

GEM™

User Guide

Freedom Scientific Inc.

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Freedom Scientific
11800 31st Court North
St. Petersburg, Florida 33716-1805
USA
www.FreedomScientific.com

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Technical Support

To contact **Technical Support** by telephone, U.S. customers can call **(727) 803-8000**, Monday through Friday, 8:30 AM to 7:00 PM (Eastern Time).

To contact by e-mail, send questions to **Support@FreedomScientific.com**.

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 or TOPAZ XL HD 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 or TOPAZ XL HD functions on the fly. If OpenBook® is installed on the same computer, you can send captured images from the TOPAZ XL HD to OpenBook for OCR (Optical Character Recognition).

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 or TOPAZ XL HD to your computer until the GEM installation is complete. For more information on using TOPAZ XL or TOPAZ XL HD, refer to the TOPAZ XL or TOPAZ XL HD 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.

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 or TOPAZ XL HD 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 or TOPAZ XL HD.

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) |
| 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 and return to live view | F12+I |
| Capture image and remain on screen | F12+TAB |
| Send current image to OpenBook | F12+DASH |
| Send all selected images to OpenBook | F12+CTRL+DASH |
| 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 |
| 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 |
| Toggle view between Letterbox and Stretch-to-fit | F12+W |

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 |
| 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 |