

USB Large Dome Button panel-mount



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Introduction

The “USB Dome Button” is a large mushroom/ dome button that connects to a workstation or PC via a USB cable.

The USB Dome Button is recognized by the PC as a “USB keyboard” (HID), with only a single key. Microsoft Windows (and other operating systems) have intrinsic support for USB keyboards, therefore no drivers are necessary.

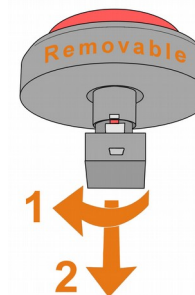
The key that the button transmits to the PC is configurable; see “Configuring the USB Button. In the factory setting, the button transmits the key “1”.

Multiple USB Dome Buttons may be attached to a PC at the same time, with each button configured to transmit a different key code (when configuring the USB Dome Buttons, each button should be connected to the PC one at a time).

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Mounting the USB Dome Button

The Dome Button should be mounted on a panel or table top. The mounting hole diameter is 24 mm. The maximum panel thickness is 3 mm, but it can be increased to 20 mm by removing the separator ring.



To detach the controller box from the button, first turn it (counter-clockwise) and then pull it down.

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Connecting the USB Dome Button

The USB Dome Button has a “mini-B” style USB connector. It should be connected to a host, like a desktop PC, a laptop or a tablet.

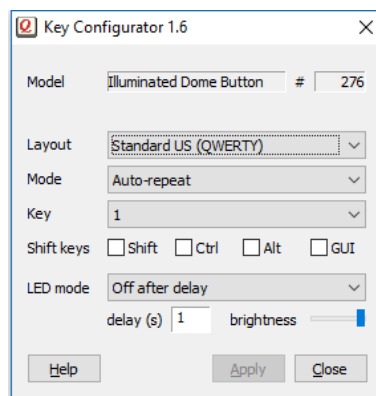


The USB Dome Button supports long cables (up to 5 metres is not a problem).

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Configuring the USB Dome Button

The configuration utility is available from <http://www.compuphase.com/usbkey/>.



To configure an USB button, only a single button should be connected to the PC.

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If not using a US keyboard layout, please select the appropriate layout of the keyboard (QWERTY/AZERTY).

The mode can be “Standard”, “Pulse” or “Macro”. In *standard* mode, the USB button sends a key-down message on a press and a key-up message on a release. When holding the button pressed, the key-down is repeated (just like a key repeats when you hold it down). In *pulse* mode, the USB button sends a key-up message shortly after the key-down. The button therefore does not repeat. In *macro* mode, you can specify a sequence of keys to be transmitted. For the syntax of macro mode, please see the help file in the application.

After changing the configuration, you must click on Apply to store the settings in the USB button.

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Starting programs or commands

In Microsoft Windows, you can attach a hotkey to an application shortcut. To start an application on a press on the USB button, the first step is to create a shortcut for it, and the second to set a hotkey in its properties. Microsoft Windows calls the hotkey a "Shortcut Key". It automatically adds the shift modifiers Ctrl + Alt to the key that you specify.

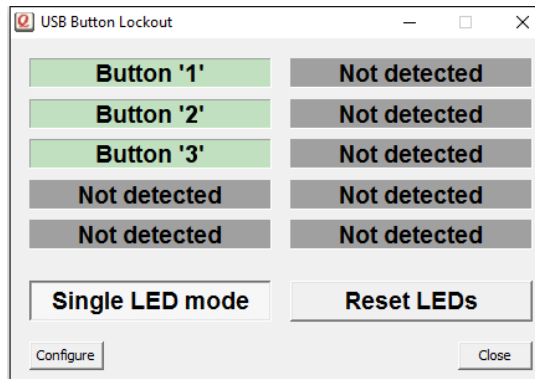
When using Linux, the method to assign hotkeys to applications depends on the desktop interface. A general purpose tool to bind a key to a command is XbindKeys.

A shortcut or command may be a batch file (or shell script) and it may include command line parameters.

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LED indicator software control

To control the LED in the Dome Button from your software, please install the ButtonLights utility. It is available on <http://www.compuphase.com/usbkey/>.



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The ButtonLights utility can configure and control up to 10 USB buttons. The application window shows the detected buttons and their status.

In contrast to the Key Configuration utility, the ButtonLights utility must remain running to operate the LEDs. It can be run from the task tray, and it can also be configured to start automatically on system start-up.

In order to control the button indicators from your own application, the application sends commands to the ButtonLights utility. Complete documentation is provided with the ButtonLights utility.

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Specifications

Mechanical

Dimensions.....Ø 98 mm, total height: 101 mm
dome: Ø 80 mm.
Mounting.....mounting hole Ø 24 mm;
panel thickness: 3 mm or 20 mm
without middle ring;
space behind panel: 42 mm or
59 mm without middle ring.
Colour.....Base: black; dome: red.
Mechanical lifespan.....> 10⁶ operations.
Actuation force.....8 to 10 N.

Operating conditions

Operating temperature...-25 °C to +40 °C.
Humidity.....5% to 95% non-condensing.

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Electronic interface

Operating voltage.....5.0 V nominal (5.5 V maximum),
powered through USB.
Current.....15 mA nominal non-illuminated,
35 mA nominal illuminated.
Debounce criterion.....20 ms stable period.
Switch latency.....30 ms maximum, 15 ms average.
USB connector.....mini-B.
USB protocol.....low-speed, USB 1.1 compatible.

Compatibility

Compatible with Microsoft Windows® XP and later,
Macintosh®, and Linux. No client-side software is
needed. (Free configuration software is available for
Microsoft Windows®, operating system).

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Conformity

EMC.....Compliant with EU Directive
2004/108/EC: EN 55022 and
EN 55024 + A1 (2001) + A2
(2003).
Electrical safety.....Compliant with EU Directive
2006/95/EC: EN 60950-21
RoHS.....Compliant with EU Directive
2002/95/EC.

Legal disclaimer

ITB CompuPhase shall not be liable for the incidental
or consequential losses or damage to tangible
property, injury or death of a person in connection
with the use of this device.

This device is intended to be connected to USB host
devices or USB hubs. Connecting the device to
equipment that does not adhere to the USB
standard may damage the device.

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