USB Large Dome Button panel-mount

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CE

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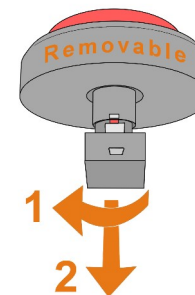
The key that the button transmits to the PC is configurable; see "Configuring the USB Button. In the factory setting, the button transmits the key "1".

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).

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.

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.
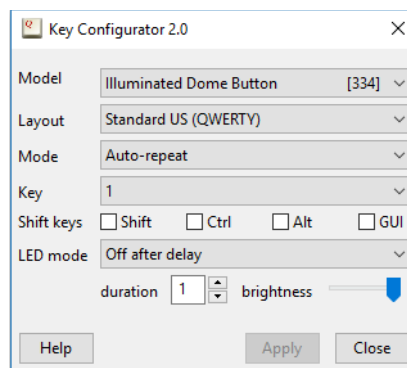

The USB Dome Button supports long cables (up to 5 metres is not a problem).

Configuring the USB Dome Button

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

The utility configures only a single button at a time. The serial number, at the right of the model name, shows which button is being configured.

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

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

When the mode is set to In *auto-repeat* 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.

Toggle key and *Tap or Hold* modes allow you to set two key codes instead of just a single one. For *Toggle key* mode these two codes are transmitted alternately. For *Tap or Hold* mode, a short press ("tap") transmits the first key, and the second key is transmitted when the button is held down.

Starting programs or commands

When the mode is set to *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.
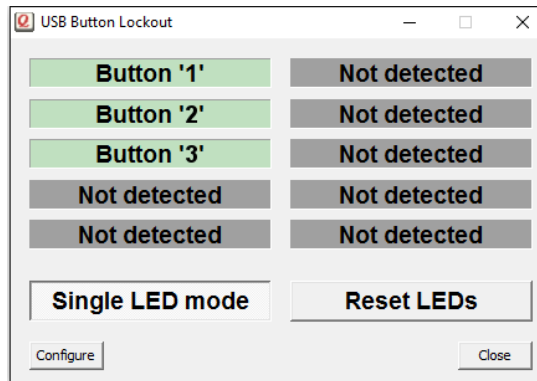
In Microsoft Windows, the ⊞ + R key combination shows the "Run" dialog. In "macro" mode, you can pop up this dialog with the key sequence "#R". You can follow this by a command and then "{ENTER}" at the end to execute it. Other operating systems support similar functions, but may require a different key combination to pop up a "Run" dialog.

In addition, the USB Dome Button supports several consumer control functions, like play, pause and others. These require standard or pulse modes.

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/.

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.

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.......$> 10^6$ operations.
Actuation force...............8 to 10 N.

Operating conditions

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

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, MacOS®, Linux and Android. No client-side software is needed. (Free configuration software requires Windows®, MacOS®, or Linux).

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

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.