Hands-free operation with INFINITY Cameras

Scenario

There are occasions when hands-free operation is critical. These include situations such as performing a sterile procedure, while conducting certain types of lab research, or possibly while inspecting delicate electronic components when your hands are preoccupied and it is simply unsafe, or inconvenient to reach your hand out to a keyboard or mouse to capture an image.

Suggestion

Use your INFINITY camera with either the INFINITY Capture or INFINITY ANALYZE application software, and add a footswitch to your PC. This footswitch allows for each of the three pedals to emulate a sequence of keyboard functions. It can perform a single operation, or send a string of key strokes to the application software for more complex operations. The best part about this device is that you don't need to know anything about electronics or computer programming to make it work for you.
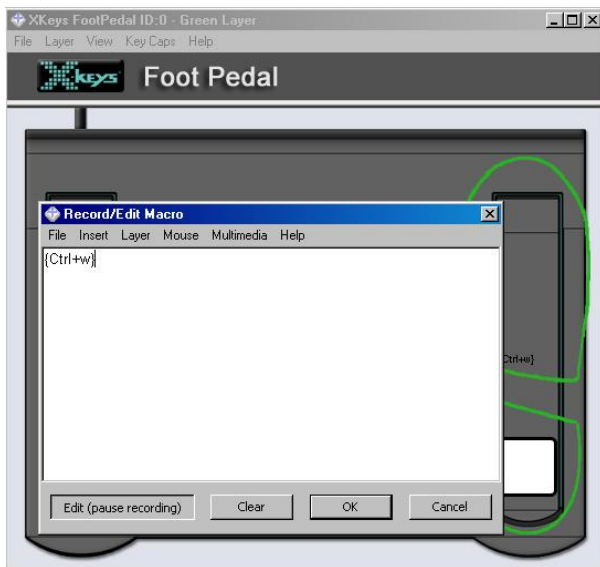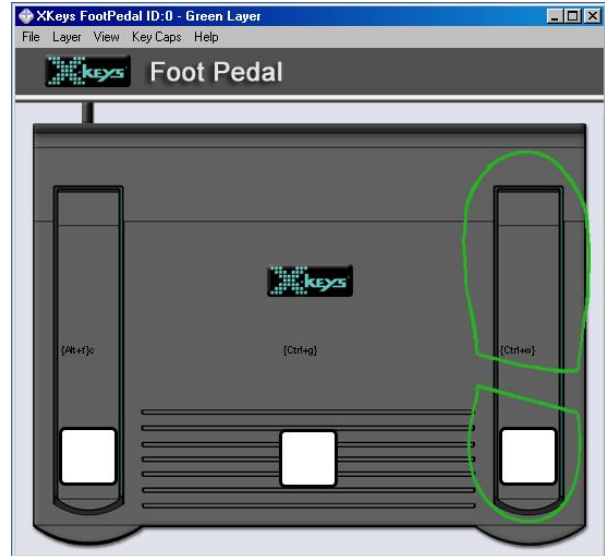
A programmable foot switch lets you use your foot to activate any keyboard command. The center pedal is larger, and has minimal travel, for your most heavily used key action; while the outer pedals offer two additional actions without having to search for a second and third footswitch on the floor. These devices are available with either a USB interface, or a standard PS/2 connection. Be certain to order the configuration that is best suited to your preference.

Comparable footswitches are available from a number of sources. Prices vary by region and supplier, but you would expect to pay about $150 USD for this accessory. Use these links to contact a dealer near you.

Country	Product Name / URL Link
USA	• Savant USB Triple Action Foot Switch http://www.kinesis-ergo.com/fs-savant.htm
Canada	• X-Keys Triple Action Foot Pedal http://www.ergocanada.com/cgi-bin/store/commerce.cgi?product=Footswitch
Europe	• Savant Programmable Foot Switch http://www.programmablekeyboards.biz/programmable-keyboards.html

Simple to use

The footswitch comes with a user interface that makes it simple to configure. The drivers for the USB version are installed from the CD supplied with the device. It installs in minutes. Once the plug & play device recognition is complete, the manual switch can be set to 'program' mode, causing the user interface to appear on the screen. It displays a graphic showing the footswitch pedals. Each pedal is programmed by mouse-clicking on the location of the pedal, causing a footprint graphic to be overlaid. Next, type the desired key sequence on the keyboard. The typed keys are displayed in the overlay window. Once all three pedals have been programmed in this manner, the footswitch is ready to use.
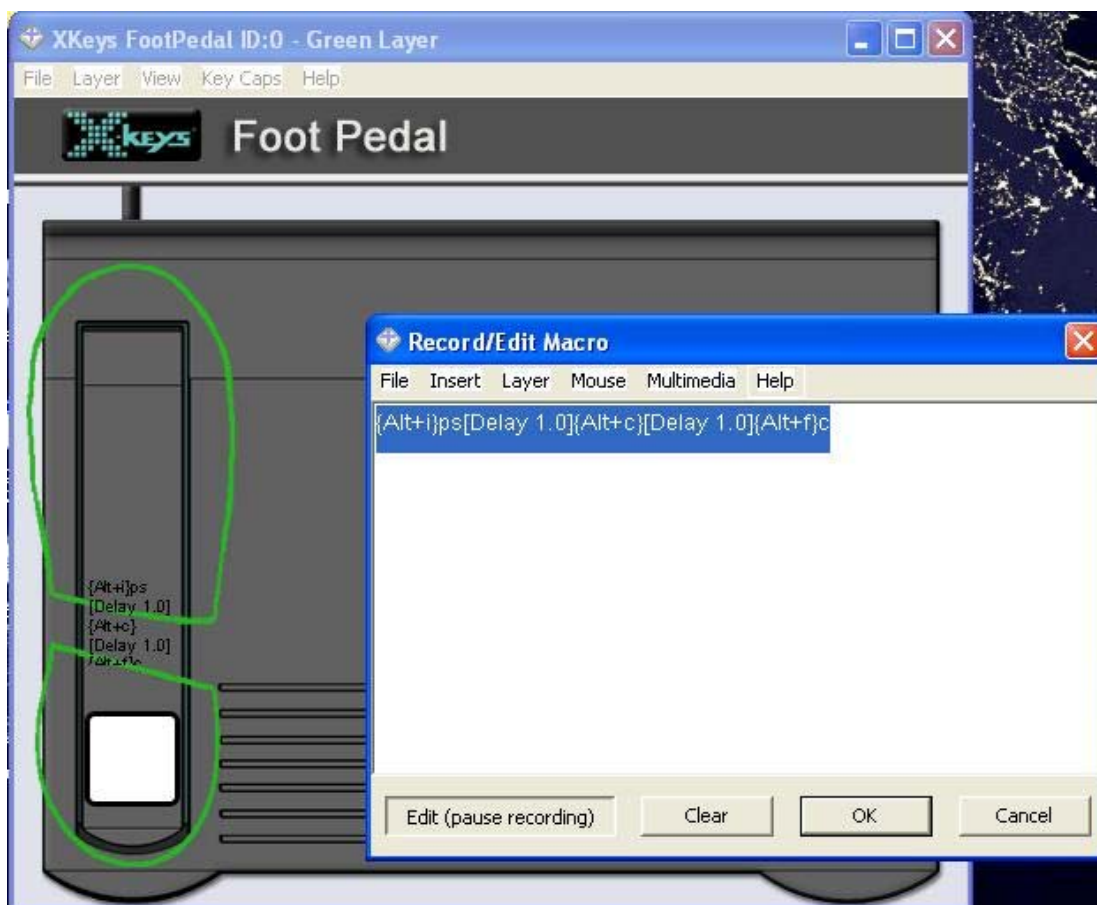
For example, programming the right-side pedal to emulate a <Alt> f, c, will invoke the image acquisition in the INFINITY Capture software, while programming the center pedal to emulate a <Ctrl> G, will cause an image to be captured within the INFINITY ANALYZE software. Verify the application controls for the keyboard shortcuts you want to use. Each time an underscore appears under one letter on a menu item, that key corresponds to a shortcut. For drop down menus, use the <Alt> key with the designated letter.

Many image capture and report preparation software packages aimed at Pathology will include the ability to capture from a camera through a TWAIN interface. All INFINITY cameras can be used in this manner, as the INFINITY software installs a TWAIN plug-in that launches a custom version of the INFINITY Capture application. Since the main software package typically requires several mouse clicks (or keystrokes) to invoke the image capture

package, it is important to be able to incorporate delay sequences in the set of keyboard commands programmed into the footswitch.

The image below shows the specific steps used to invoke the menu sequence in MS Word to go through the Insert menu (<Alt> i), Picture (p), from Scanner or Camera (s); the one second delay gives the pop-up dialog a chance to appear. Next the Custom Insert button was selected (c), and another 1 second delay to bring up the INFINITY TWAIN package. From there, the File menu (<Alt> f), and Capture (c) operations are executed. The TWAIN interface is closed as each image is captured, due to allocation of image frame memory, but this sequence of steps allows the process to be repeated without looking up from the microscope.

The table below provides some examples of key sequences for commonly used functions that work with the ANALYZE or CAPTURE applications.

Function	Key sequence in CAPTURE	Key sequence in ANALYZE
Image acquisition	<Alt> f, c	<Ctrl> G
White balance	<Alt> c, w, g	<Ctrl> W
Auto exposure	(not available – use 'AEC')	<Ctrl> E