SPECTRA 7400 DDR User's Manual

How to...

Using Screen Control II

Using Adapter Control

Using Refresh Control II

Using SnapShot

Using Media Scope

Using V-Shot for high quality still image capture

Advanced Options

SPECTRA Information

To show the SPECTRA Information:

1. [icon] Bring up the Control Panel's Display Properties window.
2. Click on the **Settings** tab and then click on the **Advanced …** button.
3. Click on the **SPECTRA Information** tab.
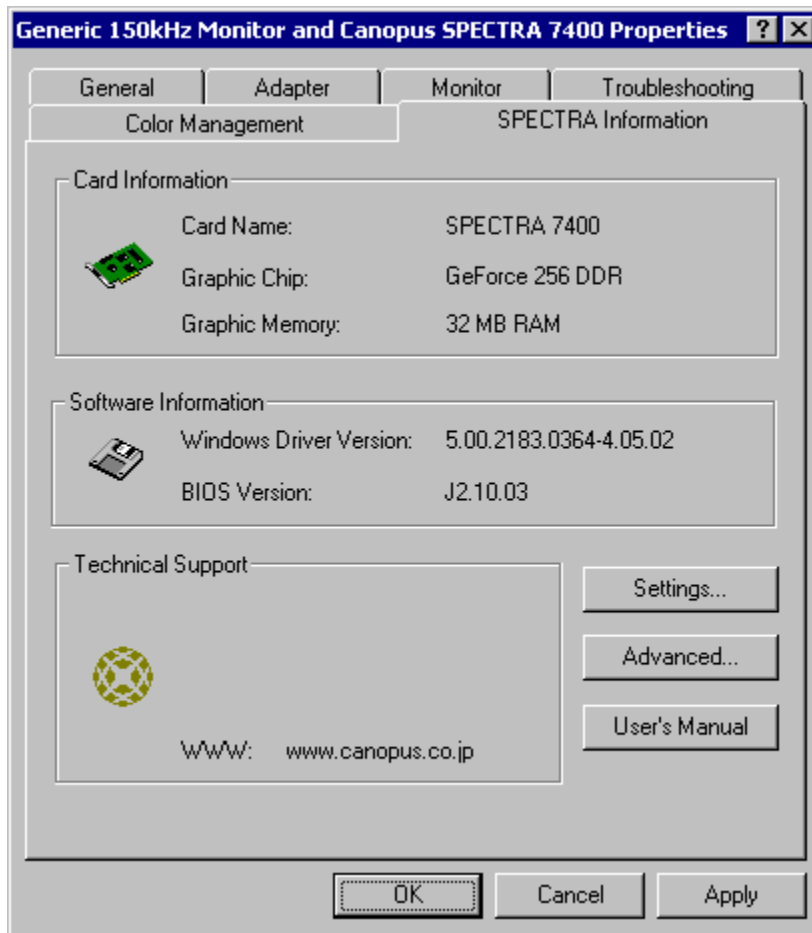
Card Information
    Show the display card information.

Software Information
    Show the driver and BIOS version.

Technical Support
    Show the technical support information.

Set your desktop resolution

To set the resolution of your desktop:

1. ⬛ Bring up the Control Panel's Display Properties window.
2. Click on the **Settings** tab.
3. Under "Screen area" drag the slider to the desired resolution:
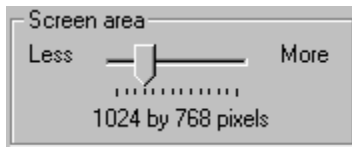
4. Click **OK** or **Apply**.

-or-

1. Click on the **Screen Control II** icon 🖥 in the taskbar.
2. Click on the resolution (and color depth) you want.

Set your desktop color depth

To set the color depth of your desktop:

1. Bring up the Control Panel's Display Properties window.
2. Click on the **Settings** tab.
3. Under "Colors" select the desired color depth:

4. Click **OK** or **Apply**.

-or-

1. Click on the **Screen Control II** icon in the taskbar.
2. Click on the color depth (and resolution) you want.

Set the refresh rate of your monitor

To set the refresh rate of your monitor:

1. ◩ Bring up the Control Panel's Display Properties window.
2.   Click on the **Settings** tab and then click on the **Advanced …** button.
3.   Click on the **SPECTRA Information** tab.
4.   Click on the **Setting…** button and then click on the **Desktop** tab.
5.   Under "Refresh Rate" drag the list box to the desired refresh rate:
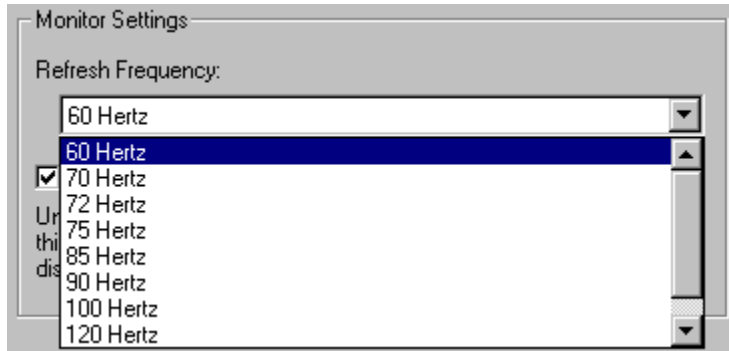
6. Click **OK** or **Apply**.

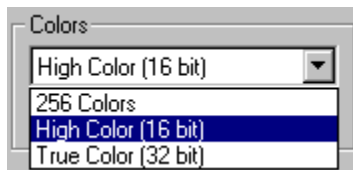   -or-

1. Click on the **Screen Control II** icon 🖥 in the taskbar.
2.   Click on the resolution (and color depth) you want.

Set the screen position of your monitor

To set the screen position of your monitor:

1. Bring up the Control Panel's Display Properties window.
2. Click on the **Settings** tab and then click on the **Advanced …** button.
3. Click on the **SPECTRA Information** tab.
4. Click on the **Setting…** button and then click on the **Desktop** tab.
5. Click the left, right, up or down arrow buttons in the Screen Position/Refresh box to shift your screen. Each click of a button shifts the screen in the indicated direction. You can click on the center

button to reset the screen to its original position.
6. Click **OK** or **Apply**.
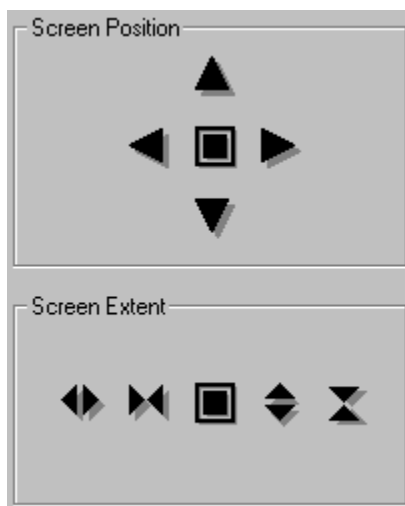
Set the gamma of your display

To set the gamma of your display:

1. ◩ Bring up the Control Panel's Display Properties window.
2.   Click on the **Settings** tab and then click on the **Advanced …** button.
3.   Click on the **SPECTRA Information** tab.
4.   Click on the **Setting** button and then click on the **Gamma** tab.
5.   Move the top slider, marked **Gamma, Brightness and Contrast**, to the left or right to achieve the desired level.
6.   Click **OK** or **Apply**.
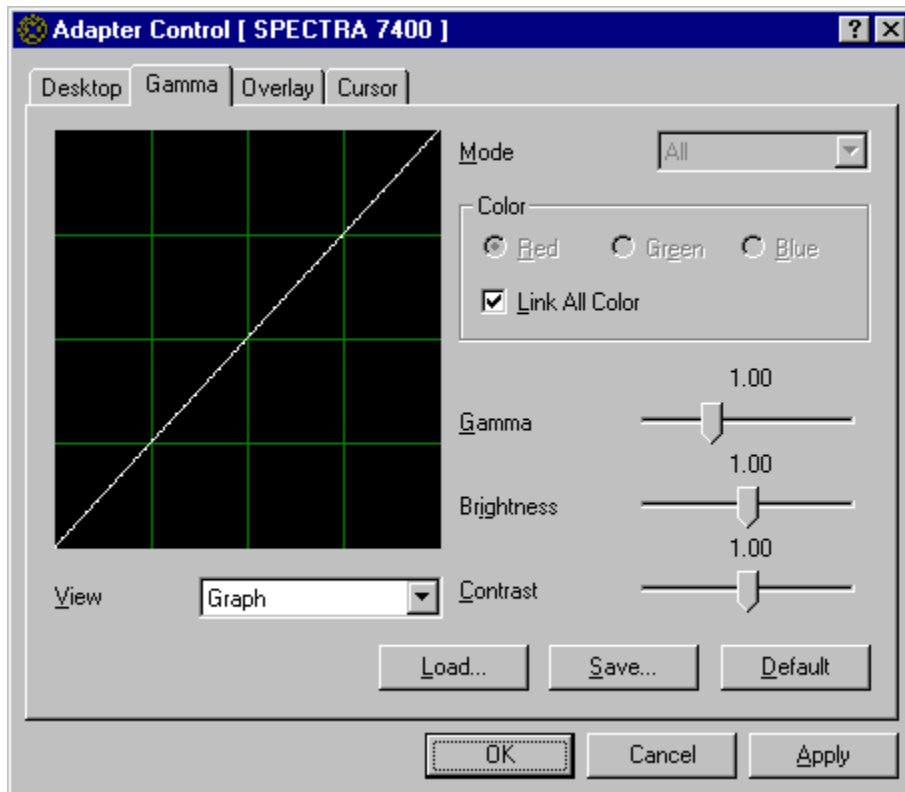
7. To save this new setting for later use, select **Save** and type a file name for the new setting.
8. To use a previously saved setting, select **Load** and the file name for that setting.
9. To reset to the standard setting, select **Default**.
10. Click **OK** or **Apply**.

You can also set the gamma of the red, green, or blue hues in your display separately:

1. Remove the check from Link All Color in the Color section. Then you can select the color Red, Green and Blue individually. Select the color that you want to adjust.

2. Move the top slider, marked **Gamma, Brightness and Contrast**, to the left or right to achieve the desired level.
3. Click **OK** or **Apply**.

To change the image for adjust window:

1. Select the View from the List box.
2. You can select Graph, Color Bar and Custom.
3. You can use your original image for Gamma control. Select the Custom, right click on the adjust window, select File from menu. Then file select window will open. If image is larger than 224 x 192, you can drag the image by left click.

Set your overlay color

To set the overlay color of your display:

1. ![icon] Bring up the Control Panel's Display Properties window.
2. Click on the **Settings** tab and then click on the **Advanced …** button.
3. Click on the **SPECTRA Information** tab.
4. Click on the **Setting** button and then click on the **Overlay** tab.
5. Move the top slider, marked **Brightness, Contrast, Hue and Saturation**, to the left or right to achieve the desired level.
6. Click **OK** or **Apply**.
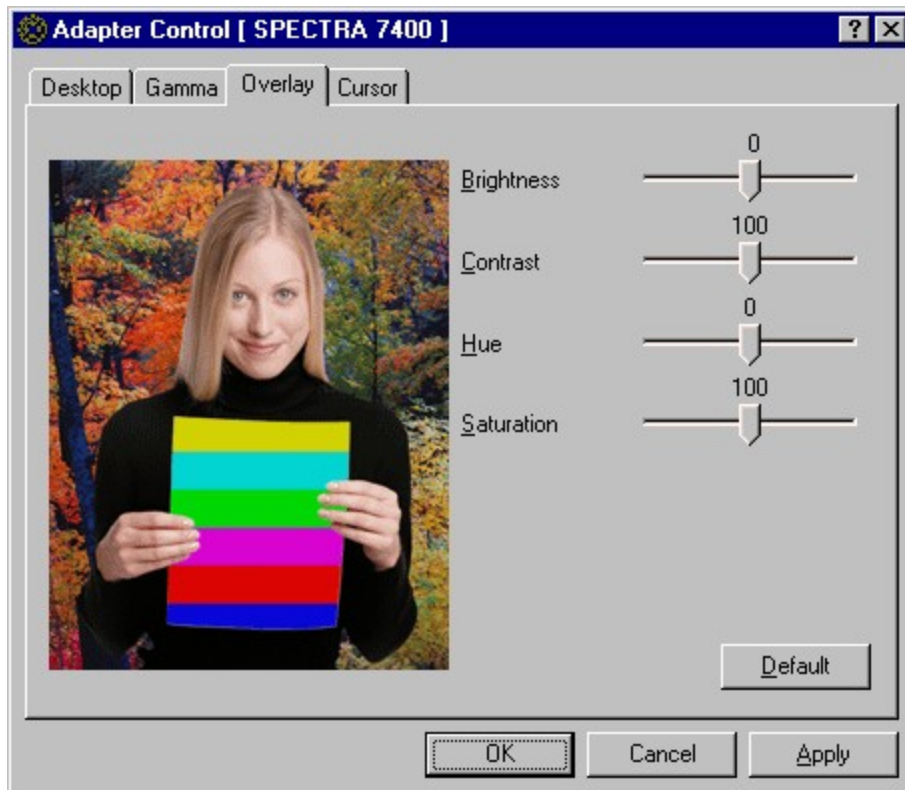
The Test image will not display when the other application is using the overlay. Color control will apply real-time to the overlay window. If resolution or refresh rate is set to a noncapable overlay mode, the test image will not display.

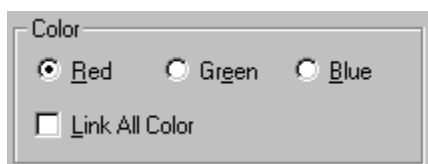# Set your cursor color

To set the color of your display:

1. Bring up the Control Panel's Display Properties window.
2. Click on the **Settings** tab and then click on the **Advanced …** button.
3. Click on the **SPECTRA Information** tab.
4. Click on the **Setting** button and then click on the **Cursor** tab.
5. Move the sliders on the left hand side of the Cursor Color box to adjust the cursor body color.
6. Move the sliders on the right hand side of the Cursor Color box to adjust the cursor outline color.

7. Click **OK** or **Apply**.

Loading / Unloading Screen Control II

Screen Control II installs automatically in the tray bar of the start menu.
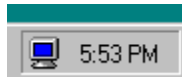
To unload Screen Control II utility click on the Screen Control II icon in the tray bar to activate its menu and select Exit.

To have Screen Control II not automatically load each time Windows runs bring up the Screen Control II dialog window and uncheck the option "Load Screen control II when starting Windows".
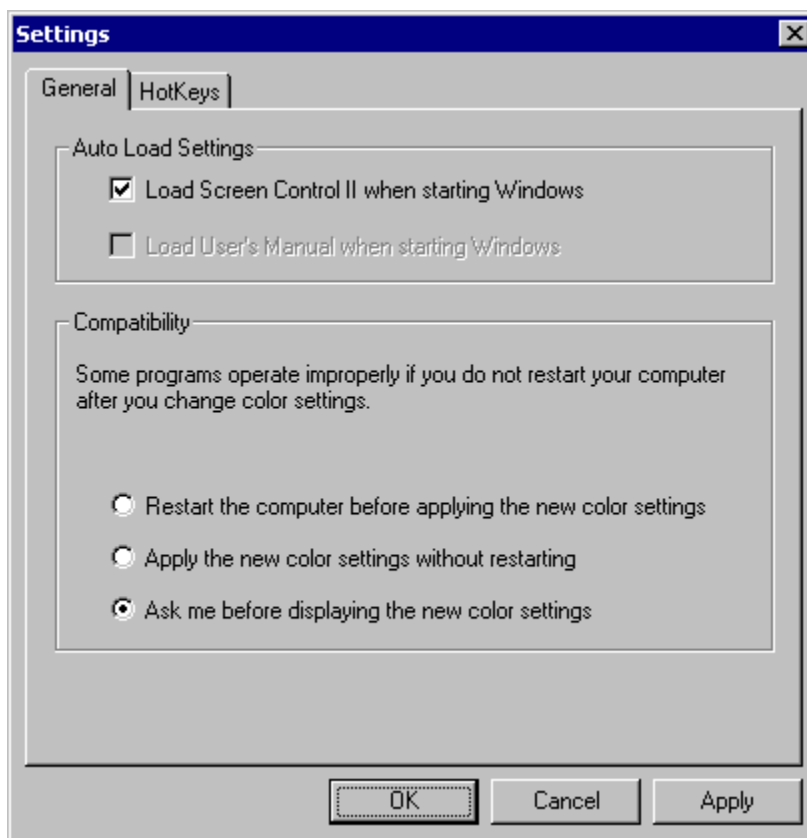
Setting the Options

1. Click on the **Screen Control II** icon ⬛ in the taskbar.
2.   Click on the **Settings** menu.
3. Select the desired options in the Auto Load Setting and Compatibility section
4. Click **OK** or **Apply**.
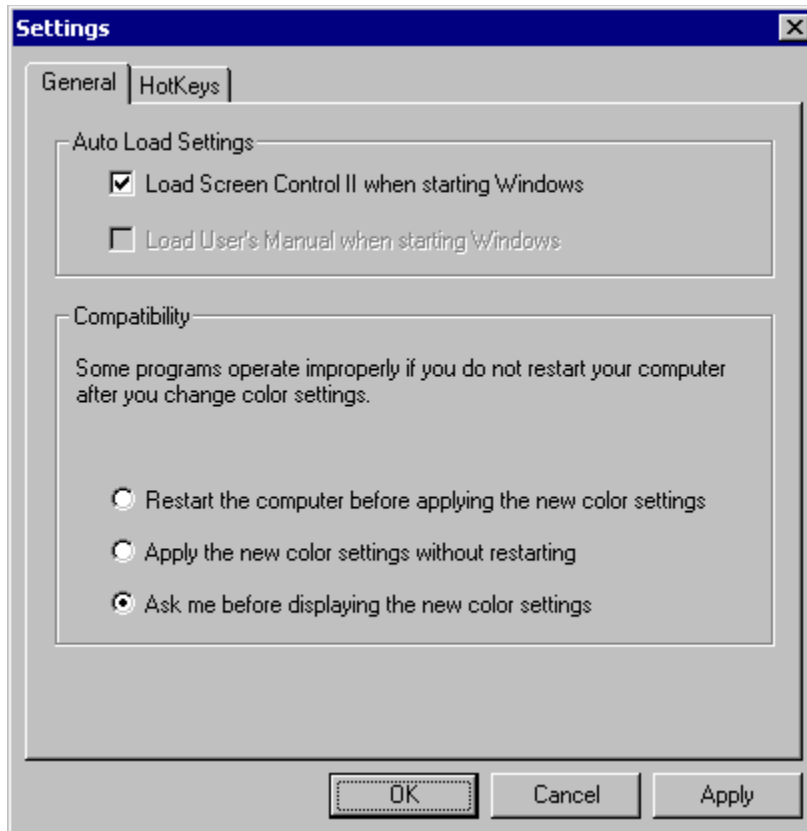
Auto Load Settings:

  Load Screen Control II when starting Windows.

    To have Screen Control II automatically load each time Windows runs bring up the Screen Control II and check the option "Load Screen control II when starting Windows". Uncheck the option to not automatically load.

  Load User's Manual when starting Windows.

    To have Screen Control II automatically load each time Windows runs bring up the User's Manual and check the option "Load User's Manual when starting Windows". Uncheck the option to not automatically load.

Compatibility:

    Set the color change mode in Screen Control II.

Assigning Hotkeys

Hotkeys are assigned in the Screen Control II . By default only the Increase and Decrease Gamma Values are available in the Hotkey list. Click on the Advanced List check box to see all of the functions available.
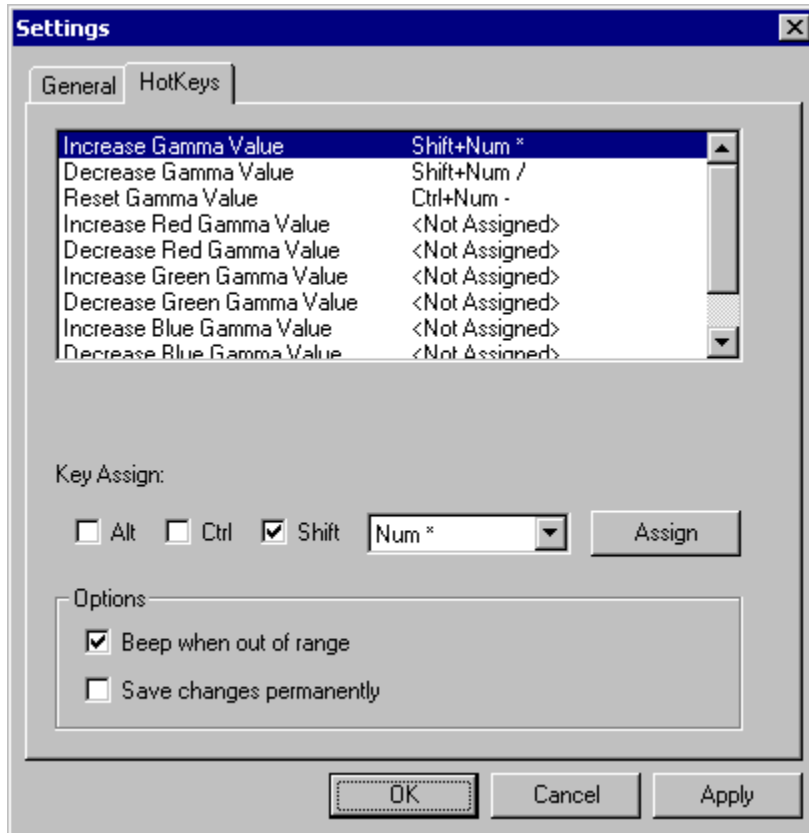
Setting Your Desktop Resolution and Color Depth

To set the resolution and color depth of your desktop:

1. Click on the Screen Control II icon in the taskbar.
2. Click on the resolution and refresh rate you want.

   -or-

1. Bring up the Control Panel's Display Properties window.
2. Click on the **Settings** tab and then click on the **Advanced …** button.
3. Click on the **SPECTRA Information** tab.
4. Click on the **Setting** button and then click on the **Desktop** tab.
5. In the Resolution section select the desktop size from the list box.
6. In the Refresh rate section select the rate from the list box.
7. Click **OK** or **Apply**.

Setting the Refresh Rate for Your Monitor

To set the vertical refresh rate of your monitor:

1. Click on the Screen Control II icon ⬛ in the taskbar.
2. Click on the refresh rate you want. When you select the Custom, <u>Custom Refresh Rate</u> dialog will appear.
3. Refresh rate will change automatically. If monitor can display correctly, click **Yes** button to apply the setting.

Setting the Custom Refresh Rate for Your Monitor

Important Information:
 You can set custom refresh rates and adjust the screen width by using the Custom Timings control. Please note there is a possibility to damage your Monitor if you use this control and set the timings to beyond the monitors capability. Only experienced users should use this control and do so at their own risk.

Note: The Custom timing is available when you specify Custom setting in Screen Control. II and SPECTRA Information tab.

To set the vertical custom refresh rate of your monitor:

1. 🔲 Bring up the Control Panel's Display Properties window.
2. Click on the **Settings** tab and then click on the **Advanced …** button.
3. Click on the **SPECTRA Information** tab.
4. Click on the **Setting** button and then click on the **Desktop** tab.
5. In the Refresh rate section select the custom rate from the list box.
6. Move the top slider, **Refresh Rate**, to the left or right to achieve the desired level.
7. Click **OK** or **Apply**.
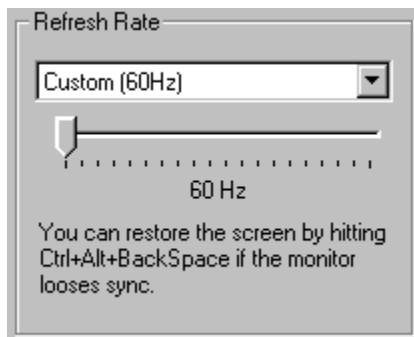
Refresh Rate:
 You can select a custom refresh rate by moving the slider control. There is the possibility of selecting a refresh rate to high for your monitor and you may damage it.

Note:
 If the screen looses sync and goes blank you can restore the previous setting by hitting **Alt-D.**

Using How the Adapter Control works
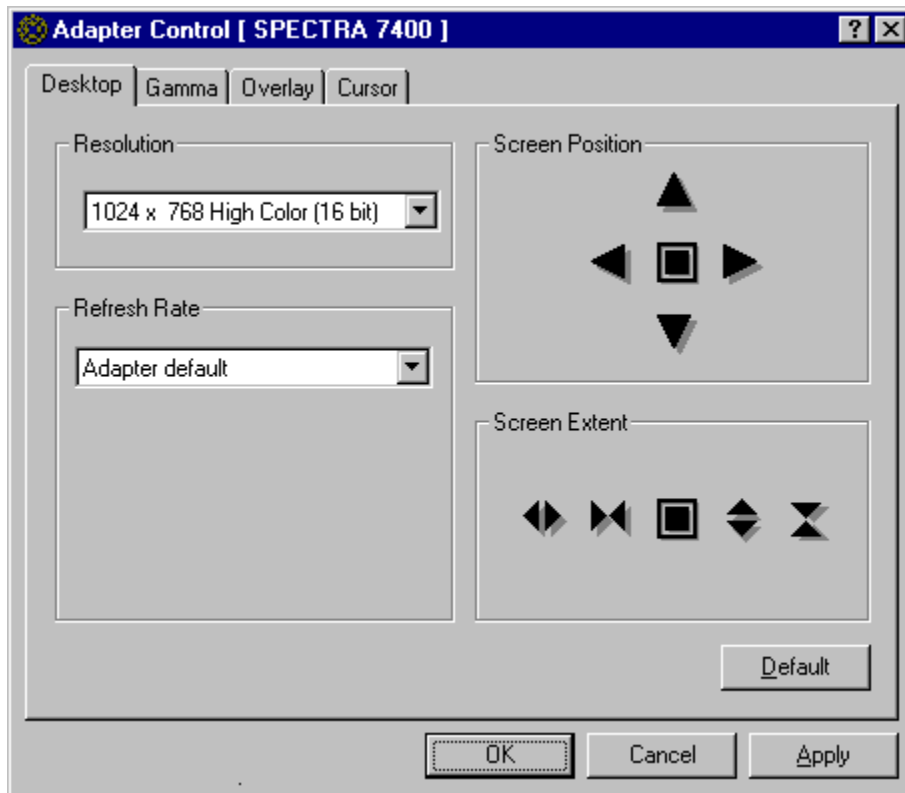
Desktop
   The Desktop tab allows you to set the resolution, color, refresh rate and **Screen Position**.

Gamma
   The Gamma tab allows you to adjust the **Gamma** setting.

Overlay
   The Overlay tab is allows you to adjust the **Overlay** color setting.

Cursor
   The Cursor tab allows you to set the **Cursor Color**.

Using Refresh Control II

Refresh Control II is a Windows utility to set the refresh rate for all resolutions in each color mode at one time.

Loading Refresh Control II:
Select the Refresh Control II from the Screen Control II.

Caution!!!
Do not set the refresh rate above your monitor's specifications. This may damage your monitor.
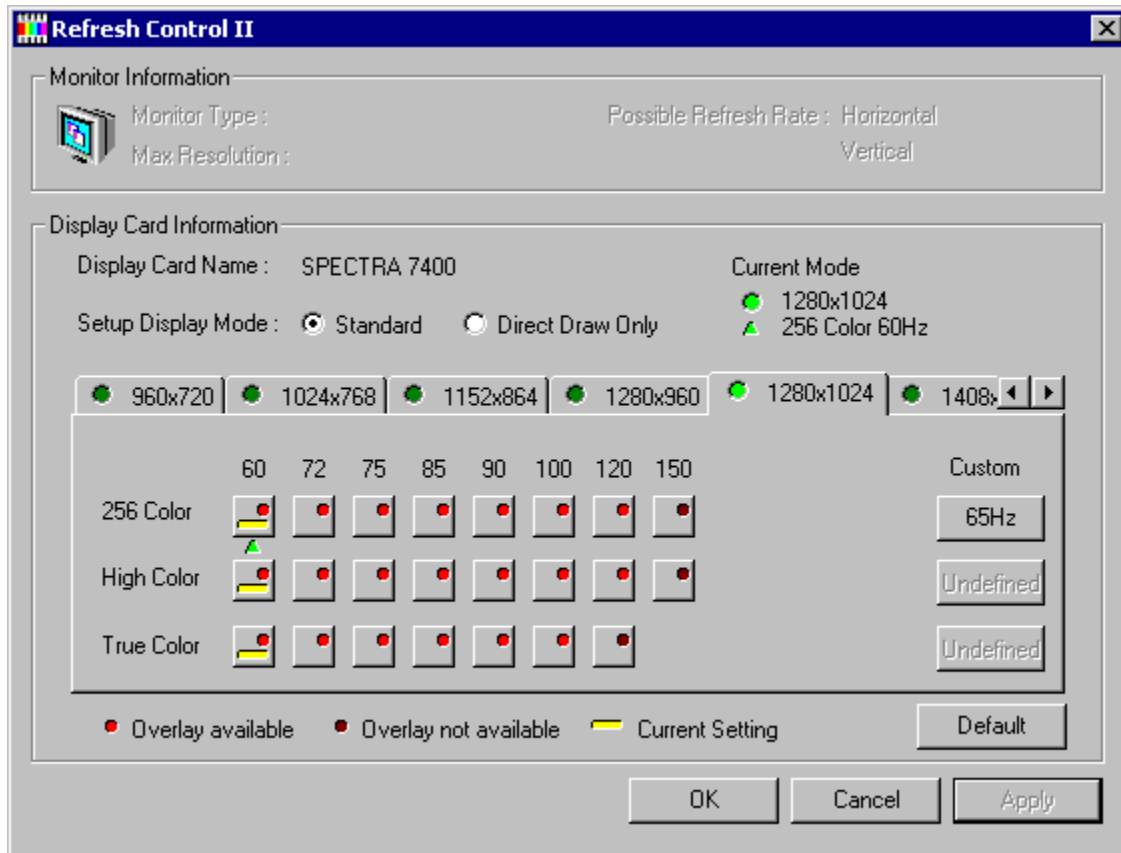
Setting Refresh rate

To set the vertical refresh rate of your monitor:
1. Open the Refresh Control II window from Screen Control II.
2. Select the Standard or Direct Draw Only depending on which mode you want to change.
3. Select the resolution.
4. Select the refresh rate.
5. The Testing dialog box will appear. Click **OK** button to proceed.
6. The Test image will show on your monitor. Push any key or click mouse left button to return. It will automatically return after 10 seconds.
7. Click **Yes** button to enable the new setting.
8. Click **OK** or **Apply**.
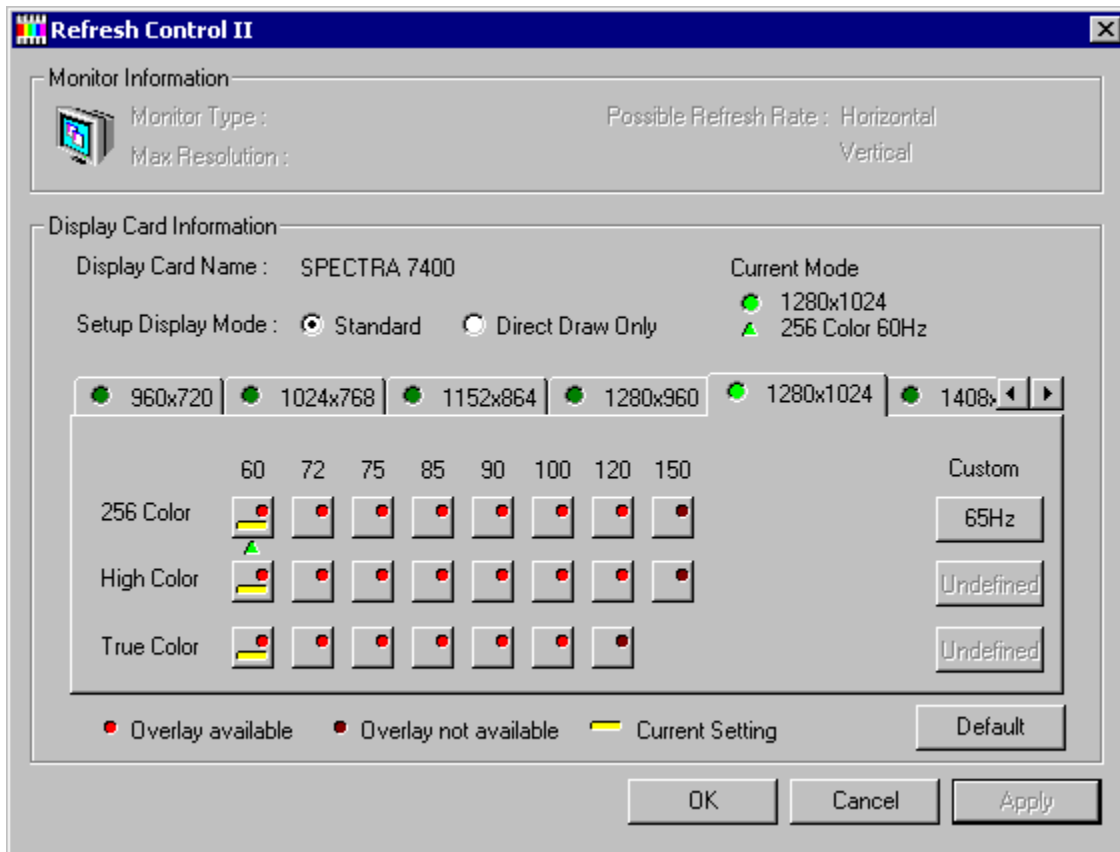
Button

	Overlay available. Red light turn on.
	Overlay unavailable. Red light turn off.
	Current setting.
	Over the maximum refresh rate of your monitor.
Undefined	Frequency Undefined. Defined button will display the refresh rate.

How the SnapShot works

Snap Shot is a Windows utility which captures screen or window images and automatically saves them to a file. It works in a multi-monitor environment and supports DirectDraw and Direct3D as well as secondary 3D graphics card screen captures.

Images are captured by hitting a hot key combination. These hot keys are defined in the Snap Shot Settings window. The Settings window can be accessed from the Snap Shot icon 📷 in the Windows Task Bar tray.
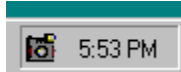
The saved image captures are stored in a file with an automatic numbering sequence.   The file naming and the location of where the images are saved can be changed in the Settings window.
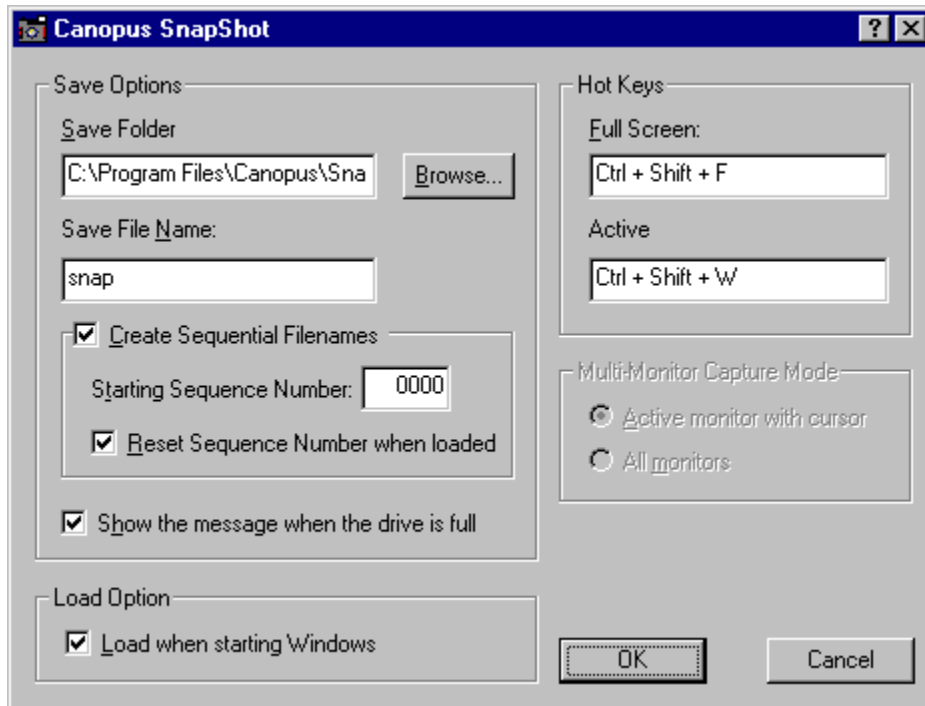
Understanding the Media Scope Controls

Power: Exit Media Scope.

Drive: Select the CD-ROM drive to use for Video CD playback.

Media: Select what media to play. You can select from **File**, **Video CD**,   **Audio CD,** or **Live Video.**

Eject: When playing a CD, ejects the CD on drives that support it. When playing a file, closes the display window and brings up an Open File dialog box.

Icon: Minimize Media Scope to an icon.

Play: Open the playback window and begin playback.   You can control playback by using the slide bar and controls at the bottom of the display window, or by using the controls on the remote.

Pause: Pause playback; click again to resume.

Stop: Stop playback.

Prev: When playing back a video or audio CD, go to the previous track.   When playing back a file, go to beginning of the file and pause.

Next: When playing back a video or an audio CD, go to the next track.   When playing back a file, go to end of the file and pause.

Return: For controlling playback of Video CD 2.0 titles.

Rec: Capture live video to disk.

Rew: Rewind while the button is held down.

FF: Fast forward while the button is held down.

Back: Go back one frame while playback is paused. (Works when playing back AVI files.)

FW: Advance one frame while playback is paused. (Works when playing back AVI files.)

Size: Select display size (**1x**, **2x**, **3x**, **Maximize**, **Full Screen**).   Unavailable sizes are displayed in gray.

> **Note F**   When playing in **Full Screen**, double-click on the video to return to the display window.

Save: Capture the currently displayed frame and save it as an image file.   Use the OPTION button to select how the image will be saved.

Option: Set preferences for Media Scope.

Volume: Adjust playback volume: + increases volume,- decreases volume.

Speed: Adjust playback speed:+ increases speed,- decreases speed.(Works only with AVI files.)

Repeat: Play back file or track in a loop.

Mute: Stop sound output. Click again to resume.
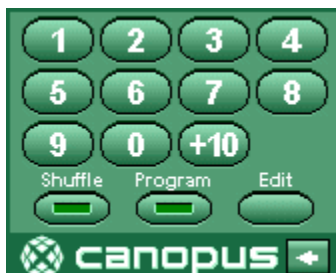
Keypad: Specify track number (or file order) for playback.

Shuffle: Play back tracks (or files) in random order.

Program: Play back tracks (or files) in the order specified with the **Edit** button.

Edit: Select tracks (or files) to play back as a **Program** Change the size of the Media Scope control.

 :   Change the size of the Media Scope control.

Capturing Video with Media Scope

To capture video with Media Scope:

Note: The Video Port 600 is required for this feature.

1. Connect your composite or S-Video source to "V IN" on the back of your SPECTRA Series card.
2. Click the **MEDIA** button at the top of the remote, and select **Live Video**
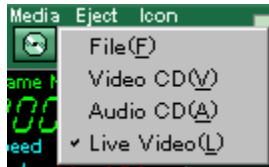
3. This will modify the remote, bringing up the capture buttons:

4. Click **SOURCE** to select between composite and S-Video input.
5. Click **VIDEO** to set capture settings (frame size, capture mode).
6. Click **AUDIO** to set audio capture setting (Media Scope uses the audio-in from your sound card to capture audio).
7. Click the Record button near the top of the remote. A dialog box will appear to set the capture parameters, including frame rate, capture time, file name, etc.
8. Click **OK** to begin capture.

Playing MPEG and AVI Files

To play MPEG or AVI files

1. Click on the **Media** selector at the top of the remote and set it to <u>File</u>.

2. Click on the **Play** button to bring up an Open File dialog box.
3. Locate the file, and click <u>Open</u> to bring up a display window and begin playing.

Playing Video and Audio CD

To play Video or Audio CD

1. Insert the CD into the CD-ROM drive. If you have multiple CD-ROM drives, use the **Drive** button to select a CD-ROM drive.

2. Click on the **Media** selector at the top of the remote and set it to **<u>V</u>ideo CD** or **<u>A</u>udio CD**.

3. Click on **Play** to load the CD, and begin playback from the first track.
4. You can now use the keypad to select a track to play, or use the **<u>EDIT</u>** command to create a pre-programmed play list.

Creating a Program List

To create a Video and Audio CD program list

1.   Begin playing a Video or Audio CD. Or, select a directory containing Video or Audio CD files by playing one of those files.
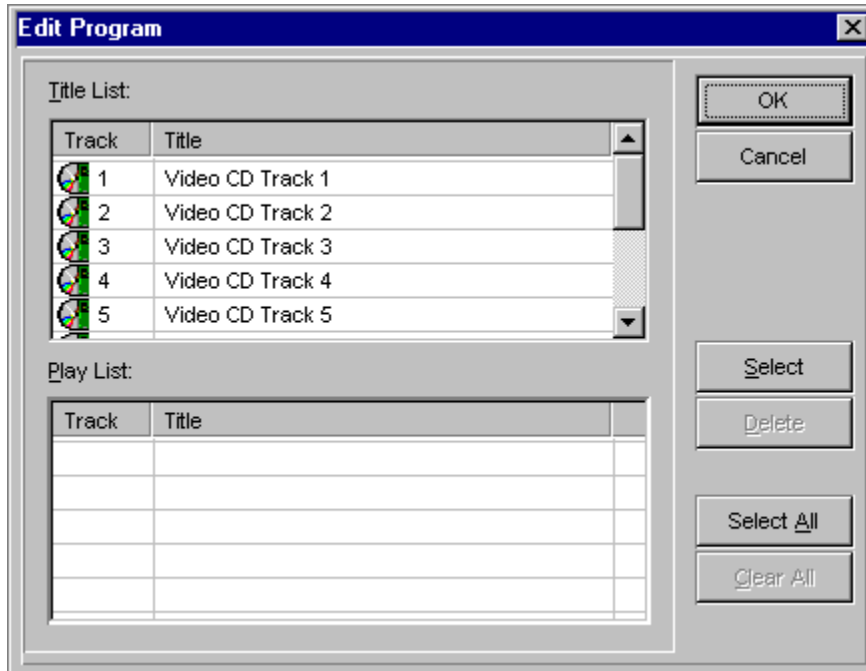
2.   From the **Title List**, click on each track (or file) you want to play, and then click on the **Select** button. The selected tracks will be saved in the **Play List**.
3.   When finished selecting titles, click **OK**.

To create a MPEG and AVI File program list

1.   Begin playing a MPEG or AVI Files. Or, select a directory containing MPEG or AVI files by playing one of those files.

2. From the **Title List**, click on each track (or file) you want to play, and then click on the **Select** button. The selected tracks will be saved in the **Play List**.
3. When finished selecting titles, click **OK**.

Setting Options for Media Scope

You can set the following preferences with the **Options** button:
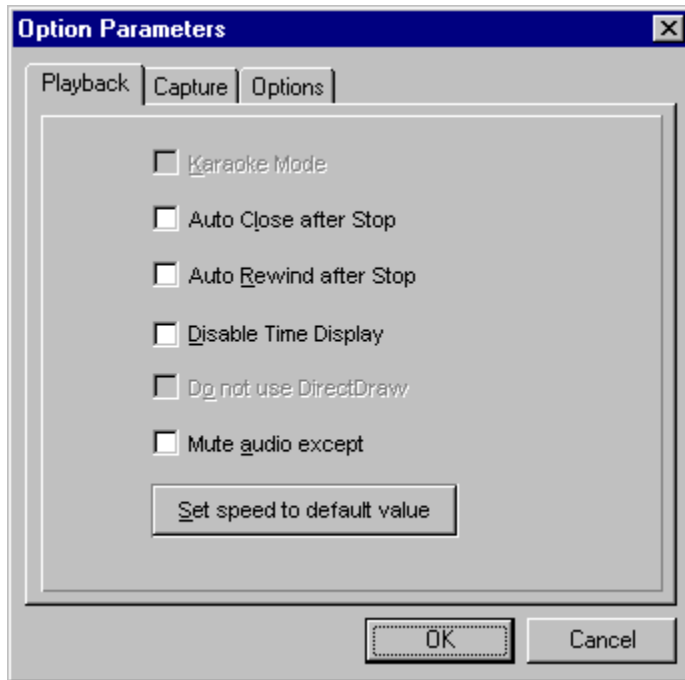
Karaoke Mode
Change audio to Karaoke during Karaoke Video CD playback.

Auto Close after Stop
When playback ends, close the display window.

Auto Rewind after Stop
After playing back a file, automatically rewind to the beginning.

Disable Time Display
Do not display the time elapsed during playback.

Do not use DirectDraw
Do not use DirectDraw for draw images.

Mute audio except Live Video
Media Scope will mute Line In except Live Video.

Set speed to default value
Set the playback speed to default.
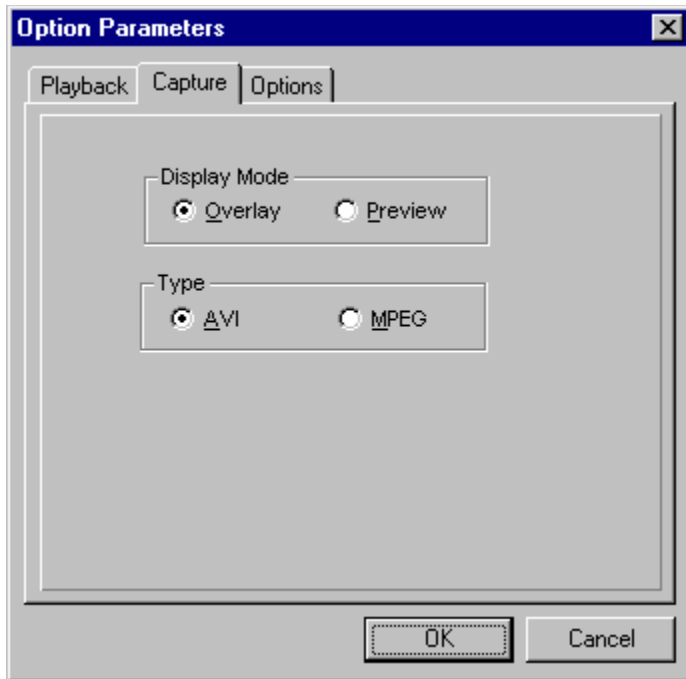
Display Mode
  Change the display mode to Overlay or Preview in Live Video.

Type
  Change the video capture mode to AVI or MPEG in Live Video.

> **Note:** MPEG mode only can choice the following settings.

Video Format	
Color Format	YUYV
Video Size	320 x 240, 352 x 240, 160 x 120
Audio Format	
Frequency	11.025, 22.05, 44.1 kHz
Sampling Rate	16 Bits
Channel	Stereo
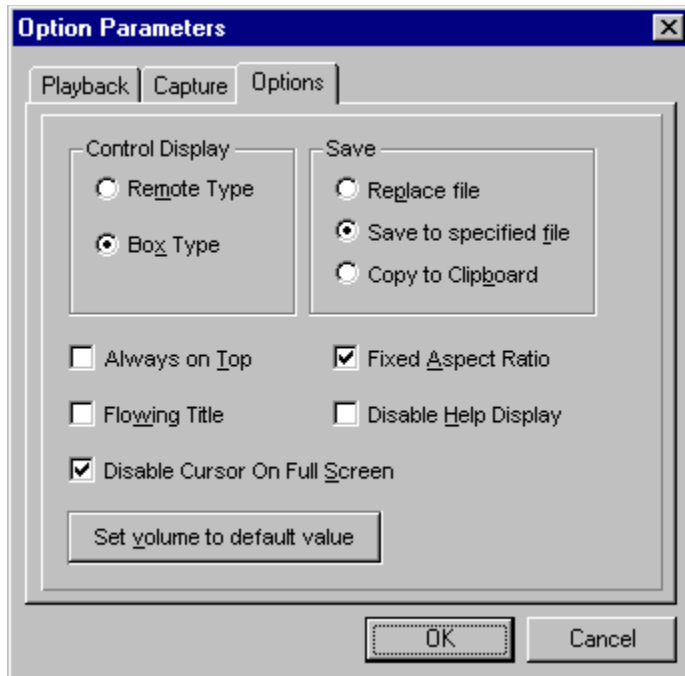
Control display
  Change the Media Scope controller type to Remote or Box.

Save
  Select how to save images captured from AVI files.

  Replace file
    Once a file name has been specified, save the captured image without bringing up the Save File dialog box.

  Save to specified file
    Always bring up a Save File dialog box to select the file name and file format for the captured image.

  Copy to Clipboard
    Copy the captured image to the clipboard.

Always on the top
  Show the Media Scope always on the top.

Flowing title
  Display the title to Media Scope display while playing it. (E.g. Karaoke CD supporting title display.)

Fixed Aspect Ratio
  Keep the horizontal and vertical size of playback to the same proportions as the source size.

  Note: Depending on the size of the source image, some of the image may be cut off on the sides during full-screen playback. To display the entire image, leave this box unchecked.

Disable Help Display
  Disable bubble help messages normally displayed as the cursor passes over each control button.

Disable Cursor on Full Screen
   During full screen display mode, do not display the cursor.

Set volume to default value
   Set the volume setting to default.

Capturing Pictures with V-Shot

V-Shot lets you capture first, process later:

Note: The Video Port 600 is required for this feature.

1. Connect a video source, like a camcorder or VCR, to the **composite** video-in connector (it's a yellow RCA jack) on the back of your SPECTRA.
2. V-Shot will then display this live video in the large preview window on the left.
3. Click the big red button to capture an image.

4. A thumbnail preview will appear in the small window on the right.

5. Continue capturing pictures, until you are ready to PROCESS.

Processing Pictures

Once you have captured your pictures, it's time to process them:

1. Scroll through the thumbnail previews using the up/down arrow keys.

2. Once you have chosen a picture, pick a processing mode: fast moving scene, slow moving scene, still scene, or 1500x1125 resolution still scene:

3. You can also select a processed size (320x240, 640x480, or 750x562) using the Options menu. 640x480 is the default.
4. Click **Process** to process the captured data into a high quality still image. This will launch the V-Shot Processor.
5. You can reprocess an image with different processing mode and size settings.

V-Shot Processor

Clicking Process launches the V-Shot Processor which turns the raw image data into a high quality still picture. You can then adjust the image attributes, save and print the picture.

File Menu

Save/Save As...:
   Saves your picture in JPEG, TIFF, or BMP file format.

Set As Wallpaper:
   Saves your picture and sets it as your Windows desktop wallpaper, either centered on the screen or tiled across it. You can remove this setting by going to the Display Properties control panel, clicking on the Background tab, and selecting a different Wallpaper.

Print:
   Outputs the picture to a printer.

Print Preview:
   Shows a preview screen of how the picture will be layed out on the page when printed.   Click on Zoom In/Zoom Out for a more detailed view.

Printer Setup:
   Selects a printer, the size of paper to be printed on, and the paper's orientation.

Exit:
   Exits the V-Shot Processor.

Edit Menu

Copy:
   Copies the processed image to the Windows clipboard.

Image Adjustment...:
   Allows you to modify the image attributes of your picture, including contrast, brightness, and saturation.
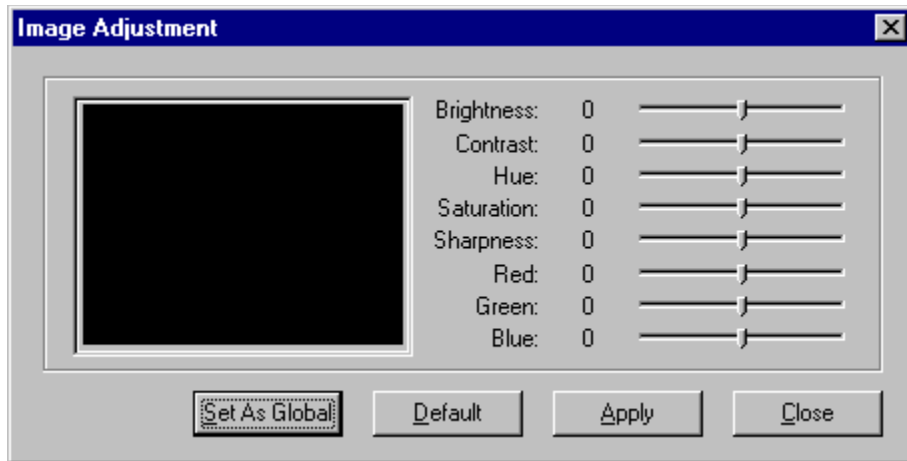
By clicking on **Set As Global**, your adjustment setting will be saved for future use. If you select Auto Adjust Image in the V-Shot Options menu, this adjustment setting will automatically be applied every time you process an image.

View Menu

Fit Window to Image:
If your desktop resolution is large enough, fits the window to display the entire image. Otherwise, maximizes the window.

Tool bar/Status bar:
Toggle display of the Tool bar and Status Bar.

Managing Your "Film"

V-Shot allows you to load and save unprocessed pictures as "film" files (*.flm file extension).   Click on the **film** slider to Load and Save film:

Since these files can become very large, you should delete any unwanted pictures before saving your film. Use the delete button to do this:

V-Shot Options

Process Size
Sets the size of the image to process: 320x240, 640x480, or 750x562. To process an image at 1500x1125, select the 1500x1125 large still scene mode on the front of the camera.

Self Timer
Useful for taking a picture of yourself with a video camera. Select 5, 10 or 30 seconds. When you click the capture button, V-Shot will wait that amount of time before capturing an image.

Enable Sound
Toggles sound effects.

Always On Top
Always keeps the V-Shot camera as the top window on your desktop.

Process Immediately
Processes a picture automatically after capture.

Disable Bubble Help
Turns off the bubble help messages that are displayed as you move your cursor over an icon.

Auto Adjust Image
Automatically applies the global image adjustment setting when you process a picture.   You can set this in the V-Shot Processor.

Prompt for Delete
Prompts you before deleting an image from your "film".

Display Picture Number
Displays a picture number in the thumbnail preview window.

Setting the General Options

Moving the slider beyond "Conservative" mode will violate the card's specifications. The card may not function properly resulting in rendering errors, locking up, or possible damage to your system. Warranty will void once you choose "Yes" button at the end of this message, and Canopus will not make any compensation caused by it in any case.

To set the General setting:
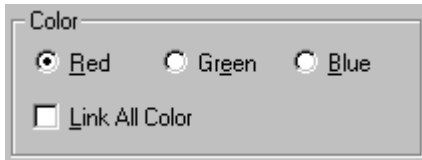
1. ⬛ Bring up the Control Panel's Display Properties window.
2. Click on the **Settings** tab and then click on the **Advanced …** button.
3. Click on the **SPECTRA Information** tab.
4. Click on the **Advanced...** button and then click on the **General** tab.
5. In the System section use the Memory Setting slider control and AGP check box.
6. Click **OK** or **Apply**.
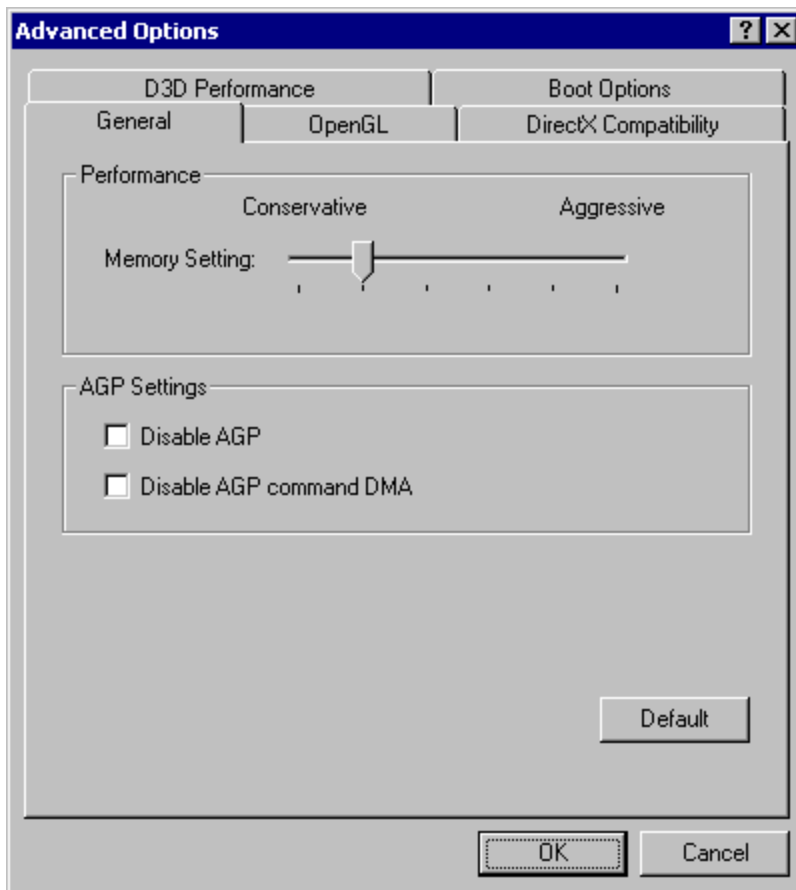
Performance
   Memory Setting
      Memory Setting slider control to change the setting in the range from Conservative to Aggressive.

AGP Settings

Disable AGP

Disable AGP. Try this option if Direct3D or OpenGL application is not stable.

Disable AGP command DMA

Use PCI for command DMA. Try this option if Direct3D or OpenGL application is not stable.

Setting the OpenGL Options

To set the OpenGL setting:

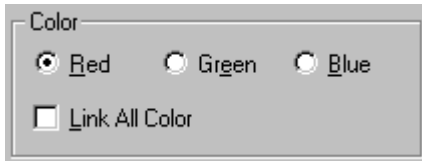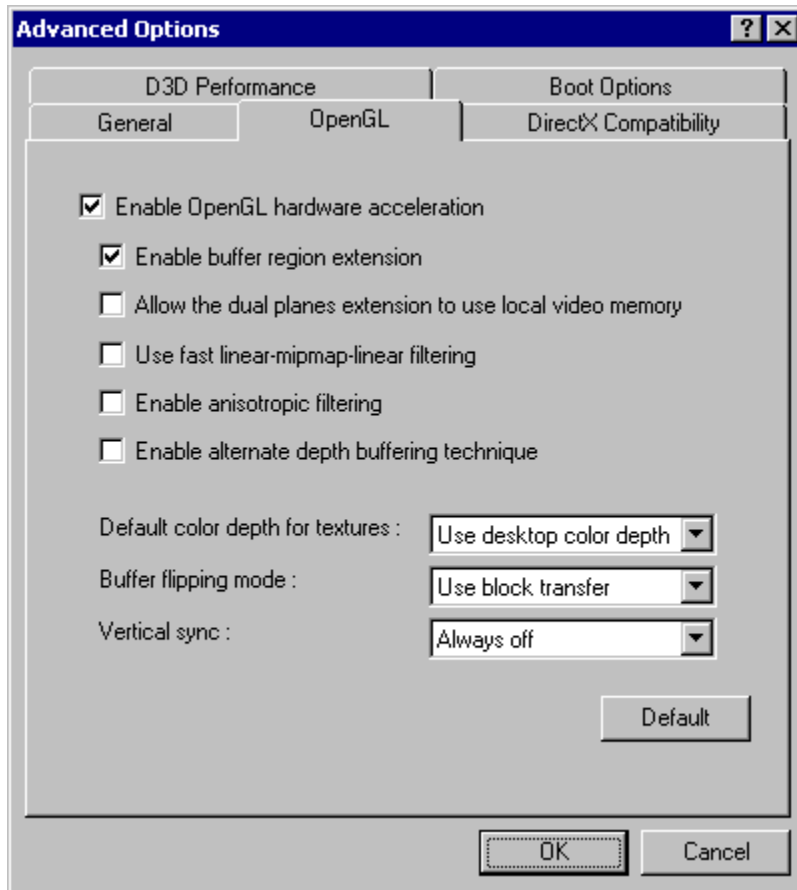| Color |
|---|
| ⦿ Red   ○ Green   ○ Blue |
| ☐ Link All Color |

1. Bring up the Control Panel's Display Properties window.
2. Click on the **Settings** tab and then click on the **Advanced …** button.
3. Click on the **SPECTRA Information** tab.
4. Click on the **Advanced...** button and then click on the **OpenGL** tab.
5. In the Options section use the setting check box.
6. Click **OK**.

Advanced Options

D3D Performance	Boot Options
General	OpenGL	DirectX Compatibility

☑ Enable OpenGL hardware acceleration

   ☑ Enable buffer region extension

   ☐ Allow the dual planes extension to use local video memory

   ☐ Use fast linear-mipmap-linear filtering

   ☐ Enable anisotropic filtering

   ☐ Enable alternate depth buffering technique

Default color depth for textures : | Use desktop color depth ▼ |

Buffer flipping mode : | Use block transfer ▼ |

Vertical sync : | Always off ▼ |

Default

OK   Cancel

Options

Enable OpenGL hardware acceleration
OpenGL hardware acceleration will use the SPECTRA 7400 DDR to improve the performance of OpenGL applications.

Enable buffer region extension
Allows the drivers to use the OpenGL extension **GL_KTX_buffer_region**. This can increase application performance in 3D modeling applications that support this extension.

Allow the dual place extension to use local video memory
Allows the use of local video memory when the GL_KTX_buffer_region extension is enabled.
However, if there are less than 8 MB of local video memory available, dual planes extension support
will not be enabled. This setting has no effect if the "Enable buffer region extension" option above is
disabled.

Use fast linear-mipmap-linear filtering
Allowing fast linear-mipmap-linear filtering will provide increased application performance at the
expense of some image quality. In many cases, a loss of image quality may not be noticeable, so you
may wish to take advantage of the extra performance gained by enabling this feature.

Enable anisotropic filtering
Anisotropic filtering provides better texture image quality as the texture surface becomes more
oblique to the eye point. It is disabled by default to comply with OpenGL conformance settings.

Enable alternate depth buffering technique
Enables an alternate technique for depth buffering. This lets the hardware use a different mechanism
for depth buffering in 16 bit applications. Enabling this setting can produce higher quality rendering of
3D images.

Default color depth for textures
This option determines whether textures of a specific color depth should be used by default in
OpenGL applications. **Use desktop color depth** will always use textures of the color depth at which
your Windows desktop is currently running. The **Always use 16 bpp** and **Always use 32 bpp** options
will force the use of textures of the specified color depth, regardless of your desktop settings.

Buffer flipping
This option determines the buffer flipping mode for full-screen OpenGL applications. You can select
from the block transfer method, the page flip method or auto-select. Auto-select allows the driver to
determine the best method based on your hardware configuration.

Vertical sync
This option lets you specify how vertical sync is handled in OpenGL. **Always off** will always disable
vertical sync in all OpenGL applications. **Off by default** will keep vertical sync disabled, unless an
application specifically requests that it be enabled. **On by default** will keep vertical sync enabled,
unless an application specifically requests that it be disabled.

Setting the DirectX Compatibility Options

To set the DirectX Compatibility setting:
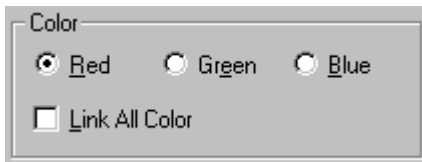
1. Bring up the Control Panel's Display Properties window.
2. Click on the **Settings** tab and then click on the **Advanced …** button.
3. Click on the **SPECTRA Information** tab.
4. Click on the **Advanced...** button and then click on the **DirectX Compatibility** tab.
5. In the Options section use the setting check box.
6. Click **OK** or **Apply**.
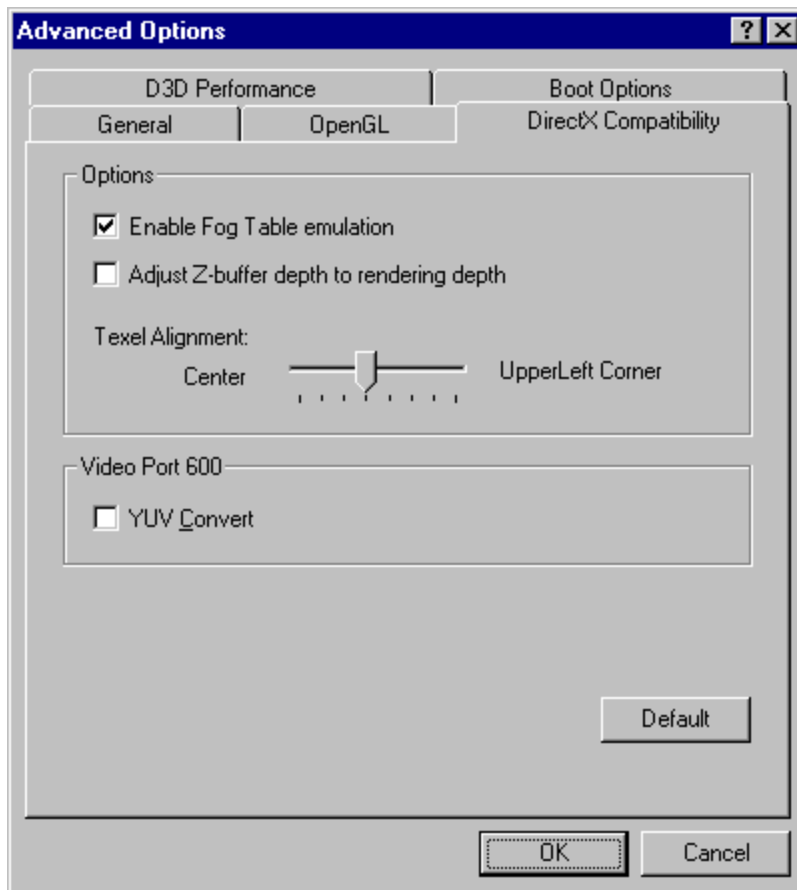
Options
    Enable Fog Table emulation
      This option is provided for games which always expect table fog support.

    Adjust Z-Buffer depth to rendering depth
      Forces the hardware to automatically adjust the depth of its Z-buffer to the depth that the application requests.

    Texel Alignment

This option changes the hardware texture addressing scheme for texels (texture elements).
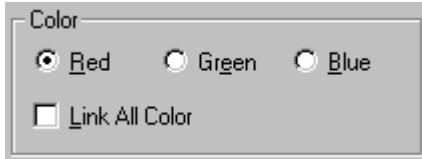
VP600
YUV Convert
If overlay window does not display properly, check this option and restart the Windows.

Setting the Direct3D Performance Options

To set the Direct3D Performance setting:

1.   Bring up the Control Panel's Display Properties window.
2.   Click on the **Settings** tab and then click on the **Advanced …** button.
3.   Click on the **SPECTRA Information** tab.
4.   Click on the **Advanced...** button and then click on the **D3D Performance** tab.
5.   In the Options section use the setting check box and list box.
6.   Click **OK**.
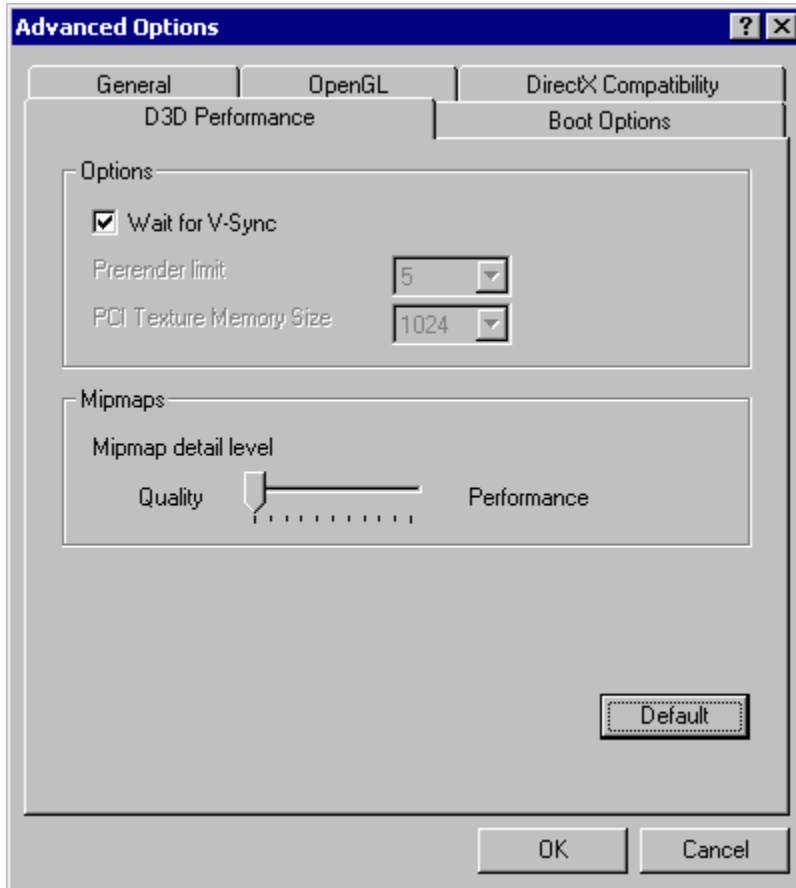
Options

    Wait for V-Sync

    Waiting for V-Sync causes screen updates to synchronize to the vertical refresh. Disabling this option allows frame rates higher than the vertical refresh rate but visible rendering errors may occur. Buffer flipping must be enabled to use this option.

    Prerender limit

    This option allows you to limit the number of frames the CPU can prepare before they are processed

by the graphics chip when vertical sync is disabled.

PCI Texture Memory Size
This option sets the amount of system memory used for storing textures. It is not available on AGP based cards.
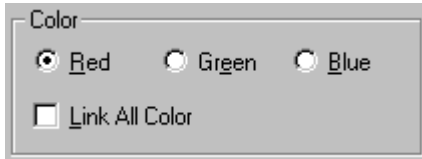
## Mipmaps
Mipmap detail level
Mipmaps can be generated with the best quality or best performance or 3 intermediate settings.

Setting the Boot Options

To set the Boot option setting:

1.   Bring up the Control Panel's Display Properties window.
2.   Click on the **Settings** tab and then click on the **Advanced …** button.
3.   Click on the **SPECTRA Information** tab.
4.   Click on the **Advanced...** button and then click on the B**oot Option** tab.
5.   In the Options section use the setting check box.
6.   Click **OK**.
7.   Restart Dialog Windows Click **Yes**.
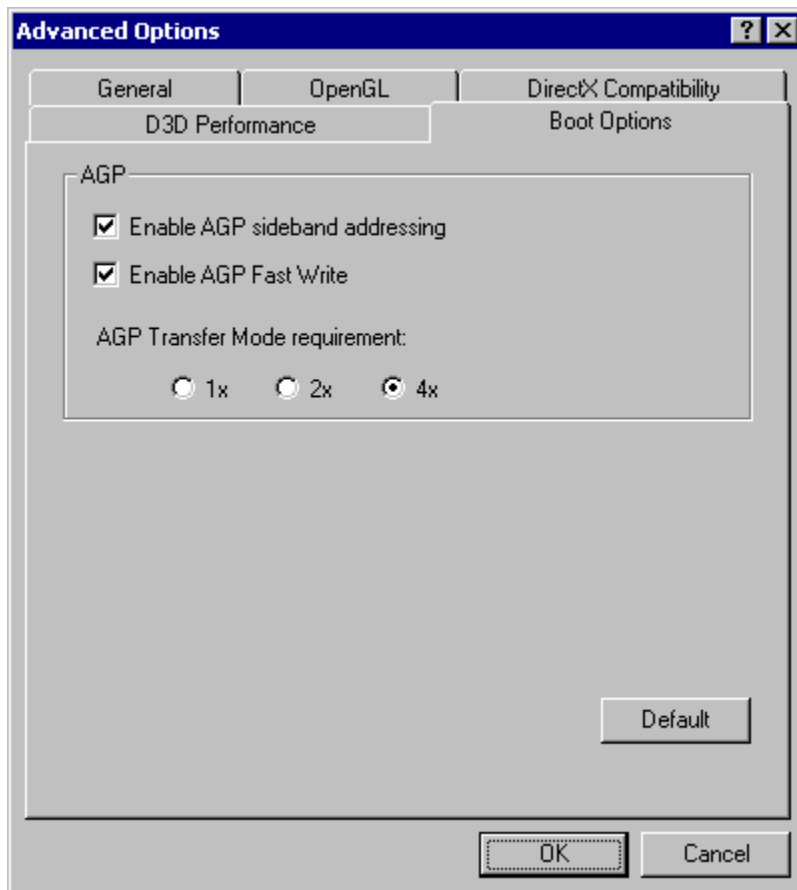
AGP
   Enable AGP sideband addressing
     Enable AGP Sideband addressing.

   Enable AGP Fast Write
     Enable AGP Fast Write.

AGP Transfer Mode requirement
  AGP Transfer Mode 1X, 2X and 4X.