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Connecting your computer to your TV can be easy if you follow these tips

By, Steve Hartfelder and Ryan Koskela or Diamond Case Designs, Inc.



For years computers have been an integral part of our life for word processing, accounting, graphics, communication and more. The last several years have seen computers take major strides to be a hub for our digital lifestyles; a storage place for our music, photographs, and videos. While the computer is an ideal multimedia platform it does have its down side. Computer monitors, particularly laptops, are small and the audio output is less than ideal.

To get the most out of the music, photographs, and videos stored on your computer or laptop you should consider pairing it with your TV and/or sound system. While this sounds like a simple solution, to crank your tunes and show off your latest vacation photographs, actually connecting your computer to your TV can be a tricky affair given the various cables and connections that are necessary.




Here we will show you several different "computer to TV cables" as well as a specialized device that will work for just about any TV or computer that lacks a specialized connection.

The Easy Solution - Computer To TV Cables

If your computer and TV have the right connections, hooking them together can be as simple as choosing the right cable. The following pictures will show you some of the common ways:

VGA to VGA

If your computer and TV both have VGA ports on them simply use a VGA cable to connect the two together. Check the specifications on your TV to see what resolutions are supported. Even though your computer may be able to output a high resolution many TVs are only able to accept low resolution signals through this connection.

VGA Port on Computer	Connect the two ports with a standard VGA cable.	VGA Port on HDTV
		

DVI to DVI

If your computer and TV both have DVI ports simply use a DVI cable to connect the two together. This connection is still popular on several PCs but has become much harder to find on current TVs. This style of connection tends to support higher resolutions (in general) than VGA.

DVI Port on Computer	Connect the two ports with a standard DVI cable.	DVI Port on HDTV
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[Click Here To Buy Now](#)

High-quality Pure Audio Video brand DVI to DVI cables.

8 Feet = Normally \$120, On Sale \$99

16 Feet = Normally \$160, On Sale \$119

DVI to HDMI

If your computer has a DVI connection but your TV does not, check to see if your TV has an HDMI connection. If it does you can use a specialized cable that has a DVI connector on one end and an HDMI connector on the other end. Like the DVI to DVI connection, higher resolutions tend to be supported with this style connection.

DVI Port on Computer	Connect the two ports with a specialized DVI to HDMI cable.	HDMI Port on HDTV
		

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High-quality Pure Audio Video brand DVI to HDMI cables.

6 Feet = Normally \$89, On Sale \$69

12 Feet = Normally \$109, On Sale \$79

HDMI to HDMI

Some of the best PCs feature an HDMI output right on the computer. If both your PC and TV support a HDMI connection simply use an HDMI cable to connect the two together. HDMI cables are capable of supporting both audio and video (assuming the computer does) and generally supports the highest possible resolutions.



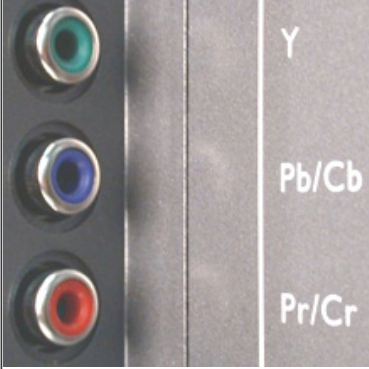
HDMI Port on Computer	Connect the two ports with a specialized DVI to HDMI cable.	HDMI Port on HDTV
		

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High-quality HDMI to HDMI cables.
 2 Meters (approx. 6 feet) = Normally \$100, On Sale \$90
 3 Meters (approx. 9 feet) = Normally \$110, On Sale \$100
 4 Meters (approx. 12 feet) = Normally \$140, On Sale \$120

The "Universal" Solution - PC To TV Converter

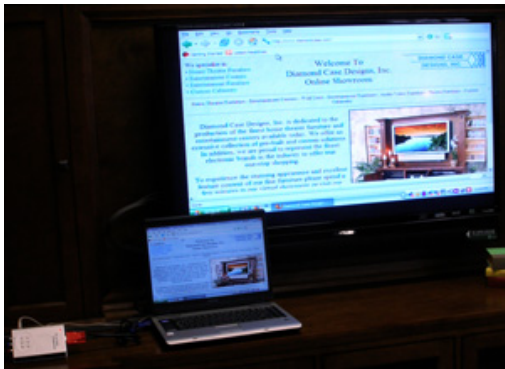
If your computer and TV can't take advantage of any of the computer to tv cable solutions covered above you'll likely need a PC to TV Converter. The PC to TV Converter is designed to take the VGA output of a computer (which is nearly universal) and convert it into the most common connections found on a TV such as component video, S-Video, or even standard RCA video.

VGA to Converter to TV		
<i>A nearly universal way to connect your computer to your TV. A VGA cable is connected from the computers output to the TV Converter. A component video cable (or S-Video) is then run from the Converter to the component video input (or S-Video) on the TV.</i>		
VGA Port on Computer	PC to TV Converter	Component Inputs on HDTV
		
<p style="color: blue; text-decoration: underline;">Click Here To Buy Now</p> <p style="text-align: center;"><i>Exclusive bundle includes:</i></p> <ul style="list-style-type: none"> (1) PC to TV Converter with all factory included cables (1) PC audio output cable (mini plug to stereo audio jacks for sound output) (1) Enhanced component video cable for improved video output (2 meters long) <p style="text-align: center;"><i>Normal Price = \$165, Discounted Bundle Price = \$145</i></p>		

How the PC To TV Converter Worked

We tested the PC to TV Converter by connecting our Windows XP-based Toshiba laptop to a Mitsubishi LCD HDTV. Initially, we used the included VGA and component video cables. In addition, we plugged in the included power cable (the unit receives power from a USB or PS/2 keyboard connection, both options are included). Finally, we plugged a special audio cable into the headphone jack of the computer and, in turn, into the TV so we could enjoy sound as well as video.

As we first fired up the unit we were disappointed to have no picture appear. This was quickly resolved by going into the control panel settings for the computer and activating the VGA output. The image immediately appeared on our TV. We played a bit with the computers output options to get the best possible match between the computer and the TV.



While we did enjoy seeing the computer screen in the glory of a big Mitsubishi TV we did note that the smaller text on the screen was a bit soft and harder to read than on the computer. We changed out the included component video cable to a higher quality cable and did notice a slight (but visible) improvement.

Because of the soft nature of the smaller text and items on the screen I would not recommend this Converter for "reading" intensive tasks. If you are thinking of composing letters, working in Excel, Word, or Photoshop this is not the recommended solution. If you are going to do basic web surfing you'll want to increase the text size through your web browser menu. If you are looking for an easy way to get your multimedia files onto your TV this is a perfect solution for you. It is ideal to see your photographs and videos

on your TV and you can to play your music or CDs (such as through iTunes).

If you are using a laptop this converter could be an indispensable option for you. You could keep it in your laptop bag and have the ability to share your music, photos, and videos with family or friends while you are on the go. Furthermore, it can be a key tool for presentations when you are unsure what connections may be available in your school, conference room, or board room. Having this nearly universal adapter can give you a "Swiss Army" knife style connection for the different scenarios you may come across.

The Converter comes with an infrared remote control that allows you to fine tune the positioning of the computers output on your TV. This can come in quite handy as the variety of resolution conversions you'll come across will likely not fill the screen perfectly. The remote also features a "Zoom" button that blows up the image to allow you to focus in on areas that feature smaller text. This did become helpful for some of the testing we did particularly when I needed to focus in on some of the soft text. I would have liked to have seen a multi-step zoom, but it is simple on/off circuit. The remote also toggles between NTSC or PAL output so it can be used just about anywhere.

Additional set-up instructions and troubleshooting information can be found in the attached PDF file.

Our Recommendations

Your best bet is to use a computer to TV cable, if your computer and TV allow. This type of connection offers the best possible output resolution. If you can use a DVI or HDMI connection you should enjoy a very high resolution connection with crisp, clean text even with small font sizes. I'm still not sure how much I would recommend doing extensive computer work on your TV but with one of those high resolution connections you probably could.

If your computer and TV don't "play well" together the PC to TV Converter will solve your problems. You won't get the crisp text you would enjoy with a direct cable connection but the Converter is good for basic web surfing (bump up the text size in your browser) and is perfect to free your multimedia files from the constraints of your computer. You'll definitely enjoy your photographs, videos, and music as they are proudly displayed on your large screen TV and heard on your home stereo system. We do recommend using a better quality component video cable as we noticed a slight but visible improvement. We also suggest getting a headphone jack to RCA adaptor so the computers audio can be connected to your home stereo.

Please use the links above if you would like to purchase one of these solutions. You can order now through our on-line store.



[Download a PDF Copy of this article with set-up and troubleshooting information](#)

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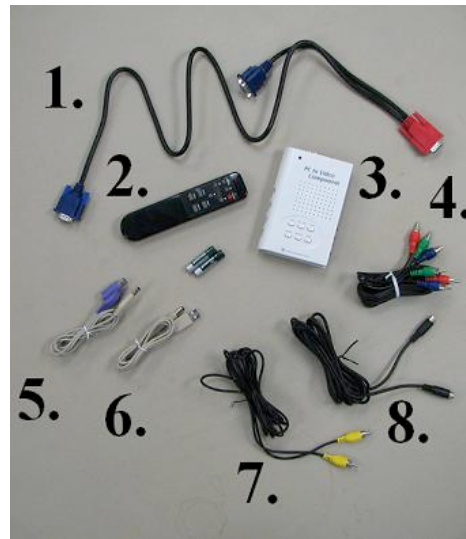
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Grand PC-TO-VIDEO Component Configuration - Model # GXP-2000



- 1. VGA cable
- 2. Remote control
- 3. PC to Video Component converter
- 4. Component cables
- 5. PS/2 power cable
- 6. USB power cable
- 7. Video cable (yellow composite)
- 8. S-Video cable

Side Views of Converter



Side 1: Power and Video-Out (Both Composite and S-Video)

*RGB out is for European-Use only



Side 2: Video In



Side 3: Adjustment Buttons and Remote Control sensor



Side 4: Video Out (Y.Cb.Cr)

Connect Y Cable to the Scan Converter

(Make sure that your computer is turned off while connecting the GPX-2000)



Y Cable



Red to Red Connector



On the back of your computer, unplug your monitor, and plug in the Y-cable (Blue to Blue)



Step 3 (optional): Plug in the monitor cable into the other Blue end of the Y-Cable

Choose Your Video Source

Good



Composite Video (yellow cable)



Connect video cable into GrandTec unit.



Plug the other end into your TV/VCR/projector's "Video-IN" (yellow composite).



Make sure that the switch is set to CVBS on the GrandTec unit.



Better



S-Video



Connect the S-Video cable to the GrandTec unit



Plug the other end into your TV/VCR/projector's "Video-IN" (S-Video).



Make sure that the switch is set to CVBS on the GrandTec unit.



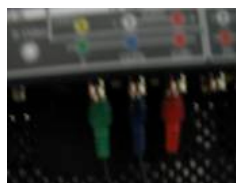
Best



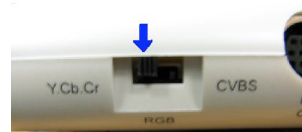
Y. Cb. Cr Cable



Connect the cables to the GrandTec unit's "Y.Cb.Cr Output" (Make sure green to green, blue to blue, red to red)



Hookup the other three colored cables into your TV/VCR/projector. Make sure green goes to green, blue to blue, and red to red.



Make sure that the switch is set to Y. Cb. Cr on the GrandTec unit.



Using either the P/S2 or USB power cables, attach one side to the unit.



Attach the other side of the cable to your computer's USB port (shown) or to your computer's PS/2 port (not shown)

Using either the P/S2 or USB power cables, attach one side to the unit.



Attach the other side of the cable to your computer's USB port (shown) or to your computer's PS/2 port (not shown)

Using either the P/S2 or USB power cables, attach one side to the unit.



Attach the other side of the cable to your computer's USB port (shown) or to your computer's PS/2 port (not shown)

Now Power up your computer and Power up your TV/VCR/projector.

Use the Video Select on your TV/VCR/projector to choose the video input. It will be either Y.Cb.Cr., S-Video, or Composite Video... depending on which one it is attached to.

When you select the correct input, you should see an image from your computer.

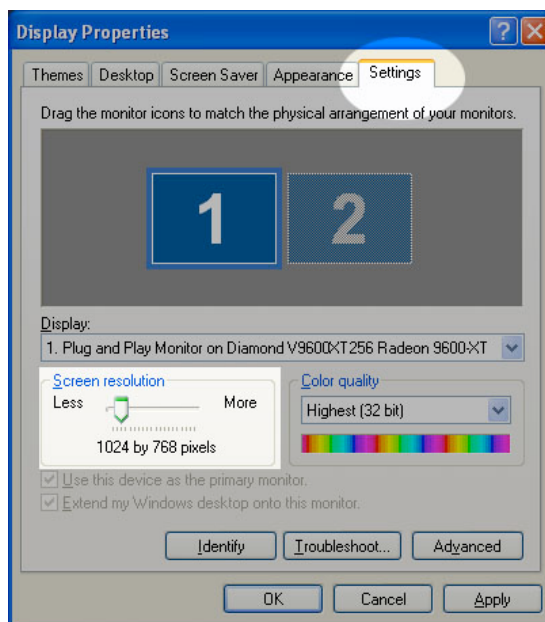
If you see color bars then you may need to adjust your computer's display setting.

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Troubleshooting

If you are seeing color bars, then your computer is not sending a compatible resolution to the unit.

On a PC, go to your computer's desktop that will have all your desktop icons and your desktop background picture. Right-Click on a blank spot on the desktop picture (in other words, do not click on an icon) When you right-click, a menu will appear (the bottom option will be "Properties") Click "Properties" A menu will popup called "Display Properties". This menu has 5 tabs (the 5th tab will be "Settings")



On this tab, there is a section called "Screen Resolution". You can use the arrow to switch between different screen resolutions. They are labeled by HORIZONTAL PIXELS x VERTICAL PIXELS. (example: 1024 x 768) Choose one that is compatible. Click Apply. A screen will popup that says "your computer will revert to your old settings in 15 seconds..." But if you are getting a good image on your screen, click ok/accept.

The PC to Video Component supports the following screen resolutions:

- | PC Resolutions: | Mac Resolutions: |
|-----------------|------------------|
| • 720 x 400 | • 640 x 480 |
| • 640 x 480 | • 832 x 624 |
| • 800 x 600 | • 800 x 600 |
| • 1024 x 768 | • 1024 x 768 |
| • 1152 x 864 | • 1152 x 864 |

- 1280 x 960
- 1280 x 1024
- 1600 x 1200

FAQ's

Q: Why am I getting a test pattern on my TV and no picture?

A: 1. The VGA cable connected between the VGA port on the computer and the VGA In/Out on the Internal Card is backwards. The end of the cable with the VGA connection should be connected to the "PC to Video Component".

2. Make sure the POWER and CHANNEL settings of your TV are correct. If the TV has a remote control, make sure it is not being triggered accidentally.

3. Make sure that the correct type of input (VIDEO or S-VIDEO) is selected on your TV. If possible, connect a VCR, camcorder or other output device to the TV's video input and make sure that the TV is accepting input through the selected connector.

Q: When I connect my TV to the GrandTec product through a VCR, I get no picture on the TV... what do I do?

A: 1. Make sure your VCR is outputting on the channel that your TV can receive auxiliary input on. Consult your VCR manual if necessary.

2. Make sure that the VCR is set to receive input from the VIDEO IN or AUX.

Q: I have DTV, EDTV, or HDTV. Can I use the Y.Cb.Cr output to get a digital display optimized for my digital TV?

A: No. The Y.Cb.Cr output is converting the analog progressive VGA signal into an analog interlaced signal for display on the TV. The Y.Cb.Cr output offers the best clarity for scan conversion, but it is not an analog to digital conversion.

Q: Why is the TV not displaying portions of the display when converted?

A: Your display might be running in OVERSCAN mode (placing portions of the picture beyond the boundaries of the screen's visible area). This typically occurs because VGA graphics have more display lines than the TV can handle. Toggle through the H-SIZE and V-SIZE settings in the MENU until you find the optimal setting for your application.

Note: The SIZE control allows the entire image to be displayed by reducing it and putting a crisp, black border around it. Use this control in situations where edges of the image would otherwise be lost due to overscanning.

Q: There are "noise lines" on the TV picture. How do I get rid of them?

A: There are four settings in most televisions that affect the clarity of the display. The same adjustments can be used to improve the clarity of the display whether you use a converter or not.

The settings are:

1. BRIGHTNESS: Typically, the brightness setting is by default too high. A high brightness setting often causes the display to flicker.
2. SHARPNESS: If the sharpness is set too high, often the result is what is termed "dot-crawl", where edges of the image appear to move. Lower the sharpness to soften the edges.
3. COLOR: If the color is set too high, often the result is colors that bleed or appear to sparkle. The high (purple) and low (red) frequency colors are most affected. Adjust the color setting down to soften the colors.
4. CONTRAST: If the contrast is set too high, often the result is exaggerated colors. Adjust the contrast down to complement the SHARPNESS setting

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