

915/965 Motherboard with a 9500 Video Card Connection Guide

Because the system box that originally shipped with your GT LIVE may need to be replaced, some video connections that worked with the previous Nighthawk system box may now need to be adjusted. The most recent motherboard is the DG31PR, which has a 9500 video card with an HDMI port. Audio and video is provided via HDMI cable. The 9500 video card only works with Golden Tee 2009 courses or higher.

This guide focuses on setting up system boxes with the 915/965 motherboard. HDMI audio is not enabled for system boxes with the 915/965 motherboard.

To determine the correct video and audio connections for your new system box, it is necessary to:

1. Identify the system box motherboard and video card combination. Use the Nighthawk System Box Configuration Table on page 2 to help with identification.

Note: The 915 and 965 motherboards have a different arrangement of ports, but the functionality is identical, so they are referred to as one type of motherboard: 915/965.

2. Identify the video card. A 9500 will have an HDMI port on the top. The older video cards, 7600 or 6600, will have a round display port above the 2nd monitor output for component video.

7600 Video Card with Display Port



9500 Video Card with HDMI Port



3. Identify the best video and audio configuration for your equipment.

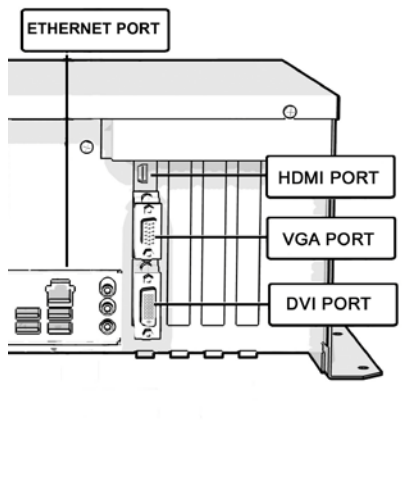
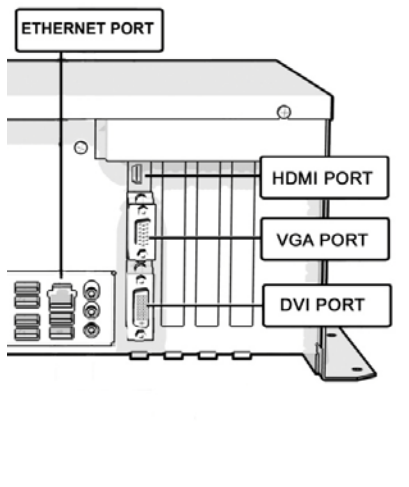
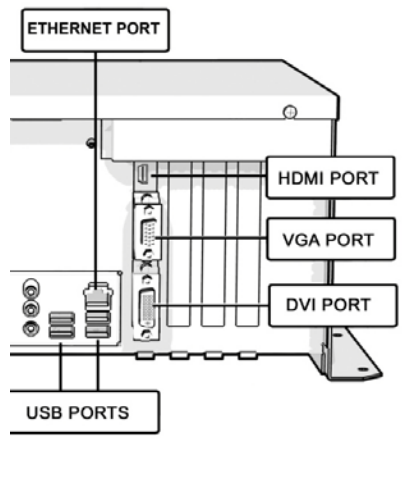
- **CRT MONITOR** - Use the DVI to VGA adaptor from the DVI port on the system box and connect to the VGA port on the monitor. Audio - Use the system box RCA audio out to the I/O board RCA audio in, with speakers connected to the I/O board.
- **HDTV** - Capable of VGA, DVI or DVI to HDMI video. Audio - Use the system box RCA audio out directly to the HDTV audio system or to the I/O board, using cabinet speakers connected to the I/O board.

Identifying the Motherboard with a 9500 Video Card

With the box horizontal on a level surface, look closely at the rear right side of the Nighthawk system box to determine which motherboard and video card combination you have. The location of the Ethernet port and USB ports is the easiest way to identify the motherboard.

The diagrams below illustrate the differences between the three main types of system boxes shown with a 9500 video card:

Nighthawk System Box Configuration Table

 <p>Diagram showing the rear panel configuration for the DG31PR system box. It features an Ethernet port at the top left, followed by an HDMI port, a VGA port, and a DVI port. There are also several other ports (likely audio and USB) located below the DVI port.</p>	 <p>Diagram showing the rear panel configuration for the D965 system box. It features an Ethernet port at the top left, followed by an HDMI port, a VGA port, and a DVI port. There are also several other ports (likely audio and USB) located below the DVI port.</p>	 <p>Diagram showing the rear panel configuration for the D915 system box. It features an Ethernet port at the top left, followed by an HDMI port, a VGA port, and a DVI port. A separate section for USB ports is located below the DVI port.</p>
<p>DG31PR</p>	<p>D965</p>	<p>D915</p>
<p>*Updated Configuration</p>	<p>Legacy Configuration</p>	

If the system box does not have an HDMI port, then it has a 7600 or 6600 video card. A system box with 2009 courses or higher and a 7600 video card can use the top video port for component video out. Proper cables and set up are required. The 9500 and 6600 video cards are not capable of component video.

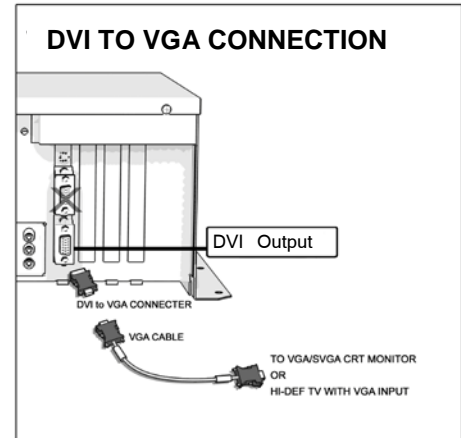
Once the configuration, and the replacement system box capabilities, are known, use the appropriate method below to set up connections.

*Audio is possible through HDMI with the DG31PR configuration.

Video Connections – Primary Monitor

HDTV VGA METHOD (Allows for dual monitors either secondary or duplicate video)

- **VIDEO:** Use the DVI to VGA adaptor from the DVI port on the system box to connect a VGA cable to the VGA port on the HDTV. Common input label names for VGA ports on HDTVs are RGB, Computer or PC.
- **AUDIO:** Using a 2-wire RCA cable (red and white) connect the RCA audio out on the system box to the appropriate audio in on the HDTV. It can also be connected to the I/O board with speakers connected to the I/O board. See Audio Connections for details.



CRT VGA METHOD (Allows for dual monitors either secondary or duplicate video)

- **VIDEO:** Use the DVI to VGA adaptor from the DVI port on the system box to connect a VGA cable to the VGA port on the CRT monitor.
- **AUDIO:** Using a 2-wire RCA cable (red and white) connect the RCA audio out on the system box to the RCA audio in on the I/O board with speakers connected to the I/O board.

DVI to HDMI METHOD (Allows for a second monitor displaying secondary or duplicate video)

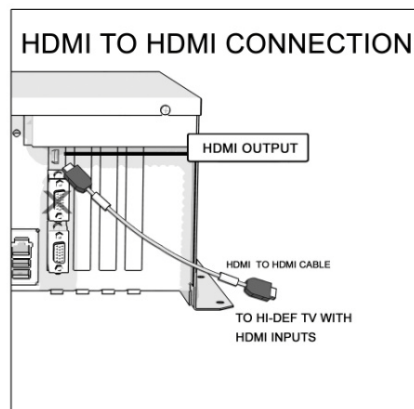
- **VIDEO:** Use a DVI to HDMI cable or adapter. Connect the DVI side of the cable to the bottom DVI port on the system box and the HDMI side of the cable to an HDMI input on the HDTV. Select the proper input on the HDTV.
- **AUDIO:** If the HDTV has RCA audio L/R inputs associated with an HDMI input, it is possible to use the HDTV speakers.



- Using a 2-wire RCA cable (red and white) connect the RCA audio outputs on the system box to the audio L/R input next to the HDMI input on the HDTV.

HDMI to HDMI (This will allow for ONE monitor only)

- **VIDEO:** Connect the HDMI cable from the system box to the HDMI input on the HDTV. Select the proper input on the HDTV.
- **AUDIO:** Using a 2-wire RCA cable (red and white) connect the RCA audio out on the system box to the RCA audio in on the I/O board with cabinet speakers connected to the I/O board. See Audio Connections for details.



The DIP switches on the I/O board must be set appropriately for the desired resolution.

HDTV MONITOR APPLICATION

IMPORTANT NOTE
 I/O CARD DIAGRAM FOR ORIENTATION

RESOLUTION SETTINGS

<p>1280 x 720 (HDMI/DVI-D) 720p DEFAULT</p>	<p>1280 x 720 (SVGA) 720p</p>
<p>1280 x 720 (Component) 720p</p>	<p>800 x 600 (SVGA)</p>
<p>800 x 600 (Component)</p>	<p>640 x 480 (VGA)</p>

Sw201 Sw200 Sw202

SECONDARY SETTINGS

<p>Primary Monitor has 16 x 9 Aspect Ratio DEFAULT</p>	<p>Optional 2nd Monitor has 16 x 9 aspect ratio DEFAULT</p>
<p>Primary Monitor has 4 x 3 Aspect Ratio</p>	<p>Optional 2nd Monitor has 4 x 3 aspect ratio</p>
<p>Enter System Setup Menus</p>	<p>Do Not Flip Optional 2nd Monitor DEFAULT</p>
<p>Exit System Setup Menus DEFAULT</p>	<p>Vertical Flip Optional 2nd Monitor</p>

Sw200 ALWAYS ON
 Do Not Change
 Settings shown for Showpiece

CRT MONITOR APPLICATION

IMPORTANT NOTE
 I/O CARD DIAGRAM FOR ORIENTATION

RESOLUTION SETTINGS

<p>SVGA 800 x 600 37.8 KHz</p>
<p>VGA 640 x 480 31.5 KHz</p>
<p>MID 512 x 384 25 KHz</p>
<p>LOW 384 x 256 15 KHz</p>

Sw201 Sw200 Sw202

SECONDARY SETTINGS

<p>Enter Operator Adjustables</p>
<p>Exit Operator Adjustables & Vertical Flip Upper Monitor (default)</p>
<p>Do Not Flip Upper Monitor</p>

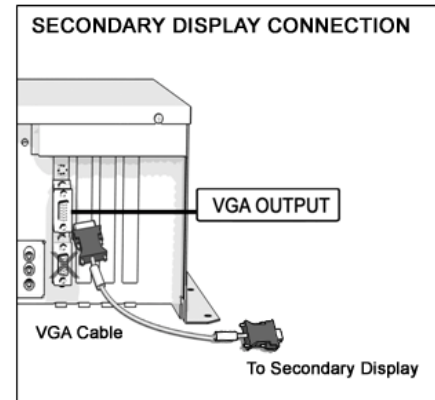
ALWAYS ON
 Do Not Change

Video Connections – Secondary Monitor

A second monitor can be installed to display secondary information or a duplicate image of the main monitor. When duplicating the main video, the second monitor will match the resolution of the main monitor.

- The second monitor must be connected to the upper VGA video port of the video card. The DIP switch settings must be set appropriately for your application.

Note: When using HDMI to HDMI a second monitor is not possible.



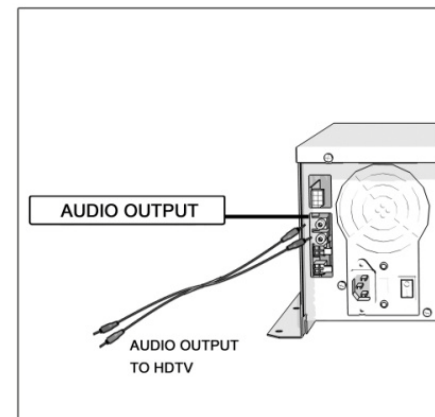
Audio Connections

HDTV Speakers

- Connect the 2-wire RCA (red and white) audio cable from the RCA audio out on the system box to the to the appropriate audio input on the HDTV.

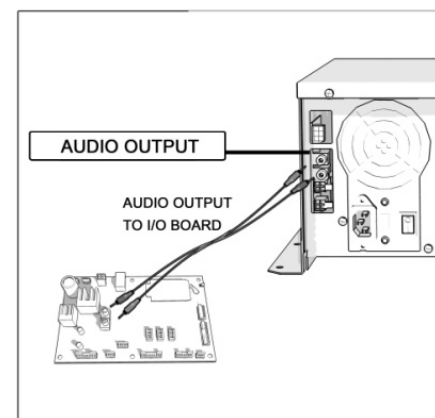
Note: If using VGA video, it may be necessary to use a stereo 3.5mm male plug to 2 female RCA adapter.

- Adjust the game volume to 75% and adjust the television volume to the desired level.



External Speakers – Speakers Connected to the I/O Board.

- Connect the 2-wire RCA (red and white) audio cable from the RCA audio out on the system box to the RCA audio input on the I/O board.
- Speakers should already be connected to the audio output from the I/O board.



See the most current manual for more information.

Available online at: <http://www.itsgames.com/itsgames/Support/Manuals>