

DVR 8X8

8-PORT DVI-D MATRIX SWITCH



USER MANUAL



Designed and Manufactured in the USA

Smart-AVI

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TECHNICAL SPECIFICATIONS

VIDEO	
Format	DVI-D Single Line
Input Interface	(8) DVI-I 29-pin (Female)
Output Interface	(8) DVI-I 29-pin (Female)
Resolution	Up to 1920 x 1200 @ 60Hz
DDC	5 volts p-p(TTL)
Input Equalization	Automatic
Input Cable Length	Up to 20 ft
Output Cable Length	Up to 20 ft
CONTROL	
Front Panel	Buttons, Select/Switch between sources and view the current selected channel
RS-232	DB9 Female - 115200, N,8,1, No flow control
IR Remote Control	Remote Control and IR EYE (Optional)
OTHER	
Power Supply	External 100-240 VAC / 5VDC4A
Dimensions	17" W x 7" D x 2" H
Weight	2.55 lbs
Operating Temperature	0 to 55 °C (32 to 131°F)
Storage Temperature	-20 to 85 °C (-4 to 185 °F)
Humidity	Up to 95% No Condensation

WHAT'S IN THE BOX?

PART NO.	Q-TY	DESCRIPTION
DVR8X8S	1	DVI-D 8x8 Router
PS5VDC4A	1	Power Adapter
SM-EYE2	1	IR Eye (Optional)
SAVI-RMT	1	IR Remote Control (Optional)
EN-DVR8X8-EAR-P	1	Rack Mount Brackets
	1	User Manual

FRONT AND BACK



DVR 8X8 Front Panel

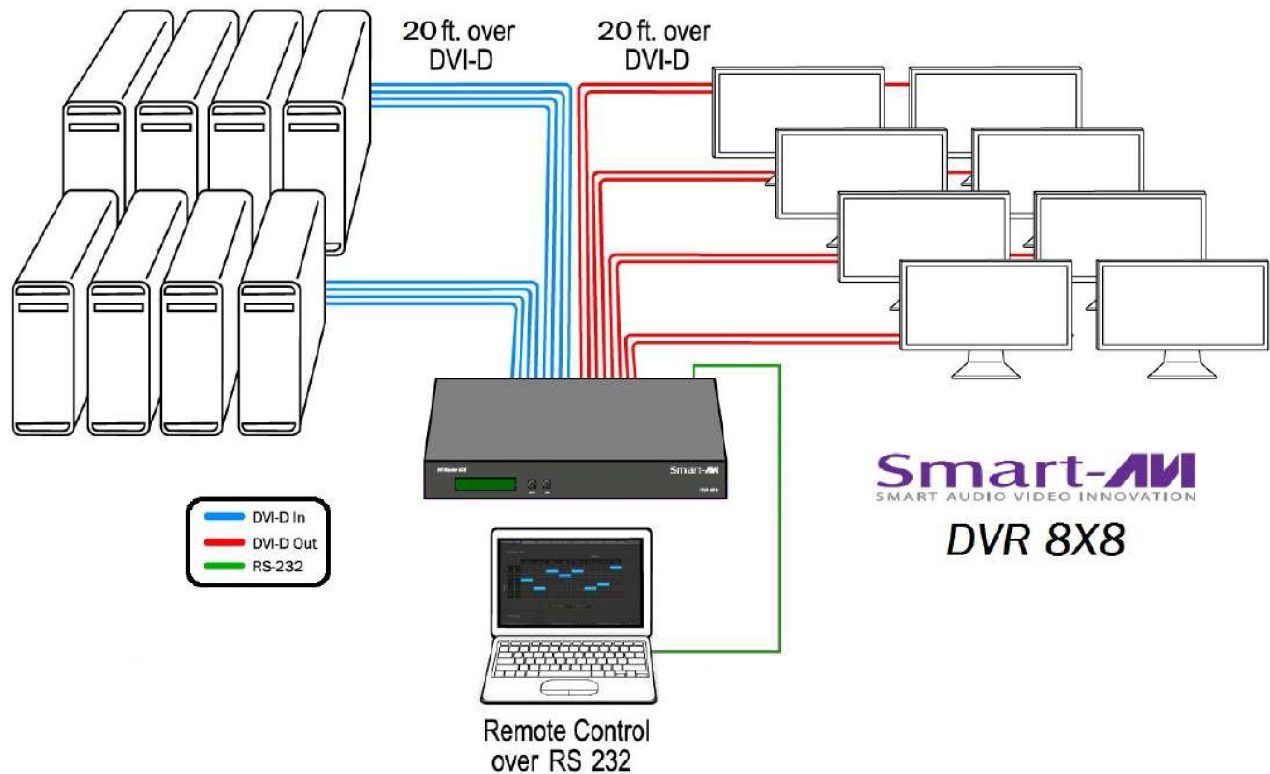


DVR 8X8 Back Panel

INSTALLATION

1. Power off the computers and displays.
2. Connect the DVI video cables from the computers to the DVI-D inputs on the rear of the DVR 8X8.
3. Connect the DVI displays to the DVI-D outputs on the rear of the DVR 8X8.
4. Optionally connect the IR Eye for IR remote control.
5. Optionally connect a computer to the RS-232 port on the DVR 8X8 for additional remote control.
6. Power on the DVR 8X8.
7. Power on the computers and displays.

SmartAVI's DVR 8X8 uses the Windows®-based SmartControl software application that makes user interface via RS-232 simple. See the full manual for more information.



FRONT PANEL CONTROL

During normal operation, you will see a list of ports on the front panel display. The display will list the status of ports 1-8:



```
Out: 1 2 3 4 5 6 7 8
In:  1 1 1 1 1 1 1 1
```

To switch ports using the front panel, press and hold the **Scroll** button for one second to enter port selection mode. A block cursor will appear over the first input port.



```
Out: 1 2 3 4 5 6 7 8
In:  [█] 1 1 1 1 1 1 1
```

1. Press **Enter** to select the output port you would like to change.
2. When selected, press the **Scroll** button to change the input port number.
3. Press **Enter** to execute and move the cursor to the next output port.

To exit the port editing mode, wait 5 seconds and the DVR8X8 will return to status mode.

MENU OPTIONS

To access the other features of the DVR8X8, press and hold both the **Scroll** and **Enter** buttons simultaneously for 3 seconds and release to bring up the MENU screen. Press **Scroll** to cycle through the following list of options:



```
SETUP MENU  U: 4.1
DDC <P> : KVMHD

SETUP MENU  U: 4.1
Memory Recall?  Y

SETUP MENU  U: 4.1
DDC <P> : SCREEN

SETUP MENU  U: 4.1
EXIT

SETUP MENU  U: 4.1
Factory Reset?  Y
```

To change the status of the selected option, press the Enter button.

- DDC : MAC - changes the DDC table to KVMHD (see DDC Learning)
- DDC : SCREEN - changes the DDC table to SCREEN (see DDC Learning)
- FACTORY RESET - resets the DVR8X8 to the factory default settings.
- MEMORY RECALL - recalls the last working configuration after a power cycle.
- EXIT - exits the MENU

DDC LEARNING

DDC provides plug-and-play capability to your displays. When you plug a display into your computer, the DDC table in the display tells the computer the optimal resolution to use. In order to preserve this plug-and-play capability, we have integrated DDC learning into all of our DVI Solutions.

To enter CHANGE DDC mode, press and hold both the **Scroll** and **Enter** buttons simultaneously for 3 seconds to bring up the MENU screen and use **Scroll** to cycle through the menu options. To select a mode, press **Enter**.

“DDC <M>: KVMHD indicates 1080p Mode and selects the best display mode to accommodate a FullHD Screen.



“DDC <S>: SCREEN indicates Screen Mode, which learns the type of display connected to the “OUT” port. This mode is indicated by <S>.



IR REMOTE CONTROL

Plug in the optional IR Eye (Receiver) into the IR port on the back of the DVR8X8. Secure it with tape so it is visible to the remote control. Point the optional remote control at the IR Eye and:

1. Press the “IN” button.
2. Press the number for the input (source) port.
3. Press the “OUT” button.
4. Press the number for the output (display) port.
5. Press the “OK” button to execute.



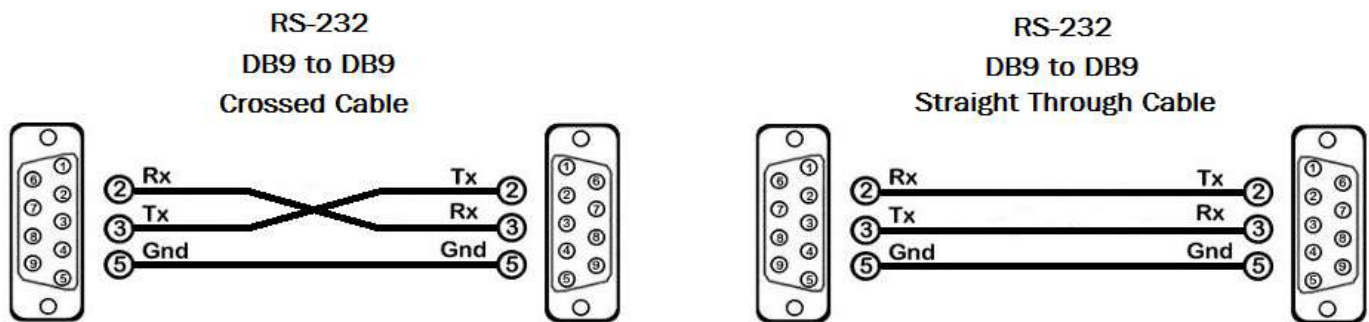
ESTABLISHING AN RS-232 CONNECTION

Before you start:

Controlling a Smart-AVI device via RS-232 requires an RS-232 card installed on your computer or a USB to RS-232 adapter. Below are instructions on how to create an RS-232 connection between a PC and the Smart-AVI device.

Make sure to use communication settings 9600 bps, N, 8, 1, No flow control.

Check the device and your PC to determine if you need a male to male or a male to female cable and how long it needs to be. The Smart-AVI device requires a straight through cable. You can use a Null Modem Adapter to convert a crossed cable to a straight through cable. Examples of crossed and straight thorough cable pin-outs are shown below. The standard maximum length for an RS-232 cable is 50 feet. Call our Smart-AVI Support Engineer if you require more information.

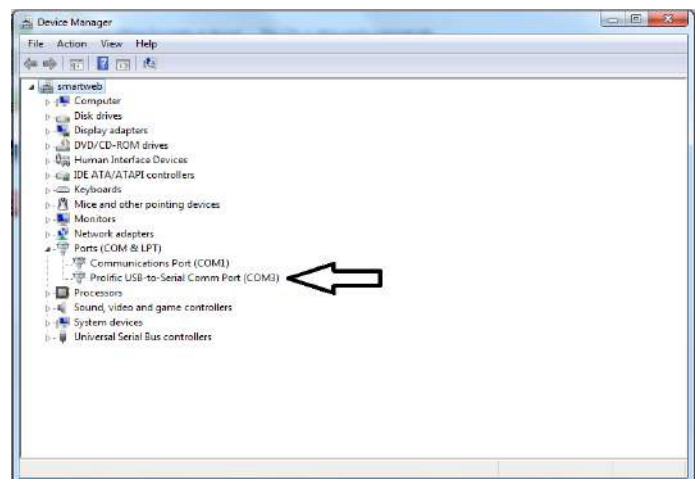


Establish a connection to the Smart-AVI device:

1. Connect an RS-232 cable to the RS-232 connector on the PC.
2. Connect the other end of the cable to the RS-232 port of the Smart-AVI device.
3. Use Windows Control Panel / Device Manager to identify the Com port number. See instructions and Figure below.
4. Power on the device.

If you are using a USB to COM port adapter on a Windows PC and need to identify the COM port used, do the following:

1. Click on the start button.
2. Click on Control Panel.
3. Click on Device Manager. In Windows 7 you need to click on "Hardware and Sound" to get to Device Manager.
4. Click on the arrow next to Ports (COM & LPT). You should see the name of your adapter and the COM port number in use.

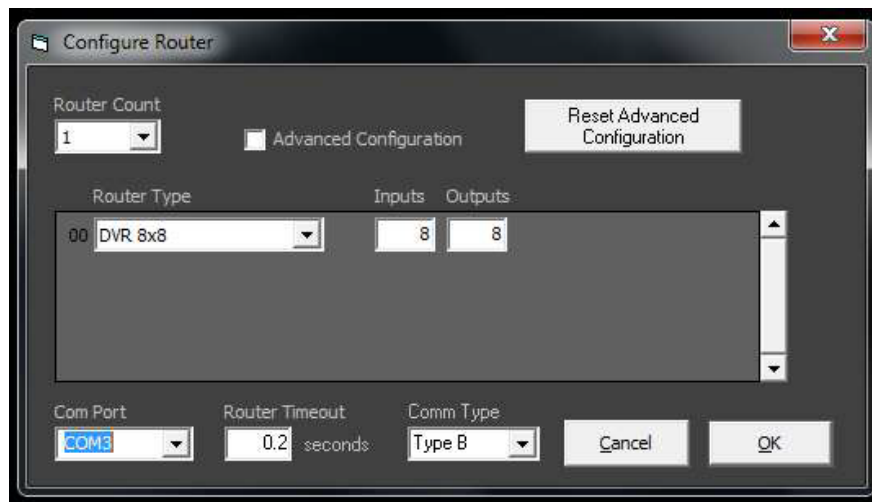


USING THE SMARTCONTROL SOFTWARE

RS-232: Controlling the DVR 8X8 has never been simpler with SmartControl software. With SmartControl, you can assign a unique name to each port on the DVR 8X8, as well as each display, customizing projects to meet your needs. Although all the functions of the matrix are available locally on the front panel of the DVR 8X8, using SmartControl allows for customization of all the matrix functions.

- Download the Smart Control Pro software from the Smart-AVI website. www.smartavi.com
- Double click SmartControlPro-v5-0-03_Installer.exe in order to initiate software installation.
- Click Install. After installation has completed, click CLOSE.
- In order to use the software, click on the START button>Programs>SmartControl Pro.
- There you should see a help file, the SmartControl Pro launcher as well as a shortcut to uninstall SmartControl Pro.

Click on SmartControl Pro in order to launch the software. When the software starts you will see a screen like this:



Advanced Configuration:

If you have more than one Router installed you will want to check this box.

Router Type:

Select DVR 8X8

Inputs/Outputs:

Enter the number of Inputs/Outputs your DVR 8X8 has. The DVR 8X8 can have up to 8 inputs and 8 outputs.

Com Port:

See the section in this manual on establishing an RS-232 connection for instructions on how to identify the com port number.

Router Time out:

This field is set to 0 by default, meaning the computer acknowledges commands almost instantly. Sometimes a computer takes longer to respond. This setting should be left at 0. If you need to change it, it should be no higher than 0.2.

After you have entered in the necessary information click OK. This will now take you to the Main Routing Window where you can route the different video/audio connections.

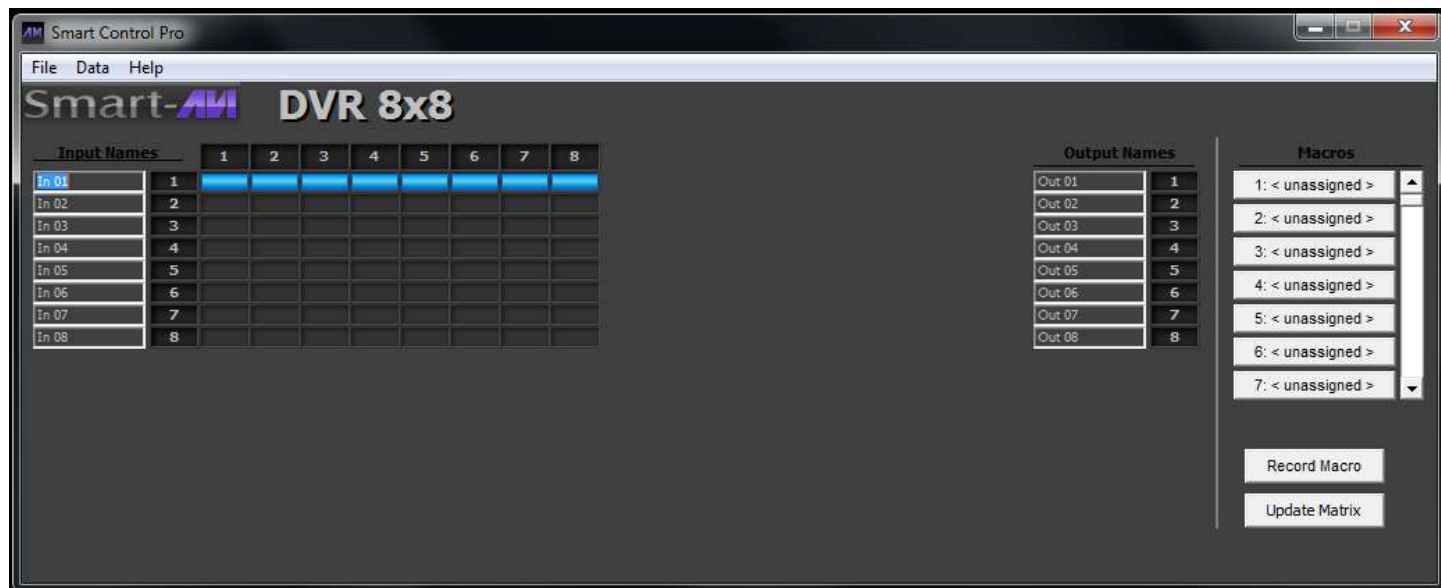
USING THE SMARTCONTROL SOFTWARE (CONTINUED)

Main Routing Window

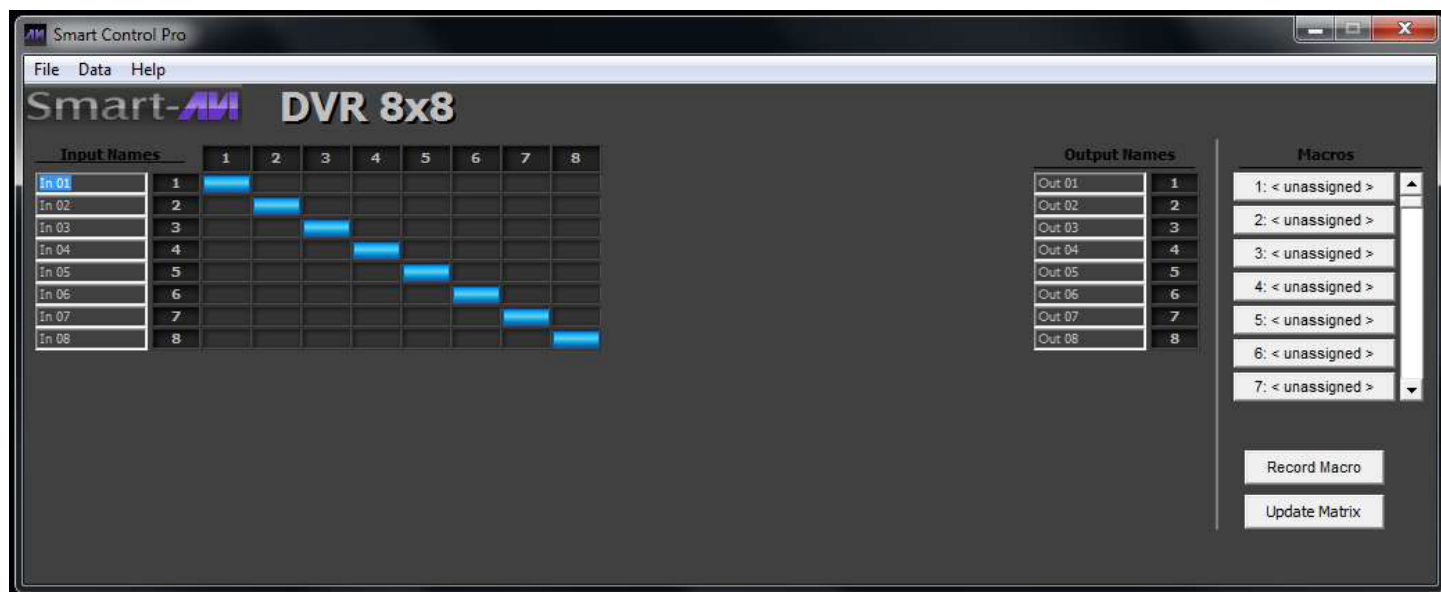
The Main Routing Window enables you to control the router(s) connections by means of the Crosspoint panel, the button panel, or with pre-recorded routes called macros.

Crosspoint Panel: This is the simplest way to route the connections. Simply click on the cross point itself. The input on the left will then be routed to the output above.

Note: Inputs can be routed to several different outputs, but each output can only have a single input at any one time. That means you can have several connections horizontally but not vertically.

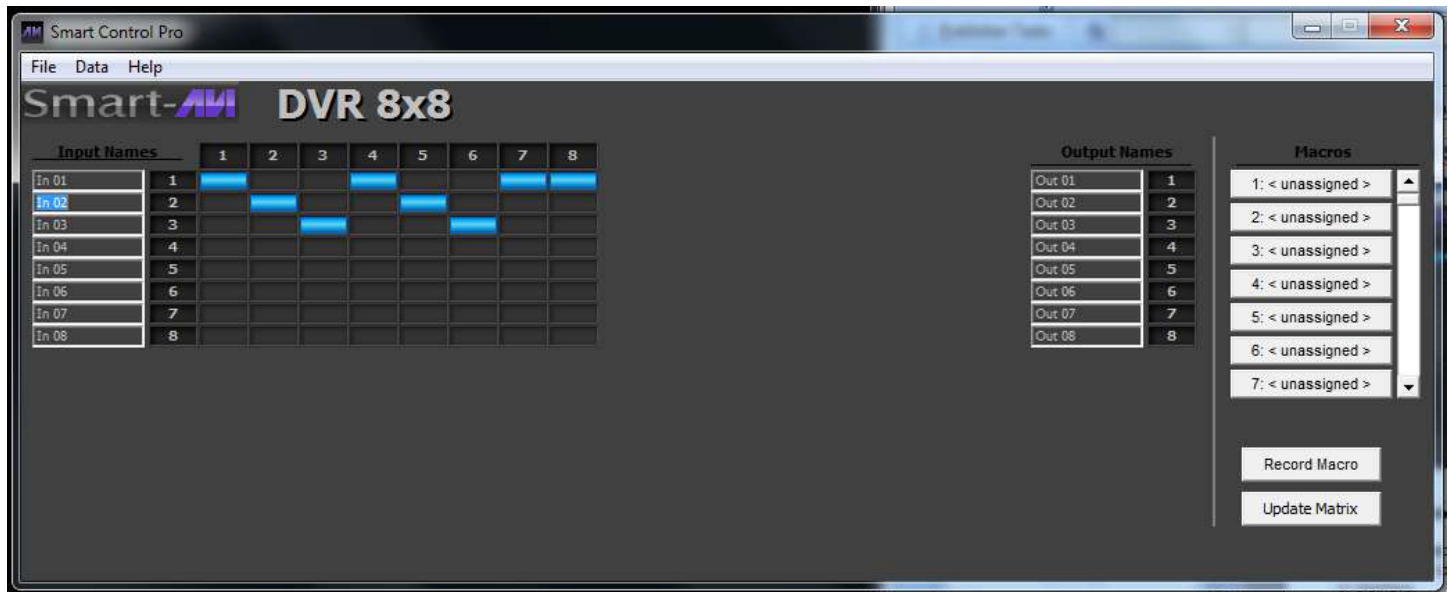


On the screen shown in figure above the input buttons run down the left side and the output buttons run across the top. They're each labeled 1 through 8. This configuration directs video from source 1 to be displayed on all 8 displays.



On the screen shown in figure above source 1 is sent to display 1, source 2 to display 2, 3 to 3, 4 to 4, 5 to 5, etc.

USING THE SMARTCONTROL SOFTWARE (CONTINUED)



The Button Panel:

Output Options:

To select multiple outputs, in the row for any input or source, click the button under the desired outputs or displays.

Input Options:

To route an input to all the outputs at once, hold the control key down and click on an input.

Macros: This section of the window is used to save and play back macros. Macros store a set sequence of routes.

To record a macro:

1. Click on the Record button (last button shown). A blinking “recording” message below this button will be displayed to indicate that all routes are being recorded.
2. Select the desired crosspoints. There is no limit on the number of routes you may record. If you click a macro button while in the record mode, the macro will be executed, and these routes will be added to the recording. This makes it possible to combine the routes of two or more macros into one bigger macro.
3. When finished, click the “Save Macro” button. You will be instructed to then click on one of the macro buttons. Doing this will save the recorded routes to that button. To cancel saving the macro, click the “Cancel Save” button.
4. To play back a macro, simply click on one of the 50 macro buttons. Use the scroll bar to bring any of these into view.

The macros are automatically saved in the current configuration file. They are also saved when you select the File/Save Configuration... menu.

To save macros in a separate file for a special purpose, select the File/Save Macros...menu.

TROUBLESHOOTING

No Power

- Make sure that the power adapter is securely connected to the power connector of the unit.
- Check the output voltage of the power supply and make sure that the voltage value is around 12VDC.
- Replace the power supply.

No Video

- Check if all the video cables are connected properly.
- Connect the computer directly to the monitor to verify that your monitor and computer are functioning properly.
- Restart the computers.

Keyboard is not working

- Check if the keyboard is properly connected to the unit.
- Check if the USB cables connecting the unit and the computers are properly connected.
- Try connecting the USB on the computer to a different port.
- Make sure that the keyboard works when directly connected to the computer.
- Replace the keyboard.

Mouse is not working

- Check if the mouse is properly connected to the unit.
- Try connecting the USB on the computer to a different port.
- Make sure that the mouse works when directly connected to the computer.
- Replace the mouse.

No Audio

- Check if all the audio cables are connected properly.
- Connect the speakers directly to the computer to verify that the speakers and the computer audio are functioning properly.
- Check the audio settings of the computer and verify that the audio output is through the speakers.

TECHNICAL SUPPORT

For product inquiries, warranty questions, or technical questions, please contact info@smartavi.com.

LIMITED WARRANTY STATEMENT

A. Extent of limited warranty

SmartAVI, Inc. warrants to the end-user customers that the SmartAVI product specified above will be free from defects in materials and workmanship for the duration of 1 year, which duration begins on the date of purchase by the customer. Customer is responsible for maintaining proof of date of purchase.

SmartAVI limited warranty covers only those defects which arise as a result of normal use of the product, and do not apply to any:

- a. Improper or inadequate maintenance or modifications
- b. Operations outside product specifications
- c. Mechanical abuse and exposure to severe conditions

If SmartAVI receives, during applicable warranty period, a notice of defect, SmartAVI will at its discretion replace or repair defective product. If SmartAVI is unable to replace or repair defective product covered by the SmartAVI warranty within reasonable period of time, SmartAVI shall refund the cost of the product.

SmartAVI shall have no obligation to repair, replace or refund unit until customer returns defective product to SmartAVI.

Any replacement product could be new or like new, provided that it has functionality at least equal to that of the product being replaced.

SmartAVI limited warranty is valid in any country where the covered product is distributed by SmartAVI.

B. Limitations of warranty

To the extent allowed by local law, neither SmartAVI nor its third party suppliers make any other warranty or condition of any kind whether expressed or implied with respect to the SmartAVI product, and specifically disclaim implied warranties or conditions of merchantability, satisfactory quality, and fitness for a particular purpose.

C. Limitations of liability

To the extent allowed by local law the remedies provided in this warranty statement are the customers sole and exclusive remedies.

To the extent allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event will SmartAVI or its third party suppliers be liable for direct, indirect, special, incidental, or consequential damages whether based on contract, tort or any other legal theory and whether advised of the possibility of such damages.

D. Local law

To the extent that this warranty statement is inconsistent with local law, this warranty statement shall be considered modified to be consistent with such law.



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