Virtual Keyboard (VKB) for Windows

User Manual

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Introduction

Congratulations on choosing the VKB Virtual Keyboard for Windows 98, Windows 2000, Windows XP and Windows NT systems. So throw away that old clunky keyboard, free up valuable desk space and put an end to sticky keys. Please take a few minutes to review the simple operating instructions in order to get the most out of your keyboard.

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Getting Started

Your Virtual Keyboard

Unpack and inspect your Virtual Keyboard. Be sure to charge the keyboard for at least 2 hours before first use.

Place the Virtual Keyboard on a flat surface, and press the On/Off button, located on the upper-left side of the accessory.

When turning on the unit, a keyboard image is projected on the surface.

Notice that the keyboard image is the basic English keyboard, including 4 Arrow keys, 1 Control, 2 Shift keys, 1 Alt and a VKB dedicated Fn key.

A two-color LED located at the top of the unit, reflects the active status of the Virtual Keyboard, where:

Color	Status/Cause	Action
Green	Keyboard is active.	
Blinking Red	The Virtual Keyboard Accessory's battery is low.	• Recharge the Virtual Keyboard Accessory.
Solid Red	The area of the projected keyboard is exposed to direct sun-shine or some other source of direct light.	• Move the Virtual Keyboard Accessory.

Installing the Virtual Keyboard Driver on Windows

The VKB Driver is distributed as a self-extracting compressed file.
Locate and run the self-extracting WinVKB_V<xxx>.exe file. Double click on the file…
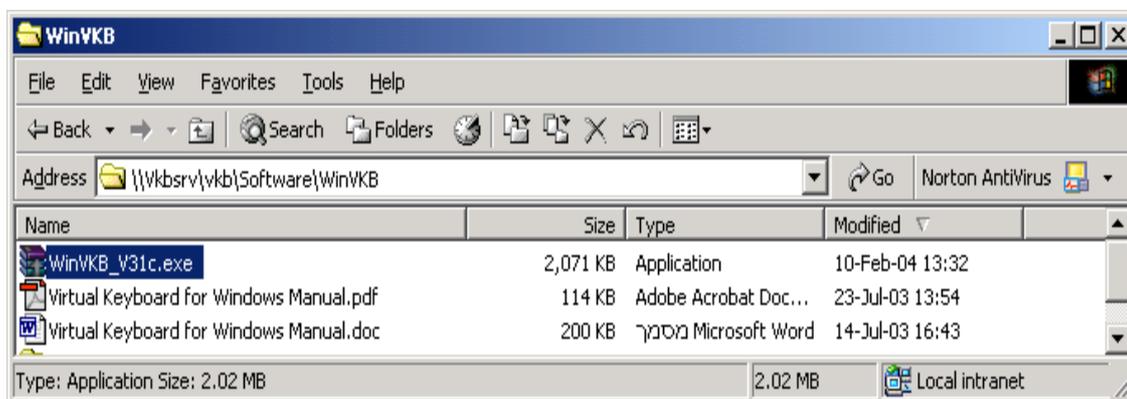
and follow the Installation program instructions.
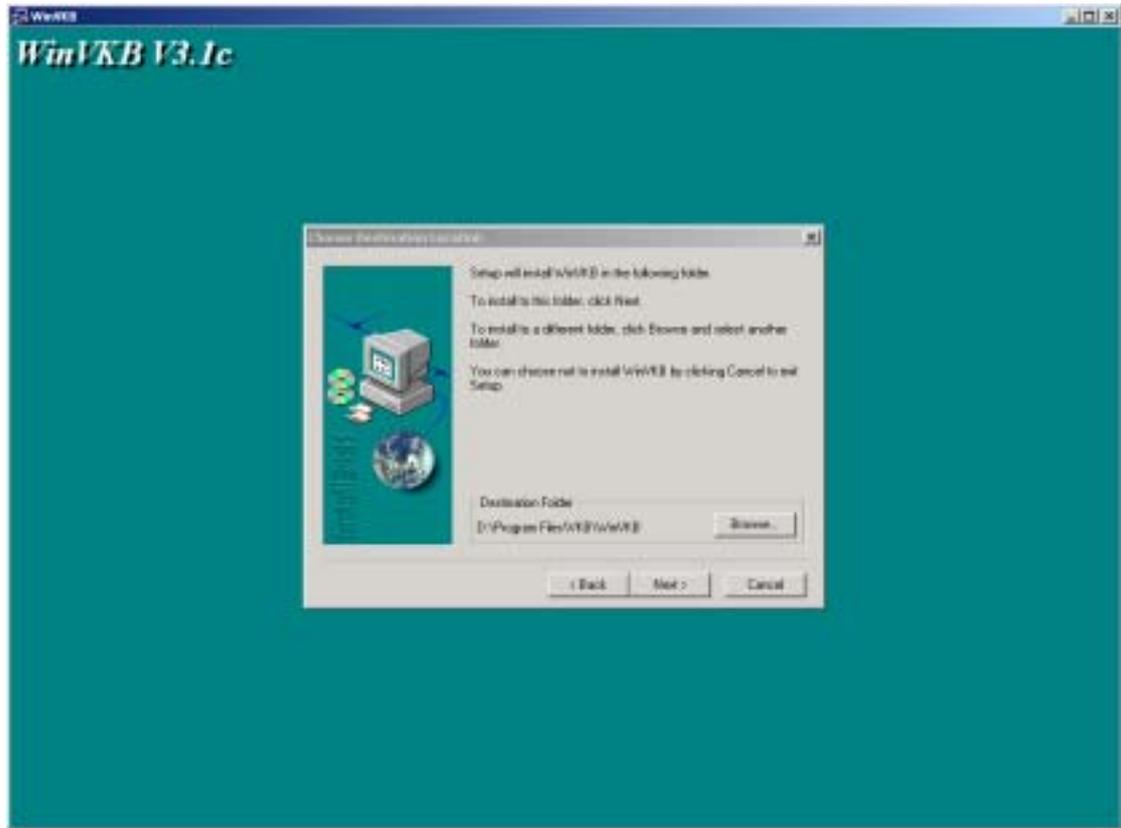
Upon completion, you may access the driver via Start → Programs → VKB or via the short cut on your desktop in the form of an icon:

Connecting the Virtual Keyboard

- Using the provided cable, connect the Virtual Keyboard to your PC.
- Place the Virtual Keyboard Accessory on a flat surface.
- Press the button on the Virtual Keyboard Accessory, causing a projected keyboard to appear.
- Double-click on the VKB icon to run it, it will start and place itself in the System Icon Tray at the bottom right corner of your screen.
- Double-click the icon in the tray and ensure that the settings are correct.
- Under the VKB tab, check the Enable VKB box to enable the driver and press the

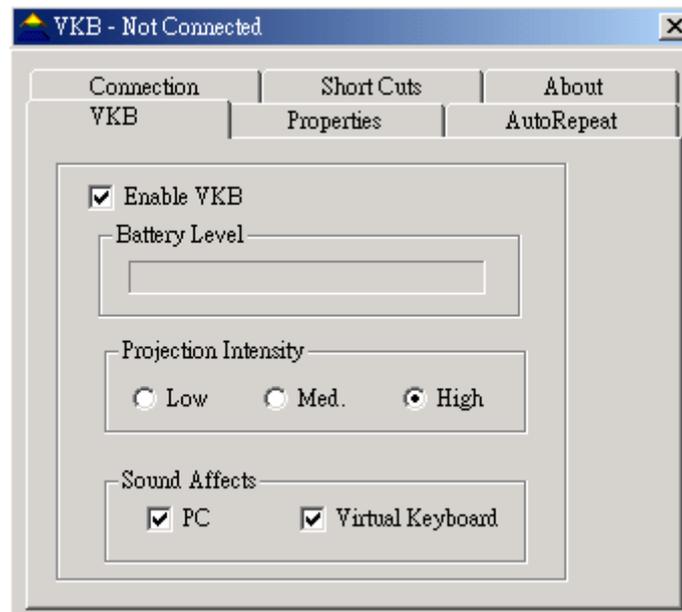 ⊠ button causing the icon to appear in the System Icon Tray.

Figure 1 VKB Main Page

Battery Level

The battery level, gives you the level of the battery in the Virtual Keyboard allowing you time to recharge it. Once detected, a "Low Battery" indicator will flash in your System Icon Tray. See Indicators.

Projection Intensity

Selecting the button for "Low", "Med" or "High" to adjust the intensity of the projected keyboard to your liking.

Key Clicks

The system has been setup to emit a "keyclick" when pressing a key. The keyclick may be emitted by your computer and/or the Virtual Keyboard.
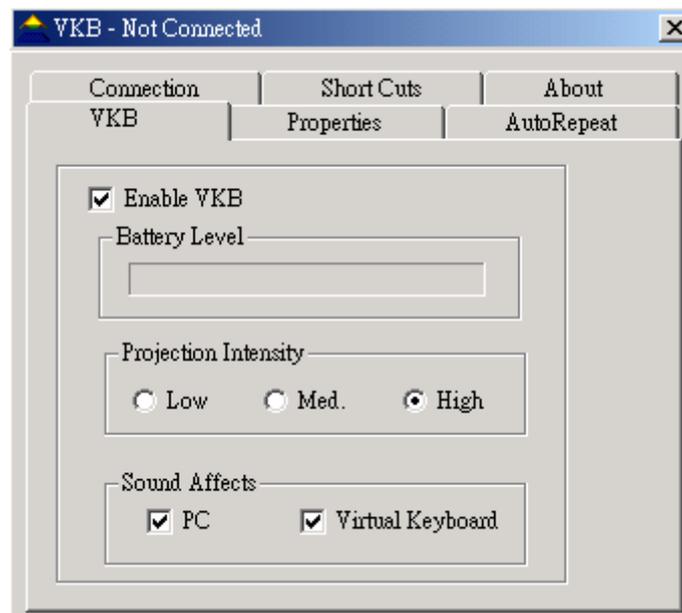
Modifying a Connection

Figure 2 Modifying a connection

The Virtual Keyboard Driver has been setup to communicate with the Virtual Keyboard via COM1:. If needed, you may change this selecting from a list of the detected ports.
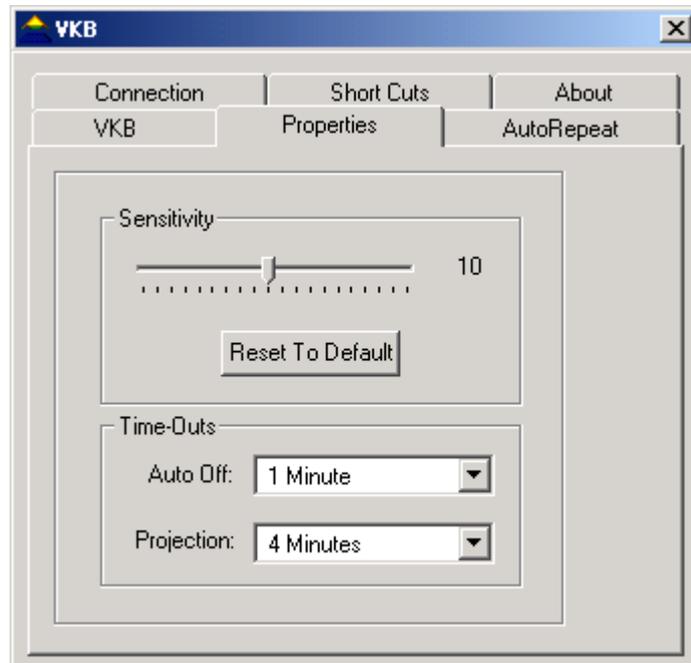
Properties

Figure 3 Properties Page

Sensitivity

As part of the Virtual Keyboard's detection mechanism, a Sensitivity setting is employed. The default value for this parameter is 10, however you may need to adjust this for optimal use. If you are experiencing missing keys, try lowering the sensitivity. If you are experiencing extra keys, try raising the sensitivity.

Reset To Default

Pressing this button will cause the Virtual Keyboard revert to its Sensitivity default factory setting.

Timeouts

To conserve the battery the Virtual Keyboard has 2 timeouts which you may set to your liking. When a period exceeding the Projection Timeout has elapsed without typing on the keyboard, the projection will automatically turn off. Pressing anywhere will cause the keyboard to be projected <u>unless</u> an additional period of time exceeding the Auto-Off Time-Out has elapsed. If this occurs, press the button on the Virtual Keyboard to turn it on.
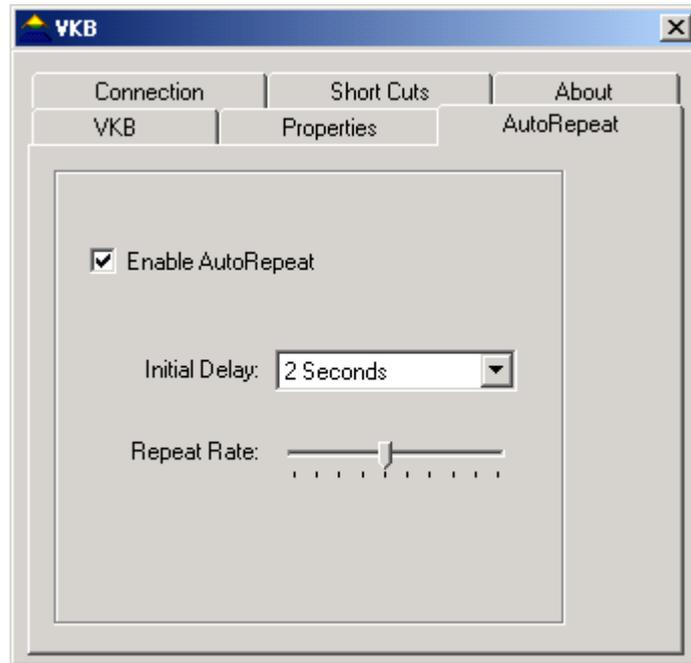
AutoRepeat Characters

Figure 4 AutoRepeat Page

The AutoRepeat feature employed by the VKB Driver allows the system to automatically repeat a key that is being pressed for more than the I*nitial Delay Period* at the *Key Repetition Interval*.

Special Short-Cuts
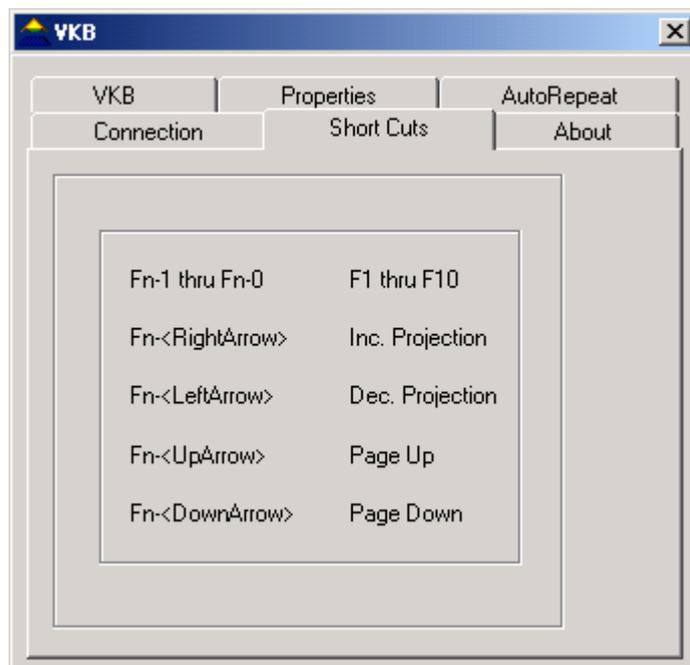
Figure 5 Short-Cuts Page

The Short-Cuts Page, displays the Virtual Keyboard's special combination keys, which may be accessed without exiting the application you may be working with.

The About Page

Figure 6 About Page

The About Page displays the Virtual Keyboard Driver's software version as well as the software version of the Virtual Keyboard. If you have encountered, and are reporting a problem, please relay information displayed on this page.

Open any application and start typing.

The Virtual Keyboard Status Icon

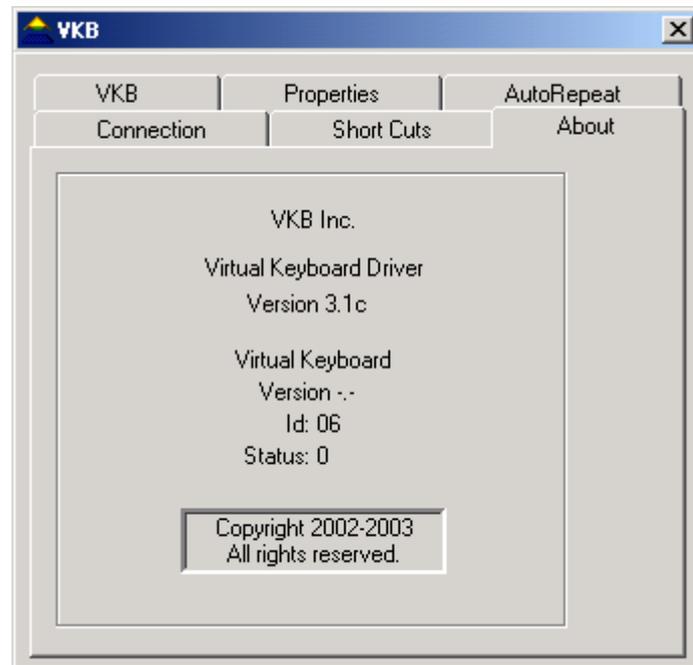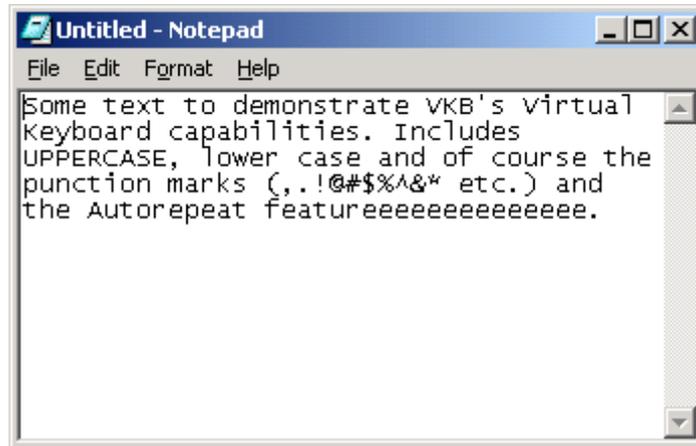When active, the VKB icon is displayed upon encountering one of the following problems. Fix the problem and the icon will disappear.

Message	Cause	Action
Not Connected	The Virtual Keyboard Driver cannot communicate with the Virtual Keyboard.	• Check that the Virtual Keyboard Accessory is on. • Check that the cable is inserted on both sides correctly. • Check that the proper connection has been selected in the Connections Page. • Ensure that another application is not using the port.
Low Battery	The Virtual Keyboard Accessory's battery is low.	• Recharge the Virtual Keyboard Accessory.
Too Much Light	The area of the projected keyboard is exposed to direct sun-shine or some other source of direct light.	• Move the Virtual Keyboard Accessory.

General Maintenances and Safety

Laser Safety Classification

The Virtual Keyboard is certified as a Class 1 Laser Enclosure. This means that the laser emission is completely eye safe under any conditions. Nevertheless, one should avoid staring directly into the keyboard projection beam in order to avoid any eye discomfort.

Micro-switch

The device is equipped with a micro-switch, which disables the Virtual Keyboard functionality when the device is picked up. Do not attempt to defeat this micro-switch.

General Maintenance

1. Avoid touching the black windows covering the detection hardware on the side of the device.
2. Never touch the keyboard projection element.
3. Avoid exposing the keyboard to moisture or extreme temperatures.
4. If the black windows become dirty clean only with a soft, lint free dry cloth. Do not use any solvents or cleaners.
5. Do not disassemble or try to touch the inside of the device.
6. Do not attempt to charge the device with a different charger than the one provided by VKB.

Troubleshooting

Problem	Possible cause	Corrective action
My keyboard is connected, but little or no keys are being detected.	The detection sensitivity is too high.	Lower the detection sensitivity setting and try again.
When typing, multiple and/or erroneous keys are displayed in addition to those I have pressed.	The detection sensitivity setting is too low.	Raise the detection sensitivity setting and try again.
	Device is not resting on a firm flat surface.	Reposition device to a firm surface.
My computer doesn't emit typewriter sounds when pressing a key.	Sound affects, on your PC, have not been enabled.	Enable Sound affects on the PC's device driver.
My keyboard is turned on but no image appears.	Device is not charged.	Charge device.
	Device is overheated.	Move device to a cooler location and wait a few minutes.
	Device is not resting on a firm flat surface.	Reposition device to a firm surface and verify that the micro-switch is fully depressed.
	Micro-switch stuck.	Clean micro-switch.

Specifications

Keyboard Projector	Light source	Red diode laser
	Keyboard layout	63 key / full sized QWERTY layout
	Keyboard size	295 x 95mm projected keyboard size
	Keyboard position	60mm from VKB unit
	Projection surface	Non-reflective, opaque flat surface
	Visibility	Good contrast up to 600 lux ambient illumination
Keystroke Sensor	Ambient illumination	Works under all standard indoor illuminations up to 600 lux
	Detection rate	Up to 400 characters per minute
	Detection algorithm	Multiple keystroke support
	Effective keystroke	Approximately 2mm
	Operating surface	Any firm flat surface with no protrusions greater than 1mm
Electrical	Power source	Integrated, rechargeable lithium-ion battery
	Voltage	3.6 Volts
	Battery capacity	>120 minutes continuous typing
	Interface	RS-232 Serial Interface
	Connector – to PDA	Rx, Tx, Gnd
	Connector – to charger	Vbat, Gnd
Software	Compatibility	MS Windows 98 / 2000 / NT/ XP, PalmOS
Mechanical & Environmental	Dimensions	Approximately 35 x 92 x 25 mm
	Weight	~90 gram
	Temperature - operation	10 – 35 Cº
	Temperature - storage	-10 – 75 Cº
Certification & Safety*	EMC per CE	EN 55024; 55022; EN 61000-3-2; -3-3
	Laser safety	IEC 60825-1; Class 1 laser enclosure

*Certification will be completed prior to commercial introduction