USER MANUAL

SERVSWITCH 4SITE II KVM SWITCH

BLACK BOX

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CHAPTER 1: HEADLINE

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SAFETY INFORMATION

WARNING: To avoid risk of electric shock do not open the device or remove any part of the casing. Contact Black Box Technical Support at 877-877-2269 or info@blackbox.com if the device requires servicing.

Read this manual carefully before operating the device.

Observe all warnings and instructions on the device and in this manual. Keep this user manual for future reference.

Power supply: Only connect the device to a grounded power supply.

Installation: Ensure that the device is disconnected from the main power supply before performing any installation work. Unplug the device or disconnect the power supply.

Cables: Only use the cables supplied by Black Box with the device. Damage resulting from the use of third-party cables is not covered by warranty. Beware of tripping hazards when laying cables.

Location: Electronic devices should never be placed on the ground between the cables. Never obstruct any vents the device may have. Ensure adequate ventilation.

Maintenance: This device is maintenance-free. Never open the casing. No settings can be made inside the device.

CHAPTER 1: SPECIFICATIONS

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1. SPECIFICATIONS

TABLE 1-1. SPECIFICATIONS

SPECIFICATION	DESCRIPTION
Casing	Desktop or 19", black (RAL 9005)
Dimensions	1.7" H x 17.1" W x 9.2" D (4.4 x 43.6 x 23.4 cm)
Weight	6.4 lb. (2.9 kg)
Operating Controls	Front panel: (4) channel selection buttons, (1) Fullscreen mode button, (1) Quad mode button, (1) PiP mode button; Rear panel: (1) Power On/Off switch
Indicators	(4) active channel indicator LEDs, (1) Fullscreen mode LED, (1) Quad mode LED, (1) PiP mode LED
Computer Ports	(4) DVI-I (analog and digital), (4) PS/2, (4) USB
Console Ports	(1) DVI-I, (2) USB for keyboard and mouse
USB 2.0 Ports	(4) transparent high-speed USB 2.0
Audio Connectors	(1) 3.5-mm analog stereo jack, (1) digital cinch connector, (1) TOSLINK optical audio
Maximum Distance	Video (DVI/VGA) up to 65.6 ft. (20 m); Keyboard/mouse up to 16.4 ft. (5 m)
Input and Output Resolution	Up to 1920 x 1200 @ 60 (DVI and VGA)* *(at WUXGA: reduced blanking only — WUXGAr)
EDID Adjustments	EDID at each input port customizable
Supported Keyboard Layouts	English, German, French, Italian, Spanish, Japanese
OSD Languages	English, German, Spanish
Power Supply	Internal AC adapter, 100 to 240 V, 50/60 Hz
Power Consumption	40 watts
Operating Temperature	41 to 113° F (5 to 45° C)
Storage Temperature	+14 to +140° F (-10 to +60° C)
Relative Humidity	5 to 65% non-condensing
Safety/Emissions	FCC, CE, NOM

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2. OVERVIEW

2.1 INTRODUCTION

The 4Site II represents the latest state-of-the-art technology in keyboard-video-mouse (KVM) switching. The key advantage of the 4Site II over conventional KVM switches is that it allows you to simultaneously display and manage four computers on a single console. It combines features of a high-end KVM switch and a digital multiviewer, scaling and converting videos at both inputs and output.

2.1.1 DISPLAY MODES

Quad Mode

In this mode, the screen is split into four fields of equal size; each displaying the entire screen contents of one source.

Fullscreen Mode

In Fullscreen mode, one of the four sources is displayed in full screen size and maximum resolution.

PiP Mode (Picture in Picture)

Using this feature, the full screen display of one of the four video sources is accompanied by one to three small images (thumbnails) of the other video sources that are displayed on the right hand side of the screen allowing simultaneous monitoring.

2.1.2 DVI AND VGA

4Site II supports resolutions of up to 1920 x 1200 at 60 Hz for both DVI and VGA.

Any combination of VGA and DVI at all standard resolutions is possible at inputs and output. Analog video input is converted to digital. If an analog display is connected, 4Site II converts the digital signal to analog at the output. Internally, 4Site II processes video purely digital guaranteeing superior digital image quality.

2.1.3 USB AND PS/2 FOR KEYBOARD/MOUSE/TOUCHSCREEN/TRACKBALL

Use either PS/2 or USB ports on the computer to connect keyboard and mouse to 4Site II. It supports any combination. To connect the console, 4Site II features two USB ports for mouse, keyboard, touchscreen, or trackball connection.

2.1.4 TRANSPARENT USB 2.0

4Site II features a transparent high-speed USB 2.0 matrix: USB 2.0 devices (e.g. printer, external memory, memory stick, webcam, 3D mouse, finger printer) can be switched to computers connected.

2.2 OPERATION

There are six ways to operate 4Site II, switch channels, and select display modes:

1. Using the buttons on the front of the unit

2. Using configurable hotkeys

3. Using the unit's external configuration software on a remote computer

4. Via a serial port using the protocol DCP XML

5. Using mouse functions (Hotmouse)

6. Using a touchscreen

CHAPTER 2: OVERVIEW

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The configuration of 4Site II is carried out via an On Screen Display (OSD). Users can open and navigate the OSD either with keyboard commands, front-panel buttons, or remotely via ConfDev on an external PC.

The LEDs on the front panel indicate the unit's current status.

Use the serial (RS-232) or USB port for remote control and firmware updates.

2.2 WHAT'S INCLUDED

Your package should include the following items. If anything is missing or damaged, contact Black Box Technical Support at 877-877-2269 or info@blackbox.com

- (1) ServSwitch 4-Site II
- (1) Power Cord
- (2) Rackmount Ears w/ hardware
- (1) CD-ROM with user manual
- (1) USB Type A male to (2) PS/2 female adapter cable
- (1) Flash upgrade Kit DB9 to RJ-45 Cable
- (1) VGA to DVI-I Adapter

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3. HARDWARE

WARNING: To avoid risk of electric shock do not open the device or remove any part of the casing. Contact Black Box Technical Support at 877-877-2269 or info@blackbox.com if the device requires servicing.

Read this manual carefully before putting the device into operation.

Observe all warnings and instructions on the device and in this manual. Keep this user manual for future reference.

Power supply: Only connect the device to a grounded power supply.

3.1 BEFORE INSTALLING THE KVM SWITCH

1. Make sure that the device is disconnected from the main power supply before installation. Unplug the device or disconnect the power supply.

CAUTION:

Cables: Only use the cables supplied by Black Box with the device. Damage resulting from the use of third-party cables is not covered by warranty. Beware of tripping hazards when laying cables.

Location: Never place electronic devices on the ground between the cables. Never obstruct any vents the device may have. Ensure adequate ventilation.

Maintenance: This device is maintenance-free. Never open the casing. No settings can be made inside the device.

3.2 FRONT PANEL

The 4Site II front panel has seven status indicators (LEDs) and eight buttons. Buttons 1 to 4 switch between channels, LEDs 1 to 4 indicate the status of the individual channels. Full, Quad, and PiP buttons LEDs are used to switch and indicate display modes and other functions, e.g., opening the OSD menu.

Figure 3-1 shows the front panel of the KVM switch. Table 3-1 describes its components.
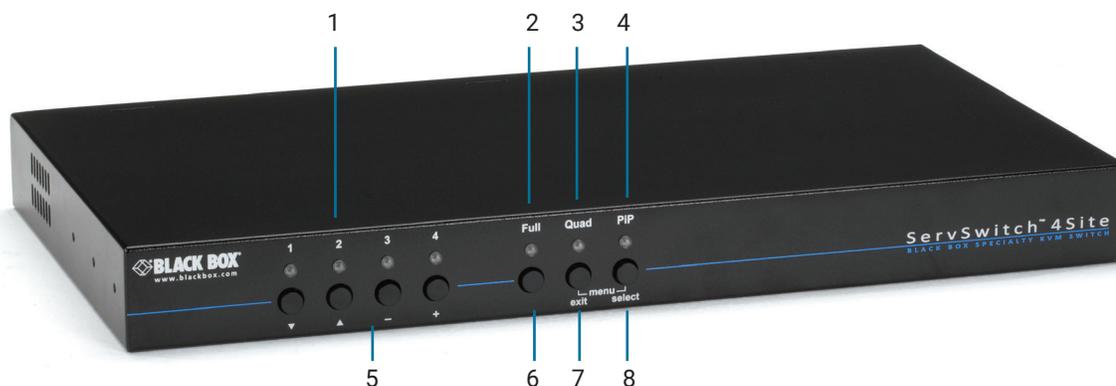

FIGURE 3-1. FRONT PANEL

TABLE 3-1. KVP4000A-R3 FRONT-PANEL COMPONENTS

NUMBER IN FIGURE 3-1	COMPONENT	STATUS	DESCRIPTION
1	LEDs 1 to 4	On Green	When these LEDs light green, the corresponding channel (computer port) has been selected and is available for keyboard and mouse access.
		Flashing Green	When a LED flashes green, there is no signal at the video input of the selected channel.
		Yellow	An LED lights yellow when there is a signal at the video input, but another channel has been selected.
		Dark	When the LED is dark, there is no signal at the video input and another channel has been selected.
		Blue	The LEDs light blue when Win Mode preset window configuration is being selected.
2	Full LED	On Green	This LED lights green when the unit is in Fullscreen mode.
3	Quad LED	On Green	This LED lights green when the unit is in Quad mode.
4	PiP LED PiP	On Green	This LED lights green when the unit is in PiP mode.
5	Buttons 1 to 4	Press and release	These buttons activate the corresponding channel (computer port).
6	Full button	Press and release	Press to switch to Fullscreen mode.
7	Quad button	Press and release	Press to switch to Quad mode.
8	PiP button	Press and release	Press to switch to picture in picture mode (PiP).

NOTE: While the OSD menu is open, you can still operate the active computer using the mouse or touchscreen.

NOTE: You can also select the active channel using hotkey and the arrow keys.

The selection window closes once the channel selection timeout period has expired.

Configure the channel selection timeout in the OSD under System, Quad Mode.

Use the "Time out of channel selection" menu item to define how long the selector is to be displayed.

3.2.1 ADDITIONAL FRONT-PANEL BUTTON FUNCTIONS

Setting output resolution to safe output modes

To set output resolution to 640 x 480 pixels at 60 Hz simultaneously:

Press and hold buttons 1 and 2 for 2 seconds.

Use this feature when you cannot use the OSD (on-screen display is dark or not legible) because the output resolution setting is not supported by the monitor. After setting the correct output resolution

(640 x 480 at 60), you can choose a resolution the connected monitor supports in the OSD.

Alternatively, hold buttons 1 and 2 again to cycle through the following video modes: VGA 640 x 480 at 60, SVGA 800 x 600 at 60, XGA 1024 x 768 at 60, UXGA 1600 x 1200 at 60, and the preferred video resolution found in the monitor EDID.

LEDs 1 to 4 and FULL indicate the selected mode in blue.

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CHAPTER 3: HARDWARE

Hardware Reset

Press and hold buttons 3 and 4 simultaneously for 5 seconds to reset the unit completely (video + mouse + keyboard).

Calling up OSD

Press and hold Quad and PiP buttons simultaneously for 2 seconds to open the OSD menu.

NOTE: While the OSD menu is open, you can still operate the active computer by mouse or touchscreen.

3.3 BACK PANEL

The back panel of 4Site II features three audio ports, four input source/computer ports, the console port (KVM), the USB control port, the serial RS-232 control port, four transparent high-speed USB 2.0 device ports, and the power connection.

Figure 3-2 shows the back panel of the KVM switch. Table 3-2 describes its components.

FIGURE 3-2. BACK PANEL

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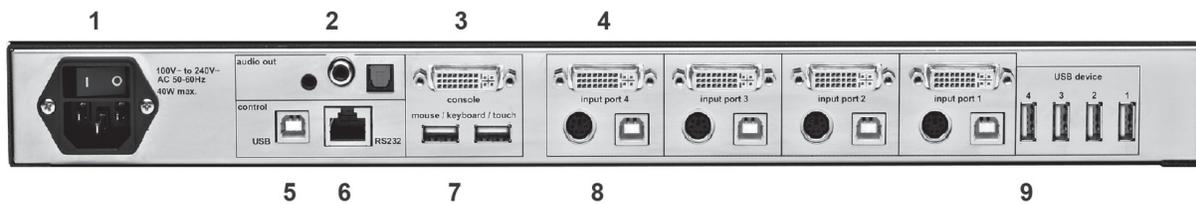
TABLE 3-2. KVP4000A-R3 BACK-PANEL COMPONENTS

NUMBER IN FIGURE 3-2	COMPONENT	DESCRIPTION
1	Power port	Plug for enclosed power cable
2	Audio ports	Connect external speakers or headphones to the 3.5-mm analog stereo jack or digital cinch connector. The TOSLINK optical audio connection enables digital audio output.
3	Monitor/DVI-I output	Analog or digital displays connect to this port.
4	DVI-I inputs	Analog or digital video signal of up to four sources connect to these four DVI-I ports.
5	USB control port	External USB control devices connect to this port to operate 4Site II remotely. Execute firmware updates or manage the device using ConfDev via the control ports.
6	RS-232/RJ-45 control port	Connect external serial control devices to this RJ-45 port to operate 4Site II remotely, e.g. connect to this port to access the OSD menu from a computer using the ConfDev device configuration tool. The serial RS-232 port is also used for firmware updates.
7	(2) USB ports for keyboard, mouse, touch or trackball (console)	Two USB ports allow connecting keyboard, mouse, touchscreen, or trackball. Using a USB hub, you can connect multiple keyboards and mice. They will work in share mode with an inactivity timeout of 3 seconds.
8	USB or PS2 keyboard and mouse (computer)	Each computer can be connected with PS/2 or USB-B for keyboard and mouse.
9	(4) transparent high-speed USB 2.0 ports	USB devices (printer, memory stick, finger printer, 3D mouse) are connected to the four transparent USB ports. This transparent USB 2.0 matrix switches USB 2.0 peripherals to computers connected to 4Site II.

CHAPTER 4: INSTALLATION

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4. INSTALLATION

STEP 1: PLACING THE 4SITE II SWITCH

To reduce the need for long cables, place the 4Site II as close as possible to its video sources. By default, 4Site II is delivered as desktop version. Using a rackmount kit, you can also mount it in a 19-inch rack.

Keyboard, monitor, mouse (console), and USB devices connect to 4Site II using the corresponding cables (DVI, USB, or PS/2). KVM extenders will allow you to work remotely via a CAT5, fiber optic, or Ethernet connection.

STEP 2: CONNECTING THE SWITCH TO POWER

Plug the power cable into the power plug located on the rear panel of 4Site II, but do not turn the power on.

STEP 3: CONNECTING THE CONSOLE (MONITOR, KEYBOARD, MOUSE, TOUCHSCREEN, TRACKBALL)

3a. Connect your monitor to the monitor port of 4Site II via a VGA-DVI cable (analog) or DVI cable (digital) up to 65.6 feet (20 meters). For greater distances use a DVI or VGA extender.

3b. Connect your USB mouse and keyboard to the USB-A ports on the console up to 5 meters. For greater distances use a KVM or USB extender.

NOTE: To connect a PS/2 mouse and keyboard to 4Site II, use a PS/2-USB adapter (not included).

3c. Connect your touchscreen to the DVI-I port and the USB-A port.

NOTE: The maximum cable length for video (DVI/VGA) is up to 65.6 feet (20 meters). The maximum cable length for a USB/PS2 keyboard and mouse is up to 16.4 feet (5 meters). For greater distances, 4Site II supports most KVM extenders, video (DVI/VGA) extenders, and USB extenders.

Connect the KVM console with digital or analog monitor, USB mouse and USB keyboard
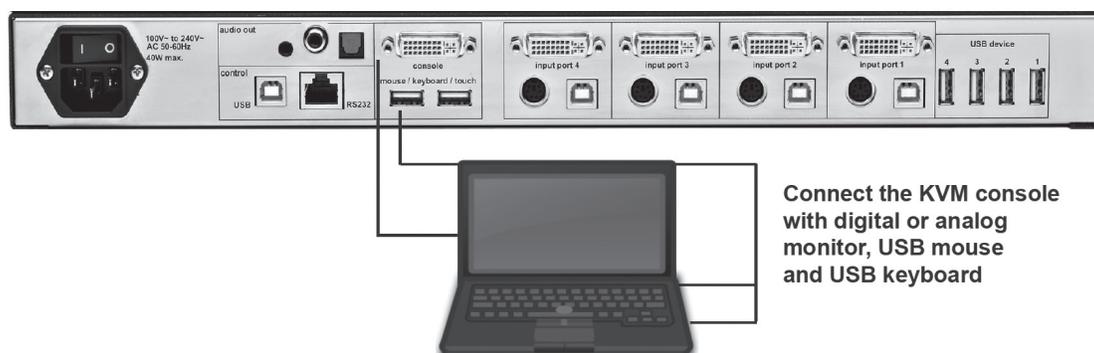
FIGURE 4-1. CONNECTING THE KVM CONSOLE WITH A DIGITAL OR ANALOG MONITOR, USB MOUSE, AND USB KEYBOARD.

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STEP 4: CONNECTING VIDEO SOURCES/COMPUTERS

4a. Switch off the computer and disconnect the keyboard, monitor, and mouse.

4b. Connect the keyboard and mouse ports of 4Site II to the computer ports either with a single USB cable or via the PS/2 interface (using a Y cable) up to 16.4 feet (5 meters). For greater distances, use a KVM or USB extender.

4c. To connect an analog video/computer source (VGA) to 4Site II, use a VGA-DVI cable. Digital video sources are connected via a DVI cable up to 20 meters. For greater distances use a DVI or VGA extender.

STEP 5: CONNECTING USB DEVICES

5a. Connect a USB device to one of the four transparent USB ports to switch it to computers connected to the 4Site II switch.

NOTE: The 4Site II supports transparent USB devices such as printer, external memory, 3D mouse, and finger printer.
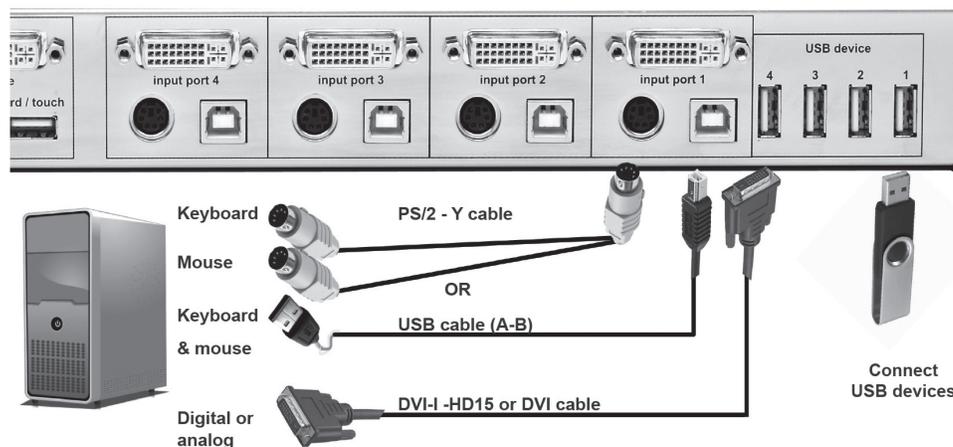
FIGURE 4-2. CONNECTING THE VIDEO SOURCES/COMPUTERS AND USB DEVICES

CHAPTER 4: INSTALLATION

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STEP 6: POWERING ON THE SYSTEM

6a. Switch on the 4Site II with the power switch on the rear panel. All front panel LEDs light up briefly indicating that the 4Site II is ready for operation. The 4Site II is now in Quad mode (default).

6b. Power up all connected computers. The 4Site II recognizes all input video sources automatically and displays them on your monitor screen.

6c. To select another display mode, use the relevant keyboard commands (see page 88f) or buttons on the front panel (page 6).

STEP 7: CONNECTING AUDIO

The 4Site II can be connected to external, powered speakers, or audio devices for sound coming from the four connected sources to be played back.

Three different connection options are available:

• 3.5-mm analog stereo jack

• Digital cinch connector

• TOSLINK optical audio jack

After physically connecting the speakers to the 4Site II:

7a. Open the OSD and navigate to Computer > Audio.

7b. Enable audio output.

7c. Select the audio source and adjust the volume.

A variety of device options are available to connect to V-Switch quad II+ for audio output

Powered speakers

Headphones

Amplifier
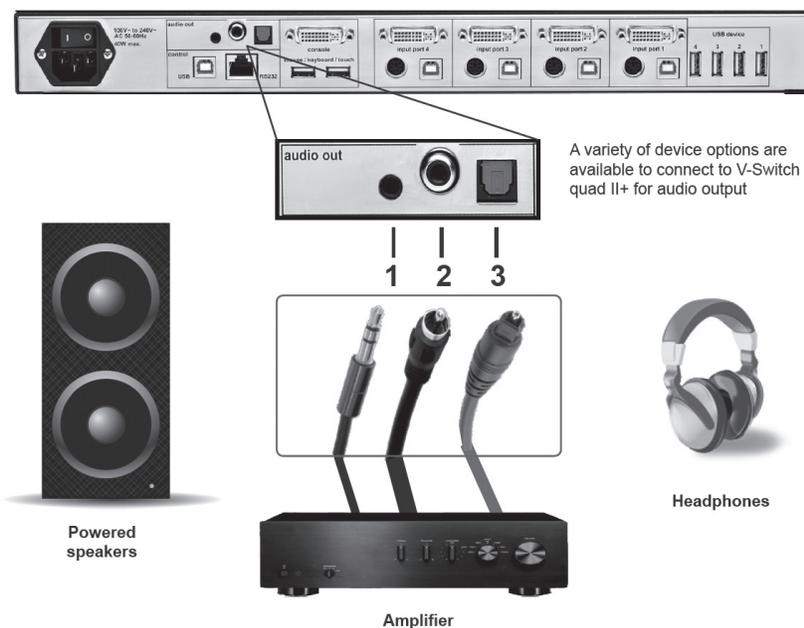
FIGURE 4-3. CONNECTING AUDIO

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A variety of device options are available to connect to the 4Site II for audio output

NOTE: Powered speakers or headphones can also be connected directly to the 4Site II, eliminating the need for an amplifier.

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5. ON-SCREEN DISPLAY (OSD)

5.1 OSD OVERVIEW

```
  SYSTEM              ▶
  MODE                ▶
  CONFIGURATION       ▶
  CONSOLE             ▶
  VIDEO               ▶
  COMPUTER            ▶
  USB DEVICE 1-4      ▶
  HELP                ▶
```

OSD menu options

SYSTEM	HOTKEY	Multiple Hotkey/Double-Click Hotkey
	HOTMOUSE	Hotmouse Recognition, Hotmouse Timeout
	OSD POSITION	Position of OSD window
	OSD LANGUAGE	German/English/Spanish
	SECURITY	Set security level
	DISABLE CHANNEL	Deactivate unused channels
	CONTROL	Device control via DCP-XML protocol (RS-232)
MODE	CURRENT	Set the current channel and mode
	START	Set the channel and mode in which the device should boot
CONFIGURATION	BACKUP	Save configuration settings
	RECALL	Restore last saved configuration
	FACTORY RESET	Reset to factory default settings
CONSOLE	VIDEO OUTPUT	Video resolution and frequency
	KEYBOARD	Keyboard layout
	TOUCH SCREEN	Calibration/Mouse key emulation/Enlarge on touch
	MOUSE	Display type of mouse (PS/2, PS/2 Wheel, or USB)
		Set USB mouse positioning (absolute/relative)
	FADE	Indicate use of smooth transitions
	ROTATION	Rotate the screen display at different degrees
	MULTI MONITOR	Assign mouse/keyboard to video
	BACKGROUND	Select background type
	EDID	Display of EDID monitor data

OSD menu options (continued)

VIDEO	INPUT STATUS	Display computers' video input resolutions
	DVI/VGA	Choose input signal: DVI/VGA - DVI - VGA
	CROPPING	Crop the display of video sources
	BRIGHTNESS	Set brightness of analog input signal
	CONTRAST	Set contrast of analog input signal
	HORIZ POSITION	Horizontal screen position
	VERT POSITION	Vertical screen position
	SCREEN WIDTH	Set screen width of analog input signal
	PHASE	Adjust phase of analog input signal
	FORMAT	Fit input format to screen
COMPUTER	CHANNEL MAPPING	Assign an input port to a channel
	AUDIO	Enable audio output/Audio source selection/Volume
	NAME 1-4	Assign computer names
	KEYBOARD	Display type of keyboard (PC1, PC2, PC3, or USB)
	MOUSE	Display type of mouse (PS/2, PS/2 Wheel, or USB)
		Set USB mouse positioning (absolute/relative)
	RESET PS/2	Reset PS/2 mouse and keyboard
	EDID/DDC	Program input EDID
USB DEVICE 1-4	USB PORT STATUS	Shows USB 2.0 matrix status and allows USB ports to be assigned to a device
HELP	ABOUT	Firmware/hardware version, serial number, etc.
	HOTKEY	List of keyboard commands
	CONTACT	Contact information

5.2 OPENING THE OSD MAIN MENU

There are three ways to open the OSD main menu:

• use keyboard command "hotkey" + "O"

• simultaneously press front panel buttons "Quad" + "PiP" for longer than one second

• remotely open the OSD via ConfDev program on an external PC with serial or USB connection

On Screen Display (OSD)

1. Call the OSD by pressing buttons Quad + PiP simultaneously for longer than one second.

2. The OSD pops up in the center of the screen (on top of the video image).
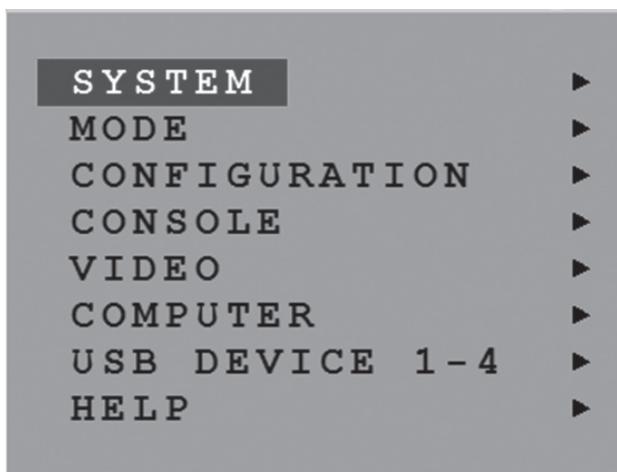
2. Press Hotkey + O on your computer keyboard.

HK + O

3. Use a serial or USB connection from a PC to 4Site II to remotely open the OSD using ConfDev.

5.3 OSD — NAVIGATION

To navigate the On-Screen Display (OSD) either use the buttons on the front panel or your keyboard.

Navigation with Keyboard

To navigate from one field to the next in the OSD menu use the UP and DOWN arrow keys or TAB/SHIFT-TAB keys. Use the LEFT and RIGHT arrow or + (PLUS) and − (MINUS) keys to change the value in the current field.

Press ENTER to select a menu item.

Press ESC to return to the previous window (higher menu level) or exit the OSD. Changes in parameters are saved automatically.

Navigation Using the Buttons on the Front Panel
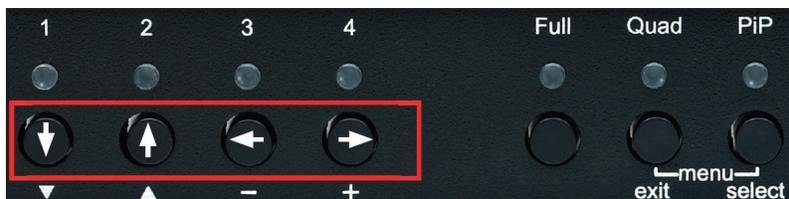
Corresponding keys on the console keyboard

Navigation using the buttons on the front panel is analogous to using the console keyboard. Buttons 1 and 2 correspond to the UP and DOWN arrow keys and buttons 3 and 4 to the LEFT and RIGHT arrow keys or +/- keys. Confirm your entry by pressing the PiP/select button.

Press the Quad/exit button to return to the previous page (higher menu level) or exit the OSD. Changed settings are saved automatically.

NOTE: Hotkey commands are possible while the OSD window is open.

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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OSD - SYSTEM - HOTKEY

HOTKEY

Navigate with the arrow keys in the SYSTEM menu to the entry HOTKEY and press the ENTER/SELECT key to open the HOTKEY window.

Two different hotkey modes are available:

- For multiple hotkey commands you can define one to four keys which are pressed simultaneously to enter the command mode. Selectable keys are: STRG, SHIFT, ALT and WINDOWS.

- For double-click hotkey commands you can choose one key, which is double-clicked to enter the command mode. Selectable keys are: STRG, SHIFT, ALT and SCROLL.

To change the hotkey mode or select another hotkey, navigate with the TAB or ARROW UP/DOWN keys to the respective field and use the ARROW LEFT/RIGHT or the +/- keys to change the setting.
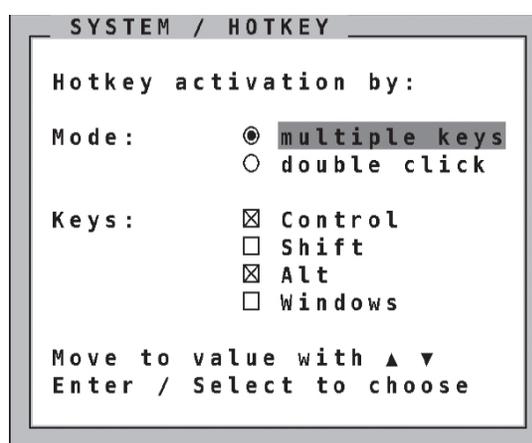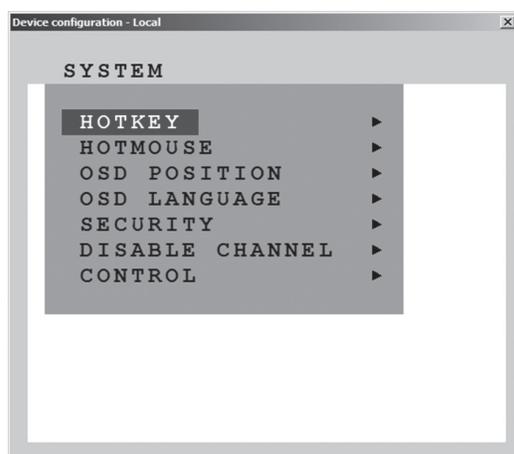
Multiple keys

The command mode is indicated by an LED flashing on the console keyboard.

Default setting: Multiple Hotkey: CTRL + ALT

NOTE: For a list of hotkeys to operate 4Site II, see Keyboard Commands in the Appendix of this manual.

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OSD - SYSTEM - HOTMOUSE

HOTMOUSE FUNCTION

Navigate with the arrow keys in the SYSTEM menu to the entry HOTMOUSE and press ENTER/SELECT to open the HOTMOUSE window.
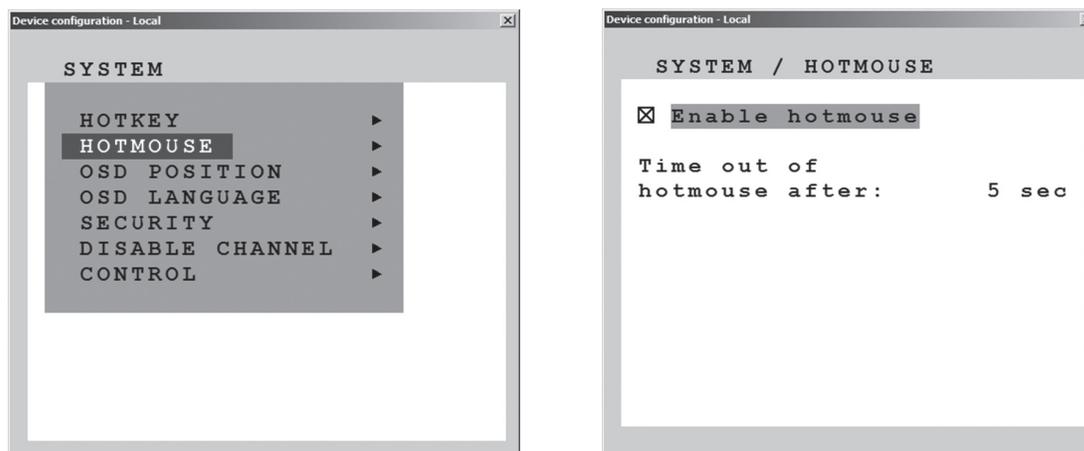
Hotmouse is an exclusive function that comes with Black Box 4Site II. It works with your standard mouse or trackball.

To activate Hotmouse operation:

- Navigate to "Enable Hotmouse."
- Change the setting to "Yes."

There are two modes of Hotmouse operation: Hotmouse Cursor and Hotmouse Menu.

While Hotmouse Cursor supports only a limited set of operations, Hotmouse Menu allows execution of all switch operations and display mode settings.

While the Hotmouse function is activated, the active computer can still be operated by a keyboard.

For a detailed description of Hotmouse, Hotmouse functionalities, and Hotmouse Menu, see the HOTMOUSE chapter.

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OSD - SYSTEM - OSD POSITION

OSD POSITION

Navigate with the arrow keys in the SYSTEM menu to the entry OSD POSITION and press ENTER/SELECT to open the OSD POSITION window.
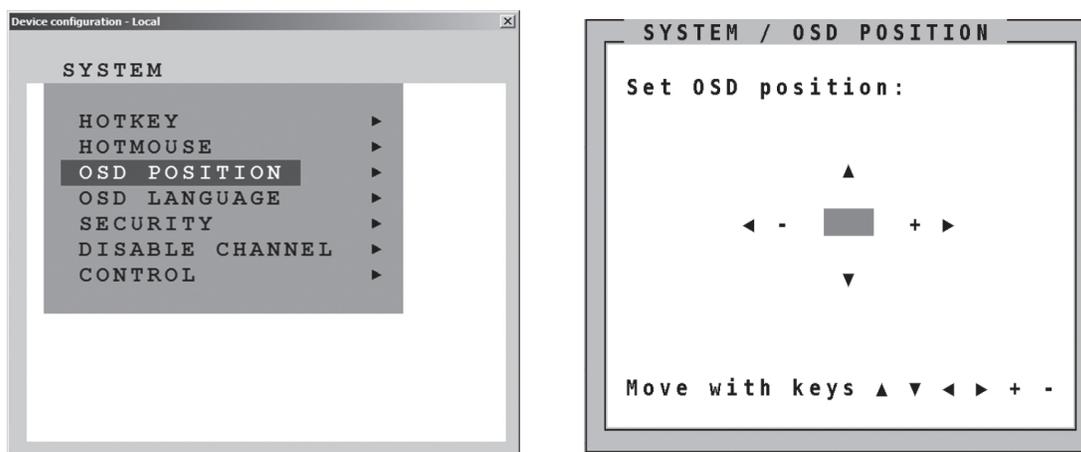
Use this function to move the OSD window to any position on the screen.

OSD - SYSTEM - OSD LANGUAGE

OSD LANGUAGE

Navigate with the arrow keys in the SYSTEM menu to the entry OSD LANGUAGE and press ENTER/SELECT to open the OSD LANGUAGE window.
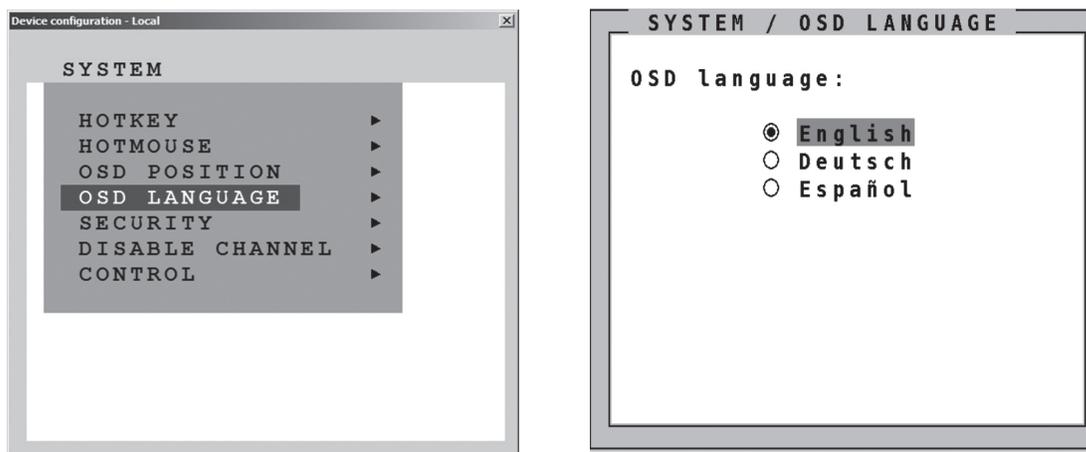
Set OSD LANGUAGE to either English (default), Deutsch (German), or Español (Spanish).

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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OSD - SYSTEM - SECURITY

SECURITY LEVELS

Navigate with the arrow keys in the SYSTEM menu to the entry SECURITY and press ENTER/SELECT to open the SECURITY window.
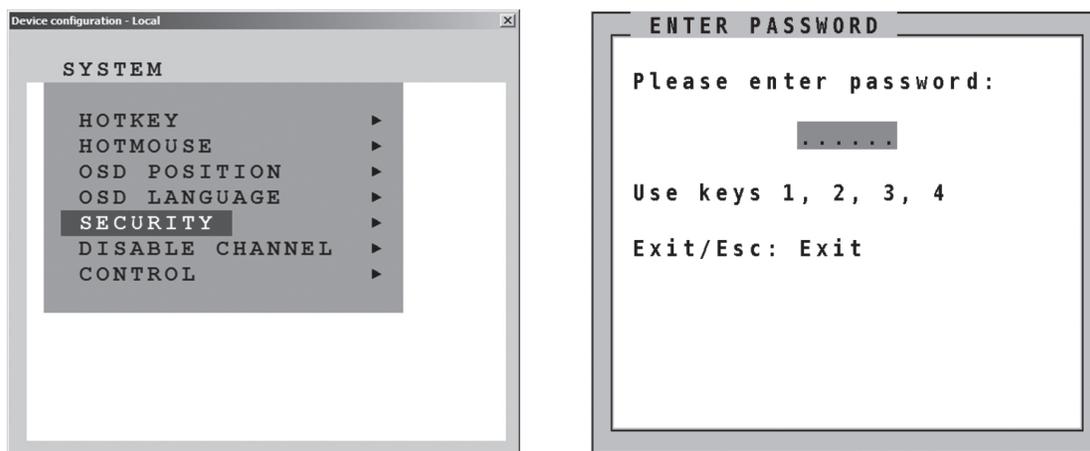
The SECURITY feature allows you to reduce the functional range of 4Site II. Eight security levels are available for this purpose.

By default, all functions are enabled (security level 0). To change the security level, you must first enter a predefined password. This six-digit password is enclosed separately with the deliverables of 4Site II and should only be accessible to authorized persons (administrators, etc.).

After entering the password on the keyboard or front panel (password is not displayed in password field), the SECURITY window opens.
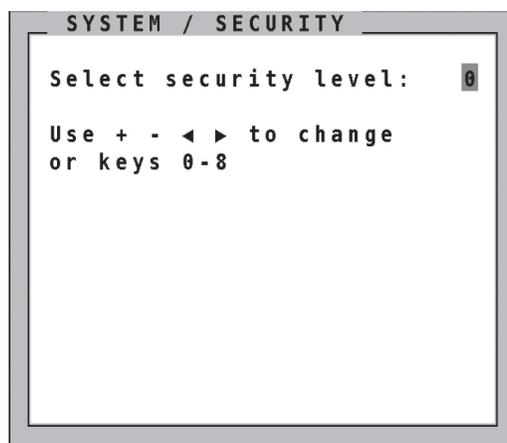
Enter the desired security level (0 to 8) under "Select security level."

NOTE: Before changing the security level, set the configuration you wish to work with to the higher security level, under MODE > START. This configuration will be maintained when 4Site II is reset, in case of power failure, or when power is turned off and on again.

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CHAPTER 5: ON-SCREEN DISPLAY (OSD)

SECURITY LEVEL 0

This is the default setting of 4Site II. All settings are allowed and all functions are enabled.

SECURITY LEVEL 8

Security level 8 allows you to work only on one channel (computer) in a predefined display mode (Quad, Fullscreen or PiP mode). No settings can be changed, apart from the SECURITY menu item, where you can change the security level.

SYSTEM	SECURITY

SECURITY LEVEL 7

In addition to the function enabled in security level 8, in level 7 you can open OSD windows that only show display modes and device settings.

CONSOLE	VIDEO OUTPUT/EDID
VIDEO	INPUT STATUS
COMPUTER	NAME 1-4/ KEYBOARD / MOUSE / EDID/DDC
HELP	HOTKEY / ABOUT / CONTACT

SECURITY LEVEL 6

Security level 6 has the following additional operations:

SYSTEM	CONTROL
CONSOLE	FADE

- Setting of active channel using front panel buttons, Hotkeys, or Hotmouse
- Selecting channel with PiP button in Quad mode
- Changing the directly selectable PiP channel in PiP mode single direct

SECURITY LEVEL 5

Security level 5 has the following additional operations: Setting of display mode (Quad/Fullscreen/PiP) using front panel buttons, Hotkeys, or Hotmouse.

SYSTEM	TEST PATTERN
CONSOLE	BACKGROUND

SECURITY LEVEL 4

Security level 4 has the following additional settings in the OSD:

SYSTEM	OSD POSITION
MODE	PIP / START
CONFIGURATION	RECALL
COMPUTER	AUDIO
VIDEO	FORMAT

- Modify display mode settings in Hotmouse Menu
- Changing both channels in Dual mode
- Changing the fixed PiP channel in PiP mode single fixed

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SECURITY LEVEL 3

Security level 3 has the following additional settings in the OSD:

SYSTEM	OSD LANGUAGE
VIDEO	BRIGHTNESS / CONTRAST / HORIZ POSITION / VERT POSITION
SCREEN	WIDTH / PHASE
USB	DEVICE 1-4

SECURITY LEVEL 2

Security level 2 has the following additional settings in the OSD:

SYSTEM	HOTKEY / HOTMOUSE / QUAD MODE
CONSOLE	KEYBOARD / TOUCH SCREEN

SECURITY LEVEL 1

Security level 1 has the following additional settings in the OSD:

SYSTEM	DISABLE CHANNEL
CONSOLE	MULTIMONITOR / VIDEO OUTPUT
VIDEO	DVI/VGA / ROTATION / CROPPING
COMPUTER	CHANNEL MAPPING / MOUSE / RESET PS/2

Switch video output to VGA (using hotkey 'V' or front panel buttons 1+2)

OSD - SYSTEM - DISABLE CHANNEL

DISABLE CHANNEL

Navigate with the arrow keys in the SYSTEM menu to the entry DISABLE CHANNEL

Press ENTER/SELECT to open the DISABLE CHANNEL window.

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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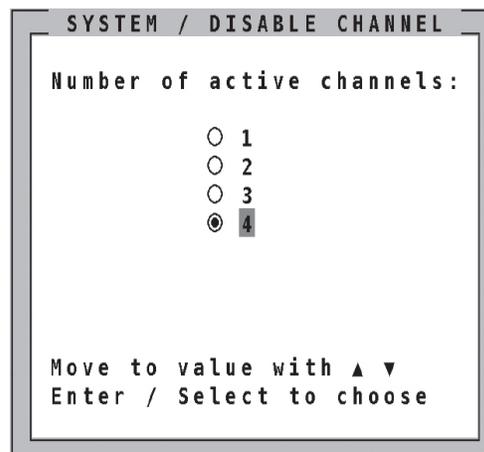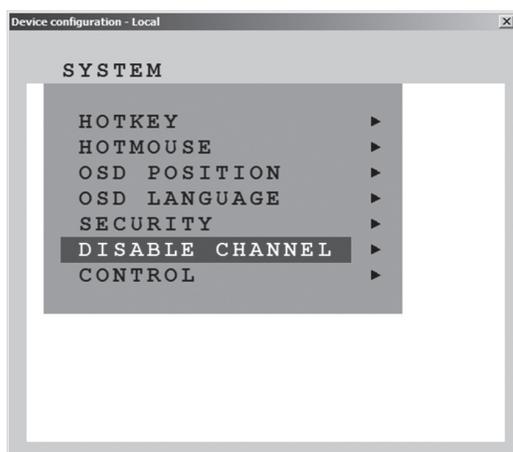
If two or three computers or video sources are connected to 4Site II, use the DISABLE CHANNEL feature to ensure that for the unused channels:

a) message "no signal input x" is not shown in Quad mode

b) PiP images are not displayed on screen

c) these channels are not selectable in Fullscreen mode

For example, if you have connected three computers (channel 1 to 3) to 4Site II, use the arrow keys to navigate to the number 3 and confirm by pressing ENTER/SELECT.

NOTE: To use the "DISABLE CHANNEL" feature, computers/video sources must be connected to 4Site II in ascending order from channel 1 to 4.

Example in Quad mode:
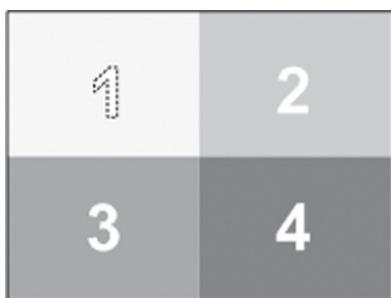
All four channels enabled
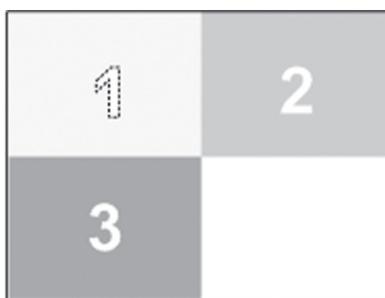
Three channels enabled

Two channels enabled
mid-height

OSD - SYSTEM - CONTROL

CONTROL

Navigate with the arrow keys in the SYSTEM menu to the entry CONTROL. Press ENTER/SELECT to open the CONTROL window.
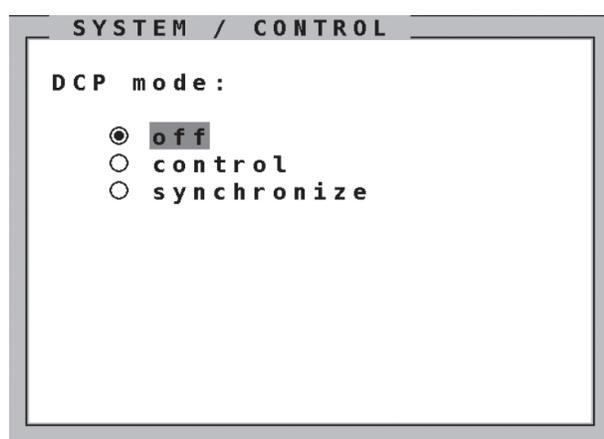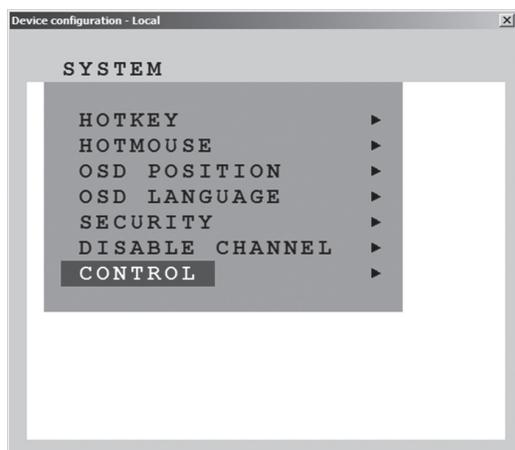
Black Box devices can be controlled via DCP (Device Control Protocol), an XML-based protocol).

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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There are two DCP modes:

◆ DCP control, which allows external control of the display mode.

◆ DCP synchronize, which keeps several 4Site II devices in the same display mode.

Default setting is "off," which prevents any external CONTROL.

Use a serial or USB cable to connect a control unit to the RS-232 port (RJ-45) on the 4Site II rear panel. To synchronize several devices, special Y cables are required.

Settings for the connection are: Transfer rate 57600 baud, 8 data bits, no parity, 1 stop bit, no flow control

The two control modes operate as follows:

DCP control

This mode allows direct control of a single 4Site II via a control device, e.g., a computer.
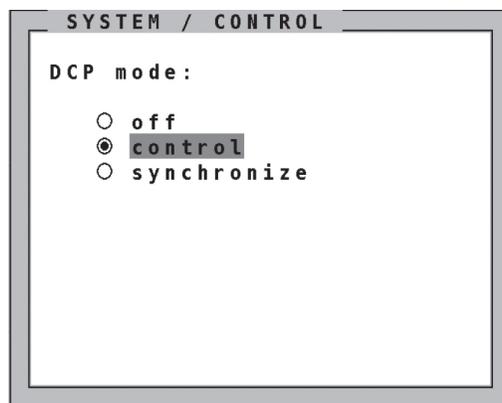
The control device can query and change the mode of 4Site II.

4Site II responds to each DCP message sent by the control device with a DCP reply. This reply includes the values of all settings queried or set via the last message. If the message sent by the control unit contains errors, the 4Site II will reply by sending an error message.

Example of DCP control

A 4Site II is controlled via DCP-XML by a computer connected by a serial cable or USB.

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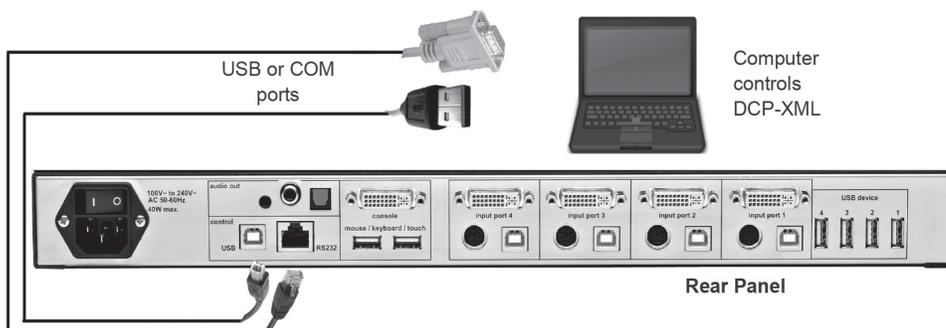
DCP synchronize

Use this mode to keep several 4Site II devices in the same mode. Every change in settings initiated in the first 4Site II by hotkeys, hotmouse, front-panel buttons or a controlling devices synchronizes the modes of all connected devices via DCP messages.

Use special Y-cables for the synchronization.

```
┌─ SYSTEM / CONTROL ───────┐
│                          │
│ DCP mode:                │
│                          │
│      ○ off               │
│      ○ control           │
│      ◉ synchronize       │
│                          │
│                          │
│                          │
└──────────────────────────┘
```
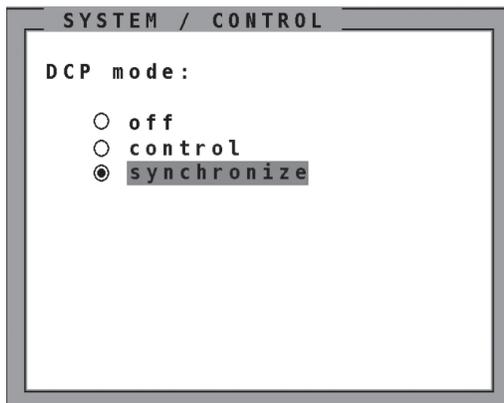
IMPORTANT: Each time you restart a 4Site II set to synchronize, it will send all its settings to the next connected device. This process also takes place after activating synchronize in the OSD menu.

When starting a chain of devices, always start by first switching on the device at the end of the chain. When the device has completed its startup phase and sent its DCP messages, switch on the next device in the chain.

Finally, switch on the first device in the chain, which synchronizes the settings of all other devices in the chain with its own settings as it starts up.

Example of DCP synchronization

4Site II 2 and 3 are synchronized with 4Site II 1.

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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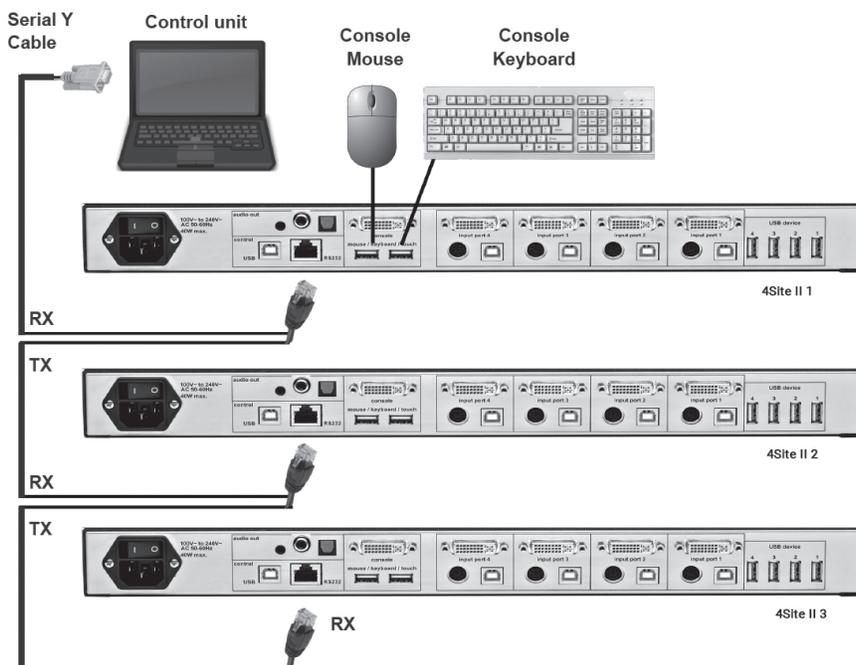
To synchronize, 4Site II 1 sends every change in settings as a DCP message via the serial Y to the RX input of 4Site II 2.

4Site II 2 adopts the settings and sends a DCP message via TX output over the Y cable to the RX input of 4Site II 3.

The synchronization chain can have any length.

Do not connect the last device in the chain to the first device (i.e., do not create a loop).

SECURITY LEVELS

The security level settings in the OSD menu previously described also apply to control via DCP messages. Queries are possible up to security level 7.

The table below shows the maximum security levels for simple element settings. These settings may be changed via DCP up to the specified protection level.

Maximum security level for:	
Console Channel	6
Video Channel	6
Video Layout	5
PiP Layout	4
PiP Height	4
PiP Offset	4
PiP Zoom	4
PiP Channel	4
DUAL ChannelS (L/R)	6
PiP Scan Time	4

OSD - MODE - CURRENT/START

CURRENT

Defines the current mode in which the device should run.
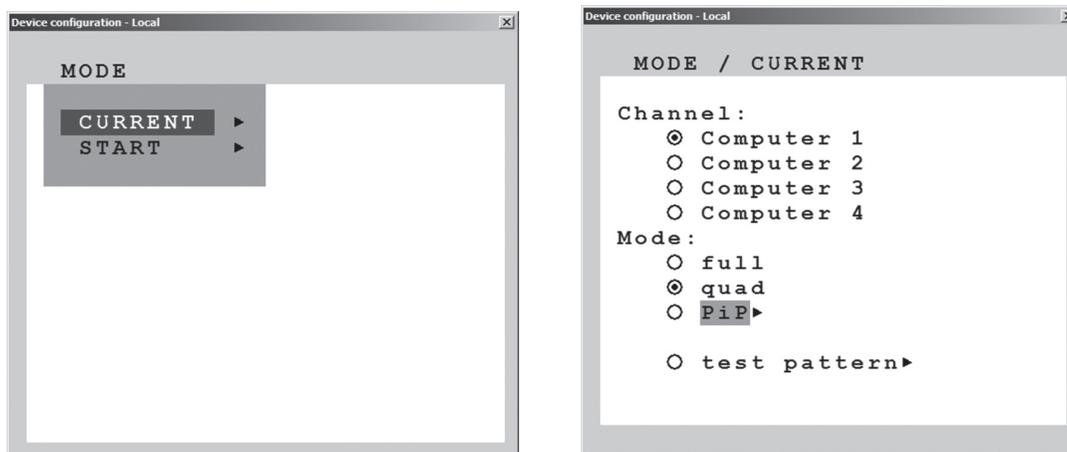
Choose from Fullscreen, Quad Mode, PiP Mode, or Test Pattern.

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CHAPTER 5: ON-SCREEN DISPLAY (OSD)

START

Sets the mode in which the device should boot.

```
MODE                              MODE / START

    CURRENT    ►                  Channel:
    START      ►                      ⊙ Computer 1
                                      ○ Computer 2
                                      ○ Computer 3
                                      ○ Computer 4
                                  Mode:
                                      ○ full
                                      ⊙ quad
                                      ○ PiP►

                                      ○ test pattern►

                                  USE CURRENT MODE
```
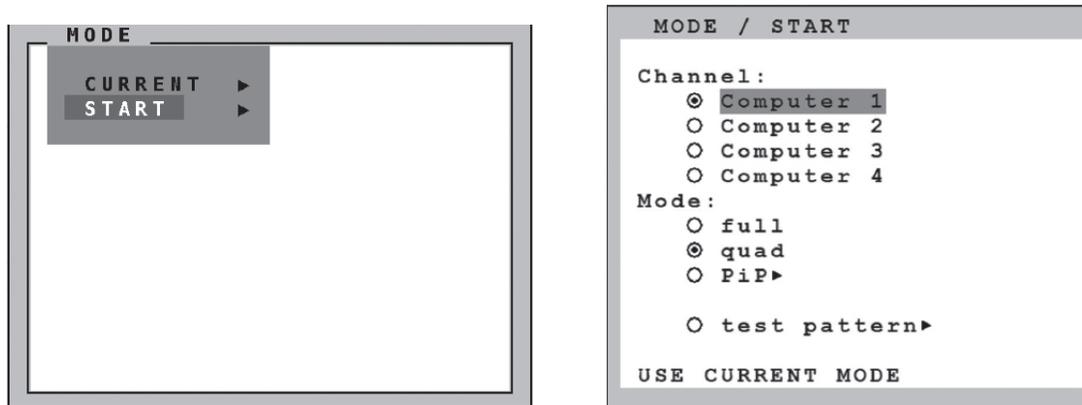
This feature allows you to define the start configuration, i.e. the display mode (Fullscreen, Quad, PiP, or Test Pattern), active channel, and PiP settings which 4Site II uses after a reset or when the system is powered up.

When the START menu is called up, the current start configuration is displayed. To modify your start configuration, change parameters in the channel, mode, and PiP fields. Press ESC to save the new parameters and exit the START menu.

Choose "Use current mode" to adopt the current settings as start mode. Use arrow keys to navigate to "Use current mode" and confirm by pressing ENTER.

The factory default start mode is Quad-mode with active channel 1.

See OSD - MODE - CURRENT/START - PiP for details on setting PiP mode to boot. See OSD - MODE - CURRENT/START - PiP for details on setting PiP mode to boot. See OSD - MODE - CURRENT/START - TEST PATTERN for details on setting a test pattern to boot.

OSD - MODE - CURRENT/START - PIP

PiP

Use this section to define the current mode in which the device should run.

```
Device configuration - Local      ⊠    Device configuration - Local          ⊠

    MODE / CURRENT                        START / PiP

Channel:                              PiP display mode:    triple
    ⊙ Computer 1                      Active channel:      gap
    ○ Computer 2
    ○ Computer 3                      PiP size:            15%
    ○ Computer 4
Mode:                                 PiP zoom factor:     1
    ○ full
    ⊙ quad                            Offset from top:     0%
    ○ PiP►

    ○ test pattern►
```
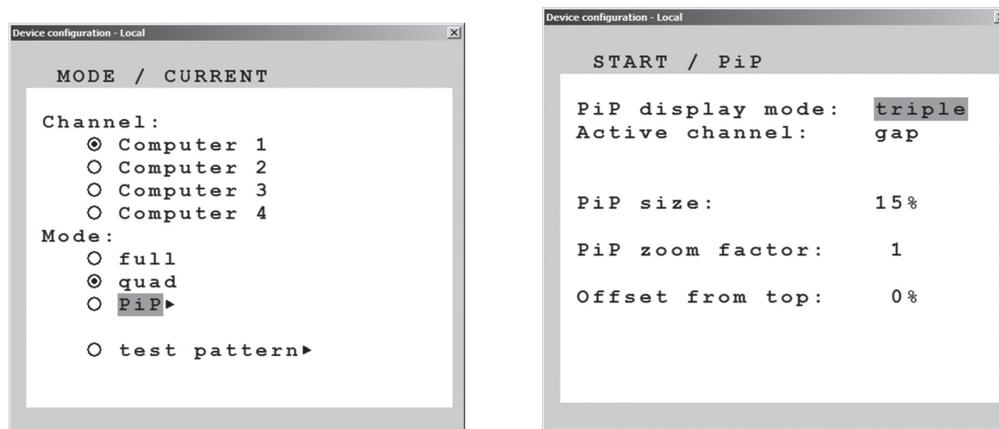
In the PIP window, you can configure PiP size, position, and display mode.

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PiP Display Mode

Select the option TRIPLE to show 3 additional screens in PiP Mode. Select SINGLE to display only one other screen. If SINGLE is selected, use the option PiP CHANNEL to define which channel should appear in the single window.

See the section Display Modes for details.

PiP size

Adjust the size of PiP images to your requirements. 12 (single mode) or 9 (triple mode) different sizes are available:

Single: 3 % - 5 % - 7 % - 10 % - 15 % - 20 % - 25 % - 28 % - 33 % - 38 % - 44 % - 50 %

Triple: 3 % - 5 % - 7 % - 10 % - 15 % - 20 % - 25 % - 28 % - 33 %

50 % equals the size of one quad screen (one quarter of a full size screen).

PIP zoom factor

Use this option to zoom the center of the PiP images by a factor of 2.

Offset from top

Use this option to change the position of PiP images. PiP images can be moved vertically to any position on the screen's right-hand margin.

NOTE: All settings also possible via Hotmouse Menu.

PIP Display Modes

4Site II offers the following PiP modes:

PIP display mode triple: All other video sources are displayed (three PiP images)
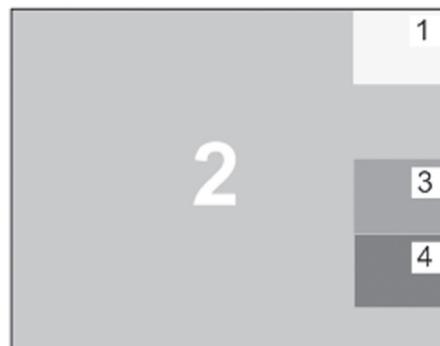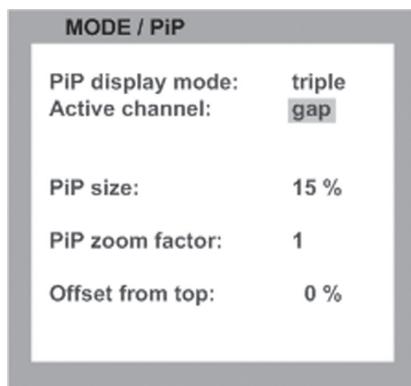
Triple gap: PiP images are displayed with a gap in place of the active channel.
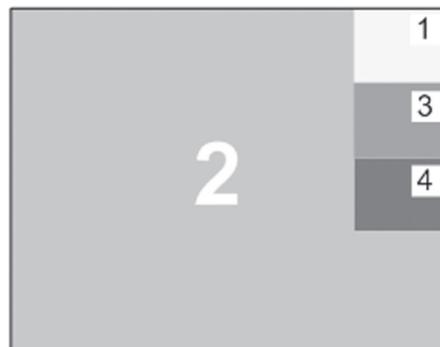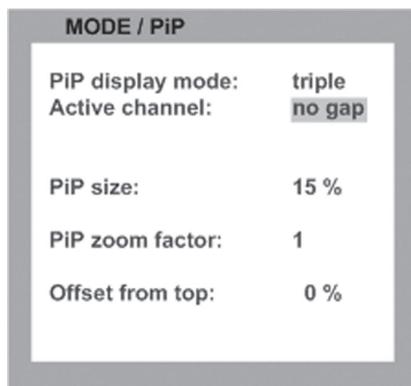
Triple no gap: PiP images are displayed without a gap.

```
MODE / PiP

PiP display mode:     triple
Active channel:       tile


PiP size:             -

PiP zoom factor:      1

Offset from top:      -
```
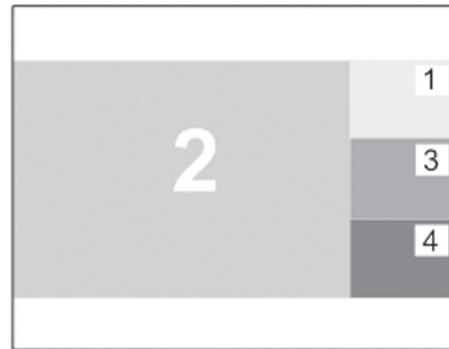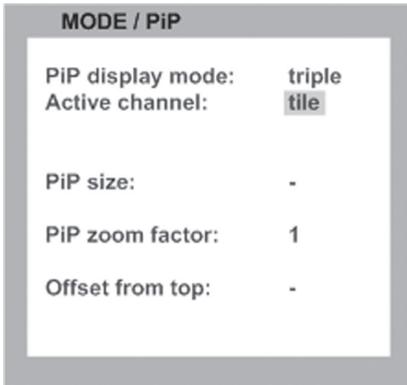

Triple tile: The size of the main image and the PiP images is optimized so that the main image and the PiP images are shown as large as possible without overlapping.

PIP display mode single:
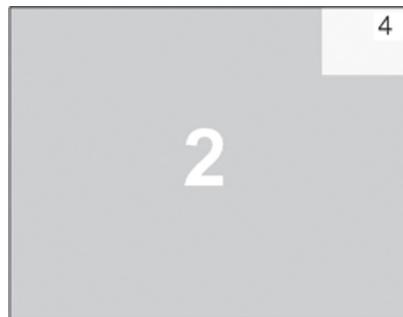
One PiP image is displayed. You can choose between different display modes:

Single fixed: One channel is selected to be displayed as permanent PiP image. Only the active channel (full image) can be switched. Press front panel buttons 1, 2, 3, or 4 to switch the full image.

```
MODE / PiP

PiP display mode:   single
Channel selection:  fixed
PiP channel:        4


PiP size:           15%

PiP zoom factor:    1

Offset from top:    0%
```
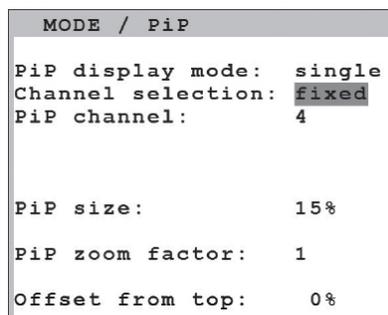
Single direct: One channel is selected to be displayed as permanent full image (active channel).

Only the PiP can be switched. Press front-panel buttons 1, 2, 3, or 4 to switch the full image.

```
      MODE  /  PiP

PiP display mode:    single
Channel selection:   direct
PiP channel:         4


PiP size:            15%

PiP zoom factor:     1

Offset from top:     0%
```

Single scan:

Within a PiP image, the three other video sources are displayed one after the other; the delay can be set to between one and nine seconds.

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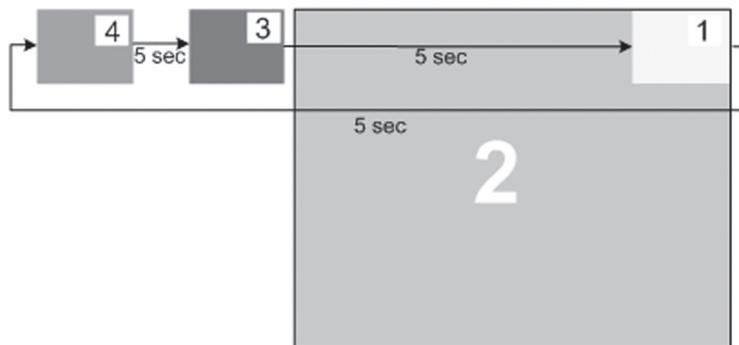
CHAPTER 5: ON-SCREEN DISPLAY (OSD)

OSD - MODE - CURRENT/START - TEST PATTERN

TEST PATTERN

Navigate with the arrow keys in the MODE menu to the entry TEST PATTERN.

Press ENTER/SELECT to open the TEST PATTERN window.
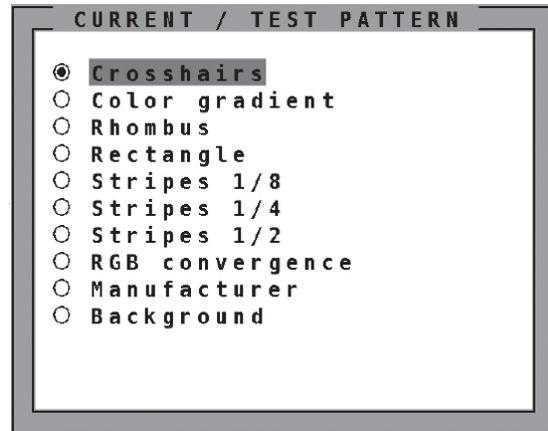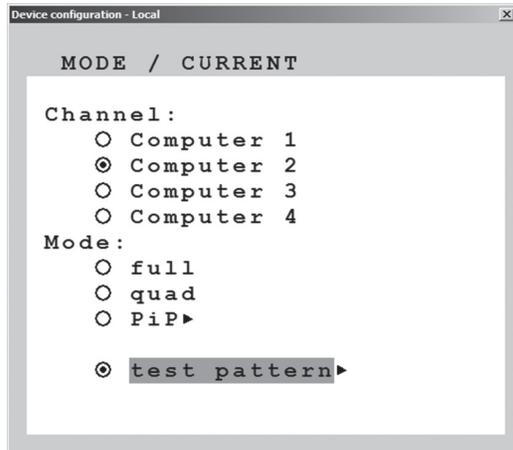
Use the Test Pattern feature to check monitor quality (pixel errors, contrast, changes etc) or the functionality of the video output of the 4Site II.

We recommend using all available test patterns for the test procedure.

To exit TEST PATTERN mode, use the OSD, the front panel buttons (Full, Quad or PiP) or hotkey commands accordingly.

Color gradient | Rhombus | Crosshairs

Rectangle | Stripes 1/8 | Stripes 1/4

Stripes 1/2

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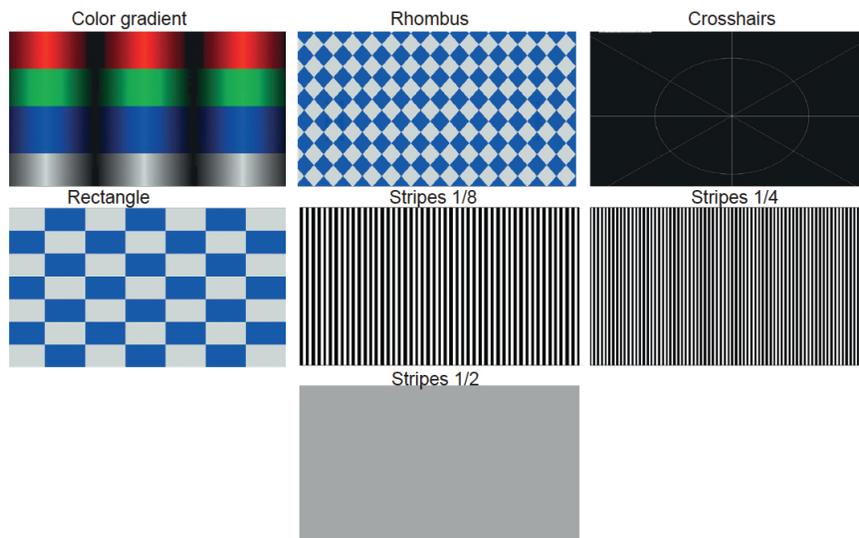
OSD - CONFIGURATION - BACKUP/RECALL

BACKUP

Navigate with the arrow keys in the CONFIGURATION menu to the entry BACKUP.

Press ENTER/SELECT to open the BACKUP window.
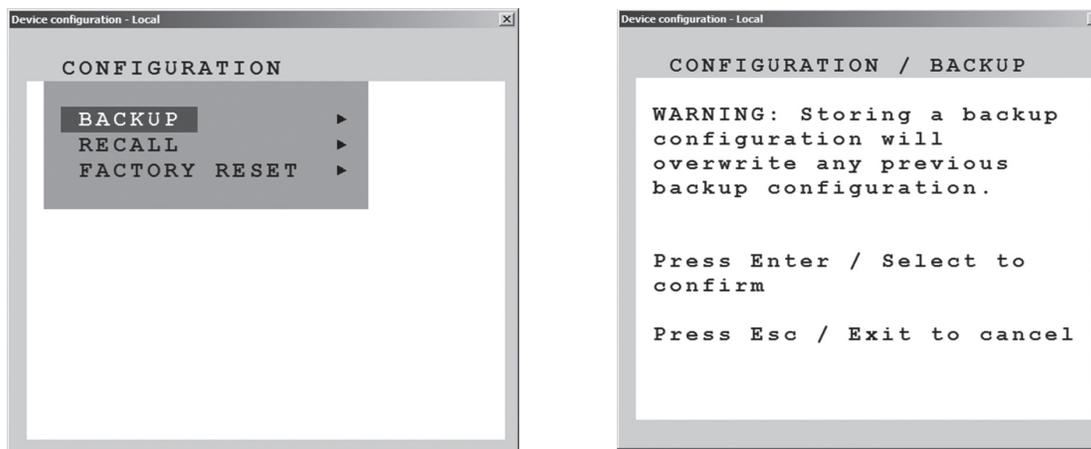
This function saves the current device settings, including the start mode set in MODE START. Additionally, EDID data from the 4 inputs is also saved. For details on creating an external backup to a file, see the section "Device Configuration Program."

RECALL

Navigate with the arrow keys in the CONFIGURATION menu to the entry RECALL.

Press ENTER/SELECT to open the RECALL window.

Use this feature to replace the current settings with the last configuration saved using the BACKUP command.

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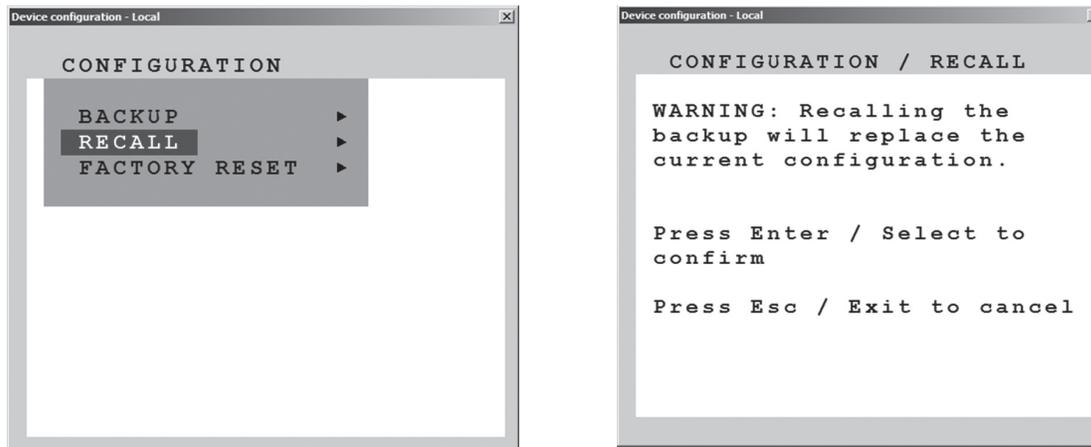
OSD - CONFIGURATION - FACTORY RESET

FACTORY RESET

Navigate with the arrow keys in the CONFIGURATION menu to the Factory Reset.

Press ENTER/SELECT to open the DEFAULTS window.
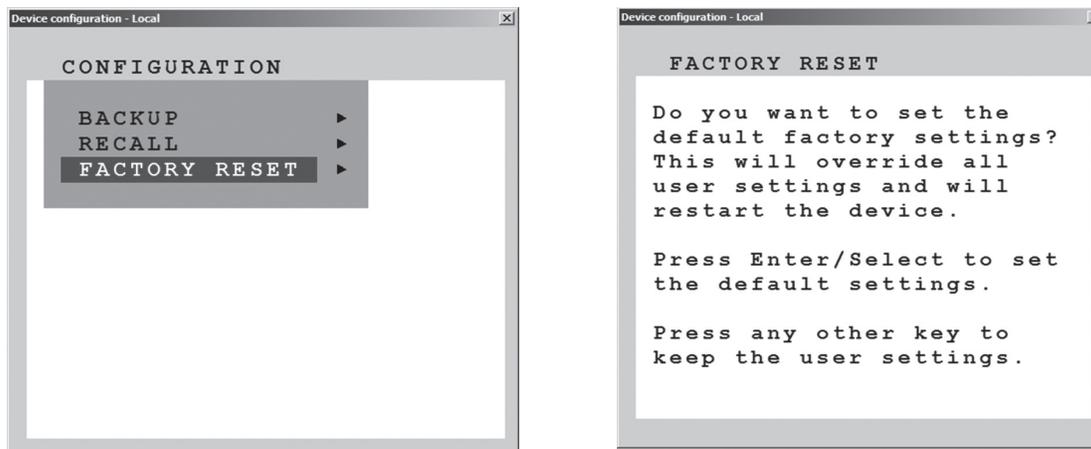
Use this function to reset the current settings of 4Site II to the factory default configuration. All four input EDIDs are also reset to their default values.

If necessary, save your current settings before using the DEFAULTS command. Execution of this command results in a complete reset and reboot of 4Site II with factory defaults.

FACTORY DEFAULTS:

SYSTEM	HOTKEY	= Multiple Hotkey / Hotkey = Ctrl + Alt	
	HOTMOUSE	= ON / Hotmouse timeout = 5 sec.	
	OSD POSITION	= centered	
	OSD LANGUAGE	= English	
	SECURITY	= None (security level = 0)	
	DISABLE CHANNEL	= All four channels are active	
	CONTROL	= Off	
MODE	CURRENT	= Active channel = 1, quad	
	START	= Active channel = 1, quad	
	> PIP	Size = 15 %	Zoom factor = 1
		Display mode = triple	Active channel = gap;
		Offset from top = 0 %	

CONSOLE	VIDEO OUTPUT	= auto
	PRESENTATION	= In presentation mode, the console mouse and hotkey will not open any OSD windows on the monitor (only 'Hotkey + O' for opening the top OSD window is deactivated separately)
	KEYBOARD	= English
	TOUCH SCREEN	= Mouse emulate right click /
	MOUSE	= Positioning Relative+Absolute+Touch
	FADE	= Off
	ROTATION	= 0
	MULTI MONITOR	= Monitor 1 --> Channel 1; Monitor 2 --> Channel2; Monitor 3 --> Channel 3; Monitor 4 --> Channel4;
	BACKGROUND	= Color / 0,0,0
	EDID/DDC	= 1920 x 1080 @ 60, 1920 x 1200 @ 60, digital
VIDEO	DVI/VGA	= DVI/ GA (all channels)
	CROPPING	= no cropping
	BRIGHTNESS	= +0 (all channels)
	CONTRAST	= 56 % (all channels)
	HORIZ POSITION	= auto (all channels)
	VERT POSITION	= auto (all channels)
	SCREEN WIDTH	= +0 (screen-width correction of all channels)
	PHASE	= +0 (all channels)
	FORMAT	Fit to screen = No (all channels)
COMPUTER	CHANNEL MAPPING	= Positioning = relative (all channels)
	AUDIO	= Enable audio output / Select active channel / Switch channel on audio activity = off
	NAME 1-4	= Computer 1-4 respectively
	KEYBOARD	= USB
	MOUSE	= positioning relative
	RESET PS/2	= Channel 1 selected
	EDID/DDC	1600 x 1200 @ 60, 1920 x 1200 @ 60, digital
USB DEVICE 1-4		= Off / manual switching w. warning / name: Device 1 (-4)

OSD - CONSOLE - VIDEO OUTPUT

VIDEO OUTPUT

Navigate with the arrow keys in the CONSOLE menu to the entry VIDEO OUTPUT.

Press ENTER/SELECT to open the VIDEO OUTPUT window.
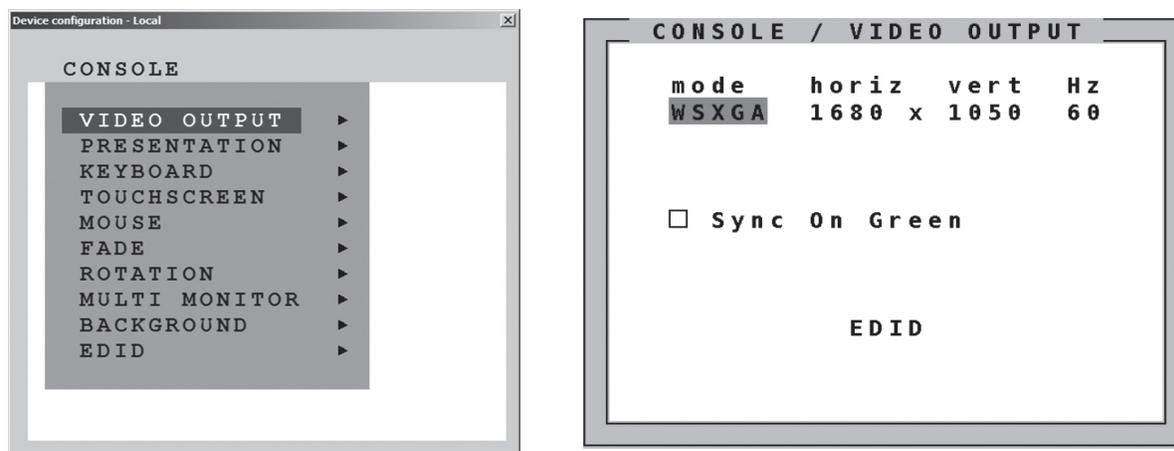
Use the VIDEO OUTPUT menu to choose an output resolution supported by your monitor.

Press ENTER/SELECT to enter the selection menu.

Use arrow keys to select the desired line in the list shown and press ENTER/SELECT for the new video format.

The new output mode is visible for 10 seconds.

Within this time, you can either accept the new setting by pressing ENTER/SELECT or return to your original setting by pressing ESC/EXIT.
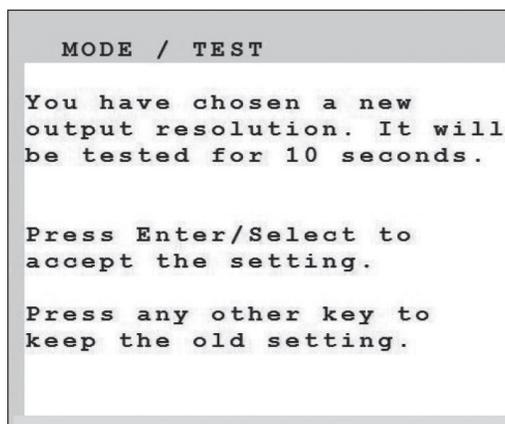
When the output mode is set to "auto," the 4Site II chooses a resolution by reading the connected monitor's EDID data. Choose the EDID menu item to check whether the connected monitor provides this data.

If the monitor does not offer this data, the 4Site II sets VGA mode (640 x 480 @ 60 Hz) as default and activates Sync on Green.

Sync on Green can be deactivated on the 4Site II.

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```
┌─  VIDEO  OUTPUT  /  MODE  ─┐
│                           │
│     mode    horiz   vert    Hz  │
│                                 │
│  ➡ auto                         │
│     VGA     640  x    480     60 │
│     VGA     640  x    480     75 │
│     VGA     640  x    480     85 │
│     SVGA    800  x    600     60 │
│     SVGA    800  x    600     75 │
│     SVGA    800  x    600     85 │
│     XGA    1024  x    768     50 │
│     XGA    1024  x    768     60 │
│                                 │
└─────────────────────────────────┘
```

OSD - CONSOLE - KEYBOARD

KEYBOARD

Navigate with the arrow keys in the CONSOLE menu to the entry KEYBOARD.

Press ENTER/SELECT to open the KEYBOARD window.

Set the keyboard layout to the desired language, English, Deutsch (German), Español (Spanish), Français (French), Italiano (Italian), or Japanese.

```
┌ Device configuration - Local ──────────[X]┐
│                                           │
│    CONSOLE                                │
│  ┌──────────────────────────┐             │
│  │  VIDEO  OUTPUT     ▶      │             │
│  │  PRESENTATION      ▶      │             │
│  │  KEYBOARD          ▶      │             │
│  │  TOUCHSCREEN       ▶      │             │
│  │  MOUSE             ▶      │             │
│  │  FADE              ▶      │             │
│  │  ROTATION          ▶      │             │
│  │  MULTI  MONITOR    ▶      │             │
│  │  BACKGROUND        ▶      │             │
│  │  EDID              ▶      │             │
│  └──────────────────────────┘             │
│                                           │
└───────────────────────────────────────────┘
```

```
┌ Device configuration - Local ──────────[X]┐
│                                           │
│    CONSOLE  /  KEYBOARD                   │
│                                           │
│  Console  keyboard  language:             │
│                                           │
│          ◉  English                       │
│          ○  Deutsch                       │
│          ○  Español                       │
│          ○  Français                      │
│          ○  Italiano                      │
│          ○  Japanese                      │
│                                           │
│                                           │
└───────────────────────────────────────────┘
```
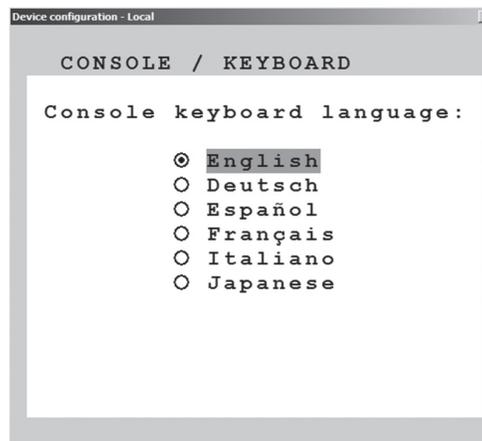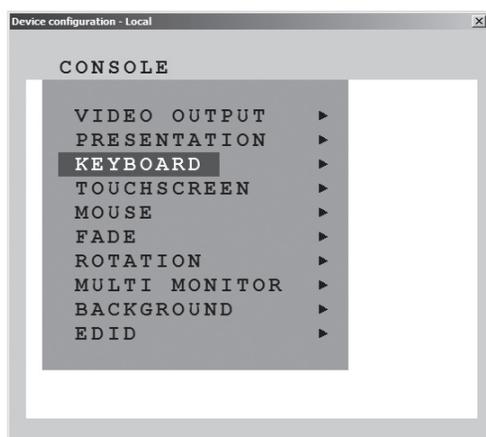
OSD - CONSOLE - TOUCH SCREEN

TOUCH SCREEN

4Site II enables the user to use a touch screen to control and switch between four computers as well as change display modes.

4Site II supports a great number of USB touch screens with commonly integrated touch controllers.

For a list of supported touch screens, see the appendix.

To control 4Site II using a touch screen, connect the touch screen to 4Site II by connecting the VGA or DVI cable from the 4Site II monitor port to the input of the touch screen. Connect the USB port of the touch screen to the 4Site II console USB port.

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CHAPTER 5: ON-SCREEN DISPLAY (OSD)

```
Device configuration - Local                            ⊠

    CONSOLE

    VIDEO  OUTPUT      ►
    PRESENTATION       ►
    KEYBOARD           ►
    TOUCHSCREEN        ►
    MOUSE              ►
    FADE               ►
    ROTATION           ►
    MULTI MONITOR      ►
    BACKGROUND         ►
    EDID               ►
```

```
    CONSOLE / TOUCHSCREEN
    CALIBRATE
    RESET CALIBRATION

    Mouse button emulation:
    ○ Click on touch
    ○ Click on release
    ◉ Mouse
        ⊠ Emulate right click

    Touch in quad mode:
    □ temporary full screen
        Timeout:  5 sec
    Touch a PiP:
    □ PiP becomes active
```

Calibration

After connecting a new touch screen, the touch screen should be calibrated manually, if it is not factory calibrated.

Manual calibration is necessary when the coordinates of the area touched on the screen are not sufficiently close to the coordinates on the display.

Factory-calibrated touch screens should not be calibrated manually, because factory calibration usually is more precise. To reset stored data from a manual calibration use "RESET CALIBRATION."

Open the CONSOLE —> TOUCH SCREEN menu, choose CALIBRATE, and press ENTER/SELECT.

Four markers will be displayed in the corners of the touch screen. Touching the center of the markers as accurately as possible yields best calibration results.

Then repeat for the other three markers to complete calibration.

OSD - CONSOLE - MOUSE

Mouse button emulation

Mouse button emulation is only performed for computers for which the digitizer touch screen interface is not activated (setting under OSD COMPUTER MOUSE/TOUCHSCREEN).

4Site II offers three modes of interpreting the user input as mouse clicks.

1. Mouse: When touching the touch screen, the mouse button is pressed. When the finger is released from the touch screen, the mouse button is released. This mode can be used for drag-and-drop operations. If emulate right-click is checked, a right-click is generated by a prolonged touch.

2. Click on touch: When touching the touch screen, a mouse click is generated at the position of the touch.

3. Click on release: When the finger is released from the touch screen, a mouse click is generated at the last position of the finger.

By default, "mouse" is set as mode. You could use your finger on the touch screen similarly to using your mouse. "Click on touch" and "click on release" are suited for kiosk applications or environments where touch screens are used instead of keyboards and mice, such as in medical industries for hygienic reasons, in industrial production and automation for operation with gloves, or in vehicles and aircraft where robust components are required.

### Touch in quad mode:

Check this box to switch a quadrant from Quad mode temporarily to full screen when touching the quadrant.

This activates keyboard and mouse of that quadrant and allows operating the computer in full screen. The other sources are not visible during this time. After a timeout of 5 seconds without keyboard/mouse activity, the 4Site II automatically switches back to Quad mode.

The timeout can be set to values between 1 and 10 seconds.

```
    CONSOLE / TOUCHSCREEN
 CALIBRATE
 RESET CALIBRATION

 Mouse button emulation:
 ○ Click on touch
 ○ Click on release
 ◉ Mouse
     ⊠ Emulate right click

 Touch in quad mode:
 ☐ temporary full screen
     Timeout:   5 sec
 Touch a PiP:
 ☐ PiP becomes active
```
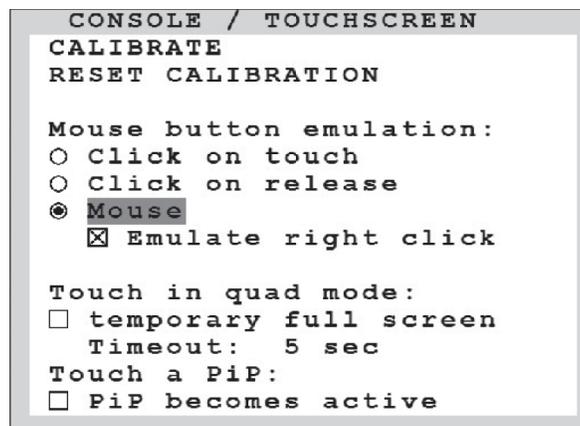
Touch a PiP:

Check this box to activate keyboard and mouse on a computer shown as PiP. When touching a PiP, keyboard and mouse become active in this PiP. This activated channel now remains a little PiP and does not switch to full image. In this PiP you can operate the computer with keyboard and mouse.

When unchecked (by default), a PiP is switched to full image as soon as it is touched. The full image gets exchanged with the other sources remaining visible as PiPs.

Right mouse button

Press and hold your finger on the touch screen to emulate the right mouse button. This only works in "mouse" emulation mode, not in "click on touch" or "click on release." By default, "Emulate right click" is set in order to perform a right mouse click. Some touch controller models do not support right mouse click. Using touch screens with such controllers requires unchecking the box, "Emulate right click."

Hotmouse and Hotmouse Menu

To open the Hotmouse Menu, tap the screen twice, and leave your finger pressed on the touch screen after the second tap (tap – hold, like a double-click without lifting the finger on the second click), until the Hotmouse Menu opens.

By clicking outside the Hotmouse Menu, you can open the Hotmouse Cursor to enlarge and reposition PiPs (only in PiP mode), and switch channels (see description of the Hotmouse function).

After you are finished using the Hotmouse Cursor, the Hotmouse Menu will reopen.

Mouse position

Absolute mouse position

4Site II works best together with touch screens when using absolute mouse positioning mode with the connected computers. To enable absolute mouse positioning mode, use the menu COMPUTER —> MOUSE in the OSD.

This mode works when a computer is connected via USB, and with most modern operating systems.

Relative mouse position

When using relative mouse positioning, check the configuration of the computers connected to ensure that mouse acceleration is switched off and mouse scaling is set to 1:1. For guides on how to change mouse acceleration and scaling, contact Black Box Technical Support at 877-877-2269 or info@blackbox.com

Resetting the mouse position: When using relative positioning mode, the actual position of the mouse cursor and the position of your finger on the touch screen may not match in certain cases when a computer switches resolution or changes the mouse position (e.g. when the system is configured to place the mouse pointer over the 'OK' button of a window). In these cases, to reset the mouse position, either switch to a different channel, and back again, or tap the touch screen three times, and leave your finger pressed on the touch screen after the third tap (tap – tap – hold), until the mouse cursor moves to the top left corner of the screen.

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CROSS CHANNEL SWITCHING

```
Device configuration - Local                    [×]

    CONSOLE

    VIDEO OUTPUT          ►
    PRESENTATION          ►
    KEYBOARD              ►
    TOUCHSCREEN           ►
    MOUSE                 ►
    FADE                  ►
    ROTATION              ►
    MULTI MONITOR         ►
    BACKGROUND            ►
    EDID                  ►
```

```
Device configuration - Local                    [×]

    CONSOLE / MOUSE

    ⊠ Cross channel switching
    ☐ Gliding
    PiP Temporary full screen
    Timeout:  5 sec
```
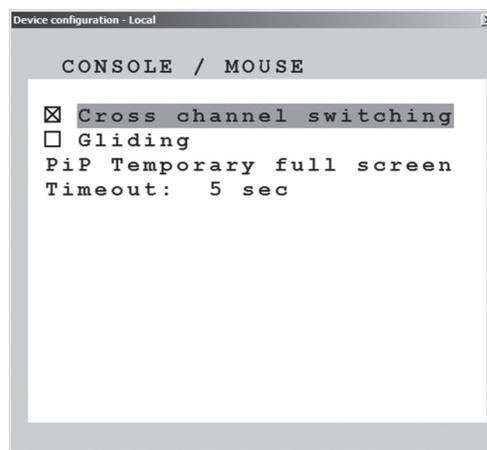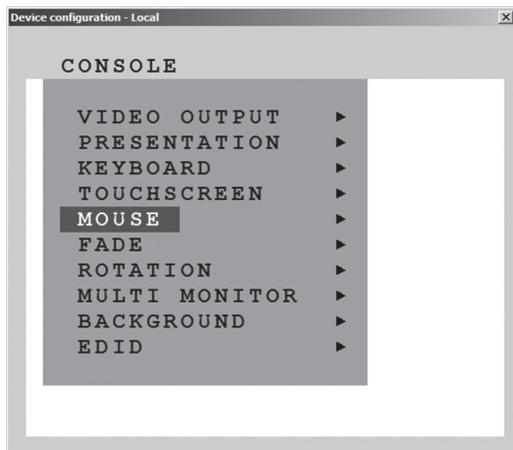
With the feature "cross channel switching" enabled, the mouse can be moved outside the borders of the active channel. A device mouse cursor is displayed and an inactive channel can be activated by a left click into the channel window.

The following table lists some points to be considered, when "cross channel switching" is activated or deactivated:

CROSS-CHANNEL SWITCHING

CROSS-CHANNEL SWITCHING	DEACTIVATED	ACTIVATED
Features	• the mouse always stays inside the active channel window	• on the mouse leaving the active channel window, a yellow device cursor is displayed
	• changing the active channel by mouse is only possible via Hotmouse	• when the device cursor is positioned over an inactive channel window, this channel can be activated with a left mouse click
Used USB interfaces	• mouse relative	• If available "mouse absolute" otherwise "mouse relative"
multiple monitors connected to a computer	• every monitor is reachable by mouse	• only the monitor connected to the 4Site II is reachable by mouse
		• recommended only for hosts supporting the interface "mouse absolute"

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OSD - CONSOLE - FADE

FADE

Use the arrow keys to navigate in the CONSOLE menu to the entry FADE and press ENTER/SELECT to open the FADE window.

Fade Through Black is an elegant visual effect for presentations: When switching channels or display modes, the previous image fades to black, and the next image is faded in smoothly.

To enable fade through black, select the transition speed under "Smooth transitions." The "Speed" setting controls the speed of the transition, with 1 being the slowest, and 3 the fastest transition.
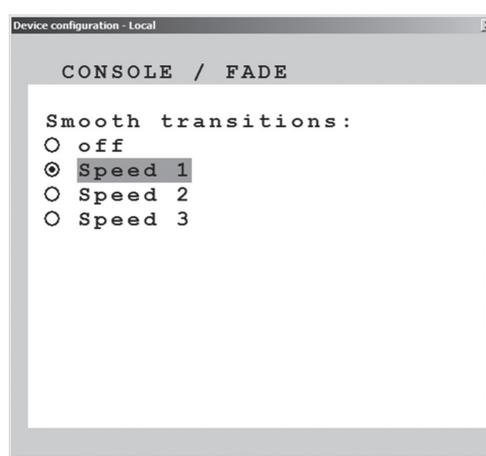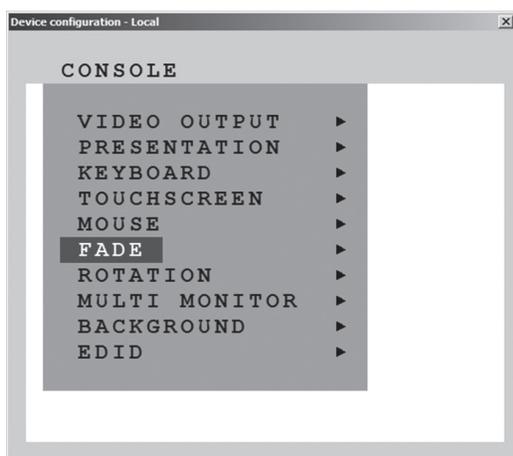
OSD - CONSOLE - MULTI MONITOR

MULTI MONITOR

Use arrow keys to navigate in the CONSOLE menu to the entry MULTI MONITOR and press ENTER/SELECT to open the MULTI MONITOR window.
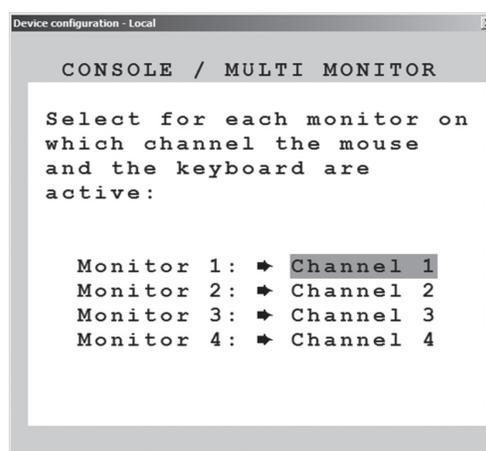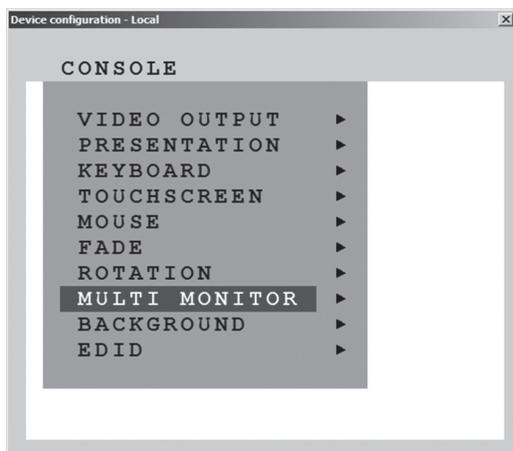
Multi Monitor is used if computers with multiple video output are connected to 4Site II but only one keyboard and mouse to operate the computer. If you use graphics cards with multiple video outputs, you must assign the computer's mouse and keyboard to the corresponding video output (channels 1-4).

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CHAPTER 5: ON-SCREEN DISPLAY (OSD)

Example:

If a computer with quad-head graphics card is connected to 4Site II, and keyboard and mouse are connected to channel 1, you must assign console "channel 1" to all video channels ("Monitor 1 - 4").

OSD - CONSOLE - BACKGROUND

BACKGROUND

Use arrow keys to navigate in the CONSOLE menu to the entry BACKGROUND and press ENTER/SELECT to open the BACKGROUND window.
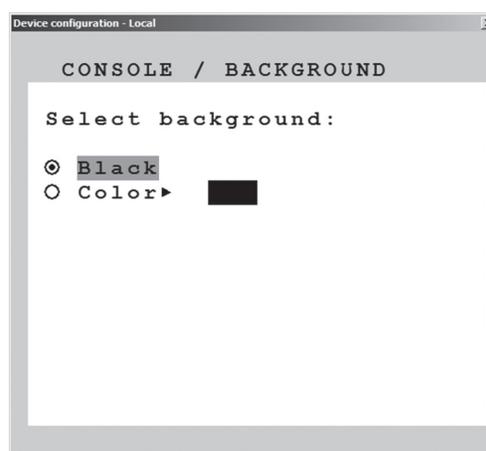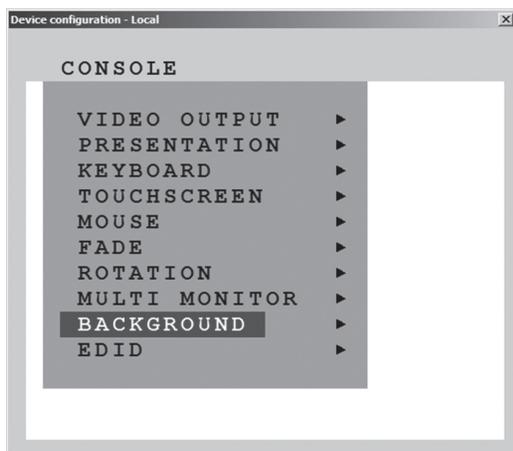
Use the window BACKGROUND to select either a solid color or an image for the background area of the screen on which windows are displayed.

NOTE: The background is shown only in Win mode. Default color for the other modes is black.
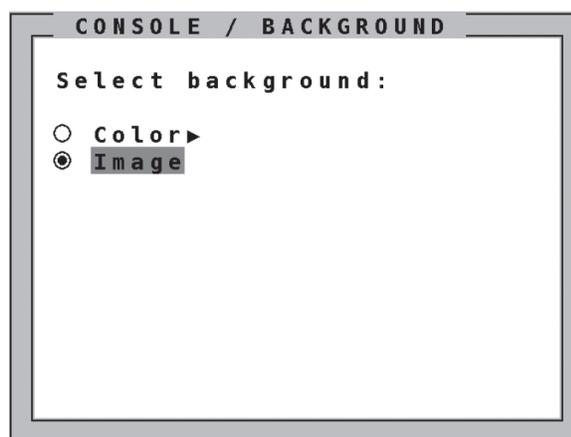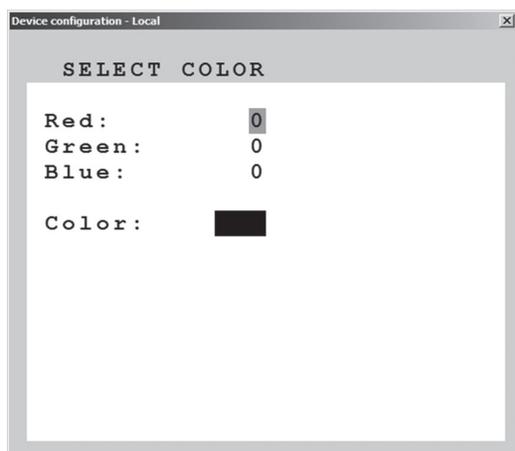
Use BACKGROUND > COLOR to set the color of the background. Enter the desired color in 24-bit color red, green, and blue values. A preview of the color will appear in the field COLOR.

After selecting BACKGROUND > IMAGE, the background area of the screen will be filled with the image that has been previously selected in the utility ConfDev under DEVICE > LOAD BACKGROUND IMAGE. If no image has been loaded, this option will not appear.

OSD - CONSOLE - EDID

EDID (display of monitor data)

Use arrow keys to navigate in the CONSOLE menu to the entry EDID and press ENTER/SELECT to open the EDID window.
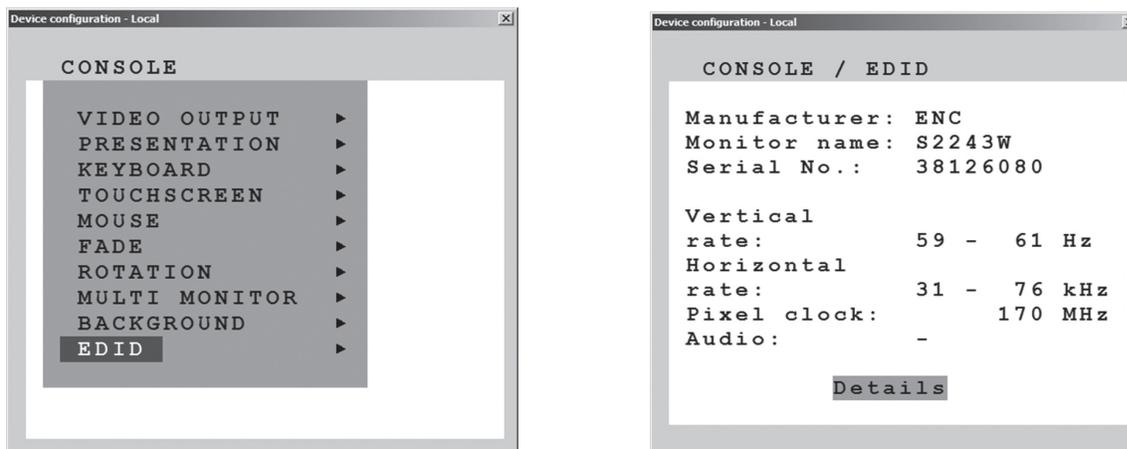
Use the EDID command to read and display monitor data (manufacturer, monitor name, serial number etc.) from the monitor's EDID memory. If VIDEO OUTPUT is set to "auto," the 4Site II uses the optimum output resolution offered by the EDID.
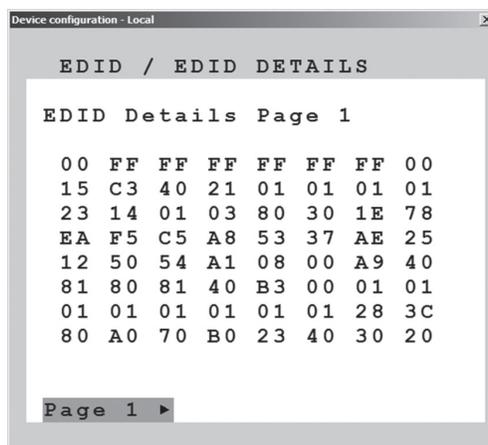
EDID (Extended Display Identification Data) is a VESA standard data format that contains basic information about a monitor and its capabilities. This information is stored in the monitor by the manufacturer and can be read by 4Site II or graphics card via a monitor cable's Display Data Channel (DCC) interface.

NOTE: EDID information can be copied to the four inputs and are then available for the connected sources. See COMPUTER > EDID/DDC.

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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OSD - VIDEO - INPUT STATUS

INPUT STATUS (Display Video Formats)

Use arrow keys to navigate in the VIDEO menu to the entry INPUT STATUS and press ENTER/SELECT to open the INPUT STATUS window.
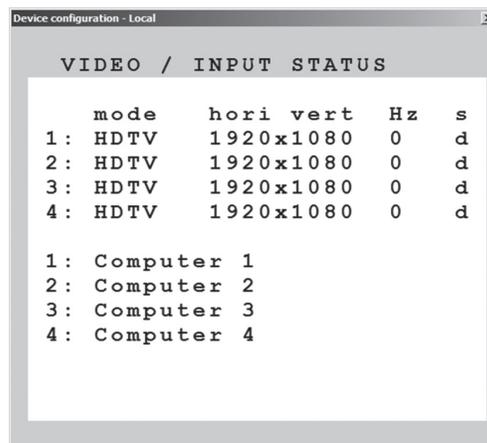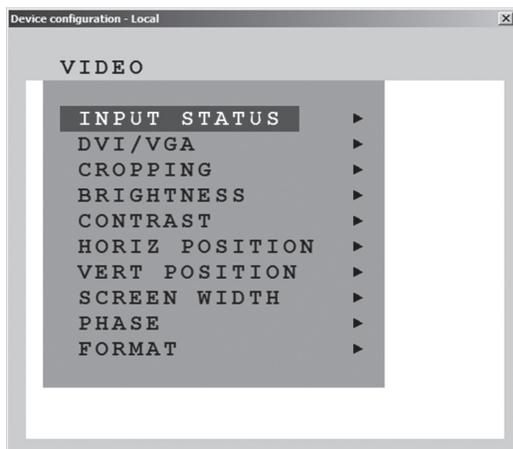
Resolutions at the four video inputs are shown under INPUT STATUS. Resolution recognition at the four video inputs is automatic. Some analog input resolutions may not correctly be detected. See the appendix for a list of video formats supported by 4Site II.

S Signal

a = analog

d = digital

g = sync on green

c = composite sync

OSD - VIDEO - DVI/VGA

DVI/VGA

Use arrow keys to navigate in the VIDEO menu to the entry DVI/VGA and press ENTER/SELECT to open the DVI/VGA window.

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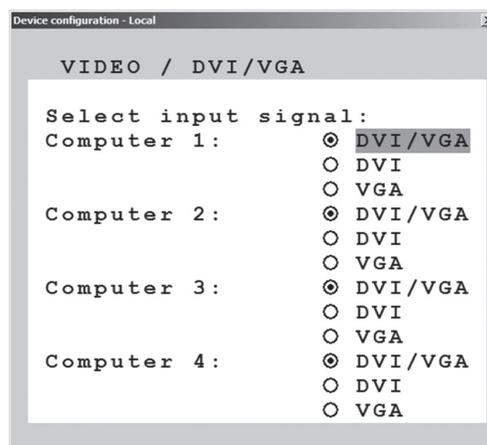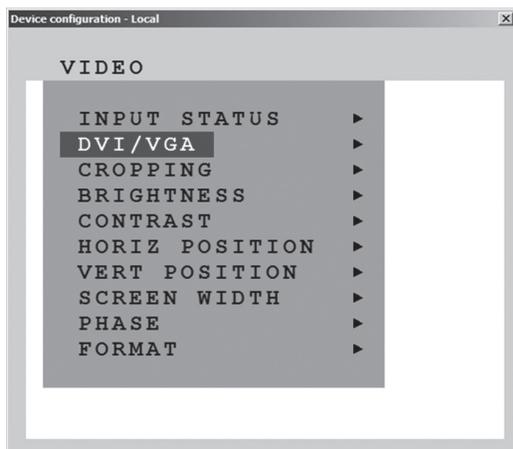
CHAPTER 5: ON-SCREEN DISPLAY (OSD)

Go to "Select input signal" and define which video signal (VGA or DVI) is to be displayed. If the setting "DVI/VGA" is selected, 4Site II will first check the digital input. If there is no signal at this input, the analog signal input will be checked.

This function can be used to connect e.g. 8 sources (4x VGA + 4x DVI) via Y-cables to 4Site II.

OSD - VIDEO - CROPPING

CROPPING

Use arrow keys to navigate in the VIDEO menu to the entry CROPPING and press ENTER/SELECT to open the CROPPING window.
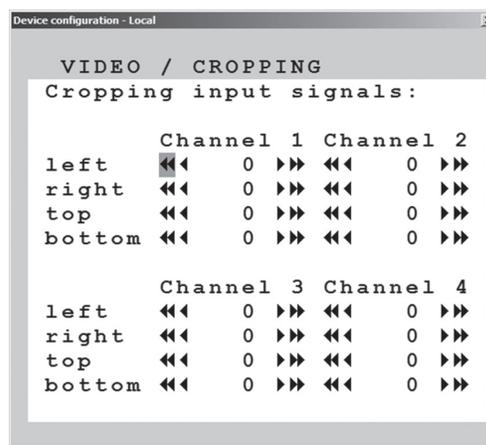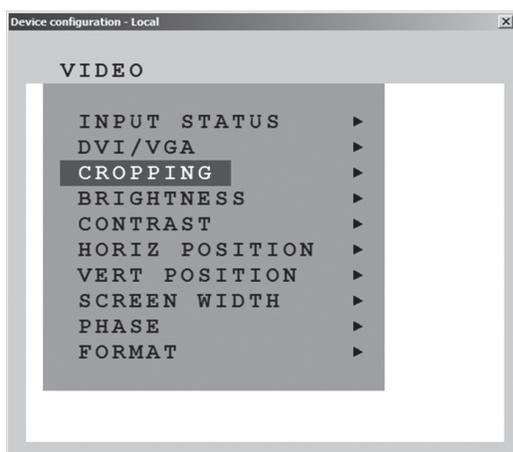
In the window VIDEO/CROPPING, enter a value from 0-999 for the left, right, top, and bottom side of the channel to be cropped.

Use the arrows to increase or decrease the value either in single digits or in increments of 30. Alternatively, the right and left arrows of the keyboard may be used to adjust these values.

NOTE: The smallest possible size of each area is 10% of the input signal.

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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OSD - VIDEO - BRIGHTNESS/CONTRAST

BRIGHTNESS – CONTRAST (with analog input only)

Use arrow keys to navigate in the VIDEO menu to the entry BRIGHTNESS or CONTRAST and press ENTER/SELECT to open the BRIGHTNESS or CONTRAST window.
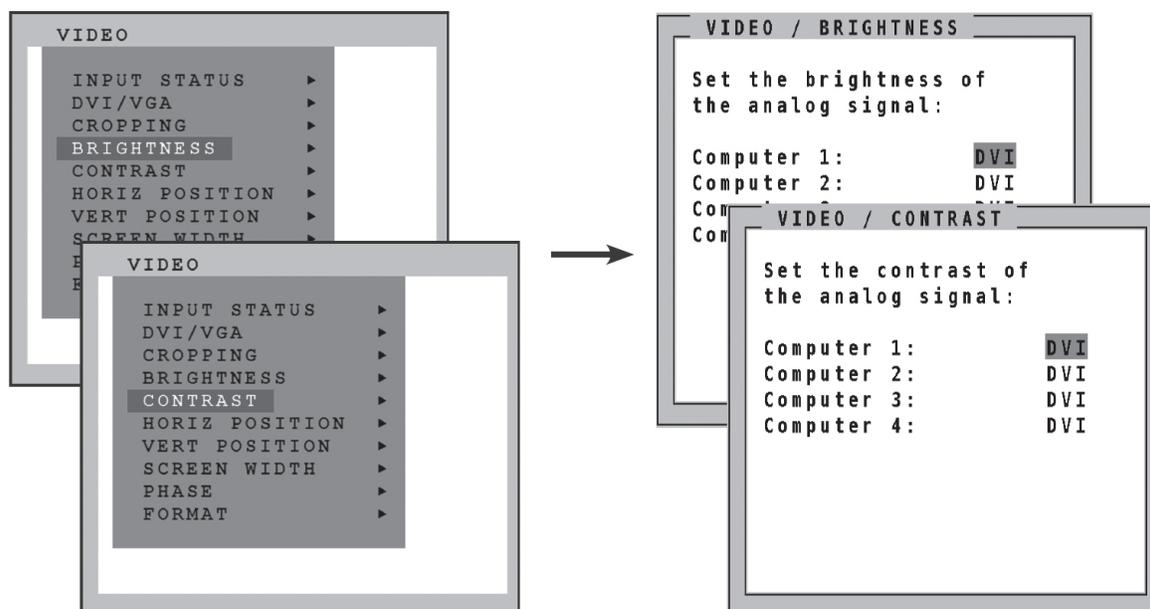
Use this feature to adjust the brightness or contrast of analog video input signals.

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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OSD - VIDEO - HORIZONTAL AND VERTICAL POSITION

HORIZ/VERT POSITION (horizontal/vertical position of computer screen) (with analog input only)

Use arrow keys to navigate in the VIDEO menu to the entry HORIZ POSITION or VERT POSITION and press ENTER/SELECT to open the HORIZ POSITION or VERT POSITION window.
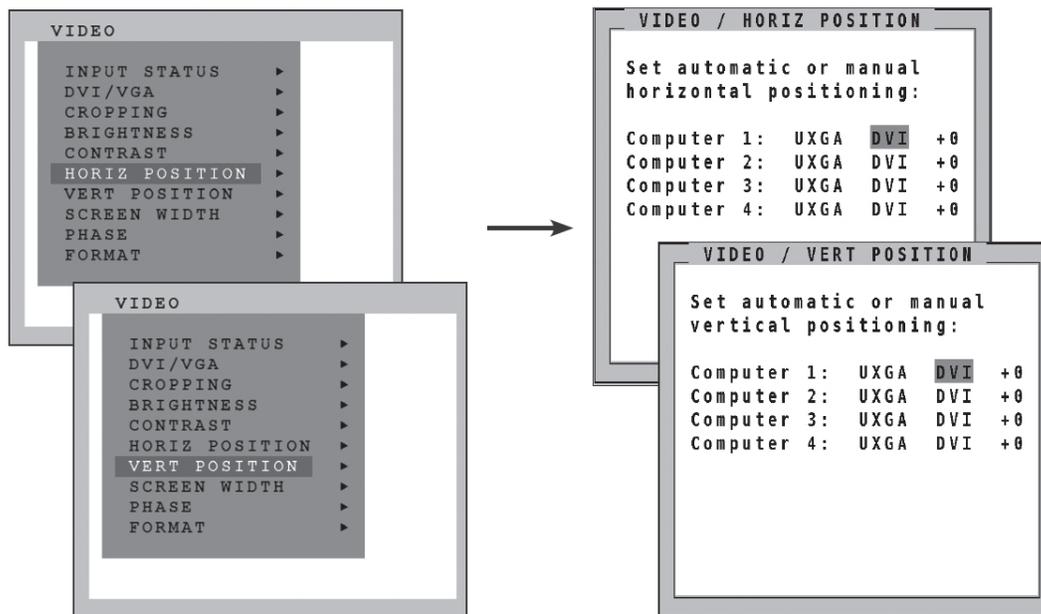
In case of incorrect horizontal position of a computer screen, use this feature to adjust the computer screen manually. Use the arrow keys to navigate to the AUTO/MAN field and set MAN for manual. Use the "+" or "-" keys in the value field to adjust the vertical position between -20 and +20, and the horizontal position between -63 and +63.

OSD - VIDEO - SCREEN WIDTH/PHASE

SCREEN WIDTH (with analog input only)

Use arrow keys to navigate in the VIDEO menu to the entry SCREEN WIDTH and press ENTER/SELECT to open the SCREEN WIDTH window.

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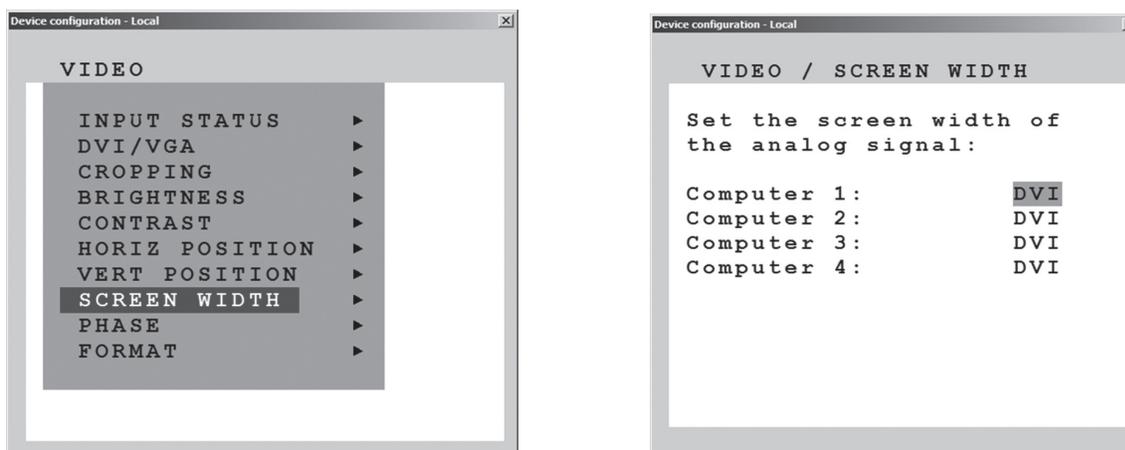
Normally, screen width (number of horizontal pixels) is defined by the VESA standard. If the screen appears blurred, change this setting to improve screen quality.

PHASE (with analog input only)

Use arrow keys to navigate in VIDEO menu to the PHASE line and press ENTER/SELECT to open the PHASE window.
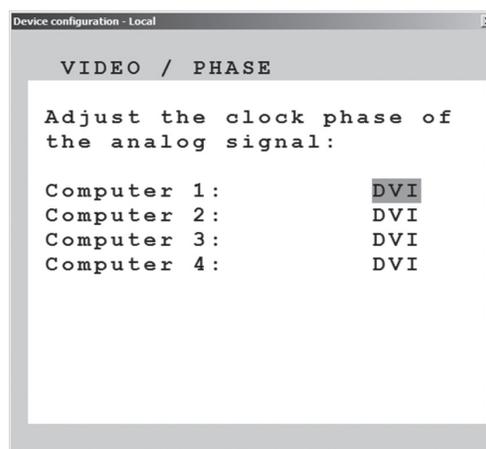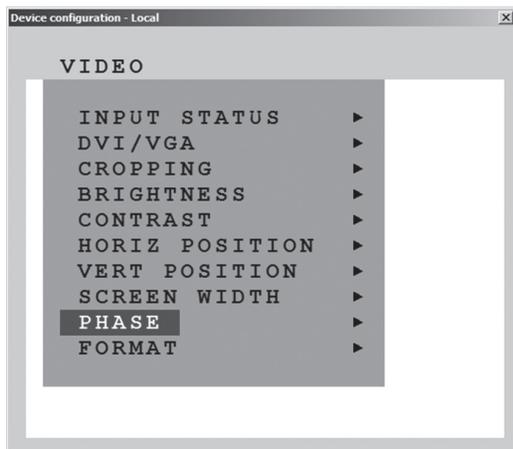
Incorrect phase (sampling time of pixel color value) may result in blurring, bad contrast, or poor legibility. Use this setting to adjust phase.

OSD - VIDEO - FORMAT

FORMAT

Use arrow keys to navigate in the VIDEO menu to the entry FORMAT and press ENTER/SELECT to open the FORMAT window.
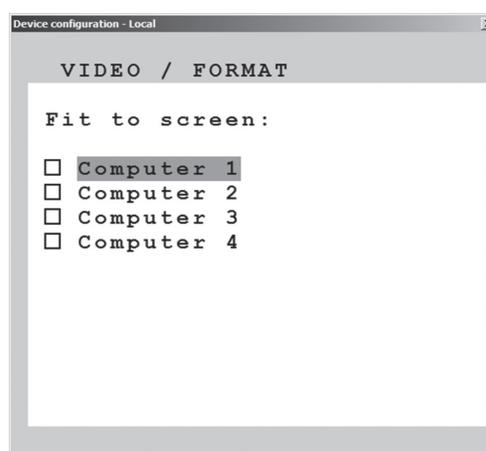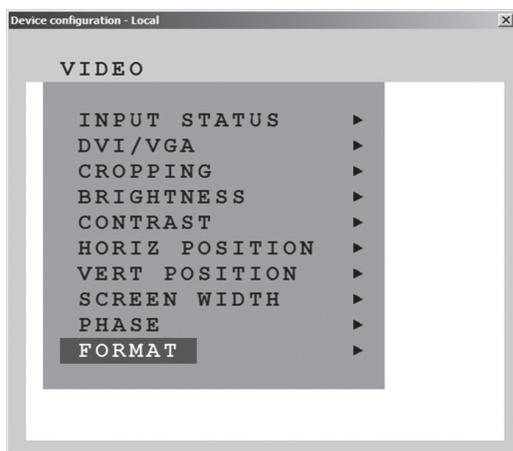
When using a wide-screen monitor (aspect ratio 16:10) in Quad mode, a video input with a different aspect ratio is normally displayed with black borders to the left and right. If "fit to screen" is enabled, the image is resized to fill the entire quadrant in Quad mode.

By default, "fit to screen" is disabled to display each source in its native aspect ratio in display modes (Quad, PiP, Full) of 4Site II.

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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Wide screen monitor – aspect ratio 16:10

Screen
(computer 1)
Aspect ratios
4 : 3
13.3 : 10

Fullscreen mode

Screen
(computer 1)
Aspect ratios
4 : 3
13.3 : 10

no input signal

Quad mode

Fit to screen
computer 1: Yes

Screen is horizontally
stretched

Screen
(computer 1)
Aspect ratios
4 : 3
13.3 : 10

no input signal
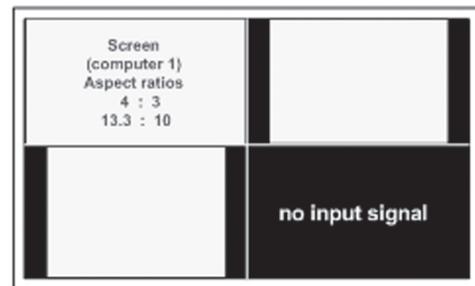
Quad mode

PiP mode for wide-screen monitors

If you use a wide-screen monitor (for example with an aspect ratio of 16:10) and the active channel does not have a wide-screen aspect ratio (e.g. 4:3), PiPs are placed aside the full image of the active channel in the black bar on the right side. The full image of the active channel is displayed left-aligned on the screen resulting in a black bar on the right side. Provided appropriate PiP size (20%) is set, PiP images are thus placed entirely outside the full screen channel. No screen content is overlapped. All content of all sources is visible.

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CHAPTER 5: ON-SCREEN DISPLAY (OSD)

Wide screen monitor – aspect ratio 16:10
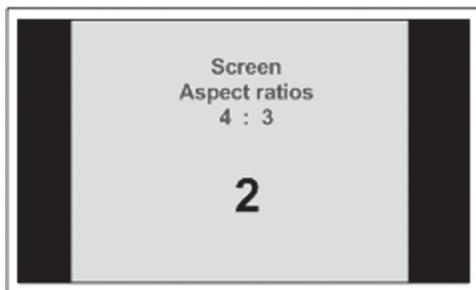
Fullscreen ist positioned on the left-hand side in PIP mode

Fullscreen mode
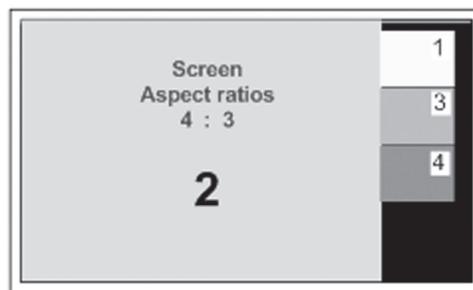
PiP mode

Quad mode

OSD - COMPUTER - CHANNEL MAPPING

CHANNEL MAPPING

Use arrow keys to navigate in the COMPUTER menu to the entry CHANNEL MAPPING and press ENTER/SELECT to open the CHANNEL MAPPING window.
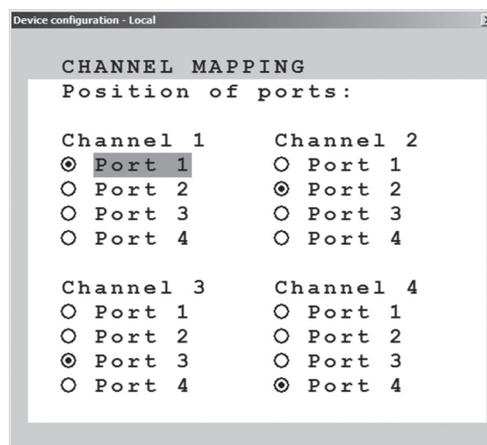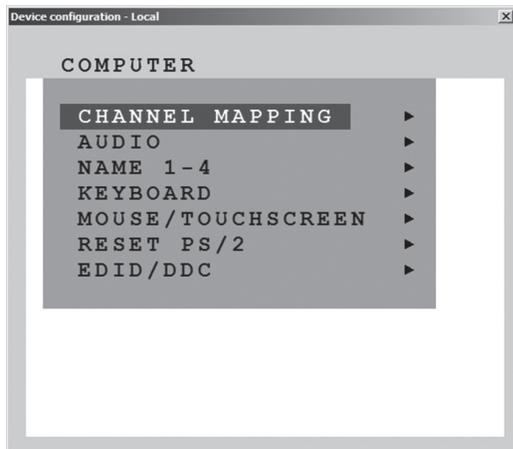
In the CHANNEL MAPPING menu, assignment between physical input ports and logical channels can be changed. This can be useful, for instance, if computer needs to be shown on another position on the quad screen without having to swap the connectors at the inputs.

Use arrow and "+/-" keys to navigate to the physical port that you would like to connect to the channel mentioned on the upper line. Press enter/select to change the connection.

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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OSD - COMPUTER - AUDIO

AUDIO

Use arrow keys to navigate in the COMPUTER menu to the entry AUDIO and press ENTER/SELECT to open the AUDIO window.
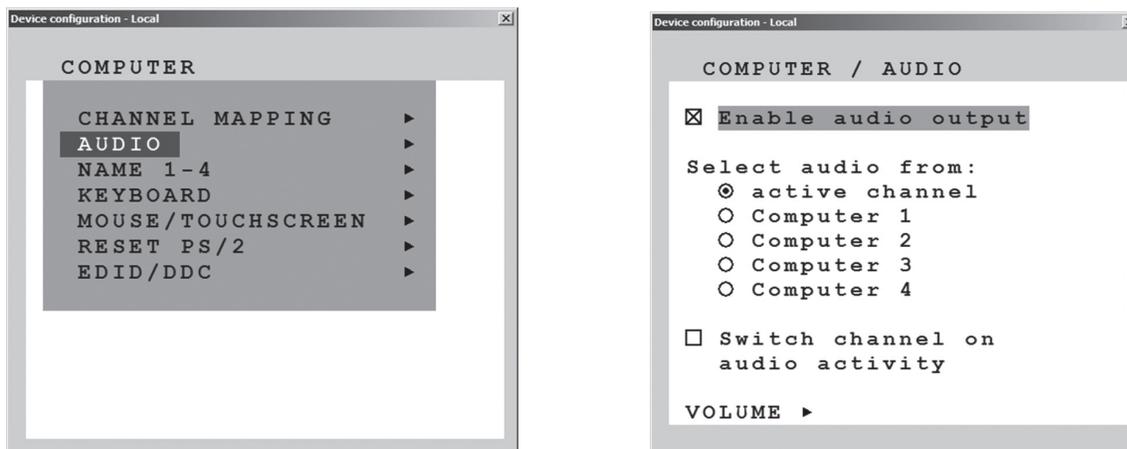
"Enable audio output": To enable or disable the audio output, activate or deactivate the checkbox "Enable audio output."

Selecting audio source: Select the audio source from the list. To ensure that the audio source is the computer being currently operated, select "active channel" from the list. For a fixed audio source, select one of the computers from the list.

Switch channel on audio activity: With this setting enabled, 4Site II automatically switches to a channel on which an audio signal is detected.

Volume

To adapt the volume of the audio sources navigate to VOLUME and press enter/select.

Use this window to adjust the volume for the audio sources in 2 db steps.
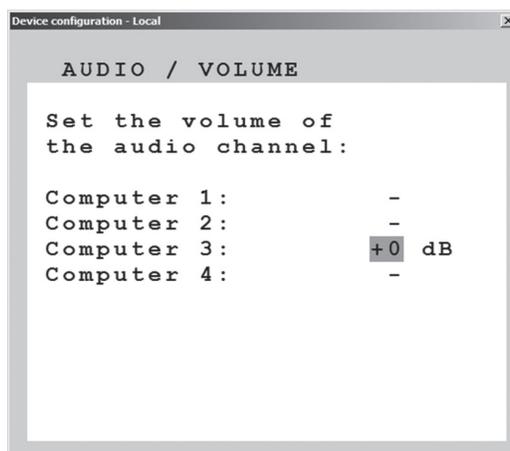
Change the volume of each channel with + and -

NOTE: You can also open this window with the hotkeys HK + -/+.

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OSD - COMPUTER - NAME 1-4

NAME 1-4

Use arrow keys to navigate in the COMPUTER menu to the entry NAME 1-4 and press ENTER/SELECT to open the NAME 1-4 window.
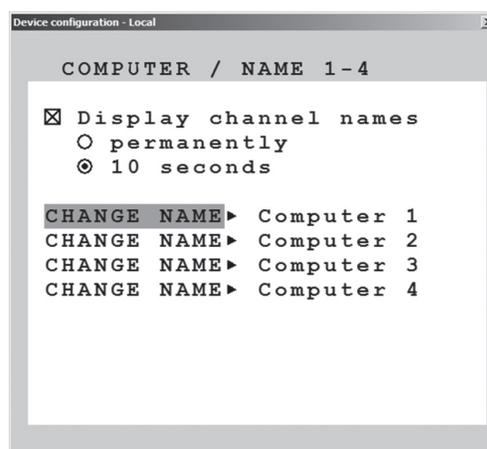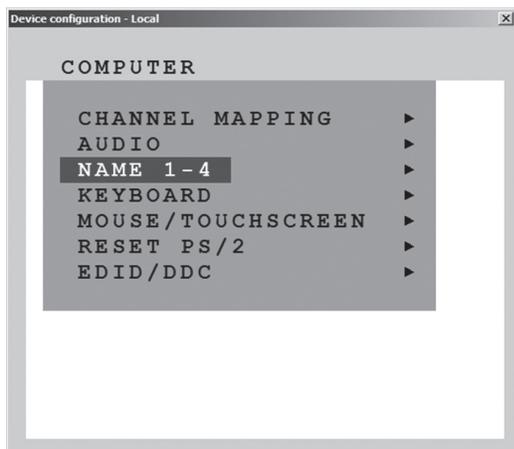
Use the section NAME to assign a name to each of the four windows displayed when HOTMOUSE is in use.

Move the cursor in the edit window using arrows on your keyboard. Press ENTER/SELECT to choose a letter. Press BACKSPACE/FULL to erase.
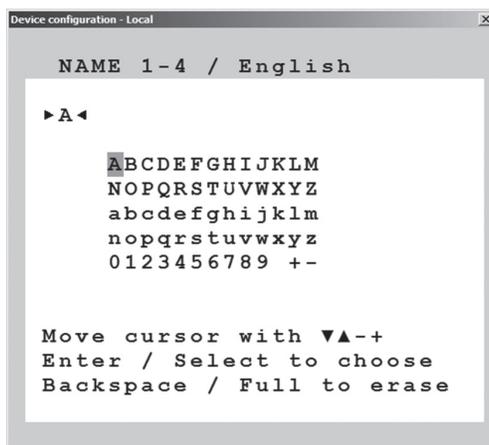
OSD - COMPUTER - KEYBOARD

KEYBOARD

Use the arrow keys to navigate in the COMPUTER menu to the entry KEYBOARD and press ENTER/SELECT to open the KEYBOARD window.

```
Device configuration - Local                    ×

   COMPUTER

     CHANNEL MAPPING        ▶
     AUDIO                  ▶
     NAME 1-4               ▶
     KEYBOARD               ▶
     MOUSE/TOUCHSCREEN      ▶
     RESET PS/2             ▶
     EDID/DDC               ▶
```

```
Device configuration - Local                    ×

   COMPUTER / KEYBOARD

     Computer 1:          USB
     Computer 2:          USB
     Computer 3:          USB
     Computer 4:          USB
```
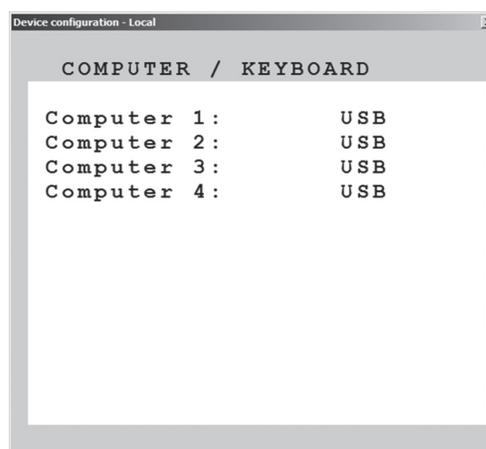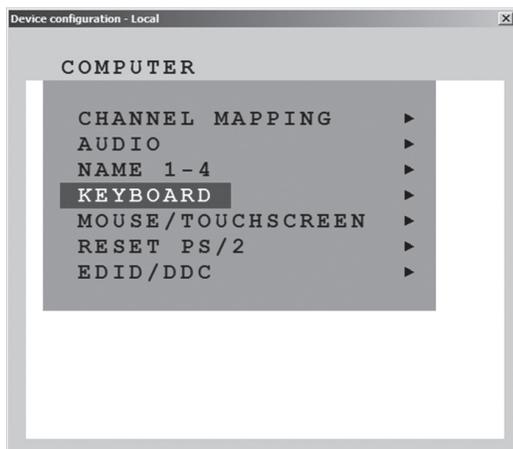
Use this display feature to identify which keyboard type (USB, PC1, PC2, or PC3) has been recognized at which computer port.

OSD - COMPUTER - MOUSE

MOUSE

Use arrow keys to navigate in COMPUTER menu to the MOUSE line and press ENTER/SELECT to open the MOUSE window.

```
Device configuration - Local                    ×

   COMPUTER

     CHANNEL MAPPING        ▶
     AUDIO                  ▶
     NAME 1-4               ▶
     KEYBOARD               ▶
     MOUSE/TOUCHSCREEN      ▶
     RESET PS/2             ▶
     EDID/DDC               ▶
```

```
Device configuration - Local                    ×

   COMPUTER / MOUSE

     Computer 1:   USB
     Computer 2:   USB
     Computer 3:   USB
     Computer 4:   USB

     Interfaces USB:
     Computer 1:   Rel+Abs+Touch
     Computer 2:   Rel+Abs+Touch
     Computer 3:   Rel+Abs+Touch
     Computer 4:   Rel+Abs+Touch

     Use + - ◀ ▶ to change
```
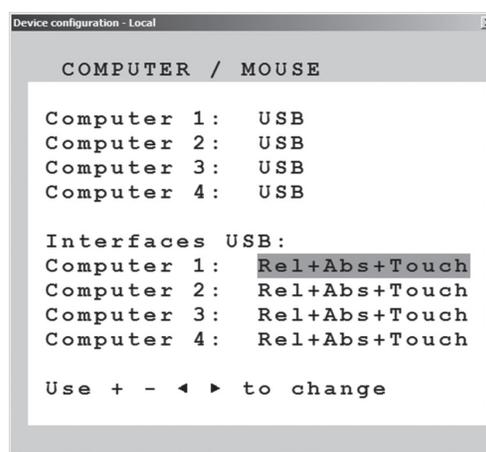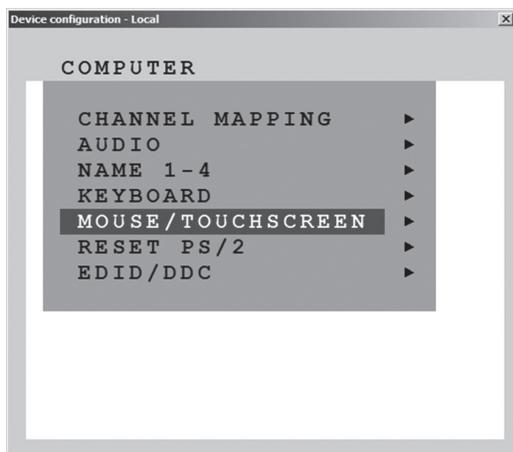
The upper half of the MOUSE window shows which mouse type (USB, PS/2 or PS/2 wheel) has been recognized at which computer port.

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

Interfaces USB:

Enable the interfaces over which data can be transmitted to the positioning devices. The interface best suited for the connected device is then automatically chosen.

For mice, e.g., this interface is "mouse relative" (Rel). If the feature "Cross Channel Switching" is enabled and the interface "mouse absolute" (Abs) is enabled, the interface "mouse absolute" will be used as an exception.

All interfaces supported by the operating system should be enabled. Interfaces not supported by the operating system should not be enabled. For example, the following settings are recommended for various versions of MS Windows:

INTERFACES SETTINGS

OSD SETTING	USED INTERFACES	RECOMMENDATIONS FOR WINDOWS
Rel	mouse relative	pre Windows 2000/XP
Rel+Abs	mouse relative mouse absolute	Windows 2000/XP to Vista
Rel+Touch	mouse relative	digitizer touch screen
Rel+Abs+Touch	mouse relative mouse absolute	digitizer touch screen Windows 7 and newer

Touch screen support

The enabled interface with the highest priority is used. The following table gives an overview of the features for the touch screen interfaces.

TOUCH SCREEN INTERFACES

	MOUSE RELATIVE	MOUSE ABSOLUTE	DIGITIZER TOUCH SCREEN
Setting in OSD	Rel	Abs	Touch
Characterization for touch screens	mouse emulation	mouse emulation	direct support by OS
Priority (1 – highest)	3	2	1
MS Windows support	Windows 98 and newer	Windows 2000/XP and newer	Windows 7 and newer
Multi-touch	no	no	yes, when supported by the touch screen
Required settings in the operating system	• 1:1 mouse scaling • mouse acceleration disabled	none	none
Limitations	• internal and displayed position of the mouse cursor may differ, therefore the position of the mouse cursor is always reset when changing the channel • Multi monitor not possible for the computer	• only possible for the main display with Windows	none

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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OSD - COMPUTER - RESET PS/2 - EDID/DDC

RESET PS/2

Use arrow keys to navigate in the COMPUTER menu to the entry RESET PS/2 and press ENTER/SELECT to open the RESET PS/2 window.

```
Device configuration - Local                      ⊠

    COMPUTER

       CHANNEL MAPPING        ▶
       AUDIO                  ▶
       NAME 1-4               ▶
       KEYBOARD               ▶
       MOUSE/TOUCHSCREEN      ▶
       RESET PS/2             ▶
       EDID/DDC               ▶
```

```
      COMPUTER / RESET PS/2

   If mouse or keyboard does
   not work for a newly
   installed computer
   you should reset the
   PS/2 line and boot
   the computer again.

   Press Enter / Select
   in order to reset the
   PS/2 line of channel 1.
```
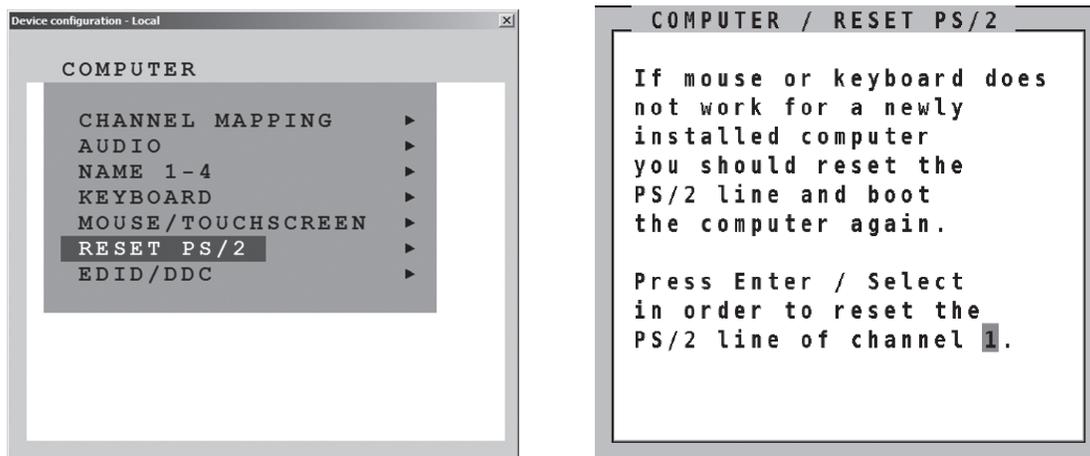
Use arrow keys left-arrow and right-arrow, or "+" and "-" keys to select the channel (1 to 4) you wish to reset and confirm by pressing ENTER/SELECT.

EDID/DDC

This window presents an overview of the status of the input EDIDs and the display EDID and allows editing of these.

```
Device configuration - Local                      ⊠

    COMPUTER

       CHANNEL MAPPING        ▶
       AUDIO                  ▶
       NAME 1-4               ▶
       KEYBOARD               ▶
       MOUSE/TOUCHSCREEN      ▶
       RESET PS/2             ▶
       EDID/DDC               ▶
```

```
      COMPUTER / EDID

   Channel 1: KVM-SWITCH 4
     UXGA   1600x1200@60 Hz
     WUXGAr 1920x1200@60 Hz
   Channel 2: KVM-SWITCH 4
     UXGA   1600x1200@60 Hz
     WUXGAr 1920x1200@60 Hz
   Channel 3: KVM-SWITCH 4
     UXGA   1600x1200@60 Hz
     WUXGAr 1920x1200@60 Hz
   Channel 4: KVM-SWITCH 4
     UXGA   1600x1200@60 Hz
     WUXGAr 1920x1200@60 Hz
   Display: VM-8HDMI
    Enter / Select to change
```

Use arrow keys to select the channel EDID information.

Press ENTER/SELECT to open the window with detailed settings for this EDID.

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CHAPTER 5: ON-SCREEN DISPLAY (OSD)

```
 COMPUTER / EDID

Channel 1: KVM-SWITCH 4
   UXGA   1600x1200@60 Hz
   WUXGAr 1920x1200@60 Hz
Channel 2: KVM-SWITCH 4
   UXGA   1600x1200@60 Hz
   WUXGAr 1920x1200@60 Hz
Channel 3: KVM-SWITCH 4
   UXGA   1600x1200@60 Hz
   WUXGAr 1920x1200@60 Hz
Channel 4: KVM-SWITCH 4
   UXGA   1600x1200@60 Hz
   WUXGAr 1920x1200@60 Hz
Display: VM-8HDMI
   Enter / Select to change
```

```
 EDID / EDID/DDC

Channel 1:

Choose two video modes:
  UXGA   1600x1200@60 Hz
  WUXGAr 1920x1200@60 Hz

Signal:  ◉ digital
         ○ analog

         WRITE
   WRITE TO ALL INPUTS
   SAME AS DISPLAY EDID
```

Select a video mode for the channel using the arrow keys. Press ENTER/SELECT to confirm selection.

```
 EDID/DDC / MODE

   mode    horiz   vert   Hz

   XGA    1024 x   768   60
   SXGA+  1400 x  1050   50
   SXGA+  1400 x  1050   60
   UXGA   1600 x  1200   50
➡  UXGA   1600 x  1200   60
   UXGAr  1600 x  1200   50
   UXGAr  1600 x  1200   60
   WXGA   1280 x   768   60
   WXGA   1360 x   768   60

 Press Enter/Select or  ▲ ▼
```
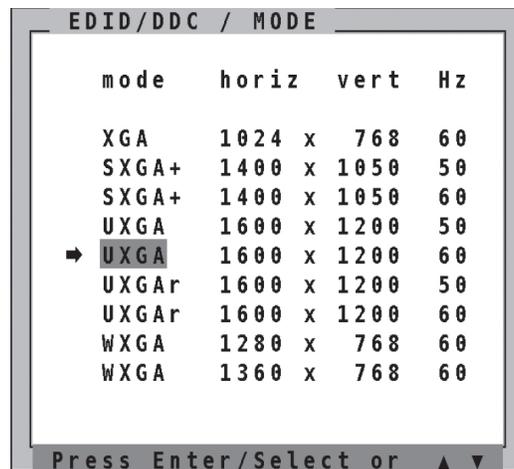
Two freely selectable video modes can be programmed in the input EDID visible to the connected computer at the input port.

We recommend programming the preferred video modes for the connected signal source.

```
 EDID / EDID/DDC

Channel 1:

Choose two video modes:
  UXGA   1600x1200@60 Hz
  WUXGAr 1920x1200@60 Hz

Signal:  ◉ digital
         ○ analog

         WRITE
   WRITE TO ALL INPUTS
   SAME AS DISPLAY EDID
```

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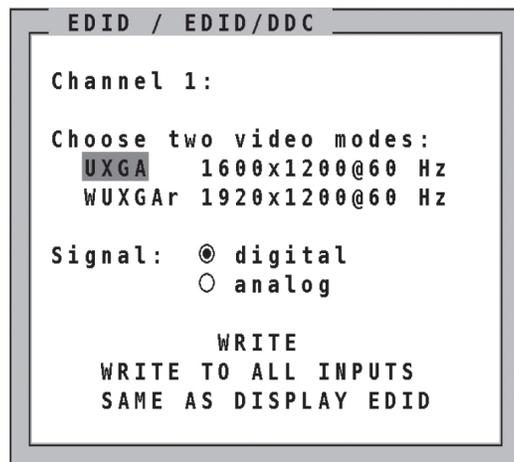
4Site II also uses these entries to distinguish between confusable analog input video signals. The following groups of analog input signals are difficult to distinguish automatically:

WUXGA 1920x1200 60 Hz

UXGA 1600x1200 60Hz

UXGA 1600x1200 60Hz with reduced blanking

WUXGA 1920x1200 50 Hz

UXGA 1600x1200 50Hz

UXGA 1600x1200 50Hz with reduced blanking

SXGA+ 1400x1050 60Hz

WSXGA 1680x1050 60Hz

XGA 1024x768 60Hz

WXGA 1280x768 60Hz

WXGA 1360x768 60Hz

If you experience problems with the automatic input detection of an analog input signal in these groups, you can overwrite the automatic detection by programming the expected video signal into the input EDID.

Use arrow keys to navigate to the first video mode entry and press ENTER/SELECT to open the window with a list of selectable video modes.

In this window, use arrow keys to select the desired line in the list shown on the right and press ENTER/SELECT for the video format.

Use arrow keys to navigate to the second video mode entry and press ENTER/SELECT to open the window with a list of selectable video modes.

Use arrow keys to navigate to "Signal" and press ENTER/SELECT to switch between analog or digital. This setting specifies whether the EDID should identify the 4Site II as an analog or digital device. Usually it is safe to leave this setting at "digital".

Use arrow keys to navigate to the following write options:

WRITE save the changes in the current input EDID.

WRITE TO ALL INPUTS save the changes to all four input EDIDs.

Alternatively, the EDID data of the connected display can be used. To do this, navigate to SAME AS DISPLAY EDID and press ENTER/SELECT SAME AS DISPLAY EDID write the contents of the display EDID to the current input EDID.

Press ENTER/SELECT to start the selected write option and wait until "successful" is displayed in the bottom status line. At this point, the EDID data can be written to one or all of the four channels.

NOTE: If the EDID data of the connected video source is used, the switch behaves as if the display is connected directly to the source.

NOTE: Keep in mind that this setting will overwrite the automatic analog input mode detection. If you connect a different video source, or change the video mode from the PC, you may need to change this setting again to get correct results. For the detection of digital input signals, this setting has no effect.

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Alternatively, the display EDID data can be copied to the inputs:

```
 ___ COMPUTER / EDID ___

  Channel 1: KVM-SWITCH 4
    UXGA   1600x1200@60 Hz
    WUXGAr 1920x1200@60 Hz
  Channel 2: KVM-SWITCH 4
    UXGA   1600x1200@60 Hz
    WUXGAr 1920x1200@60 Hz
  Channel 3: KVM-SWITCH 4
    UXGA   1600x1200@60 Hz
    WUXGAr 1920x1200@60 Hz
  Channel 4: KVM-SWITCH 4
    UXGA   1600x1200@60 Hz
    WUXGAr 1920x1200@60 Hz
  Display: VM-8HDMI
    Enter / Select to change
```

```
 ___ EDID / EDID/DDC ___

  Display: VM-8HDMI

  Mode:
    HDTV   1920x1080@60 Hz
    none

  Signal:  digital

       WRITE TO INPUT 1
       WRITE TO INPUT 2
       WRITE TO INPUT 3
       WRITE TO INPUT 4
     WRITE TO ALL INPUTS
```

An overview of the contents of the display EDID is seen above.

It has the following write options:

WRITE TO INPUT 1	write the monitor EDID to input 1
WRITE TO INPUT 2	write the monitor EDID to input 2
WRITE TO INPUT 3	write the monitor EDID to input 3
WRITE TO INPUT 4	write the monitor EDID to input 4
WRITE TO ALL INPUTS	write the monitor EDID to all inputs

NOTE: The content of the input EDIDs can be reset to default by the OSD function CONFIGURATION/FACTORY RESET.

OSD - USB DEVICE 1–4

USB Device 1-4

4Site II supports and switches transparent USB 2.0 devices such as printer, camera, 3D mouse, finger printer, and external memory. (Example: Connect a memory stick to copy data from one computer to the stick, and from the stick to another computer connected to 4Site II: Data can be copied between computers without being networked.)

Use arrow keys to navigate in the OSD menu to the entry USB DEVICE 1-4 and press ENTER/SELECT to open the window.

```
  SYSTEM              ▶
  MODE                ▶
  CONFIGURATION       ▶
  CONSOLE             ▶
  VIDEO               ▶
  COMPUTER            ▶
  USB DEVICE 1-4      ▶
  HELP                ▶
```

```
Device configuration - Local                    [x]

    USB DEVICE 1-4
  Status of the transparent
  USB 2.0 switch:

  1 Device 1:        off
  2 Device 2:        off
  3 Device 3:        off
  4 Device 4:        off

  Change port settings:

  USB port 1 (Device 1)▶
  USB port 2 (Device 2)▶
  USB port 3 (Device 3)▶
  USB port 4 (Device 4)▶
```
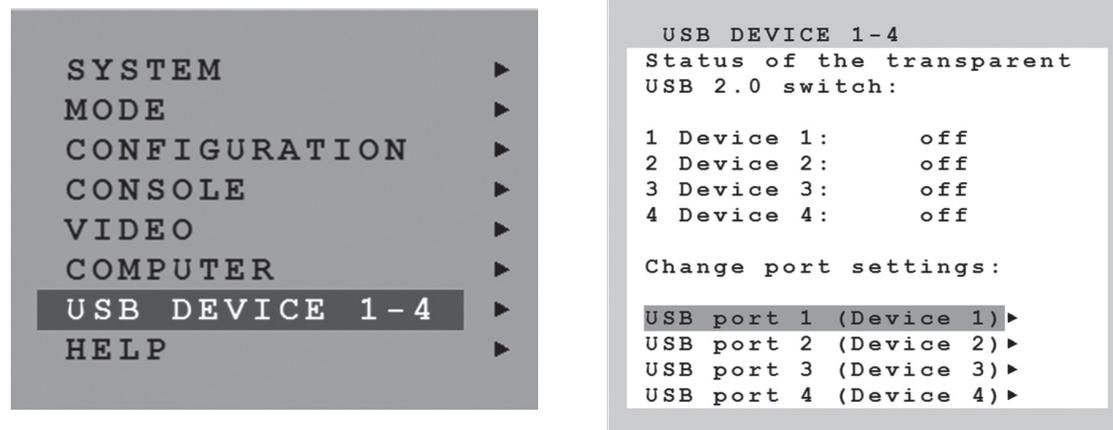
Status display of the transparent USB 2.0 switch. Connections from USB port to computer are shown

OFF: Port is not switched to a computer. A USB device may be connected, but it is not switched to a computer.

Computer (1-4): Port is switched to one of the computers.

To change port and switch settings, use arrow keys to select one of the four USB ports and open its submenu by pressing ENTER/SELECT.

Device 1 switch to: Off by default. To manually switch this USB port to one of the four computers, use arrow keys to select one of the four computers and press ENTER/SELECT.

```
Device configuration - Local                    [X]

    USB DEVICE

    Device 1 switch to:
        ⦿ off
        ○ Computer 1
        ○ Computer 2
        ○ Computer 3
        ○ Computer 4
    ☐ reconnect at boot

    Switching mode is:
        manual switching
        with warning
    CHANGE SWITCHING MODE▶
    CHANGE DEVICE NAME▶
```
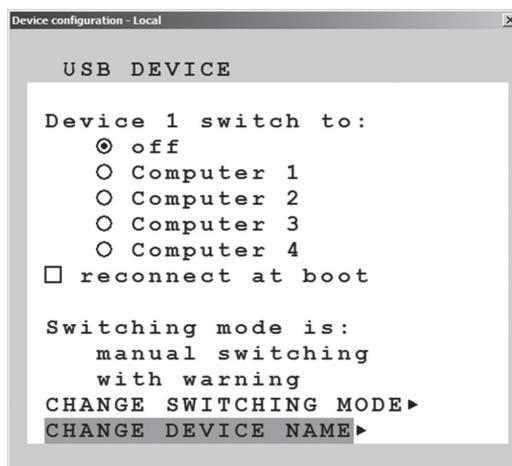
The following options can be selected for the USB port: Manual switching, change switching mode, change USB device name.

Switching mode:

By default, switching mode is "manual switching with warning."

To change the switching mode, use the arrow keys to navigate to "CHANGE SWITCHING MODE" and press ENTER/SELECT.

```
___ SWITCHING MODE ___

Device 1:

Switching mode:
    ⦿ manual switching
      with warning
    ○ manual switching
      without warning
    ○ automatically
      with active channel

Use for devices with risk
of data loss
(USB Sticks, ...)
```

```
    USB DEVICE

    Device 1 switch to:
        ⦿ off
        ○ Computer 1
        ○ Computer 2
        ○ Computer 3
        ○ Computer 4
    ☐ reconnect at boot

    Switching mode is:
        manual switching
        with warning
    CHANGE SWITCHING MODE▶
    CHANGE DEVICE NAME▶
```

Use arrow keys to choose one of the following modes to change the switching mode:

1. Manual switching with warning: This mode allows switching the USB port manually by selecting one of the computers connected. But before the switch is executed the following warning message is displayed: "In order to prevent data loss, stop the USB device before switching!" To switch, press ENTER/SELECT. This switching mode is recommended for USB devices with risk of data loss (e.g. USB stick, printer, external memory)

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2. Manual switching without warning: This mode allows switching the USB port manually by selecting one of the computers connected. The switching is executed immediately. This switching mode is recommended for USB devices without risk of data loss.

3. Automatically with active channel: In this mode, the USB device/port is always switched automatically with the active channel. When switching channel/computer this USB device/port will automatically be switched to the activated channel/computer.

OSD - USB DEVICE 1-4 - SWITCHING MODE

NOTE: After power on, all USB devices are disconnected from computers except devices with switching mode "automatically with active channel."

Change device name:

In the "USB DEVICE./USB DEVICE" menu choose "Change device name" and press ENTER/SELECT to change the name of the connected USB device.

Use the keyboard to rename the USB device or use the front panel buttons (as described in the OSD). Exit the menu. The new name will automatically be saved and displayed in the other menus.
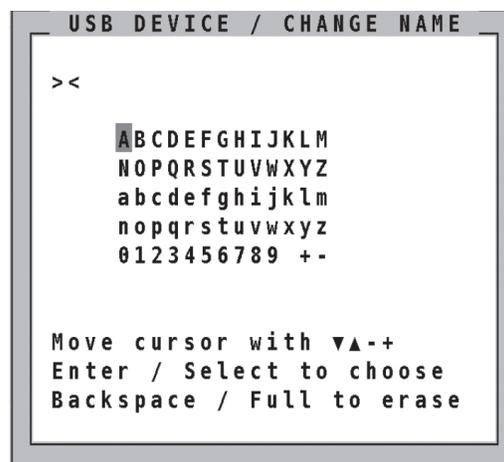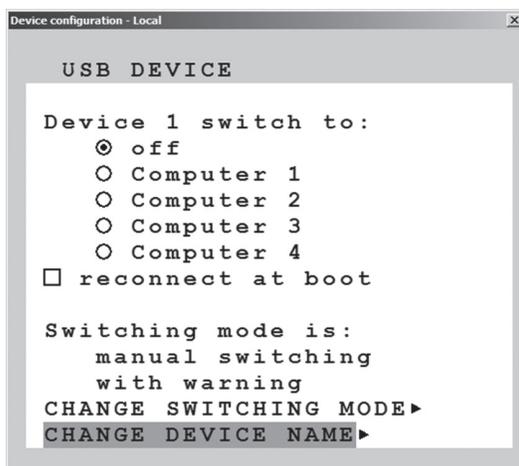
NOTE: Use hotkey + "u" (by default: hotkey = Ctrl + Alt) to quickly access the USB DEVICE 1-4 menu. This allows quick access to this menu when switching manually. To directly open the switching menu of, e.g., USB device/port 1 use hotkey + "F1" (by default: hotkey

= Ctrl + Alt).

OSD - HELP - HOTKEY/ABOUT/CONTACT

Use arrow keys to navigate in the HELP menu to the desired line and press ENTER/SELECT to open the corresponding window.

HELP > ABOUT displays the current revision levels hardware and firmware.

HELP > HOTKEY provides a guide to hotkey shortcuts.

HELP > CONTACT window contains information on how to contact Black Box support.

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HOTMOUSE - ACTIVATING HOTMOUSE CURSOR

Hotmouse

Hotmouse is an exclusive function offered by Black Box 4Site II. It works with your standard mouse or trackball and touch screens. Similar to using hotkeys on your keyboard, Hotmouse is a quick and comfortable way to operate 4Site II simply with your standard mouse, trackball, or touch screen. No software or additional hardware is required.

When activated, your mouse cursor becomes hotmouse cursor - a numbered arrow - that allows performing all hotmouse functions.

Activating the hotmouse cursor

To activate hotmouse cursor move your mouse on the console four times in a rapid horizontal shaking motion or with hotkey + M.

The hotmouse cursor can also be activated via touch screen: tap the screen twice, and leave your finger pressed on the touch screen after the second tap (tap – hold, like a double click without lifting the finger on the second click), until the hotmouse menu opens. Now click outside the hotmouse menu to open the hotmouse cursor.

Close the hotmouse by double clicking or with hotkey + M.

The hotmouse cursor changes its look depending on its position on the screen (arrows in vertical or horizontal direction, and number of channel).

Housemouse cursor	Vertical positioning of PiP images / Resize in Win mode	Resize window or PiP	Move window

Use the hotmouse cursor to perform the following functions:

in Fullscreen mode: - Switch to another fullscreen channel

in Quad mode: - Select another active channel (keyboard, mouse)

in PiP mode: - Modify position and size of PiP images
　　　　　 - Change active channel

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HOTMOUSE CURSOR IN FULLSCREEN MODE/QUAD MODE

Hotmouse Cursor in fullscreen mode

When you activate the hotmouse cursor in Fullscreen mode, PiP images of the other channels are temporarily displayed to allow you to switch to another channel.

Switching to another fullscreen channel

Activate hotmouse cursor. Move the hotmouse cursor over the PiP image of the channel that you wish to activate and click the left mouse button.

Example: Switch from channel 2 to channel 3
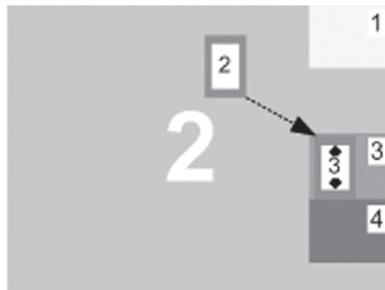
| Channel 2 is active | Channel 3 is selected. | Channel 3 is active. |

Hotmouse cursor in Quad mode

Switching active channel (mouse, keyboard)

Activate Hotmouse Cursor. To change the active channel (switching mouse and keyboard), position the Hotmouse Cursor in the respective channel field (1 to 4) and press the left mouse button.

 IN FULLSCREEN MODE / QUAD MODE

NOTE: When you move into another channel field, the channel number in the Hotmouse Cursor changes.

Example: Switch from channel 2 to channel 3

| Channel 1 is active | Channel 3 is selected. | Channel 3 is active. |
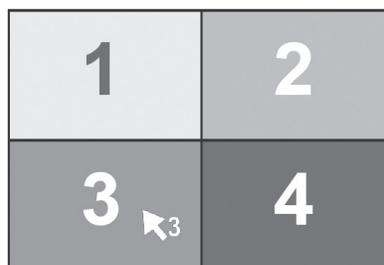
HOTMOUSE CURSOR IN PIP MODE

Change active channel

Enable Hotmouse Cursor. Move the Hotmouse Cursor to the PiP-image of the channel you wish to activate and press the left mouse button.

NOTE: When the Hotmouse Cursor moves over a PiP-image, its appearance changes (arrows, channel number).

Example: Switch from channel 2 to channel 3

Channel 2 is active	Channel 3 is selected.	Channel 3 is active.

Vertical positioning of PiP images

Activate Hotmouse Cursor. Move the Hotmouse Cursor to the PiP-image area, hold down the left mouse button and drag the PiPs to the desired vertical position.

NOTE: As soon as the Hotmouse Cursor moves over a PiP image, its appearance changes (arrows pointing in vertically).

Example: Move PiP images upward
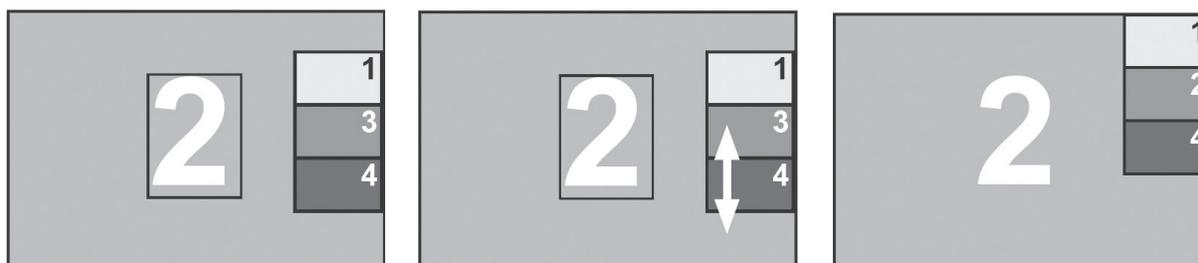
Modify size of PiP images

Activate Hotmouse Cursor and move to the left edge of the PiP image area until horizontal arrows appear in the Hotmouse Cursor. Hold down the left mouse button and drag the Hotmouse Cursor to the left to increase PiP image size, or to the right to reduce PiP image size.

NOTE: As soon as the Hotmouse Cursor moves to the left edge of the PiP image area, its appearance changes (horizontal arrows, channel number).

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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Scaling PiP images up

Hold left mouse button
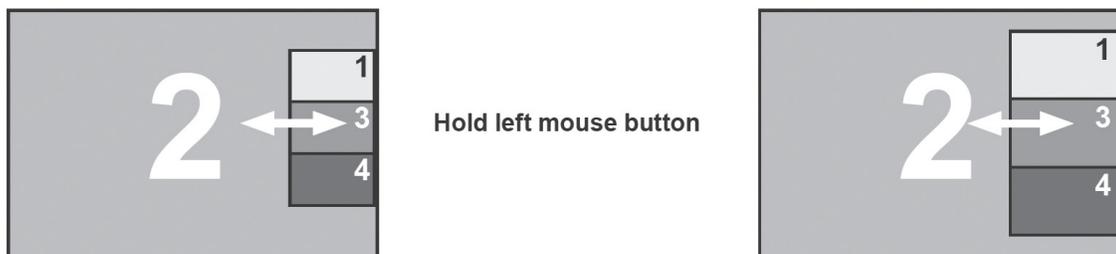
Scaling PiP images down

Hold left mouse button
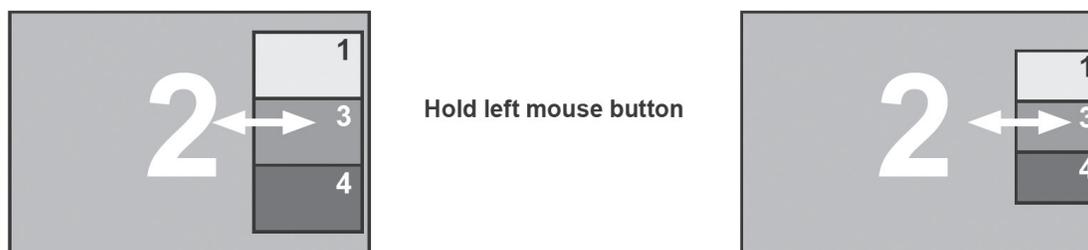
HOTMOUSE MENU - ACTIVATING/OPERATING

Hotmouse Menu - ACTIVATING

Activate Hotmouse Cursor and press the right mouse button to open the Hotmouse Menu. The Hotmouse Menu can also be opened via Hotkey:

+ M

The Hotmouse Menu can also be opened via touch screen: tap the screen twice, and leave your finger pressed on the touchscreen after the second tap (tap – hold, like a double click without lifting the finger on the second click), until the Hotmouse Menu opens.

By clicking outside the Hotmouse Menu, you can open the Hotmouse Cursor to enlarge and reposition PiPs (only in PiP mode), and switch channels.

After you are finished using the Hotmouse Cursor, the Hotmouse Menu will reopen. Menu appearance varies depending on display mode (Quad / Fullscreen / PiP). This menu allows you to carry out switching operations and change PiP settings.

Hotmouse Menu - OPERATING

The Hotmouse Menu allows you to carry out switching operations and to enter PiP settings by mouse click (left mouse button).

Click Help on the Hotmouse Menu for information on the individual symbols.

Click on HELP to open the HOTMOUSE HELP window.
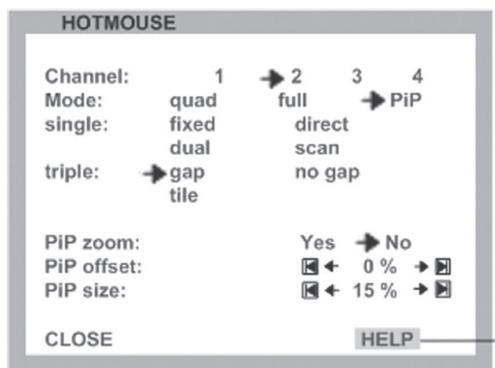
Hotmouse Menu in PiP-mode

Click with the left mouse button on the right-arrow symbols to either increase or decrease the values in question. Clicking on the left-arrow right-arrow symbols sets the minimum or maximum value.
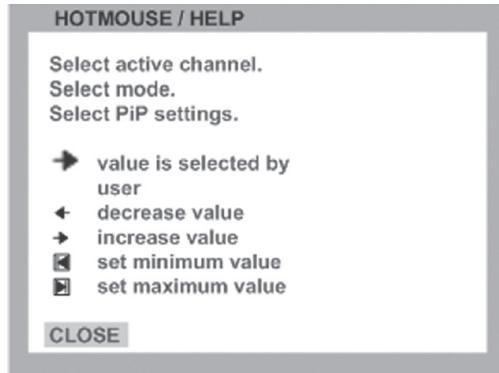
After having completed the settings, click on CLOSE to close the Hotmouse Menu window and exit the Hotmouse Function.

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CHAPTER 5: ON-SCREEN DISPLAY (OSD)

HOTMOUSE MENU - MODES

The individual modes can be set as follows:

Hotmouse Menu - QUAD MODE

Use the mouse to navigate to a channel in the Hotmouse Menu and click the left mouse button to activate it. You can also switch to a different mode with the left mouse button.
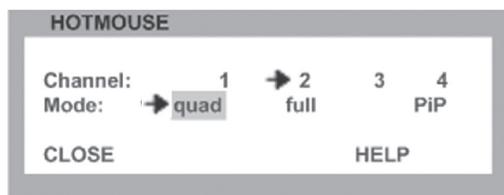

Hotmouse Menu in Quad mode

Quad mode

Hotmouse Menu - FULLSCREEN MODE

Use the mouse to navigate to a channel in the Hotmouse Menu and click the left mouse button to activate it. You can also switch to a different mode with the left mouse button.
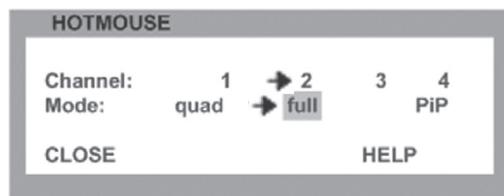
Hotmouse Menu in Fullscreen mode

Fullscreen mode

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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Hotmouse Menu – PIP MODE

Use the mouse to navigate to a channel in the Hotmouse Menu and click the left mouse button to activate it. Change position and size of PiP images, and PiP zoom.

Change PiP mode (triple / triple gap / single fixed / single direct / single scan) and scan time.

Triple gap: PiP images are displayed with a gap in place of the active channel.
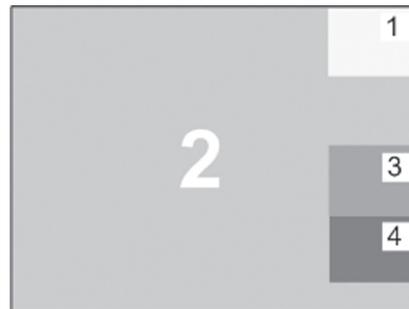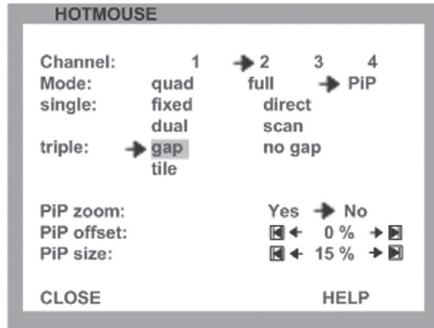
Triple no gap: PiP images are displayed without a gap.
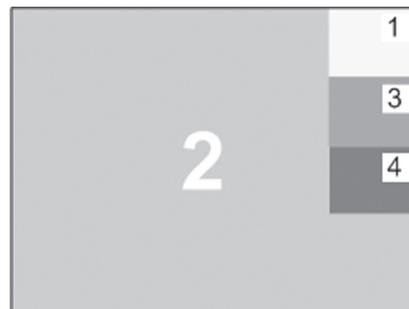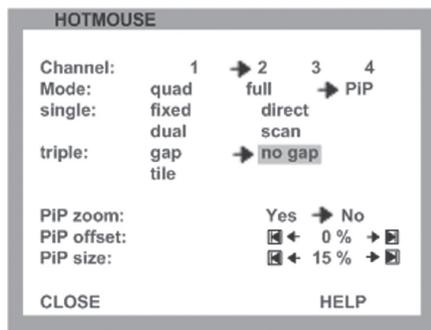
Triple tile: The size of the main image and the PiP images is optimized so that the main image and the PiP images are shown as large as possible without overlapping.

CHAPTER 5: ON-SCREEN DISPLAY (OSD)

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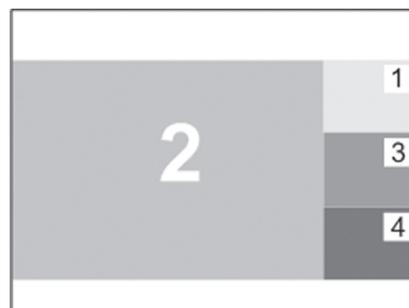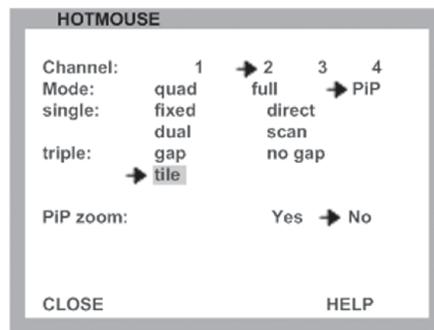
Single fixed: One selected PiP image is permanently displayed.

Single direct: Press the front panel buttons 1, 2, 3, or 4 to directly select the PiP channel you want.
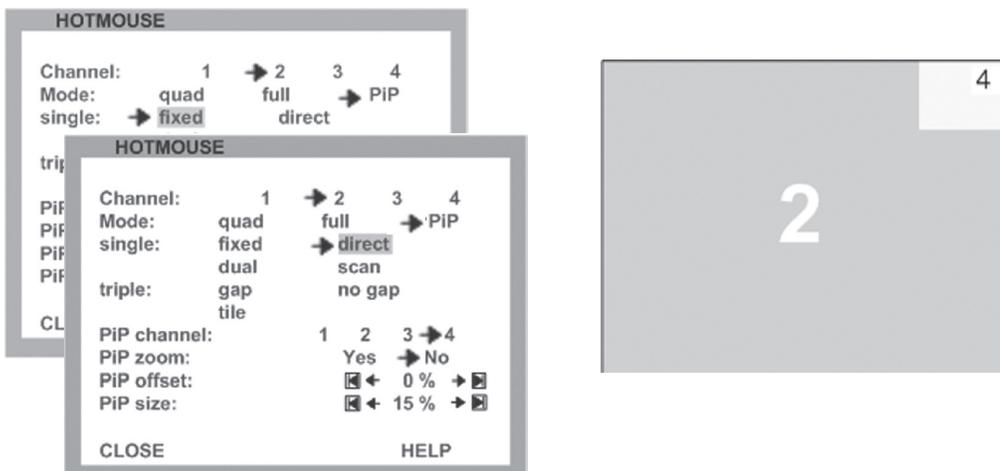
Single dual: The left half of the first channel is displayed at full size next to the left half of the second channel. Use the "active" setting to select the active channel.To switch the active channel use the OSD, Hotkeys, or front-panel buttons.
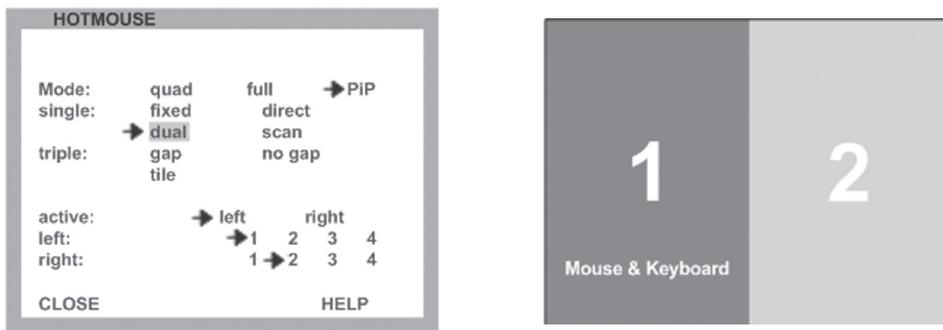
Single scan: Cycles through the PiP images at a set interval.

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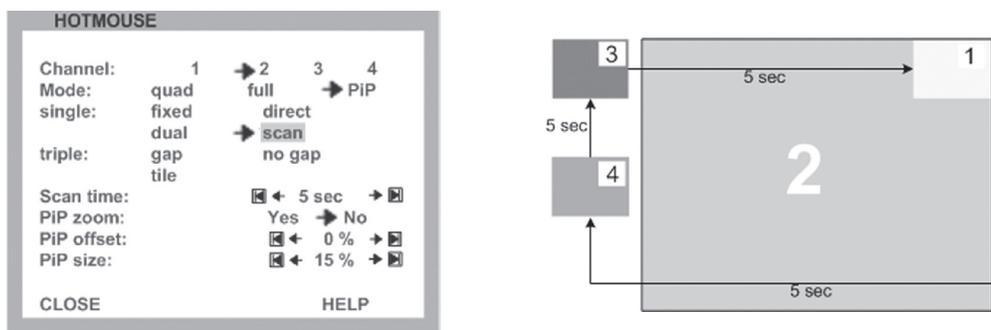
APPENDIX A. KEYBOARD COMMANDS

4Site II supports two types of hotkeys: "multiple keys" and "double-click." By default, 4Site II is set to "multiple keys."

Use the OSD menu to choose the hotkey type and keys.

Multiple keys: Press multiple keys plus command key.

COMMAND = Hotkey HK and Command-Key together

The following hotkeys are available for selection:

Ctrl   Shift   Alt   PiP

By Default: **HOTKEY HK = Ctrl + Alt**

Further examples: = **HK = Ctrl + Shift**

HK = Alt

Double-click key: Double-click one key (=hotkey) and immediately press the command key within 2 seconds.

COMMAND = Hotkey HK and Command-Key in sequence

As double-click hotkey you can choose one of the following keys:

Ctrl   Shift   Alt   Scroll

Examples: **HOTKEY HK = Scroll-Scroll**

HK = Ctrl-Ctrl

NOTES:

In command mode (hotkey is activated), LED is flashing on the keyboard. In double-click hotkey mode, pressing an invalid key leaves the command mode.

While OSD is open hotkey = Ctrl

Selecting display mode

HK + Q = Quad Mode

HK + F = Fullscreen Mode

HK + P = PiP Mode

Selecting active channel in Fullscreen/Quad/PiP

HK + 1 = Computer 1

HK + 2 = Computer 2

HK + 3 = Computer 3

HK + 4 = Computer 4

You can also use hotkey and the arrow keys to switch the active channel. In Quad and Win mode, you can select the channel on the right using the 1, 2, 3, or 4 keys on the numeric keypad.Switch the active channel with hotkey and the arrow keys. In PiP mode, the active channel automatically is displayed as full image.

Open USB device switch menu

HK + F1 = Open USB device/port 1 switch menu

HK + F2 = Open USB device/port 2 switch menu

HK + F3 = Open USB device/port 3 switch menu

HK + F4 = Open USB device/port 4 switch menu

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Other commands

HK + O = Open OSD

HK + U = Directly open OSD USB Device 1-4

HK + V = Safe output mode

HK + I = Directly open OSD PiP menu (In the background display mode switches to PiP as long as menu is open)

HK + M = Open/Close the Hotmouse

HK + ± = Adjust volume menu

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APPENDIX B. DEVICE CONFIGURATION PROGRAM

Installation of Device Configuration Program (CONFDEV)

The Device Configuration Program allows you to remotely operate the OSD of 4Site II on an external Windows computer via serial connection.

To install the device configuration software CONFDEV, you need:

◆ A Windows computer with a free USB or RS 232 COM-port

◆ Your 4Site II

◆ The installation CD containing the confdevEn.exe program

◆ The enclosed serial cable (RJ-45-DB9 adapter + RJ-45 CAT5 cable)

Rear Panel
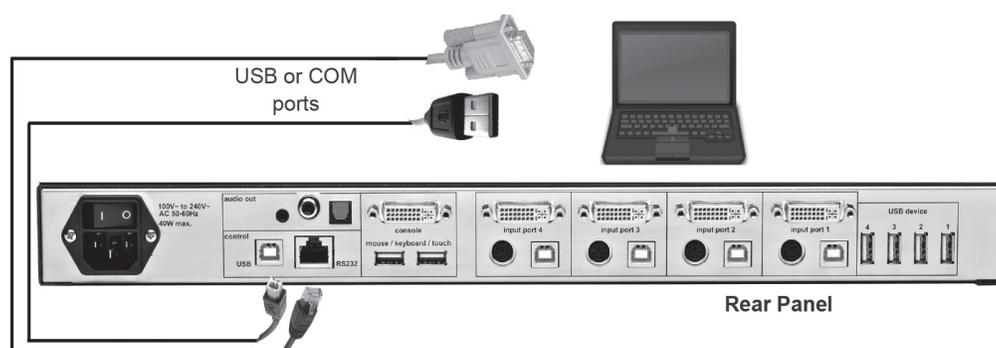
Use the serial cable to connect the COM port of the Windows computer with the serial port of your 4Site II.

Insert the installation CD into the CD-ROM drive and start the confdevEn.exe program.

The Device Configuration Program (CONFDEV) window opens:
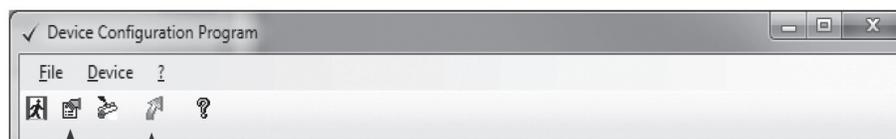
Click to open the OSD (device configuration) remotely.

Click to change settings (Eg. COM port)

APPENDIX B: DEVICE CONFIGURATION PROGRAM

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Settings

Click the "device configuration" button to open the SETTINGS window. It allows you to set the font size for the OSD window, log parameters, and the COM port 4Site II is connected to.
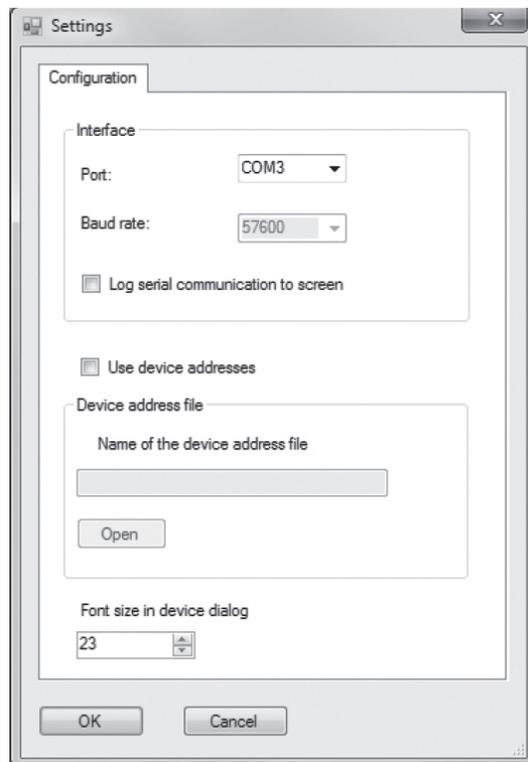
Remote OSD operation

Click the green arrow to open the On Screen Display (OSD) of 4Site II remotely on your external Windows computer. Now, the main OSD menu is open and ready for navigation.

Navigation

Use the arrow keys on the keyboard of your remote Windows computer to navigate to the desired line in the OSD menu and confirm by pressing ENTER. Use the ESC key to return to the previous menu.
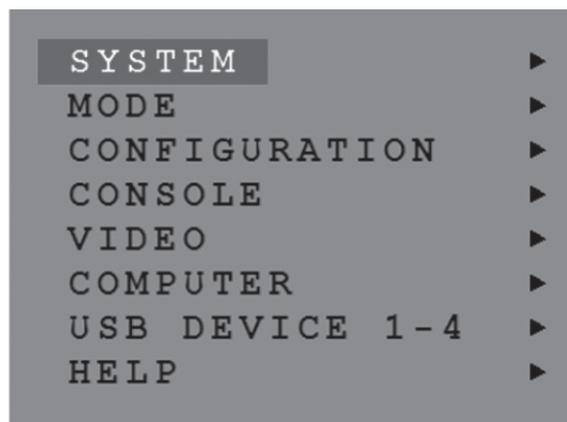
UPLOADING A BACKGROUND IMAGE

A background image can be uploaded to the 4Site II and will be displayed behind windows when in Win Mode. To upload an image to the 4Site II , use the ConfDev menu DEVICE > LOAD BACKGROUND IMAGE.

IMPORTANT: Only 256 color bitmaps are supported for background images. The file used should have a maximum size of 2 MB. The maximum resolution will be that of the monitor connected.

If an image of another format needs to be used, it must first be converted into a bitmap. There are free tools available like Gimp or Paint. NET to do this conversion. MS paint available in Windows also supports this conversion. Due to the limited color count in the bitmap format, the quality of the image may be reduced. For downloading, a compression algorithm is used. If the image cannot be compressed well, the download can take up to 30 minutes.

NOTE: A 256-color bitmap is uploaded from the user PC to 4Site II using the ConfDev utility.

STORING A CONFIGURATION

ConfDev can also be used to store device configurations to a file on your PC. Open the ConfDev menu DEVICE > STORE CONFIGURATION. The Save As dialog will appear and you can save the configuration to the desired location.

LOADING A CONFIGURATION

ConfDev can be used to load device configurations from a file on your PC. Open the ConfDev menu DEVICE > LOAD CONFIGURATION. The Open dialog will appear from which you can select the configuration file to be loaded.

APPENDIX C: FIRMWARE UPDATE

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APPENDIX C. FIRMWARE UPDATE

To execute a firmware update, you need:

◆ a computer with serial or USB port

◆ the serial cable (RJ-45-DB9 adapter + RJ-45 CAT5 cable) or a USB cable (USB-A/USB-B)

◆ the current executable firmware file

1a. Use the serial cable to connect the COM port of your computer to the RS-232 port on 4Site II.

OR

1b. Use the USB cable to connect the USB port of your computer to the USB port on 4Site II.

NOTE: The virtual com port USB driver can be downloaded from www.blackbox.com

2. Start the executable firmware file.

3. Set the desired COM port

4. Press "Update." LEDs 1-4 on the front panel of 4Site II flash (blue) during the update. Additionally, the upgrade process is indicated by an OSD window on your remote computer.

After a successful update, 4Site II restarts without changing configuration.

APPENDIX D: SERIAL CABLE

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APPENDIX D. SERIAL CABLE

For serial remote control, 4Site II requires a special adapter to connect a CAT5 cable to the serial RJ-45 port at the rear panel of 4Site II. This adapter is connected to your external serial control device (e.g. computer). To the adapter any CAT5 cable can be connected. The CAT5 cable again is connected to the RJ-45 port of 4Site II. The adapter (plus a standard CAT5 cable [in green]) is included with 4Site II.

Serial cable = Black Box adapter + standard CAT5 cable

APPENDIX E: DCP-XML REMOTE CONTROL

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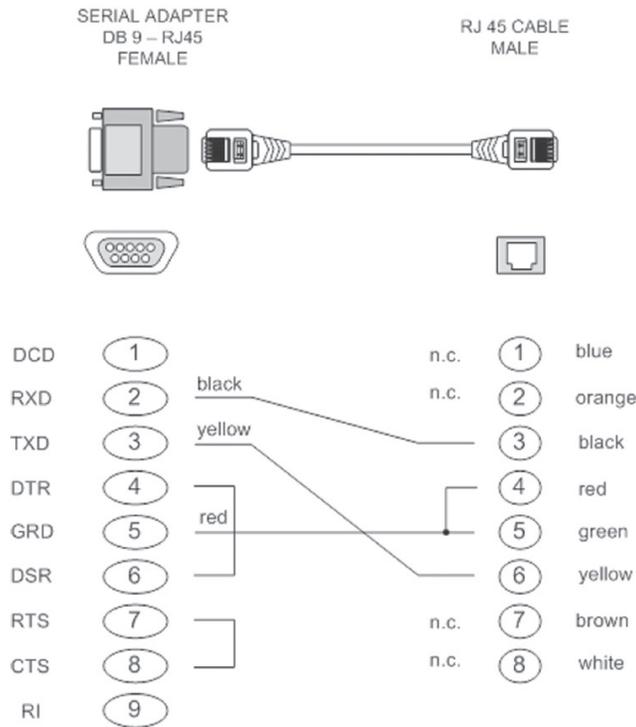
APPENDIX E. DCP-XML REMOTE CONTROL

DCP-XML permits remote control of 4Site II by a computer or other devices using the RS-232 serial port of 4Site II. To connect to this port, use the serial cable (Black Box RJ-45-DB9 adapter + standard RJ-45 CAT5 cable).

DCP is an XML-based protocol. (Device Control Protocol). Using DCP, all important settings of the 4Site II can be queried and changed.

A general description of XML can be found at http://www.w3.org/XML/

The XML scheme for DCP can be found on the enclosed CD, under the name "dcp.xsd."

For a detailed description on how to use DCP-XML with 4Site II, see the "DCP-XML Manual" on CD supplied with 4Site II.

DCP Modes

DCP has two modes of operation:

1. Control: This mode is intended for direct control of a 4Site II, for example using a computer.

2. Synchronize: This mode is used to synchronize multiple, linked devices. In Synchronize mode, 4Site II sends all settings changes as DCP messages. Thus, a chain of linked 4Site II can be controlled synchronously.

APPENDIX F: SUPPORTED TOUCHSCREEN CONTROLLER

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APPENDIX F. SUPPORTED TOUCHSCREEN CONTROLLER

4Site II supports USB touch screens having built in one of the following controllers:

Tyco ELO Touch System:

- AccuTouch Five-Wire Resistive Touch Technology: includes models 1215L, 1229L, 1515L, 1522L, 1528L Medical, 1529L, 1537L, 1715L, 1729L, 1739L, 1915L, 1928L, 1928L Medical, 1939L, 2020L

- IntelliTouch Surface Wave Touch Technology elo 2701 Controller Series (IntelliTouch, SecureTouch)

- CarrollTouch Infrared Touch Technology

(not supported: Acoustic Pulse Recognition [APR])

TSharc:

TSharc Octopus Controller: widely used, including in touch screens manufactured by 3M, Microtouch, TrollTouch, The Bergquist Company

XanQ: USB-R5W-HT580-R by XanQ Technology Corporation

3M MicroTouch:

- MicroTouch™ EX II (new release delivered since 2009 with support of HID)

- MicroTouch™ DST, only restrict: (first calibrate it at computer, then same procedure but while connected at 4Site II; only left mouse key support, right mouse key has no function). E.g. integrated at display NEC Multeos 32″ und 40″ LCD with touch option.

ET&T Technology: ETouch IR™ infra red touch screen, aluminium frame, 26″ up to 65″

eGalaxy eMPIA Technology Inc. (EETI): S5000UEGG; 4/5-Wire Resistive Touch Technology; USB;

NOTE: If your USB touch screen does not feature one of the controllers listed above or does not work with a digitizer touch screen interface, contact Black Box Technical Support at 877-877-2269 or info@blackbox.com to determine compatibility.

NOTE: New multitouch screen systems are compatible with the newly defined digitizer touch screen interface. Generally these can be used.

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APPENDIX G: SUPPORTED VIDEO INPUT/OUTPUT

APPENDIX G. SUPPORTED VIDEO INPUT/OUTPUT

VIDEO INPUT (Display Video Formats)

Mode	Resolution	Sync polarity H/V	Refresh rate analog Hz	digital* Hz	Set in EDID	VESA/CEA Standard
CGA	640x350	+/-	85	85		DMT
CGA	640x400	-/+	85	85		DMT
EGA	720x400	+/+	70	70	x	CVT
EGA	720x400	-/+	85	85		DMT
VGA	640x480	-/-	60	22 - 60	x	DMT
VGA	640x480	-/-	72	72	x	DMT
VGA	640x480	-/-	75	75	x	DMT
VGA	640x480	-/-	85	85	x	DMT
SVGA	800x600	+/+	56	22 - 56	x	DMT
SVGA	800x600	+/+	60	60	x	DMT
SVGA	800x600	+/+	72	72	x	DMT
SVGA	800x600	+/+	75	75	x	DMT
SVGA	800x600	+/+	85	85 - 180	x	DMT
XGA	1024x768	-/+	50	22- 50		CVT
XGA	1024x768	-/-	60	60	x	DMT
XGA	1024x768	-/-	70	70	x	DMT
XGA	1024x768	+/+	75	75	x	DMT
XGA	1024x768	+/+	85	85	x	DMT
XGA/B	1152x864	+/+	75	75	x	DMT
SUN	1152x900	+/+	66	66		CVT
HDTVp	1280x720	+/+	50	22 - 50		CEA-861-E
HDTVp	1280x720	+/+	60	60		CEA-861-E
WXGA	1280x768	-/+	60	60		DMT
UWXGA	1280x960	+/+	60	60		DMT
UWXGA	1280x960	+/+	85	85		DMT
SXGA	1280x1024	g	50	50		CVT
SXGA	1280x1024	+/+	60	60	x	DMT
SXGA	1280x1024	g	72	72		CVT
SXGA	1280x1024	+/+	75	75	x	DMT
SXGA	1280x1024	+/+	85	85	x	DMT
WXGA	1360x768	+/+	60	22 - 60		DMT
SXGA+	1400x1050	-/+	50	22 - 50		CVT
SXGA+	1400x1050	-/+	60	60		DMT
SGI	1600x1024	+/+	60	60		CVT
UXGA	1600x1200	+/+	50	50		CVT
UXGA	1600x1200	+/+	60	60	x	DMT
UXGAr	1600x1200	+/+	50	50		CVT
UXGAr	1600x1200	+/+	60	60		CVT
WSXGA	1680x1050	-/+	60	60		DMT
HDTVp	1920x1080	+/+	---	22 - 24		CEA-861-E
HDTVp	1920x1080	+/+	50	50		CEA-861-E
HDTVp	1920x1080	+/+	60	60	x	CEA-861-E
WUXGAr	1920x1200	+/+	50	22 - 50		CVT
WUXGAr	1920x1200	+/+	60	60	x	DMT

NOTE: * digital: all video formats up to 162 MHz pixel clock following DMT, CVT, or GTF standard timings are supported. Within this range, ANY digital resolution is supported. Analog input may not be detected correctly. See EDID/DDC.

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APPENDIX G: SUPPORTED VIDEO INPUT/OUTPUT

VIDEO OUTPUT (Display Video Formats)

The table lists all video formats supported by 4Site II at the output port.

Mode	Horizontal	Vertical	Hz
VGA	640	480	60
VGA	640	480	75
VGA	640	480	85
SVGA	800	600	60
SVGA	800	600	75
SVGA	800	600	85
XGA	1024	768	50
XGA	1024	768	60
XGA	1024	768	70
XGA	1024	768	75
XGA	1024	768	85
SXGA	1280	1024	50
SXGA	1280	1024	60
SXGA	1280	1024	75
SXGA+	1400	1050	50
SXGA+	1400	1050	60
UXGA	1600	1200	50
UXGA	1600	1200	60
UXGAr	1600	1200	50
UXGAr	1600	1200	60
XGA/B	1152	864	75
UWXGA	1280	960	60
UWXGA	1280	960	85
SUN	1152	900	66
WXGA	1280	768	60
WXGA	1366	768	60
WSXGA	1680	1050	60
WUXGAr	1920	1200	40
WUXGAr	1920	1200	50
WUXGAr	1920	1200	60
HDTVp	1280	720	50
HDTVp	1920	1080	24
HDTVp	1920	1080	50
HDTVp	1920	1080	60

NOTE: When set to auto (by default) 4Site II reads the EDID of the monitor connected and automatically supports its resolution.

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APPENDIX H: CASCADING

APPENDIX H. CASCADING

CASCADING multiple 4Site II units - more than 4 video sources on a single display

4Site II can be cascaded in order to display more than 4 video sources simultaneously on a single display.

In this master-slave-system, any 4Site II can be used as master or slave. It is the same hardware. One 4Site II is used as master unit. The console that has a keyboard, mouse and display or touchscreen is connected to the output of the master unit. A slave 4Site II can be connected to each input of the master unit. In this way, each quadrant on the display can be split in four more quadrants.

Example: In a setup with one master and four slave 4Site II a total of 16 video sources can be displayed simultaneously on a single console.

All display modes:

Display modes (Fullscreen, Quad, PiP) of slaves and master can individually be set, combined, and switched, e.g. the master unit could be set to Quad mode, while the first slave is set to PiP, the second slave to Fullscreen, the third slave to Quad, and the fourth slave to PiP mode. Any combination is possible.

Keyboard and mouse operation:

Keyboard and mouse can be activated on any of the up to 16 computers connected to operate these.

Hotkeys for switching:

Use hotkeys to quickly activate any of the e.g. 16 channels or to switch the display mode of any of the 4Site II units in the master-slave-system.

Different levels (master or slave) require different types of hotkeys.

For example, keep the hotkey default setting **HK1 + Ctrl + Alt** for all slave 4Site II.

Just change the hotkey setting for the master 4Site II to **HK2 + Ctrl + PiP**

Example:

In a cascaded 4Site II setup with one master, 4 slaves, and 16 computers connected you can activate keyboard and mouse of computer 16 by pressing the following hotkey combination:

HK2 + 4 (to activate the channel 4 on the master level), then **HK1 + 4** (to activate the channel 4 on the slave 4Site II connected to port 4 of the master)

Example:

To change a display mode of e.g. the slave 4Site II connected to port 4 of the master 4Site II, press the following hotkey combination:

HK2 + 4 (to activate the channel 4 on the master level), then **HK1 + P** to switch from default Quad mode to PiP mode in this quadrant. The result is a screen split in four equal quadrants. All quadrants are split again in four equal quadrants (Quad mode), just the quadrant in the lower right corner (channel 4) is showing its four sources in PiP mode.

NOTE: Use a programmable keyboard for comfortable switching of cascaded 4Site II. Behind a single key you can program a combination of hotkeys. By pressing a single key you can activate keyboard and mouse of one of e.g. 16 computers connected or the switch display mode of the master or any of the four slave 4Site II.

APPENDIX I: REGULATORY INFORMATION

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APPENDIX I: REGULATORY INFORMATION

I.1 FCC CLASS A STATEMENT

This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used

properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment 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 necessary to correct the interference.

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

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

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APPENDIX I: REGULATORY INFORMATION

I.2 NOM STATEMENT

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.

2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.

3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.

4. Todas las instrucciones de operación y uso deben ser seguidas.

5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.

6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.

7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.

8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.

9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.

10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.

11. El aparato eléctrico deberá ser connectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precaución debe ser tomada de tal manera que la tierra fisica y la polarización del equipo no sea eliminada.

13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.

14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.

15. En caso de existir, una antena externa deberá ser localizada lejos de las lineas de energia.

16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.

17. Cuidado debe ser tomado de tal manera que objectos liquidos no sean derramados sobre la cubierta u orificios de ventilación.

18. Servicio por personal calificado deberá ser provisto cuando:
    A: El cable de poder o el contacto ha sido dañado; u
    B: Objectos han caído o líquido ha sido derramado dentro del aparato; o
    C: El aparato ha sido expuesto a la lluvia; o
    D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
    E: El aparato ha sido tirado o su cubierta ha sido dañada.

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J.1 DISCLAIMER

Black Box Corporation shall not be liable for damages of any kind, including, but not limited to, punitive, consequential or cost of cover damages, resulting from any errors in the product information or specifications set forth in this document and Black Box Corporation may revise this document at any time without notice.

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