

## Video Overlay Instructions

### Simultaneously Display Match Information and Live Video:

The audience display supports the use of video overlay to place real-time match information (including the match timer, the teams in the match, and the match number) on top of live video from the event. Using this feature, live video can be shown on a large television or projector while retaining the match timer and other important information.

### How to Enable Video Overlay:

Since some events do not have the equipment or personnel necessary to support live video this feature must be turned on. The operator may enable the overlay feature by selecting the 'View' menu in the Audience Display application followed by 'Overlay On'.



When overlay is disabled (default), the 'In Match' screen will show a large, full-screen timer along with the match number and teams competing. When overlay is enabled, the timer and match number will appear in one corner and the teams competing will appear in the other. The rest of the screen will be filled with the selected overlay color.

### Hardware Overlay:

If you have a large enough budget the highest quality and most robust video overlay solution is to use professional chroma-key equipment. The chroma-key hardware replaces the selected color (chroma-key) with a video input from a video camera. Unfortunately, chroma-key equipment can be prohibitively expensive (\$800 and up).

### Software Overlay:

The cheaper and less robust option is to use a computer to do the video overlay with free software. Dscaler is the only program that is known to do an more-or-less acceptable job. Dscaler must be used in conjunction with a video capture device.

There are essentially two choices, video capture cards or webcams. External USB video capture cards and internal PCI video capture cards work equally well. These can be purchased for around \$100 and still need to be fed a video signal from some type of video camera. The alternate solution is to use a webcam. No video capture card or additional video equipment is required. However, most webcams (all Logitech webcams) have a maximum frame rate of 30 frames per second (fps) which is too slow to adequately capture quick movements. Less commonly available webcams with frame rates of 60 fps or greater readily solve the problem. Be careful because frame rates decrease as resolution increases. For instance the Phillips 1330nc can capture 90fps at resolutions up to 640x400 (VGA) but drops to a maximum of 30fps if the resolution increases to 800x600 (SVGA).

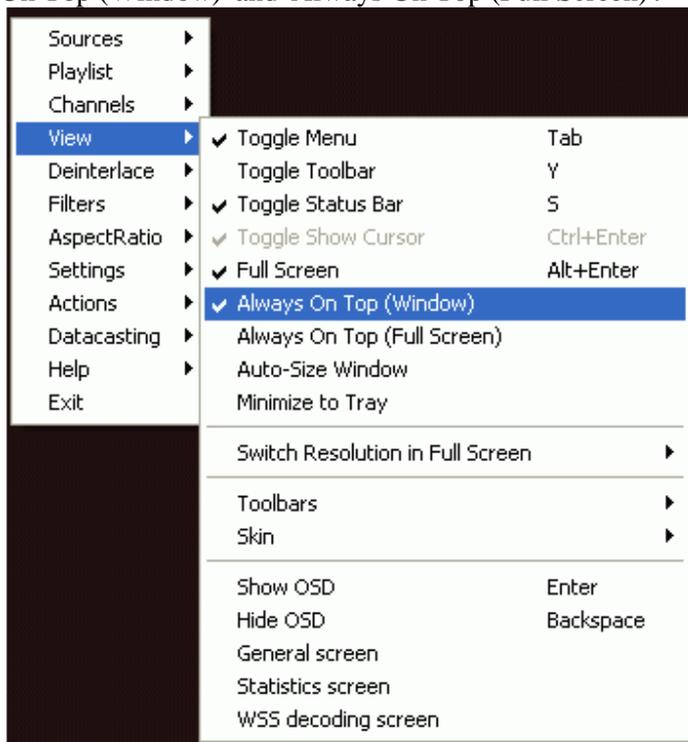
Software overlay should only be used when the audience display can be run on dedicated computer with a decent video card, modern processor, and a large amount of memory. Do not attempt to run DScaler on the same computer that is running the Tournament Manager server, it will most likely crash and potentially corrupt the tournament database.

### Install DScaler:

Install drivers for any video capture card or webcam that will be used for software overlay. Finally, download and install the free DScaler TV Viewer application from [www.dscaler.org](http://www.dscaler.org). Download the experimental version (despite the dire warnings) in order to adjust resolutions. Stay away from the buggy “stable” version since it has not been updated in years.

### Configuring DScaler:

Plug in your video capture system. Open the DScaler Application. Select your video capture card or webcam from the ‘Sources’ menu. You should immediately see live video. Next, select the 'Settings' menu followed by 'Advanced Settings'. Choose 'Overlay Settings' from the menu on the left. Highlight 'Overlay Colorkey' from the options in the top-right of the window and click the 'Default' button at the bottom left. The Value indicated should be 1052704. Click 'OK'. Right click on the screen. Select 'Sources' and select your video capture card or webcam. Right click on the screen again and select 'View'. Uncheck 'Always On Top (Window)' and 'Always On Top (Full Screen)'.

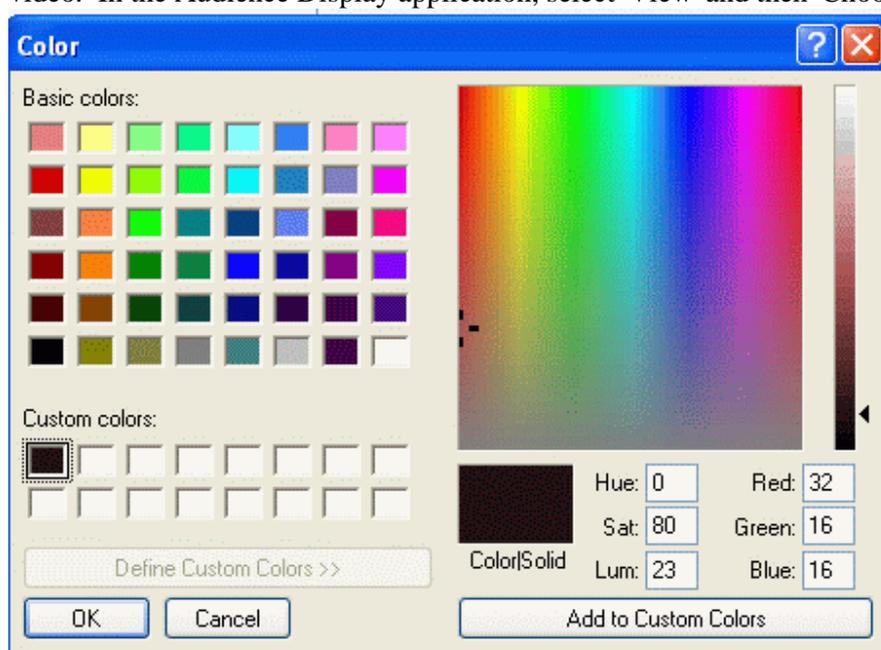


### Configure Tournament Manager to Display Live Video:

Install the Tournament Manager application (not the server) on a separate computer that is on the same network as the computer running the Tournament Manager server.

Adjust the display properties on the computer running the audience display to 800x600 (SVGA). High definition only makes sense if your camera, video capture card, and display are all capable of displaying high definition at acceptable frame rates (60 fps or better).

Ensure that the Tournament Manager server is running on some other computer. Open the Tournament Manager Audience Display application (800 x 600) on the computer running video. In the Audience Display application, select 'View' and then 'Choose Overlay Color'.



Select an overlay color in the popup 'Color' window. This is the color that will be replaced by live video. If you are using software overlay you will need to create a custom color that matches DScaler's default overlay color (Red 32, Green 16, and Blue 16). Select your color and click 'OK'.

#### **Setting the Audience Display over DScaler:**

Activate the DScaler window by clicking in it and press Alt-Enter to make it full-screen. Next, hold down the Alt key and press the Tab key repeatedly until you see "Audience Display" selected. Release the Tab key and the Audience Display window should be active. Press Alt-Enter to make the Audience Display full-screen. At this time, test the Audience Display by selecting the "In Match" screen from the Tournament Manager application. You should see the match timer and team list overlay on top of the live video. Certain video cards on older computers may not support the video overlay feature. If you find that this procedure does not work, try a different computer. Most recent laptops appear to support this mode.