Name of the current camera.

On Air / ISO status

Normally grey, these four dots light up yellow when the camera has ISO status and they are red when the camera is On Air.

Note

When no camera is selected, the message 'select CAM' is shown.

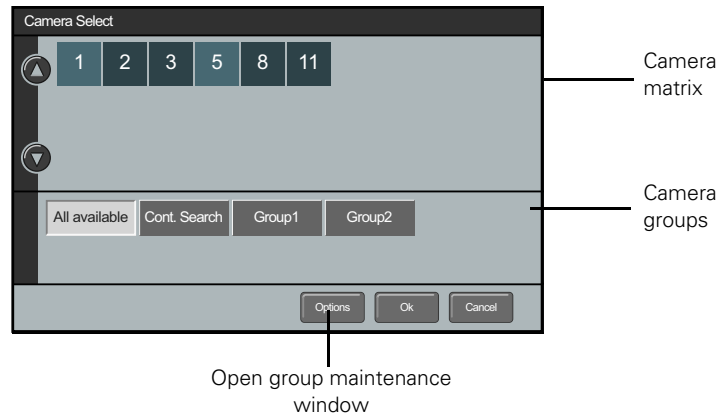
3.4.2 Selecting a camera (in single camera mode)

Click or tap anywhere in the lower right corner of the screen to open the camera selection window. Select a camera by clicking or tapping its number in the camera matrix. This camera will immediately be selected and the camera selection window closes.



3.4.3 Selecting cameras (in multi camera mode)

Click or tap anywhere in the lower right corner of the screen to open the camera selection window. You can now select one or more cameras or a pre-defined group of cameras.



The upper half of the window shows the numbers of the cameras within the selected group. The default group is the **All Available** group that contains all available cameras in the system. If you have defined your own groups they will be shown here. Learn more about managing groups in [Section 3.5 on page 29](#).

- Click or tap a camera group and it will be immediately selected and the camera selection window closes, or:
- If a group was selected the camera selection window displays all cameras in that group. You can make a new selection from the cameras. Click or tap **Ok** to activate this selection.
- Click or tap **All Available** to show all cameras and make a selection by clicking or tapping camera numbers. When your are done, click or tap **Ok** to activate the selection.
- Click or tap **Cont Search** to keep the list of cameras being updated. The list of cameras is populated continuously.

3.5 Managing groups

To make studio control easy, especially with large numbers of cameras in a system, you can define and maintain groups of cameras. Click or tap **Options** in the camera selection window to open the groups management window.



3.5.1 Creating a new group

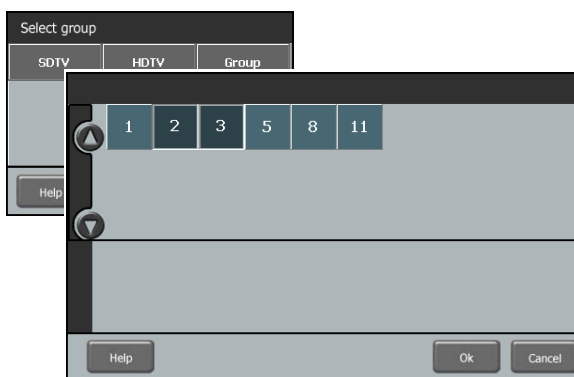
In the **Options** window click or tap **Create Group** to open a new window. A list of available cameras is shown. Select the cameras you want to add by clicking or tapping their numbers.



When you are done selecting cameras click or tap the **OK** button. Use the keyboard layout to enter a name for your new group. Click or tap the **OK** button to return to the **Options** window. Click or tap **Close** to return to the camera selection window. The new group has been added to the groups list.

3.5.2 Editing a group

To change the set of cameras in a group click or tap **Edit Group** in the **Options** window and a list of groups will be displayed. Click or tap the name of the group you want to edit.



A list of all available cameras is shown. Cameras that are already in the selected group are highlighted. Make a new selection of cameras by selecting or unselecting their numbers.

When you are done Click or tap **Ok** to return to the **Options** window.

3.5.3 Renaming a group

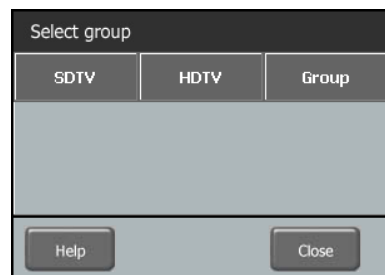
To change the name of a group within a group click or tap **Rename Group** in the **Options** window and a list of existing groups will be displayed. Click or tap the name of the group you want to change and enter a new name in the keyboard window.



Click or tap **Ok** to return to the Options window.

3.5.4 Deleting a group

To delete a group of cameras click or tap **Delete Group** in the Options window. A list of groups will be displayed. Click or tap the name of the group you want to delete. The group will be deleted and the window closes.



3.6 Managing files

3.6.1 File management

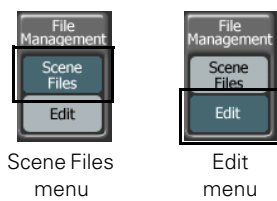
The MCP 400 has an advanced file management system that enables the user to manage camera scene files. Usually these files are only available within the camera but with File Management they can be transferred to and from a USB Flash Drive that is inserted into the MCP 450.



Note

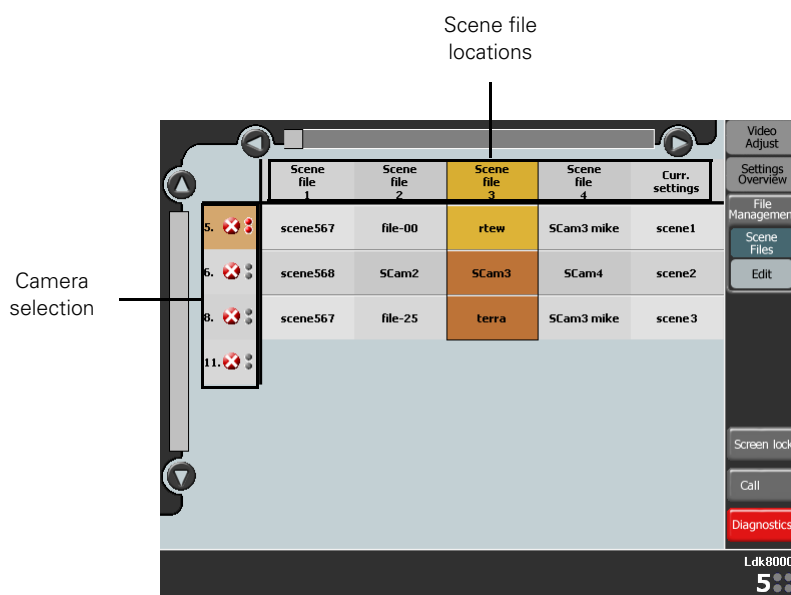
Some large capacity USB Flash Drives are reported to have reduced speed performance when used with the MCP 400. When this situation occurs, try to use a different capacity or brand of USB Flash Drive.

To access File Management click or tap the **File Management** button in the main menu. The menu opens and two submenus appear: the Scene files menu and the Edit menu.



3.6.2 Scene files menu

Scene files are sets of video functions with their values. A camera holds up to 4 scene files and 2 standard files (factory and customer type). The MCP 400 treats the camera's current settings as a (special) scene file.



Scene files are stored in scene file locations in the camera or on a USB Flash Drive that is connected to the MCP 400. When the scene files menu is activated, a matrix window is shown. At the top the names of all 7 scene file locations are displayed (scroll to see them all):

Scene file 1	Scene file 2	Scene file 3	Scene file 4	Curr. settings	Factory std.	Customer std.
scene567	file-00	rtew	SCam3 mike	scene1	Factory std.	Cust std.

Scene file location 1,2,3 and 4

Contain up to 4 scene files that can be recalled, stored or transported between the USB Flash Drive and the camera. Each file can have its own distinctive filename that provides information about the scene file or its contents.

Current settings location

Contains the current camera settings, represented as a file. Its name is copied from the latest recalled or restored scene File.

Factory standard file location

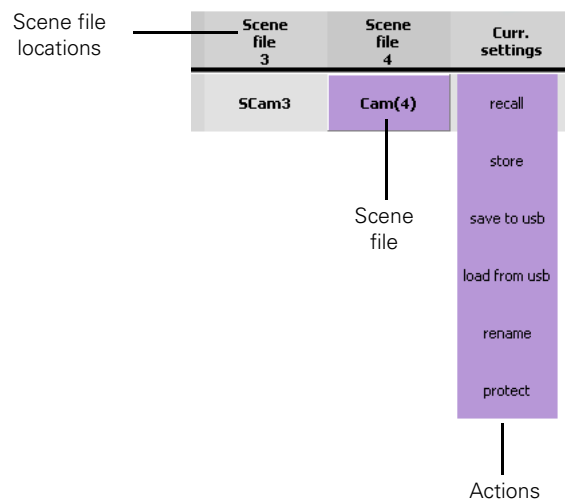
Contains the Factory Standard file that holds the factory default functions and values for the camera. This file is read only and cannot be changed.

Customer standard file location

Holds a Customer Standard File that can be used to reset the camera to your own default values. The Customer Standard File can be managed like any of the 4 scene files except that its name is always 'Cust. Std.' to indicate that it is a Standard File.

3.6.3 Scene file actions

When you click on a filename in the matrix a drop-down menu appears showing the actions that are available for that file:



The following table shows which actions are available for each file location:

	Scene files 1,2,3 and 4	Current settings	Factory standard	Customer standard
Recall	Yes	-	Yes	Yes
Store	Yes	-	-	Yes
Save to USB	Yes	Yes	Yes	Yes
Load from USB	Yes	Yes	-	Yes
Rename	Yes	-	-	-
Protect/Unprotect	Yes	-	-	Yes

Recall

Copies the selected scene file from its file location to the camera's current settings file.



Note

It is not possible to recall a scene file while the camera is On Air. The message 'On Air!' is displayed.

Store

Copies the camera's current settings file into the selected scene file location. This action is not available when the location is protected.



Note

The existing file stored in this location will be deleted.

Save to USB

Copies the scene file from this location to the MCP 400's USB Flash Drive.

Load from USB

Copies the scene file from the MCP 450's USB Flash Drive into this location. This action is not available when the location is protected.

Rename

Changes the name of the scene file in this location. This action is not available when the location is protected.



Note

Files stored on the USB Flash Drive will not be renamed by this operation.

Protect/Unprotect

To prevent a file from being overwritten the location can be protected. This action toggles between protected and unprotected status.



Note

After a camera software update all scene file locations are empty and the current settings file is restored to the factory default settings. You can only Store, Load from USB and Rename a scene file location.

3.6.4 Controlling multiple files

To set up a number of cameras simultaneously select a row of scene file locations at the top of the matrix. Click or tap one of the locations to open the action menu:

Scene file locations

	Scene file 1	Scene file 2	Scene file 3	Scene file 4	Curr. settings
5.	scene567	file-00	rtew	SCam3 mike	scene1
6.	scene568	SCam2	SCam3	SCam4	scene2
8.	scene567	file-25	terra	SCam3 mike	scene3

Multiple file selection

- Recall and Store are carried out for each selected camera individually.
- Save to USB only saves the scene file of the selected camera to the USB Flash Drive.
- Load from USB loads a single scene file from the USB Flash Drive into all scene file locations.



Note

Be careful when loading a scene file into the current settings: all cameras that are not On Air will immediately take over the new settings.

- Rename is carried out sequentially for all selected scene files.
- Protect/Unprotected inverts the protection status of all scene files.

3.6.5 Editing files

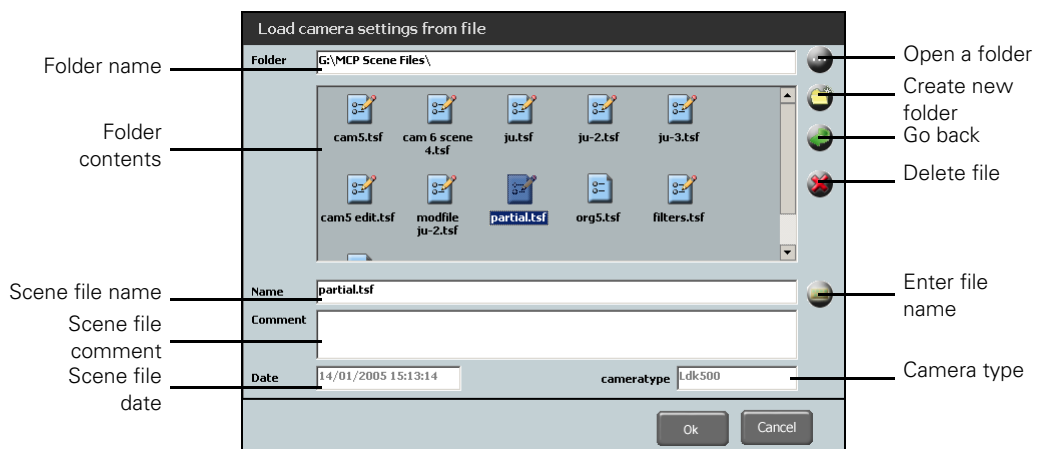
The second option in the File Management menu is the Edit menu. It is used to filter functions from a scene file to build your own customized set of functions to load into the camera.

Proceed as follows:

1. Click or tap the Edit menu in the File Management menu to open a new window. At the bottom there are four buttons: **Load**, **Save As**, **Filter** and **Close**.



2. Make sure a USB Flash Drive is inserted into the MCP 400. Click or tap the **Load** button to open the files window. The contents of the root folder of the USB Flash Drive is shown.



3. In the files window, select a scene file by clicking tapping its icon.



- Click or tap the **OK** button to load the scene file. The functions preview displays all functions that are in the scene file.

Path and filename of the selected scene file



- Click or tap the **Filter** button to open the Filter Menu. Select or unselect functions as described in ["Selecting functions" on page 26](#).
- Click or tap the **Save As** button to save your edited scene file to the USB Flash Drive. After saving the scene file the icon changes to:



filters.tsf



Note

Edited scene files can only be used to load into the current settings file location.

3.7 Diagnostics

3.7.1 Diagnostics screen

This screen provides diagnostics for the camera system. The diagnostic parameters are at the top of the screen and the current values and messages are below.

Camera selection
- displays your selection of cameras.

Diagnostic parameters
- information sources.

	Ref Available	Gen. Lock	Basestation Comm.	Camera Comm.	OCP Comm.	Cable
1.	No	No	Yes	No	No	No Cam
4.	NO	NO LOCK	Yes	No	Yes	Open
5.	No	No	Yes	Yes	Yes	DC Power
8.	No	No	Yes	No	No	No Cam
11.	No	No	Yes	No	Yes	AC Power
50.	SDTV	No	Yes	Yes	Yes	DC Power

Diagnostics panel
- view diagnostic values for all cameras in your selection.

Diagnostics
- provides a quick status overview of the system.

Camera selection
- displays selected camera;
- select one or more cameras;
- define and maintain groups of cameras.

3.7.2 Ref Available

Shows the video reference status at the Base Station reference input. Can be **SDTV**, **HDTV** or **No** (warning highlight).

3.7.3 Gen. Lock

Shows status of the Genlock input of the Base Station. Can be **Yes**, **No Lock** or **No** (warning highlight).

3.7.4 Camera Comm.

Shows the communication status between the MCP 400 and the camera. Can be **Yes** or **No** (warning highlight).

3.7.5 Basestation Comm.

Shows the communication status between MCP 400 and the Base Station. Can be **Yes** or **No** (warning highlight).

3.7.6 OCP Comm.

Shows the communication status between an attached OCP 400 and the camera. Can be **Yes** or **No** (warning highlight).

3.7.7 Cable

Shows cable power status for Triax connections. Can be **Open**, **AC Power**, **DC Power** or **No Cam** (warning highlight).

3.7.8 C->BS FibCable

Shows cable quality for Fiber connections from Camera to Base Station. Also the attenuation in dBs is shown.

3.7.9 C->BS FibSignal

Shows signal quality for Fiber connections from Camera to Base Station.

3.7.10 BS->C FibCable

Shows cable quality for Fiber connections from Base Station to Camera. Also the attenuation in dBs is shown.

3.7.11 BS->C FibSignal

Shows signal quality for Fiber connections from Base Station to Camera. Also the attenuation in dBs is shown.

3.7.12 Cable Length

Triax cable length in % of the maximum cable length allowed.

3.7.13 C->BS TrSignal

Shows signal quality for Triax connections from Camera to Base Station.

3.7.14 BS->C TrSignal

Shows signal quality for Triax connections from Base Station to Camera.

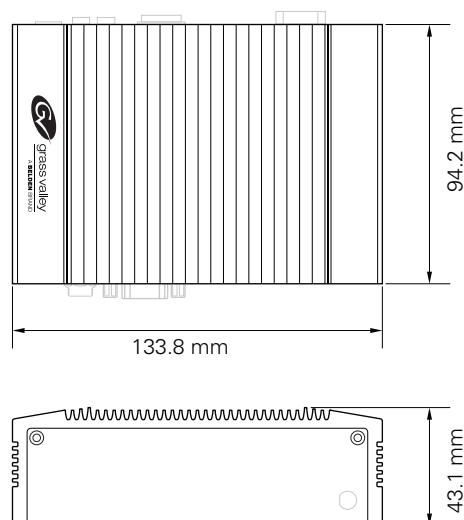
Chapter 4

Specifications

4.1 Specifications for MCP 450

Item	Value
Dimensions (Height x Width x Depth)	43.1 x 133.8 x 94.2mm (1.7 x 5.27 x 3.71 in)
Operating temperatures	0 to +40° C (32 to 104° F)
Storage temperatures	-40 to +85° C (-40 to 185° F)
Power requirements	12 VDC \pm 10% nom. 1.5 A
Power consumption	via power adapter DC 12 V, 36 W max.
Ethernet connection	2 x RJ-45 connector; 10/100/1000 Mbps, Compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 8023y, IEEE 802.ab.
VGA output	RGB 0.7 Vpp (75 Ω) TTL compatible
USB connectors	3 x USB ports USB 2.0 compliant
Serial Port	1 x RS-232

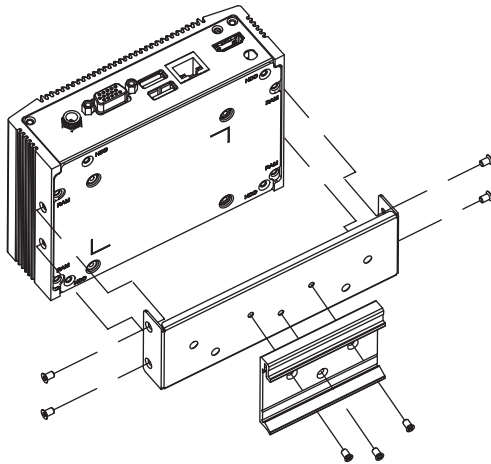
4.2 Dimensions



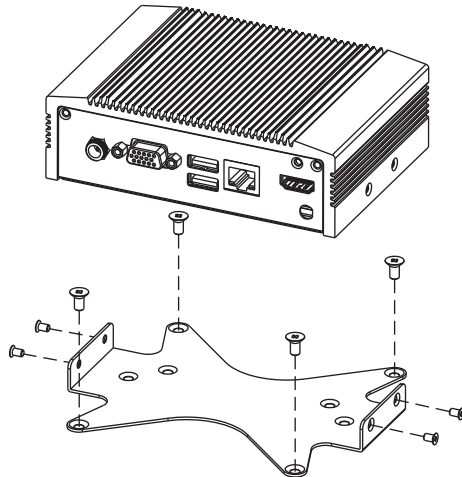
4.3 Mounting

To mount the MCP 450 in a desk or onto a wall, use the supplied mounting kit that suit you mounting situation:

DIN rail mounting:



VESA plate mounting:



Wall or surface mounting:

