Installation and Operation Manual Videohub Smart Control





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3 Welcome



Welcome to Videohub Smart Control!

Videohub Smart Control is simple to install. We've extracted the relevant pages from the Videohub manual so you don't need to read too much. All the information in this mini manual can also be found in the Videohub manual.

We hope you share our dream for the television industry to become a truly creative industry by allowing anyone to have access to the highest quality video.

Previously high end television and post production required investment in millions of dollars of hardware, and professional SDI routing switchers have always been way too high in cost for most people to afford. HD-SDI is even worse and until now, only the largest post production and television facilities could afford HD-SDI routing. Videohub changes all that and even enables you to pipe 2K film around your studio just like video. Now Videohub Smart Control makes it even easier to route video using dedicated, broadcast quality, hardware control panels that are also affordable. We hope you get years of use from it and have lots of fun connecting everyone in your facility together!

This instruction manual should contain all the information you'll need on installing your Videohub Smart Control, although it's always a good idea to ask a technical assistant for help if you are not sure what IP addresses are, or if you don't know much about computer networks. Videohub Smart Control is easy to install, however, there are a few slightly technical preferences you will need to set after you install it.

We think it should take you approximately 5 minutes to complete installation. Please check our web site at www.blackmagic-design.com and click the support page to download the latest updates to this manual and Videohub software including the Blackmagic Videohub Smart Control utility. Lastly, please register your Videohub Smart Control when downloading software updates so we can keep you updated when new software is released. We are constantly working on new features and improvements, so we would love to hear from you!

Grant - etty

Grant Petty CEO Blackmagic Design

4 Welcome



How to read as little of this manual as possible

Most people only need to read one or two pages out of each section of this manual and there is no need to read every page. Here is what you'll learn in each section.

Planning

First, go to the "Planning your Videohub Installation" section for your Videohub Smart Control. This section provides you with all the information you need to know before buying or installing a Videohub Smart Control. You can plan how to set it up so there are no nasty surprises.

Hardware Installation

Hardware Installation covers connection of Videohub Smart Control via Ethernet and USB as well as how to make neat labels and avoid damaging the unit.

Software Installation and Configuration

Now it's time to install and configure the software for your Videohub Smart Control.

Routing Video

Now that the hardware and software is set up, it's time to start routing video!

5 Planning Your Videohub Installation

Videohub Smart Control



6 Planning Your Videohub Installation

Planning your Videohub Smart Control Installation

Videohub Smart Control is a rack-mountable control panel, with 40 backlit pushbuttons and Ethernet connectivity, which works with all models of Videohub. It can be configured to work with one or many SDI destination devices, using the included software utility for Mac OS X and Windows. Once configured for your SDI equipment and Videohub router, Videohub Smart Control no longer requires a computer and can immediately change SDI routes as desired.

The front panel of Videohub Smart Control can be removed to allow insertion of labels under the buttons. All 40 pushbuttons can be variably backlit to ensure the labels can be easily read, even in dark rooms.

When configured for a single SDI destination, such as a monitor or deck, the pushbuttons can instantly switch between 40 different SDI sources on the same Videohub router. When configured for multiple SDI destinations, destination buttons become gold colored, source buttons become white, and the lower right button can be configured as a take button and illuminates red. Macro buttons illuminate green when enabled and each one can be configured to perform up to 16 simultaneous crosspoint switches. The Blackmagic Videohub Smart Control configuration utility runs on Mac OS X and Windows computers and uses a USB 2.0 connection to Videohub Smart Control. You will need to provide a USB 2.0 type A to mini B male cable.

This same USB cable can be used for applying occasional firmware updates downloaded from the Blackmagic Design website. Programmable firmware can provide new features, compatibility with new hardware and support for new formats. The Blackmagic Videohub Smart Control utility is used to apply firmware updates, on Mac OS X and Windows computers, and uses a USB 2.0 connection to Videohub Smart Control.

Videohub Smart Control connects to any Videohub via 10/100Base-T Ethernet networking and also includes a loop through Ethernet port for connecting to additional control panels, Videohub routers or other network devices. You will need to provide a standard RJ45 Ethernet network cable to connect Videohub Smart Control to your Ethernet network switch.

Videohub Smart Control features power over Ethernet meaning no external power supply is required if used with a power over Ethernet switch. If your Ethernet switch does not provide power over Ethernet, use the included universal power supply with international power socket adapters for all countries. To stop power from being accidentally disconnected, a cable tie point is included just below the power socket to lock down the power connection. You will need to provide a mains power socket for the universal power supply.

Videohub Smart Control is 1 rack unit high and less than an inch thick. You will need to leave enough space in your equipment rack to install the Videohub Smart Control hardware. You can rack-mount Videohub Smart Control at the front or at the rear of the rack to leave space for other equipment. When configured for a single SDI destination, install Videohub Smart Control immediately under an SDI deck or monitor you wish to control. If you don't have a rack, then you can leave it in a safe place on the floor!

Connecting Videohub Smart Control with Ethernet

Videohub Smart Control connects to any Videohub via standard Ethernet networking and can be powered over Ethernet or with an external power supply. Videohub Smart Control has two 10/100Base-T Ethernet ports. The In port usually connects directly to the Ethernet network switch and then to any Videohub router on your local area IP based network. Alternatively the In port can connect directly to any Ethernet-equipped Videohub using a standard Ethernet cable and without the need for a network switch. The Out port provides a loop through Ethernet connection to additional control panels, Videohub router or other network devices. The loop through Ethernet connection is useful if you want to add Videohub Smart Control to your network without having to run an additional cable back to the network switch.

You will need to carry out the following steps to connect Videohub Smart Control to the local area IP based network.

- Step 1. Videohub Smart Control features power over Ethernet meaning no external power supply is required if used with a power over Ethernet switch. You can skip this step if your network switch provides power over Ethernet. Otherwise connect the included power supply to Videohub Smart Control. No problem will be caused by connecting the power supply and power over Ethernet at the same time.
- **Step 2.** Use the network In port on Videohub Smart Control to connect to your network switch, or directly to an Ethernet-equipped Videohub, with a standard RJ45 Ethernet cable.
- Step 3. You might also wish to connect another network device to the network Out port on Videohub Smart Control, such as a Videohub router, another Videohub Smart Control or other network devices such as a computer or VoIP phone. The Out port does not provide power over Ethernet and any network device connected to this port will require its own power supply.

In most facilities, Videohub is usually shared via an Ethernet network switch so it can be controlled by computers on the network as well as by Videohub Smart Control. See "Connection method 1".



Connection method 1. Connecting to an Ethernet-equipped Videohub via a network switch.

Videohubs without a built-in Ethernet port can be connected as shown in "Connection method 2".



Connection method 2. Connecting to a USB-attached Videohub via a network switch.

You might wish to connect your Videohub Smart Control directly to an Ethernet-equipped Videohub if:

- you need to set up very fast
- you don't have any requirement to share Videohub on the network so it can be controlled by computers on the network
- you don't have much space, such as in an OB van
- you have a limited power budget, such as in an OB van

A regular Ethernet cable can be used between Videohub Smart Control and the Videohub. There is no need to use a special crossover cable. See "Connection method 3".



Connection method 3. Connecting directly to an Ethernet-equipped Videohub.

When power is first connected to Videohub Smart Control, a self-test will be conducted and all the buttons will display their test lights in the following sequence: red, green, blue and white.

The top left button of a Smart Control panel indicates its network status, using the following diagnostic display, as long as the panel is not selected in the Videohub Smart Control software:

Pink flashing light - unit is attempting to acquire an IP address. The button should quickly become red if the unit is set to use a static IP address, or if the unit successfully acquires an IP address from the DHCP server. If the button took several minutes before turning red, the unit has failed to acquire an IP address and has eventually provided itself with a self-assigned AutoIP address in the 169.254.xxx. xxx format. Unless you wish to use an AutoIP address, disconnect and firmly reconnect the network cables to ensure they are properly connected, check for faulty network cables and make sure the DHCP server has spare IP addresses available. Then unplug and reconnect all power sources from Videohub Smart Control so it will request a new IP address from the DHCP server. The button should quickly become red.

Red flashing light - unit has acquired an IP address and is attempting to connect to the Videohub Server. Make sure the Videohub Server is powered on and connected via Ethernet.

Yellow flashing light - unit has connected to a Videohub Server computer but the Videohub Server is running an incompatible software or firmware version. Update Videohub with the latest version of Videohub software and firmware and then power cycle Videohub Smart Control.

No flashing light - unit has successfully connected to the Videohub Server and is ready to control the Videohub if solid white, or solid white and gold, lights can be seen.



Side view of Videohub Smart Control showing the mini-B type USB port

Connecting Videohub Smart Control with USB

A USB 2.0 connection, to a computer, is used to configure the network and button settings of Videohub Smart Control.

When viewed from the rear of the unit, the mini-B type USB port can be found on the small, left panel of the chassis, just in front of the rack-mounting holes.

The USB port will become inaccessible once Videohub Smart Control has been installed in a rack. Therefore most people will usually configure Videohub Smart Control via USB, and then remove the USB cable, before installing the unit in a rack.

If you are likely to reconfigure Videohub Smart Control periodically, then it may be more convenient to permanently connect a USB cable to the unit before installing Videohub Smart Control in a rack. This will enable Videohub Smart Control to connect to a computer via USB without needing to remove the unit from the rack.



Steps 3-5. Remove the 4 screws, lift off the face plate and then the button caps $% \left({{{\rm{T}}_{\rm{s}}}} \right)$



Step 7. Lightly press the four corners of the square label into the rounded corners of the clear cap

Labelling Control Panels

Videohub Smart Control and Smart Videohub have removable face plates which provide access to the buttons for labelling.

Included with the software installer is a Smart Labels folder containing both PDF and Adobe Illustrator template files. You can print and use either of these files for labelling the buttons. The Illustrator file contains text boxes so you can add your text labels before printing them out. If you don't have Adobe Illustrator, you can just print out the PDF file and write on the labels. Then cut out the square labels so they are ready to be inserted in to the buttons.

To remove the face plate:

- Step 1. Power off the unit and disconnect all cables.
- **Step 2.** Remove the unit from the rack and lay it flat with the buttons facing upwards and the Ethernet ports face-downwards on the table.
- **Step 3.** Using a No. 2 Phillip's head screwdriver, remove the 4 screws found on each of the top and bottom sides of the faceplate.
- Step 4. Now lift the face plate off the rest of the unit.
- **Step 5.** The button caps can be easily lifted off with your fingers. Remove the clear cap from a button that you wish to label, while taking care to avoid lifting the silicon button membrane.
- **Step 6.** Loosely place the printed label into the upturned clear cap.
- **Step 7.** Use a pointy device, such as the tip of a screwdriver, to lightly press the four corners of the square paper label into the four, rounded corners of the clear cap. Avoid using a pen for the pointy device as it is likely to mark your labels.
- **Step 8.** Reinstate the clear cap containing the printed label. As the clear cap is pressed down on to its silicon button, the paper label will be pushed forward, and neatly held flat against the window of the clear cap. Repeat for as many buttons as you wish to label.
- **Step 9.** Lower the face plate back into position, making sure the Blackmagic Design logo is the correct way up.
- **Step 10.** Replace the eight screws.



Mac OS X installation: Drag the Blackmagic Videohub Smart Control utility to the Applications folder



Windows installation: Follow install prompts.

Installing the Videohub Smart Control Software

The Blackmagic Videohub Smart Control software runs on the latest Lion and Mountain Lion versions of Mac OS X. On the Windows platform, Videohub software runs on both 32 and 64-bit versions of Windows 7 with the latest service packs installed. Testing on previous versions of these operating systems is not conducted and so it is always best to keep up to date with the latest versions of Mac OS X and Windows.

The Blackmagic Videohub Smart Control software only needs to be installed on one computer running Mac OS X or Windows.

While the CD supplied with some models of Videohub contains the software installer, we recommend you visit www.blackmagic-design.com to ensure you have the latest version.

On Mac OS X, open the supplied CD, or downloaded disk image, and drag the Blackmagic Videohub Smart Control utility to your Applications folder.

The Videohub software installer for Windows also installs the Blackmagic Videohub Smart Control utility and there is nothing more you need to install. If you have not already installed the latest version of the Videohub software for Windows, you will need to conduct the following steps.

Locate the installer file and double-click it. This will be on the supplied CD or, if downloaded from the Blackmagic website, in your downloads folder. A dialog will appear saying, "Found new hardware" and the Hardware Wizard will start. If prompted to search the Windows Update Website, select, "No, not at this time" and click "Next".

Select "Install the Software Automatically" and the system will find the Videohub Smart Control drivers for you.

A "This software has not passed logo certification" or "The publisher could not be verified" warning may reappear during this process. Choose to "Continue Anyway" or "Run".

Once this is complete and Videohub Smart Control is connected and powered on, you are ready to configure the device for your facility.



Blackmagic Videohub Smart Control application icon

Software Update Required						
The software on this Smart Control is out of date. Would you like to update it now?						
Yes No						

This message will appear if a firmware update is required.



The update will take about 2 minutes to complete.

Updating the Software in Your Videohub Smart Control

Once the software installation has been completed and Smart Control is powered on, it is a good idea to check that the internal software is up to date.

- Step 1. Launch the Blackmagic Videohub Smart Control utility.
- Step 2. Connect your Smart Control unit to the computer via USB 2.0.
- Step 3. If no software update is required, you will simply see the settings used by your Smart Control. Settings can be changed now if desired and this is a good opportunity to give each Smart Control a unique name. Please skip the rest of the steps in this section as your Smart Control is already up to date.

If a software update is required, the following message will appear: "Software Update Required. The software on this Smart Control is out of date. Would you like to update it now?" Click <u>Yes</u>. The update will take about 2 minutes to complete.

Step 4. The message, "Software Update Complete," should appear at completion of the update. Click ok to dismiss the message. Settings can be changed now if desired and this is a good opportunity to give each Smart Control a unique name.

Step 5. You can now unplug the USB cable from your Smart Control.

Smart Control Panels

••• Blackmagic Smart Control

Any panels discovered on the network will be listed in the Smart Control Panels pane with an Ethernet network icon.



Any USB-connected panels will be listed in the Smart Control Panels pane with a USB icon.

Configuring the Videohub Smart Control Software

After installing the Videohub Smart Control software, launch Blackmagic Videohub Smart Control and it should immediately search your network for any Smart Control panels. Any panels discovered on the network will be listed in the Smart Control Panels pane with an Ethernet network icon next to their names. If several Smart Control panels are listed, but you don't know which one is which, select one of them and then press the "Identify" button. This will cause all the buttons of the selected Smart Control panel to flash white.

Select the name of the desired Smart Control panel and you will be able to change the Smart Control name and also the button settings for each Smart Control. Network settings will remain grayed out and can only be changed via USB.

If no Smart Control panels are found on the network, some units might not have received an IP address via DHCP and it will be necessary to manually configure each unit with appropriate network settings. To do so, connect a Smart Control to your computer via a USB 2.0 type A-mini B male cable and launch Blackmagic Videohub Smart Control. If the utility prompts you to update the software, refer to the previous section named "Updating the Software in Your Videohub Smart Control". The USB-connected Smart Control will be automatically selected in the Smart Control Panels pane and will show a USB icon next to its name. You will be able to change all name, network and button settings for the USB-connected unit. After you have finished configuring the unit, the USB cable can be removed.



The Videohub Smart Control utility automatically searches your network for any Smart Control panels. One panel has been found in this picture.



Blackmagic Videohub Smart Control network settings



You can manually add a Smart Control, by IP address, to the list of Smart Control Panels

If a Smart Control panel is selected in the Videohub Smart Control software, all of the panel's buttons will illuminate with the same colors and intensity as shown in the software interface. While the panel is selected in the software, the top left button will not indicate the status of the unit.

After configuring the network and button settings in the Blackmagic Videohub Smart Control utility, quit the software or unplug its USB connection. If the top left button begins to flash, refer to the diagnostic light information in the previous section named "Connecting Videohub Smart Control with Ethernet." Otherwise, you can immediately test the buttons as you program them and verify the SDI routes are valid.

Network Settings

Each Videohub Smart Control unit requires an IP address in order to communicate with a Videohub via the IP-based network.

When configuring Videohub Smart Control via USB, you can choose DHCP or Static IP. DHCP automatically obtains all the network settings for your Videohub Smart Control and is the easier choice.

If you decide to use a static IP address, please ask your system administrator for a spare IP address to avoid creating an IP conflict on your network. You will then need to complete the IP address, subnet mask and gateway details for your Videohub Smart Control hardware. A static IP address must be used if directly connecting Videohub Smart Control to an Ethernet-equipped Videohub without using a network switch.

You will also need to complete the IP details for the Remote Videohub which you wish to control with your Videohub Smart Control. The remote Videohub is the Videohub Server and could refer to a Videohub Server computer or an integrated Videohub Server.

Add Smart Control

If you already know the IP address of a Smart Control but it hasn't automatically appeared in the Smart Control Panels pane, you can add the Smart Control manually. To do so, click Add Smart Control (+) at the bottom of the Smart Control Panels pane. Type in the IP address of the Smart Control panel and click OK. The software will verify the presence of the Smart Control unit and add it to the Smart Control Panels list. If the Blackmagic Videohub Smart Control utility does not find a Smart Control at the specified address, it will not add the unit to the list and will instead present an error message. You can use Blackmagic Smart Control Utility to manually add a Smart Control when connected to Smart Control hardware via Ethernet or USB.

Button Settings	
Number of Destinations	4
Destination	

Blackmagic Videohub Smart Control configured with multiple destinations.

Videohub Smart Contro	k	Blackmagicdesign
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	Network Settings	Battor: Settlergs
Pouter SCI in B		

Click on the desired Source or Destination button to configure the button.



Enter the number of the Videohub port to which the SDI device is connected.

Button Settings: Number of Destinations

Videohub Smart Control can be configured as a Cut-Bus controller or as an XY controller.

When configured as a Cut-Bus controller, every button represents an SDI source and there is only one destination. Use this configuration when dedicating a Videohub Smart Control unit to a single destination device, such as an SDI monitor or deck. All of the buttons will become white to indicate that they are all source buttons. Simply slide the "Number of Destinations" slider all the way to the left so the number of destinations becomes "1". The "Destination" button below the slider will become active. Click on the active "Destination" button and enter the number of the Videohub output port, to which the destination device is connected, in to the "Router SDI Out A" field. If your destination device is receiving dual-link HD-SDI or dual-stream 3D, you will also need to enter an output port number in to the "Router SDI Out B" field. There is also a "Router Remote" field if your Videohub is also routing RS-422 deck control to the destination device. Click "OK" to confirm the Destination settings.

When configured as an XY controller, Videohub Smart Control can be configured to work with up to 20 destinations. The source buttons will illuminate white and the destination buttons will illuminate gold-colored. Use this configuration if you don't intend to dedicate a Videohub Smart Control unit to each destination device. Simply slide the "Number of Destinations" slider to the right so the number of destinations increases to the desired number. The "Destination" button below the slider will become grayed out and inactive. You can now configure the destination buttons by clicking on each gold button in the software interface. Enter the number of the Videohub output port, to which the destination device is connected, in to the "Router SDI Out A" field. If your destination device is receiving dual-link HD-SDI or dual-stream 3D, you will also need to enter an output port number in to the "Router SDI Out B" field. There is also a "Router Remote" field if your Videohub is also routing RS-422 deck control to the destination device. Click "OK" to confirm the destination settings. If you increase the number of destination buttons, there will be a corresponding decrease in the number of available source buttons.

Source buttons are configured in much the same way as destination buttons by clicking on each white button in the software interface. Enter the number of the Videohub input port, to which the source device is connected, in to the "Router SDI In A" field. If your destination device is receiving dual-link HD-SDI or dual-stream 3D, you will also need to enter an input port number in to the "Router SDI In B" field. There is also a "Router Remote" field if your Videohub is also routing RS-422 deck control from the source device. Click "OK" to confirm the source settings.

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Number of Mac	ros	
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Button settings in Blackmagic Videohub Smart Control.

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Using DHCP		D			
Using Static IP		E			
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Up to 16 crosspoint routes can be changed by a single macro.



The Take button illuminates red in the lower right corner

Button Settings: Number of Macros

If you want to make multiple crosspoint routing changes simultaneously, you can enable macro buttons so that a single button press will change up to 16 crosspoint routes. Slide the "Number of Macros" slider to enable up to 10 macro buttons. As you increase the number of macro buttons, there will be a corresponding decrease in the number of available source buttons.

Click a green macro button to reveal the corresponding Macro window and then enter up to 16 pairs of sources and destinations. When finished, click the OK button to save the routes and close the window.

Button Settings: Take Button

When the "Use Take Button" is enabled, the lower right button becomes red-colored. Use this configuration if you wish to be able to select a change of route and then confirm the change by pressing the red "Take" button.

The take button can be used with both Cut-Bus and XY controller configurations and can also be used with macros.

When the take button is enabled, it replaces whatever source, destination or macro button had previously been configured in the same button location.

Button Settings: Backlight

Adjust the backlight slider to vary the brightness of the backlit buttons as desired.

Enable the "Backlight Destinations Only" button if you wish to disable the backlighting of the white source buttons.

Load/Save Settings

If you intend to use your Videohub Smart Control as a Cut-Bus controller, and dedicate a number of Videohub Smart Control units to single destination devices in your facility, it can be convenient to save the settings from an already configured unit and then load the settings file in to the other units. After loading the pre-configured settings in to the other units, you need only update network settings and the SDI destination device for each of the other units. Load/Save settings can also be used with XY controller configurations. You can load and save settings by choosing "Load Settings" or "Save Settings" from the File menu.

18 Using Hardware Control Panels

Videohub Smart Control configured as a Cut-Bus controller and with a Take button

Videohub Smart Control configured as an XY controller and with a Take button

Using Videohub Smart Control

After configuring the Videohub Smart Control hardware with the Blackmagic Videohub Smart Control software utility, there is nothing more to do other than change video routes as desired.

Using Videohub Smart Control as a Cut-Bus Controller

If Videohub Smart Control has been configured as a Cut-Bus controller, the destination device has already been chosen and you only need to choose a video source.

- Select one of the white, video source buttons. The video source will immediately be connected and viewable on the destination device, such as an SDI monitor. The selected source button will be brightly illuminated compared with the other source buttons making it obvious which source has been chosen.
- If the Take button has been enabled, the current source button will remain lit and both the new source button and the Take button will begin to flash. The change of route will not take place until you confirm by pressing the Take button. If you accidentally pushed the wrong source button, simply press the desired source button before pressing the Take button.

Using Videohub Smart Control as an XY Controller

If Videohub Smart Control has been configured as an XY controller, destination buttons appear gold-colored and source buttons illuminate white. When working with multiple destinations, always select a destination button before selecting a source button.

- To change routes, start by selecting a gold destination button and it will illuminate brightly compared with the other destination buttons. If a video source has previously been connected to this destination, it's button will be brightly illuminated white. Now press the desired video source button to connect a new source to the destination. The video source will immediately be connected and viewable on the destination device, such as an SDI monitor. The new source button will brightly illuminate white, and the brightness of the previous source button will reduce to normal. To change another route, select another destination button and then select a new source button.
- If the Take button has been enabled, the current source button will remain lit and both the new source button and the Take button will begin to flash. The change of route will not take place until you confirm by pressing the Take button. If you accidentally pushed the wrong source button, simply press the desired source button before pressing the Take button.

Locking and Unlocking Routes

If you wish to lock a destination using Videohub Smart Control, press and hold the desired destination for 2 seconds until it turns blue and then release it. The corresponding source button will also illuminate. If you attempt to change sources for a locked destination, the destination button will flash blue because the route is locked so the source cannot be changed.

To unlock the destination, press and hold the button for two seconds until it returns to the standard gold color. You cannot unlock destination buttons locked by another computer, iPad or Smart Control, and the locked destination button will flash blue if you attempt to do so. If you encounter a locked destination, and do not know who locked the video device, you can override the lock using the Videohub software on a Mac OS X or Windows computer.

Using Macros

If you press a green macro button, it will simultaneously make the crosspoint changes you have previously configured in the Videohub Smart Control software. Each button can be configured with up to 16 crosspoint routes.

If you have the Take button enabled, the simultaneous change of routes will not take place until you confirm by pressing the Take button.

20 Help



There are four steps to getting help.

- **Step 1.** Check out the Blackmagic Design web site www.blackmagic-design.com and click on the Support page for the latest support information.
- Step 2. Call your dealer.

Your dealer will have the latest technical updates from Blackmagic Design and should be able to give you immediate assistance. We also recommend you check out the support options your dealer offers as they can arrange various support plans based on your workflow requirements.

Step 3. The next option is to email us with your questions using the web form at

www.blackmagic-design.com/support/contact

Step 4. Phone a Blackmagic Design support office. Check our web site for current support phone numbers in your area. www.blackmagic-design.com/company.

Please provide us with as much information as possible regarding your technical problem and system specifications so that we may try to respond to your problem as quickly as possible.

Limited Warranty

Blackmagic Design warrants that Videohub routers will be free from defects in materials and workmanship for a period of 36 months from the date of purchase excluding connectors, cables, cooling fans, fuses, keyboards and batteries which will be free from defects in materials and workmanship for a period of 12 months from the date of purchase. Blackmagic Design warrants that Videohub Smart Control will be free from defects in materials and workmanship for a period of 12 months from the date of purchase. Blackmagic Design warrants that Videohub Smart Control will be free from defects in materials and workmanship for a period of 12 months from the date of purchase. If a product proves to be defective during this warranty period, Blackmagic Design, at its option, either will repair the defective product without charge for parts and labor, or will provide a replacement in exchange for the defective product.

In order to obtain service under this warranty, you the Customer, must notify Blackmagic Design of the defect before the expiration of the warranty period and make suitable arrangements for the performance of service. The Customer shall be responsible for packaging and shipping the defective product to a designated service center nominated by Blackmagic Design, with shipping charges pre paid. Customer shall be responsible for paying all shipping changes, insurance, duties, taxes, and any other charges for products returned to us for any reason.

This warranty shall not apply to any defect, failure or damage caused by improper use or improper or inadeguate maintenance and care. Blackmagic Design shall not be obligated to furnish service under this warranty: a) to repair damage resulting from attempts by personnel other than Blackmagic Design representatives to install, repair or service the product, b) to repair damage resulting from improper use or connection to incompatible equipment, c) to repair any damage or malfunction caused by the use of non Blackmagic Design parts or supplies, or d) to service a product that has been modified or integrated with other products when the effect of such a modification or integration increases the time or difficulty of servicing the product. THIS WARRANTY IS GIVEN BY BLACKMAGIC DESIGN IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED. BLACKMAGIC DESIGN AND ITS VENDORS DISCLAIM ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. BLACKMAGIC DESIGN'S RESPONSIBILITY TO REPAIR OR REPLACE DEFECTIVE PRODUCTS IS THE WHOLE AND EXCLUSIVE REMEDY PROVIDED TO THE CUSTOMER FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES IRRESPECTIVE OF WHETHER BLACKMAGIC DESIGN OR THE VENDOR HAS ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES. BLACKMAGIC DESIGN IS NOT LIABLE FOR ANY ILLEGAL USE OF EQUIPMENT BY CUSTOMER. BLACKMAGIC IS NOT LIABLE FOR ANY DAMAGES RESULTING FROM USE OF THIS PRODUCT. USER OPERATES THIS PRODUCT AT OWN RISK.

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