USB GPIO
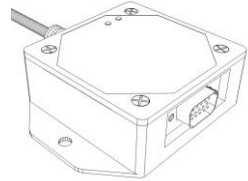## Product Manual

- Part #XK-1502-UHIO14-R
- 10 configurable I/O connections
- 4 inputs via 3.5mm stereo ports
- 2 dedicated digital outputs
- Designed, Sold, and Supported in USA
- From P.I Engineering, *The No Slogan Company*
- USA: www.xkeys.com

Box Contents

This package contains:
1- X-keys USB Wire Interface
1- Product Manual

Quick Start for Windows

Out of the box the USB GPIO will have I/O connections 1-10 configured as outputs. They may be reset to inputs accepting either short-to-ground input or +3 to 6 VDC input. The configuration is done with our free X-keys HD15GPIO Setup Utility for Windows, available for download at this address: xkeys.com/PISupport/SoftwareUtilities.php

Select the desired configuration for I/O 1-10 and click the "Set Configuration" button to save your settings. Test the inputs and outputs. Selecting an output will turn it on. Triggering an input will highlight it in green in the utility.

To program keystrokes or other functions on the inputs, we recommend X-keys Basic Setup, also a free download at this address: xkeys.com/PISupport/SoftwareUtilities.php
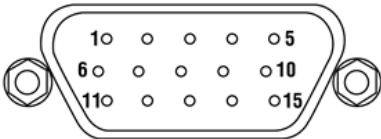
1. Launch X-keys Basic Setup
2. Press any switch connected to the X-keys (or double-click on the port image) to begin recording a macro.
3. Type keystrokes. Multiple lines of keystrokes, text, shortcuts, and functions may be entered on a single switch.
4. Press the switch again (or click Save) to complete programming.
5. When finished, close the programming window.

NOTE: Mouse and joystick commands are found in the Functions menu.

Connecting to the HD15 Port

Any HD15 female connector may be used to connect. We offer an DH15 to screw terminal connector as an optional accessory (part #XK-A-1534-R).

Pinout Wiring

HD15 Connector — Male connector on the X-keys		3.5mm Ports — Port 1 is closest to the HD15 connector on the X-keys	
Pin	Function	3.5mm Port	Function
1	I/O 1*	Port 1 Tip (left)	Input 1L**
2	I/O 2*	Port 1 Ring (right)	Input 1R**
3	I/O 3*	Port 1 Sleeve (ground)	Ground
4	I/O 4*	Port 2 Tip (left)	Input 2L**
5	I/O 5*	Port 2 Ring (right)	Input 2R**
6	I/O 6*	Port 2 Sleeve (ground)	Ground
7	I/O 7*		
8	I/O 8*		
9	No connection		
10	Ground		
11	I/O 9*		
12	I/O 10*		
13	Digital Output 1 (5VDC, 10mA max)		
14	Digital Output 2 (5VDC, 10mA max)		
15	5VDC (from USB connection)		

*Inputs configurable as short-to-ground or +3 to 6 VDC.
**Inputs short-to-ground only
All outputs 5VDC, 10mA max

3.5mm Ports

Each of the two 3.5mm ports accepts a 3.5mm plug such as those found on most Assistive Technology switches. A single switch can be plugged directly into each port or the port can accept two switches with a 3.5mm left and right splitter. We sell this adapter on our website (#XK-A-1182-35Y-R). Please be aware that the splitter must separate the left and right channels to support two switches independently (headphone splitters will not work).

Support

Should you encounter difficulty with the installation or programming, please open the Help File in the application or post a question in our support forum. You may also contact technical support.

USA: tech@xkeys.com | Phone: 1-517-655-5523

Compatibility

X-keys USB devices are programmed with X-keys Basic Setup for Windows XP through 10. Developers may also use software development kits for Windows, Linux and Android to integrate X-keys into their applications. Additionally, the USB GPIO has a hardware programming feature which allows a user to emulate keyboard, mouse, joystick, or multimedia messages on any USB-enabled operating system. For more information about any of these options, see our web site or contact our Technical Support Department (tech@xkeys.com).

Compatible Accessories

Please visit the Accessories page on our website for details on the following.

- X-keys Port Splitter #XK-A-1182-35Y-R
- HD15 Female to Screw Terminal Connector #XK-A-1534-R
- Wired Foot Pedals (see our website xkeys.com)
- Wired Switches (see our website xkeys.com)
- X-keys USB Extender t#XK-A-1362-R

FCC Declaration of Conformity

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CE Declaration of Conformity

We, P.I. Engineering, Inc., declare that the X-keys is in conformance with:

- **EMC Directive 2014/30/EU, tested in accordance with EN 55032:2012 and 55024:2010/A1:2015**
- **Certificate of compliance on file at P.I. Engineering, 101 Innovation Pkwy, Williamston, MI 48895**

Contact Us

USA Sales	USA Technical Support	USA Shipping Address
sales@piengineering.com	tech@piengineering.com	P.I. Engineering
Phone: 1-517-655-5523	Phone: 1- 517-655-5523	101 Innovation Parkway
www.xkeys.com	www.xkeys.com/support.php	Williamston, MI 48895-1663

Limited Warranty

For all X-keys products purchased and installed in the United States, Canada and the United Kingdom, P.I. Engineering warrants that the X-keys product will be free from defects in materials and workmanship under normal use and service, and will meet the specifications presented by P.I. Engineering at the time of original purchase, for one year as evidenced by a copy of the purchase receipt. Under this warranty, P.I. Engineering will, at its sole option, repair or replace any X-keys product which is defective, provided that you are responsible for (i) the cost of transportation of the product to P.I. Engineering or its designated service facility, and (ii) any loss or damage to the product resulting from such transportation.

Upon discovery of a defect in the product within the Warranty Period, you should notify P.I. Engineering Technical Support to obtain an RMA (return authorization number) and instructions for shipping the product to a service location designated by P.I. Engineering. You should send the product, shipping charges prepaid, to the designated location, accompanied by the return authorization number, your name, address, and telephone number, proof of purchase, and a description of the defect. P.I. Engineering will pay for return of product(s) to the customer.

P.I. Engineering shall have no responsibility to repair or replace the X-keys product if the failure has resulted from accident, abuse, mutilation, misuse, or repair/modification performed by any entity other than P.I. Engineering.

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In the event that the above limitations are held unenforceable, P.I. Engineering's liability for any damages to you or to any party shall not exceed the purchase price you paid, regardless of the form of any claim.

This limited warranty is valid for and only applies to products purchased and used inside the United States (and its territories), Canada, and the United Kingdom.

This limited warranty is governed by the laws of the United States of America and the state of Michigan.

X-keys Electronic design: P.I. Engineering, Inc., **Patent # 4964075**
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www.piengineering.com ◘ www.xkeys.com

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PI Part# 1585