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## 1. Introduction

Follow these steps to set up your Versa™ TILE system.

- Set up panels and connect cables
- Connect the computer and Versa DRIVE
- Create a pixel map
- Address the Versa TILE panels
- Test

More detailed information can be found for any topic in the separate manuals for each product.

## 2. Versa TILE Assembly & Cabling

1. Assemble the panels
  - a. Attach staging panels to one another with the integral kingpins and rotary locks (requires an 8mm hex key).
  - b. Bolt architectural panels together through the holes in the frame's perimeter.
  - c. 5x5 and 10x10 panels may be mixed together.
2. Power Cabling
  - a. Each panel has an IEC input and output connector for AC power. Multiple panels may be daisy-chained together.
  - b. One Male – Female IEC power cable (jumper) is provided with each panel.
  - c. Supply your own IEC input cable with the appropriate male plug for your local power.
  - d. At 120VAC, 6 10x10 or 24 5x5 panels may be connected in series.  
At 240VAC, 8 10x10 or 32 5x5 panels may be connected in series.
3. Data Cabling
  - a. Each panel has a serial input and output connector for data connection. Multiple panels may be daisy-chained together. The order of the cables is not important.
  - b. One Male – Female serial cable (jumper) is provided with each panel.
  - c. Serial data is sent from the Versa DRIVE to the panels through the 6-pin XLR cable.

## 3. Computer & Versa DRIVE Connections

1. Set the DVI Connection



**WARNING:** All equipment must be **OFF** when plugging or unplugging **ANY** DVI connections.

- a. Set the display properties on your computer to 1,024 x 768 @ 60 Hz.
- b. Power down your computer.
- c. Make sure the Versa DRIVE and computer are powered off.
- d. Connect the DVI output from the computer to the DVI input on the Versa DRIVE.
- e. Connect your monitor.
  - i. If you are using a D2, you may plug your DVI monitor into the DVI output on the back of the Versa DRIVE.  
**NOTE:** make sure your DVI monitor is turned off when making this connection.
  - ii. If you are using a D1, connect your monitor to the VGA output from your video card.
- f. Turn the Versa DRIVE on.
- g. If using a VGA monitor, turn it on now.

- h. Boot up the computer.  
Within a few seconds, the DVI Link light on the front panel should blink steadily.
  - i. If using a DVI monitor, turn it on now.
4. Set the Serial Connection
- a. Connect the computer to the Versa DRIVE with an RS232 cable.  
If using a D1, skip to step 2b.  
If using a D2, set the D2's serial connection to RS232:
    - i. On the D2's front panel, press **Λ** (Up) or **V** (Down) to highlight the SERIAL INPUT menu, then press ENTER.
    - ii. Press **Λ** (Up) or **V** (Down) to highlight the SERIAL menu, then press ENTER.
    - iii. Press **Λ** (Up) or **V** (Down) to highlight the RS232 menu, then press ENTER.
    - iv. Press **MENU** to go back to the SERIAL INPUT.
    - v. Press **Λ** (Up) or **V** (Down) to highlight the ID menu, then press ENTER.
    - vi. Press **Λ** (Up) or **V** (Down) to set the value to "1", then press ENTER.
  - b. Launch RasterMAPPER and go to the Versa DRIVE Control Tab.
    - i. Set **Serial Port** to Port = COM1, Baud = 19200.
    - ii. Set **Versa DRIVE Model** to D1 or D2.  
If you are using a D2, select #1 in the **Versa DRIVE Select** panel.
    - iii. Press **Connect**.
    - iv. Test the connection by pressing **Firmware Version** **Get**.  
This should display the Versa DRIVE's current firmware version and revision date.
    - v. Set **Image Offset** to 0,0 and press **Send**.
    - vi. Set **Brightness Index** to 10 and press **Send**.
    - vii. Set **Output** to Video (the large button with the video monitor on it).
5. Connect the Versa DRIVE to Versa TILE Panel
- a. Connect a 6-pin XLR cable from Serial Output A on the back of the Versa DRIVE to the Data Input connector on the back of the first Versa TILE panel.
  - b. If the Versa DRIVE is on and receiving a valid DVI input, the Data LEDs on the back of each Versa TILE panel should be blinking rapidly.

## 4. RasterMAPPER

RasterMAPPER™ creates a map that defines the relationship between the pixels in your video content and the tiles in the Versa TILE wall. To download the most recent version, please visit [www.elementlabs.com/support](http://www.elementlabs.com/support).

1. Create a map of your system
  - a. In RasterMAPPER, go to the **Pixel Map** tab and select the **Fixture Info** tab.
  - b. Select a fixture from the **Fixture Select** drop-down menu (i.e. TILE 1m).
  - c. Select the **Arrow +** (yellow) tool and click in the grid area to add fixtures. The order in which you place the fixtures will determine how they need to be addressed in the next section.
  - d. Right clicking with the **Arrow +** tool to delete fixtures.
2. Review the sequence of the Versa TILE panels
  - a. Go to the **Sequence** tab.
  - b. Press the **Show Address** button.  
Each fixture will now be labeled with its sequence number, ranging from 0 to N.  
Note the first panel (#0) and the order. This information is necessary to set the panel addresses in the next section.
3. Send the Pixel List to the Versa DRIVE

- a. Go to the **Pixel List** tab. Note the **Total Pixel** count.
- b. Press the **Send** button.  
This may take a few seconds depending on the size of your map.
- c. Go to the **Versa DRIVE Control** tab.
- d. Press the Pixel Count **Get** button.  
This should return the same value as the Total Pixel count from step 3a.

## 5. Buffer Board

### 1. Modes

The **MODE** button on the Buffer Board controls seven key functions of each panel:

- a. **Addr** (Address): sets the starting pixel address of the buffer box
- b. **SIZE** (Size): sets the number of pixels for that tile
- c. **Next** (Next): displays the start address of the following buffer box
- d. **Display** (Display): turns the digital display and Data LED off or on
- e. **F-88** (Firmware): displays the firmware version
- f. **Type** (Type): sets the Versa DRIVE type
- g. **Loc** (Lock): locks the buffer box
- h. **Test** (Test): runs a color test on the tile

### 2. Adjusting Values

The **Addr**, **SIZE** and **Type** modes have values that can be set by the user.

- a. Press the **MODE** button to cycle through the modes.
- b. Press the **RIGHT** (>) button to select the first (or next) digit when the desired mode is shown in the display. The selected digit will be flashing.
- c. Press the **UP** (^) button to increment the value of the selected digit.
- d. Repeat steps 2b and 2c to set all of the digits.
- e. Press the **MODE** button to exit the current mode. Any changes will automatically be saved.
- f. The Buffer Box automatically locks after 10 seconds. This disables the **RIGHT** (>) and **UP** (^) buttons. Press the mode button to unlock the Buffer Box.

### 3. Set the Address, Size, and Type on each panel's Buffer Board


- a. Set the starting pixel address (**Addr** mode).  
The starting pixel address of the first panel (panel #0 in the RasterMAPPER map) should be 1.
- b. Set the size of the panel (**SIZE** mode).  
(i.e. 5x5 will be 25 pixels, 10x10 will be 100).
- c. Set the Versa DRIVE type that is being used with the system (**Type** mode).
- d. Repeat steps 3a, 3b, and 3c for each panel in the system.
  - i. Any panel's address should be the sum of the previous panel's start address plus the previous panel's size (# of pixels).
  - ii. If the **SIZE** value is set correctly (step 3b above), the buffer board will display the **Next** panel's address.  
View this by pressing the **MODE** button to view the **Next** mode.  
Also, when the Buffer Board is locked the display will alternate between the panel's address and the **Next** address.

## 6. Testing the System

1. Go to the **Versa DRIVE Control** tab in RasterMAPPER.
2. Select one or more of the test pattern options in the **Output** section.  
NOTE: Dynamic test patterns are not supported by the D1.
3. Select Video in the **Output** section.  
The Versa TILE system should now be displaying the upper X x Y pixels from you computer screen. A simple method to check the accuracy of your map is to move your mouse cursor (arrow) around in the area of your screen that is mapped to the Versa TILE system. You should see the cursor move smoothly across the Versa TILE panels.

## 7. Troubleshooting

Problem	Cause	Solution
<b>Why are my tiles multicolored and static?</b>	No serial data or	<ul style="list-style-type: none"> <li>• Make sure the 6-pin XLR cable is firmly seated into Serial Data Output A of the Versa DRIVE and the Data Input of the first Versa TILE panel.</li> <li>• The green data light on the Versa TILE panel should blink rapidly. If the light is not blinking, try another cable</li> <li>• Make sure you have loaded a proper map from RasterMAPPER into the Versa DRIVE.</li> <li>• If you are using a D1, turn it off, wait 5 seconds, and turn it back on – this will reset the sync between the drive and the panel.</li> </ul>
	No or invalid DVI input to Versa DRIVE	<ul style="list-style-type: none"> <li>• Verify that the DVI cable is firmly seated and screwed into both the Versa DRIVE and the computer. If the cable is loose, power down both devices before making the connection.</li> <li>• In your computer's display properties, make sure your DVI output is enabled and set to 1,024 x 768 @ 60 Hz.</li> <li>• Try another DVI cable.</li> </ul>
	Type set incorrectly on buffer box	<ul style="list-style-type: none"> <li>• On the buffer board, press the <b>MODE</b> button until you see <b>TYPE</b>.</li> <li>• Press <b>RIGHT (&gt;)</b> to enter the menu</li> <li>• Press <b>UP (Λ)</b> to select D1 or D2 depending on your model of Versa DRIVE.</li> <li>• Press <b>MODE</b> to exit and save your changes.</li> </ul>

<b>Why is my expected image distorted or discontinuous?</b>	Map error	<ul style="list-style-type: none"> <li>• Check the map created in RasterMAPPER. In the Versa DRIVE Control tab of RasterMAPPER, connect to the Versa DRIVE and press the Pixel Count  button. If this number is not equal to the number of tiles in your system, the map did not load correctly. Send the map again and verify the Pixel Count again.</li> </ul>
	Incorrect tile addressing	<ul style="list-style-type: none"> <li>• Make sure the panels have correct addresses and size values.</li> </ul>
<b>Why is my DVI light not blinking?</b>  <b>Or blinking slowly?</b>	Incompatible DVI signal or wrong resolution and frequency.	<ul style="list-style-type: none"> <li>• The Versa DRIVE requires 1,024 x 768 @ 60 Hz (59.97 Hz is not a correct frequency). Make sure your computer's output is set to this resolution and frequency.</li> <li>• If the resolution of the computer is changed and a Versa DRIVE D1 is used, power off the D1 for 5 seconds and then turn it back on.</li> </ul>
<b>Why is my desktop only displaying its content and nothing else?</b>	A VGA monitor is in use with the Versa DRIVE and the Versa DRIVE is seen by the computer as an extension of the desktop in dual monitor mode.	<ul style="list-style-type: none"> <li>• Power down all devices.</li> <li>• Boot the computer with only the monitor connected.</li> <li>• Consult your video card manufacturer's documentation on how to set the two monitor outputs in "Clone" or "Mirror" mode.</li> <li>• Power down the computer and reconnect the devices and power up as described earlier in this guide.</li> <li>• If you continue to experience problems, consult the computer / video card vendor.</li> </ul>
<b>Why is only part of my system working properly?</b>	Serial Data is not passing through the entire system.	<ul style="list-style-type: none"> <li>• Check that all of the Serial Data cables are firmly seated.</li> <li>• Verify that the Data lights are rapidly blinking on the back of each buffer board. If the data light is not blinking on a particular panel, remove the XLR cables from the Data Input and Data Output and connect them together, thus bypassing the panel. Do the panels after the problem panel now have blinking data lights? <ul style="list-style-type: none"> <li>○ If yes, the panel bypassed has a problem and may need repair. Consult your vendor.</li> <li>○ If no, take the Serial Data cable from Versa DRIVE Port A and connect directly to the problem panel to verify that it works.</li> </ul> </li> </ul>

## **8. Contacting Element Labs**

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