

*GEM*TM

User Guide

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Technical Support

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To search the knowledge base, visit **www.FreedomScientific.com** and choose the Support link.

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Introduction

GEM™ allows you to view, capture, and save magnified images when using the Freedom Scientific TOPAZ® XL Desktop Magnifier with your computer.

Using hot keys or the graphical user interface, you can quickly and easily step through or jump to multiple images captured by GEM. Groups of images can automatically be saved to any designated folder on your computer. These same images are easily identified using either the default or customized base name along with a time stamp. Hot key input directly from your computer keyboard allows you to manipulate camera views, change magnification, select color modes, and control other TOPAZ XL functions on the fly.

System Requirements

The following list contains the Minimum system requirements for GEM.

- **Operating system:** Microsoft Windows ® 7, Windows Vista, and Windows XP operating systems
- **Processor:** Intel® Pentium® III or higher
- **Processor speed:** 900 MHz or higher
- **Memory (RAM):** 256 MB (512 MB recommended)
- **Required hard disk space:** 60 MB for program installation
- **Video:** 32-bit color graphics 32 MB graphics memory minimum (DirectX® with Shader support needed in order to use Color Adjustments from the Advanced menu)
- **USB port for camera interface:** USB 2.0

Installing GEM

To install GEM on your computer, do the following:

Important:

Do not connect the TOPAZ XL to your computer until the GEM installation is complete. For more information on using TOPAZ XL, refer to the TOPAZ XL User's Guide.

1. Insert the GEM program disk into your computer.
2. The GEM Setup program starts. Follow the instructions that appear on your screen to complete the installation.

Note: If the setup program does not start automatically, go to the Start button, select Run, and type D:\setup. If your disk drive is not D, substitute the correct drive letter.

The GEM setup program will then begin.

3. Choose the Typical installation to install GEM to the default location on your hard drive. Select the Custom installation if you want to install GEM in a location other than the default.
4. Once the installation is complete, power on the TOPAZ XL and connect it to an available USB port on your computer.
5. Start GEM by selecting the GEM icon from the desktop to begin using the application with TOPAZ XL.

Getting Help

There are several ways to quickly obtain help when using GEM:

- Select **Help Topics** from the Help menu (**ALT+H, H**).
- Press **F1** to open the Help file.
- Press **SHIFT+F1** to open context-sensitive help for the item currently selected on the user interface.

GEM Hot Keys

GEM uses the **F12** key as the default modifier key. It is always pressed in combination with the hot key to perform the command. The **F11**, **Print Screen**, and **Scroll Lock** keys can also be used as modifier keys. To change the modifier key, select the **Advance** menu from the GEM menu bar, select **Preferences**, and then select a value from the **GEM Key** combo box.

Zoom and Focus

This table describes hot keys used for camera zoom and focus.

Description	Modifier Key+Hot Key
Increase zoom	F12+F2
Decrease zoom	F12+F1
Focus lock – cycle between Off, On, and On with Position Locator	F12+D
Freeze Frame toggle	F12+Z

Screen View

This table describes hot keys that control different ways to configure and view the screen.

Description	Modifier Key+Hot Key
Select one of three views: Full Screen – Camera view, Full Screen – Computer view, or Split Screen view	F12+V (add SHIFT to reverse order)
Full Screen – Camera view	F12+HOME
Full Screen – Computer view	F12+END

Description	Modifier Key+Hot Key
Split Screen view	F12+PAGE UP
Split Screen orientation – toggle Split Screen view between horizontal and vertical orientation; use this keystroke in conjunction with F12+F to change camera view locations	F12+P
Move Split Screen view – toggle the camera position to move the Split Screen view from top to bottom or from left to right based on screen orientation (F12+P)	F12+F
Increase Split Screen viewing area	F12+F5
Decrease Split Screen viewing area	F12+F6
Move GEM console to foreground	F12+ENTER
Scroll image up or left while in Split Screen mode	F12+F8
Scroll image down or right while in Split Screen mode	F12+F7

Video Modes

This table describes hot keys for switching color video modes.

Description	Modifier Key+Hot Key
Select Color Video mode – switches between all available color modes	F12+E (add SHIFT to reverse order)

Description	Modifier Key+Hot Key
Normal (full color) mode	F12+SHIFT+A
User selectable (default is yellow on blue mode)	F12+SHIFT+S
Black on white mode	F12+SHIFT+D
White on black mode	F12+SHIFT+F

Capture Image

This table describes hot keys used for image capture and deletion.

Description	Modifier Key+Hot Key
Save current image on screen	F12+CTRL+S
Capture image	F12+TAB
Delete image	F12+DELETE

View Image

This table describes hot keys used to quickly move between live and saved images.

Description	Modifier Key+Hot Key
Jump to live image	F12+0 (zero)
Next image	F12+SPACEBAR
Previous image	F12+SHIFT+SPACEBAR
Jump to image 1 (most recent image)	F12+1
Jump to image 2	F12+2

Description	Modifier Key+Hot Key
Jump to image 3	F12+3
Jump to image 4	F12+4
Jump to image 5	F12+5
Jump to image 6	F12+6
Jump to image 7	F12+7
Jump to image 8	F12+8
Jump to image 9	F12+9
Open image file manager	F12+G

Lines and Masks

This table describes hot keys that control screen markers such as reading lines and screen masks.

Description	Modifier Key+Hot Key
Screen markers – toggle on or off	F12+K
Screen marker style – select reading lines or screen masking	F12+Y
Screen marker orientation – toggle between horizontal or vertical screen marker orientation	F12+O
Move reading lines or screen mask down or to the right	F12+N
Move reading lines or screen mask up or to the left	F12+SHIFT+N

Description	Modifier Key+Hot Key
Increase distance between reading lines or increase amount of image viewable in the masked area	F12+F10
Decrease distance between reading lines or decrease amount of image viewable in the masked area	F12+F9
Select reading line color	F12+R (add SHIFT to reverse order)

Camera Control

This table describes hot keys that control the camera.

Description	Modifier Key+Hot Key
Increase camera brightness	F12+B
Decrease camera brightness	F12+SHIFT+B
Illumination toggle	F12+L
Refresh video view	F12+ESCAPE

Color Adjustments

This table describes hot keys that control color adjustments for the live image. DirectX with Shader is needed to use color adjustments. Open the About dialog box, accessed from the Help menu, to verify whether or not your computer has DirectX with Shader display capabilities.

Description	Modifier Key+Hot Key
Increase brightness	F12+T
Decrease brightness	F12+SHIFT+T
Increase hue	F12+H
Decrease hue	F12+SHIFT+H
Increase saturation	F12+U
Decrease saturation	F12+SHIFT+U
Increase contrast	F12+C
Decrease contrast	F12+SHIFT+C