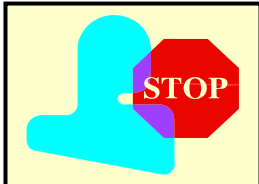


### KD-VTCA3

### VGA to Component Video Adapter

### PowerStrip Supplemental Operating Instructions

## **KD-VTCA3 SUPPLEMENTAL OPERATING INSTRUCTIONS**



**PLEASE READ AND STUDY THE FOLLOWING INSTRUCTIONS BEFORE ATTEMPTING TO INSTALL AND OPERATE YOUR HANDY KD-VTCA3 VGA-TO-COMPONENT VIDEO ADAPTER**



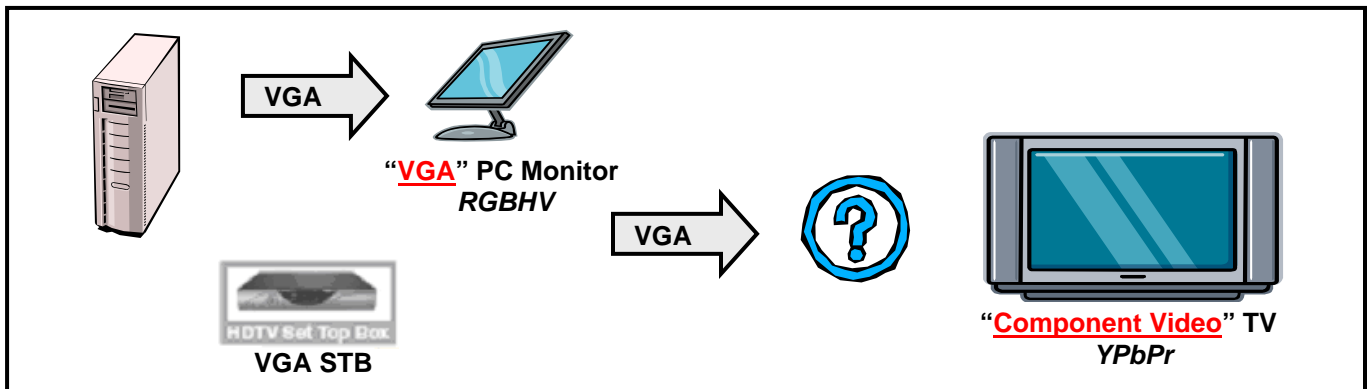
The **KD-VTCA3 Video Adapter** is so simple to install and operate. The KD-VTCA3 performs the useful function of converting VGA (RGBHV) Video from your PC (computer or laptop), High Definition PC (HDPC), or other VGA video source, to Component Video for display on your HDTV or display that may only accept YPbPr (Component) Video.

Before proceeding with the simple installation and operation of the KD-VTCA3 Video Adapter, it is important to note:

- This video adapter is **NOT a Video Scaler or Video Processor**, so the Output resolution and scanning parameters are the same as the Input resolution and scanning parameters
- This video adapter **does NOT accept 480i or 576i Input video** (you must provide “progressive” scan resolutions)
- This video adapter takes VGA Input video and provides **two outputs**:
  - Input video converted to Component (YPbPr) Video
  - VGA “loop-through” that is exactly the same as the Input video and allows you to retain your computer VGA display even with the KD-VTCA3 installed in your system

### **Why you might need the KD-VTCA3 VGA to Component Video Adapter**

You may already have a VGA (RGBHV = Red, Green, Blue, H & V Sync) source of HD images from your HD Set Top Box or PC that you can currently watch only on your VGA computer display or monitor. You may already have an HDTV or HD display that only accepts Component (YPbPr) Video, not “VGA”. What to do? As you will see, the KD-VTCA3 is your perfect solution!



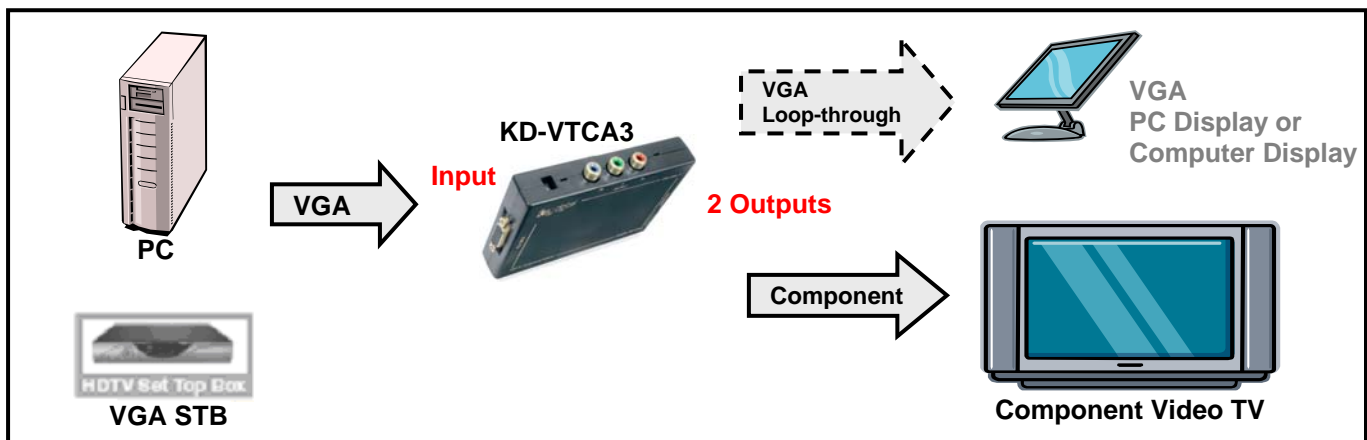
## KD-VTCA3

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## How does the KD-VTCA3 VGA to Component Video Adapter solve my problem ?

The KD-VTCA3 is the perfect solution because it converts VGA Video to Component Video, and simultaneously provides a “loop-through” VGA output so you can retain continuity to your existing computer display or other VGA display, if desired. That way, you can keep your PC monitor conveniently connected to your PC, while you enjoy the experience on your HDTV display.



## What is the one problem I may encounter during installation of the KD-VTCA3 !?!?

The KD-VTCA3 Video Adapter simply converts the VGA output from your PC, HDPC, or other source (like a VGA output Set Top Box) to Component Video, and performs no other video processing\*. **That means it is very possible your PC's Graphics card output scanning rate and/or video resolution that was configured to work for your existing VGA display might have to be “tweaked” or modified before it can work with your Component Video display.**

Typically, you'll need to change the output resolution settings on your PC's Graphics card (it's an easy process) and select parameters that work properly for your Component Video display device. For example, your VGA display may work for many resolutions and scan rates, but your Component Video HDTV display will probably only work for the following resolutions and rates:

- 720p (p = progressive frames at 60 Hz), 45 KHz horizontal scan rate
- 480p (p = progressive frames at 60 Hz), 31.5 KHz horizontal scan rate

**Remember: The KD-VTCA3 Video Adapter does NOT accept 480i or 576i Input video**

\* If you need to perform additional video processing, see **Key Digital's** full line of Video Processors that include a rich feature set of functionality and perform the highest quality processing

**KD-VTCA3****VGA to Component Video Adapter****PowerStrip Supplemental Operating Instructions**

It makes sense that you may want to retain continuity to your existing VGA display using the handy VGA “loop-through” feature of the KD-VTCA3, so you can “see what you are doing.” It is very possible that until your Component Video display “syncs up” with an acceptable format, you will otherwise not have a picture. For such cases, it is best to adjust the resolution settings with your PC’s VGA display while you observe the Component Video display, since the VGA can typically handle multiple scan rates and you will therefore not be “flying blind.”

**What is the recommended way to change the output settings on my PC so I can drive my Component Video display ?**

When using your KD-VTCA3 driven by a computer or HDPC (high definition PC) that has been successfully driving a VGA display, special care should be given to set your PC to the appropriate resolution that will be recognized by your HDTV Component Video TV or display. A freeware program called **PowerStrip** helps you to do this, and is available from: <http://www.entechtaiwan.com/ps.htm>. **Use PowerStrip at your own risk.**

**How does PowerStrip help me ?**

**PowerStrip** is shareware computer software that allows you to adjust video scanning and timing parameters for the VGA video output of your PC. That way, you can select the resolution and timing parameters that work for your Component Video display.

Be sure to read all of the Operating Instructions provided with your KD-VTCA3 Video Adapter, and make the following connections:

- Connect the output of your PC to the input of the KD-VTCA3.
- Connect your Component Display to the Component Output of the KD-VTCA3.
- If possible, connect your VGA display to the VGA “loop-through” output of the KD-VTCA3 and use this display to monitor the adjustments you will making.
- Supply power to your KD-VTCA3 Video Adapter using the supplied Power Supply only.

Using **PowerStrip** on your PC at your own risk from the link provided above, you can make any of the following adjustments to the output video via the Graphics card in your PC:

- **Custom resolution:** Ability to choose any computer resolution in single pixel increments. For example 1352x773 or 1360x1024.
- **Custom timings:** Ability to change the scan rate without changing computer resolution, as well as modify the size of sync signals, to fit the specs of a particular display. This also includes ability to choose refresh rate in tiny fractions of a Hz.
- **Selection of Progressive scan:** Display is done in a VGA-like fashion by drawing all the scan lines of an image one at a time, during one vertical refresh. You **MUST** select progressive scan for use with the KD-VTCA3 Video Adapter.

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#### Step-by-step PowerStrip Instructions

**PowerStrip** is shareware computer software that allows you to adjust video scanning and timing for the video that goes out to your display on the VGA connector of your PC. Use **PowerStrip** to set your PC output video timing and resolutions that work for your Component Video display. Follow the step-by-step directions provided below and refer to the Operating Instructions provided with your KD-VTCA3 Video Adapter.

*The following instructions are typical of what you may encounter when installing and adjusting **PowerStrip** on your PC. Your actual experience may vary depending upon the **PowerStrip** software revision, and the Graphics card installed in your PC. As with all shareware software, use **PowerStrip** at your own risk.*

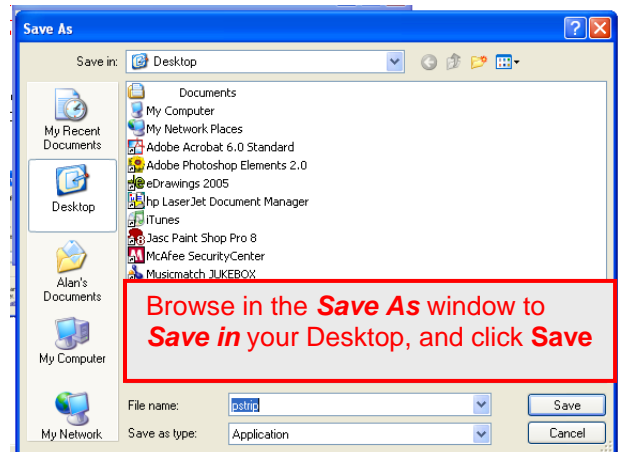
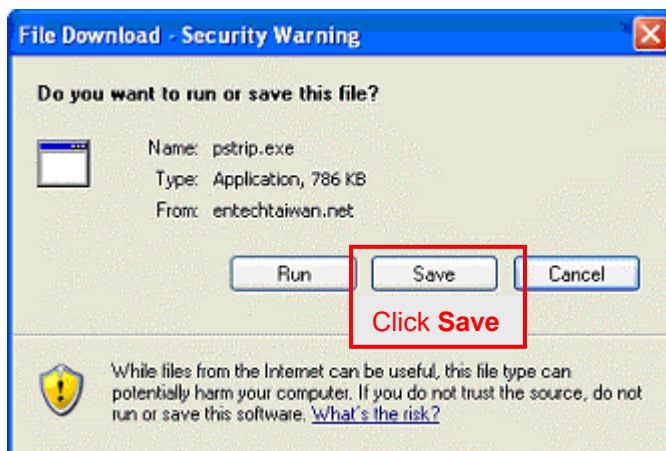
#### 1. Download **PowerStrip** onto the Desktop of your PC:

- Be sure your PC is connected to the Internet, and go to the following web site: <http://www.entechtaiwan.com/ps.htm>
- Once there, look for the Icon to install **PowerStrip**, such as:

Click on the Icon to start the **PowerStrip** installation on your PC



- As shown below, after clicking on the Icon that comes up on your PC like the one above, click "**Save**" in the **File Download** Pop-up Window. In the **Save As** Pop-up Window that follows, browse to **Save in** your Desktop or other convenient location of choice on your PC and again click "**Save**".



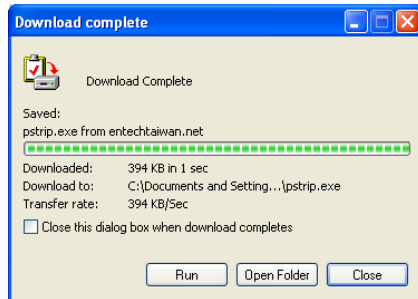
### KD-VTCA3

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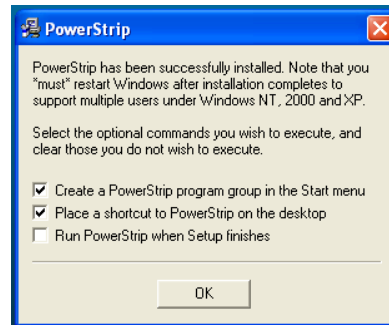
### PowerStrip Supplemental Operating Instructions

#### 2. Install the **PowerStrip** application on your PC:

- Once the download onto your Desktop or desired folder is totally completed (the download should be rapid with a high-speed Internet connection), either “**Run**” the **PowerStrip** application (called the Executable) directly from the Pop-up window shown below, or “**Close**” the window and run directly from your Desktop or folder by double-clicking the “**pstrip**” **PowerStrip** Icon:



- Follow the **PowerStrip** Installation instructions provided in the **PowerStrip Setup** Pop-up Windows. Once **PowerStrip** is totally and successfully installed on your PC, you may be asked to restart your computer.



#### 3. Run **PowerStrip** on your PC:

- To run **PowerStrip**, click on the **PowerStrip** rainbow display Icon on your Toolbar



or Desktop:

### **CAUTION**

In the following steps, you will be changing the display resolution settings of your PC's Graphics card. Use care when invoking new settings, as some displays may be damaged by variant timing parameters. You will not be instructed to make gross adjustments in the steps below. If at any time you need to restore your current settings:



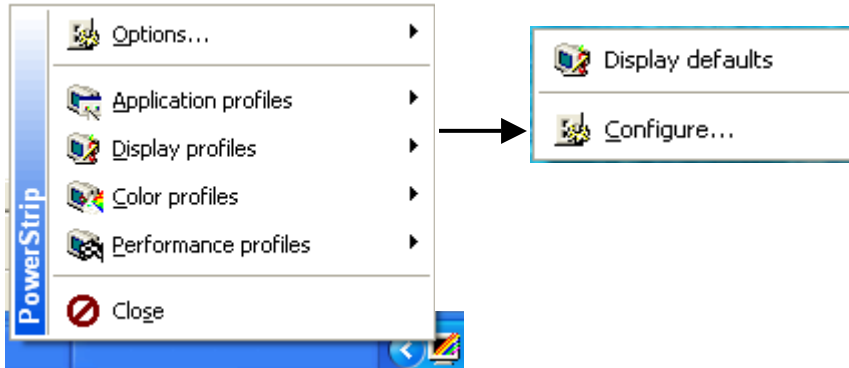
- Alt-R* resets the display and allows you to continue
- Backspace* is an “undo” that cancels the last adjustment
- Esc* (Escape) resets the display and closes
- You can also “*Close*” all operations from within the **PowerStrip** application once it is running

**KD-VTCA3**

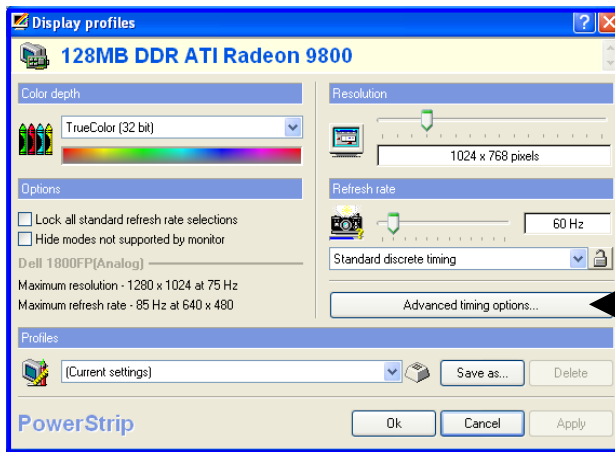
**VGA to Component Video Adapter**

**PowerStrip Supplemental Operating Instructions**

Select “**Display profiles**” and then “**Configure**” from the dropdown menus:

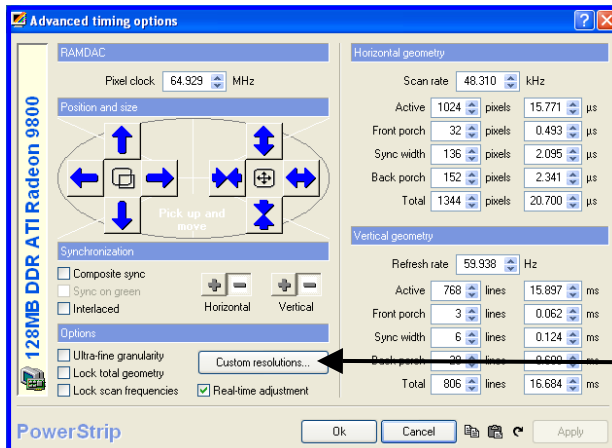


- Depending upon the Graphics card installed in your computer, you may see a screen such as this (in this case, for the “ATI Radeon 9800” Graphics card). Select “**Advanced Timing Options...**”.



Select **Advanced timing options...**

- Once in the “**Advanced Timing Options**” screen, select “**Custom resolutions...**”.



Select **Custom resolutions...**

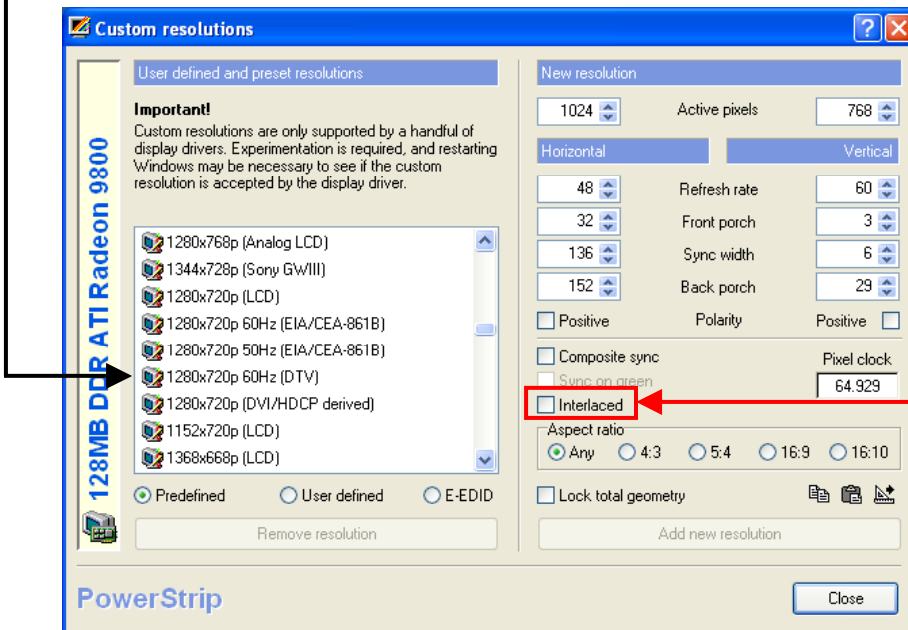
### KD-VTCA3

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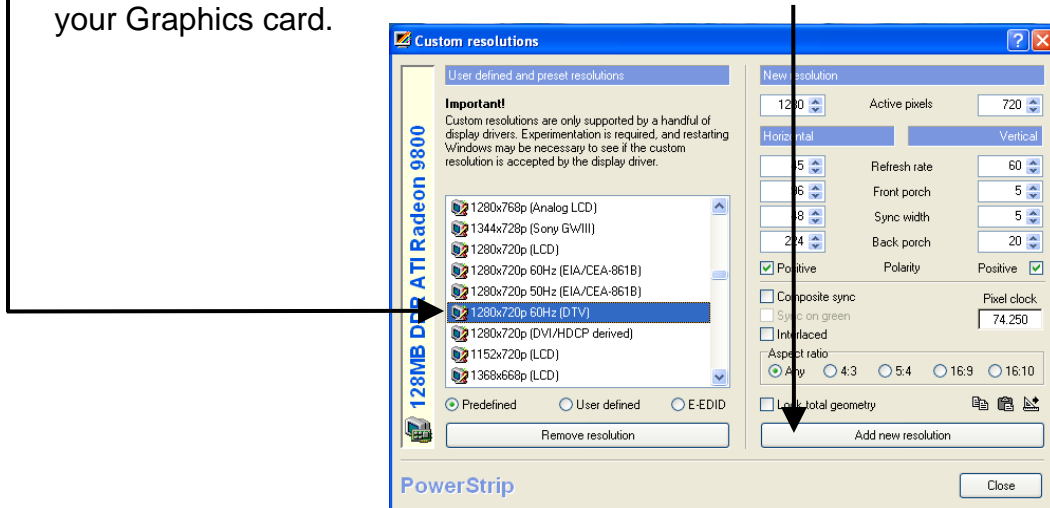
4. Select the output (display) resolution from your PC's Graphics card, to match the desired resolution of your HDTV Component Video display:

- Once in the “**Custom resolutions**” screen, select the DTV (digital TV) standard **1280 x 720p 60 Hz**, a common HDTV video standard that you may wish to select for display on your Component Video HDTV. Another possible option of lower resolution is 480p. You may need to scroll to find your preferred HDTV resolution.



The KD-VTCA3 Video Adapter does not accept interlaced signals. Be sure the “Interlaced” box is **NOT** checked off

- Once you've selected the desired resolution by clicking on it, it will become **highlighted**. You will need to click “**Add new resolution**” to add the resolution to your Graphics card.

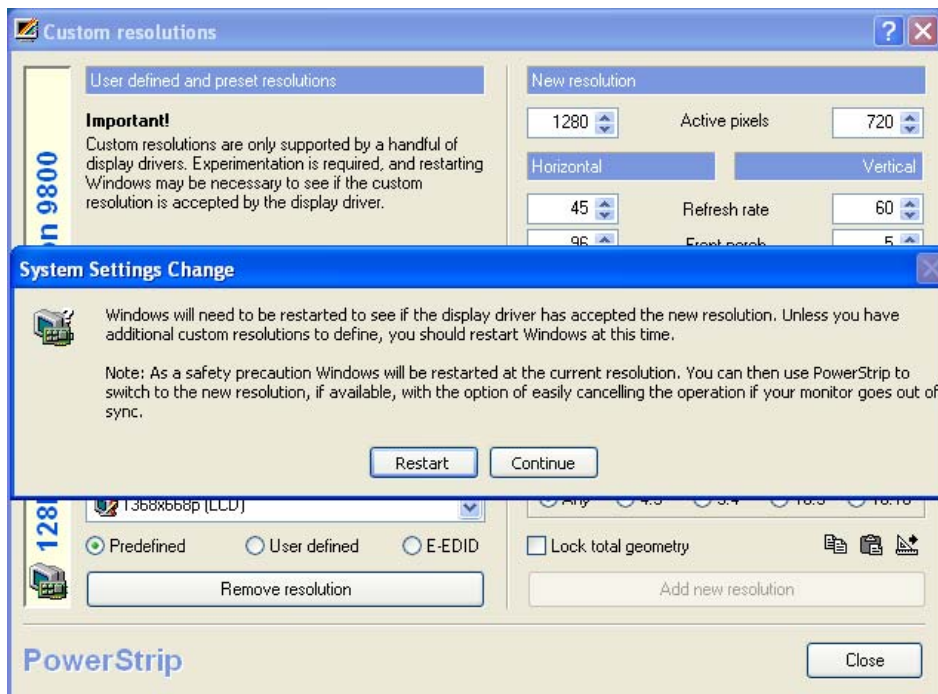


### KD-VTCA3

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- Now that you have added the new resolution to your Graphics card, you will need to invoke the new resolution as your desired output resolution. To do this, you may need to restart Windows and experiment to see if the resolution you have selected is indeed able to drive both your VGA computer monitor, and your Component Video HDTV display (follow the instructions as guided by the **PowerStrip** application). As shown in the screenshot below, use **PowerStrip** to select the new resolution that you have just added. If you are not able to sync up your VGA (PC's) and Component Video (HDTV's) displays to the new resolution, you can always cancel the operation in **PowerStrip** and try another resolution by repeating Steps 3 & 4 of these instructions.



### KD-VTCA3

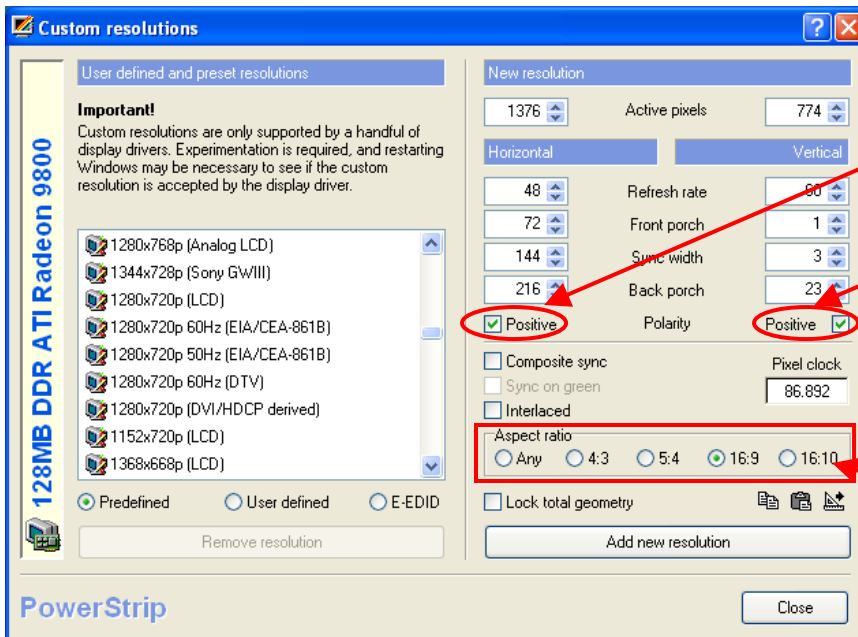
### VGA to Component Video Adapter

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#### Advanced PowerStrip Options

PowerStrip allows you to perform advanced features, such as:

- **Positive/negative sync polarity:** Some displays use positive or negative polarity for horizontal and vertical sync, while others can support both. Most computer monitors and high-end CRT projectors work with any polarity combination.
- **Aspect Ratio:** Legacy televisions and many computer displays have an "Aspect Ratio" of 4:3 (ratio of screen width to screen height). Motion picture films typically have a much wider Aspect Ratio, such as 2.35:1. HDTV's also have a wide Aspect Ratio, called 16:9.
- **Resolution-within-resolution:** Also called "letterboxing" by some, and is very useful for HDTV televisions. A trick to allow displaying a computer mode on a display that cannot directly support the mode. It can also be a way of solving excessive overscan on HDTV sets.



Positive Horizontal and Vertical Sync

Aspect Ratio selection