

ComputerProx TF2000 User's Guide



Dear Customer,

Congratulations on the purchase of your TF2000 Ultrasonic Proximity Detector. We at ComputerProx Corp hope you enjoy using our product as much as we enjoyed creating and developing it! Please share your comments and suggestions to help us with our future solutions!

If you are interested in our OEM or Independent Developer's Programs, please call!

Thank you,
The Staff at ComputerProx

Need Assistance?

Call: (847) 289-1667

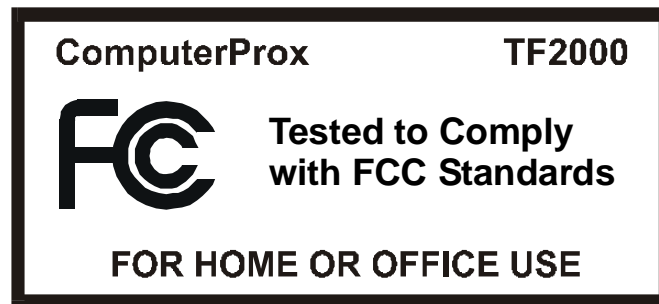
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TF2000 FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



Note: 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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, 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 receiver.
- Connect the equipment into an output on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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Overview

Congratulations on your purchase of the TF2000 Ultrasonic Proximity Detector for locking your computer. Now when you walk away from your system, you will benefit from a hands-free means of locking your computer.

The concept of the TF2000 is easy to understand. Your computer simply 'thinks' that the TF2000 is a USB keyboard that is attached to your system. The TF2000 sends programmable keystrokes to lock your computer when you leave the workspace. It's that simple. No more unattended and unlocked computers. The TF2000 will lock the system for you...and you can now do this *hands-free!*

The primary purpose of the TF2000 is to detect two events. The most important is the detection of you leaving the defined work zone of your computer. When the TF2000 detects that you have left the work zone, the unit sends the keystrokes necessary to lock your system. For example, when Windows 2000 users leave their workstations, they would normally hit the CTL-ALT-DEL-Enter key sequence to lock their systems. With the TF2000 attached, the CTL-ALT-DEL-Enter keystrokes are automatically sent for the user.

The second event is when you return to your work zone. The TF2000 can now detect this event and send some preparatory keystrokes for you. For example, on return to their computer, Windows 2000 users must hit the CTL-ALT-DEL key sequence to prepare the computer for the password entry. Again, with the TF2000 attached, it will now send those keystrokes for you.

The device is simple to install and fun to use...so let's get started!

Installation

Before installing the TF2000, let's first review the system requirements. The TF2000 requires the following minimum system configuration.

Minimum System Requirements

- Windows 98se, ME, 2000 or XP
- Open USB port
- CDROM drive
- 200K free disk space

Note: If you do not have an available USB port as specified in the TF2000 requirements, a USB hub will be needed.

Mounting the TF2000

If your system meets these requirements then mounting the TF2000 in your workspace is the next step. ComputerProx recommends that the best location for TF2000 is on top of your monitor. It is best to start by positioning the TF2000 in the center of the monitor with the sensor pointing forward and unit level (See Figure 1).

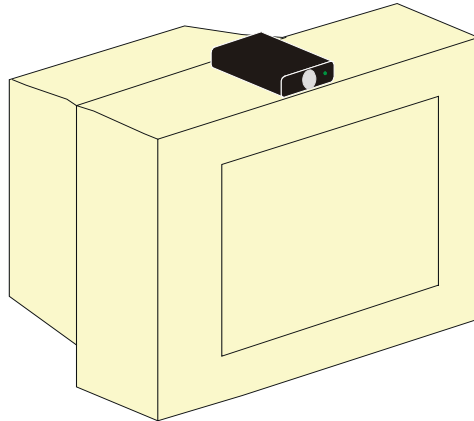


Figure 1. Best location of the TF2000 on a monitor.

Use the provided “Glue Dots” to affix the TF2000 to the monitor as shown. The “Glue Dots” provides a semi permanent bond between the TF2000 and the monitor. The provided foam tape can be used, after you have configured and used the system for a period of time, for a more permanent bond.

Note that it is best to start with the TF2000 pointed in a level position. On some monitors this may require you to adjust your monitor on its pedestal to a more downward angle. If the TF2000 is at an excessive upward or downward angle when placed on your monitor top, it may be necessary to purchase the optional adjustable angle bracket (P/N: BKT-ANGLE) from the ComputerProx web site (www.ComputerProx.com) for proper operation.

Once mounted, connect the TF2000 USB cable to an open USB port on your computer.

Windows will load the appropriate USB keyboard drivers once the TF2000 is attached. If the USB Keyboard drivers are not currently resident on your system, you will be asked to place your Windows Operating System disk into your CDROM drive. Follow the directions provided by Windows during this install.

Note: There are no USB drivers provided on the TF2000 Configuration Disk. All USB drivers will be provided by the Windows 98se, Windows 2000 or Windows XP operating systems.

Once the USB drivers have been loaded and activated by Windows, observe the LED (Light Emitting Diode) on the TF2000. The LED will light once the device has been registered to the computer. It may take a minute to light. If after a minute the LED does not light, restart your computer by first properly shutting down Windows and then powering your system off. Restart and observe the LED.

When the TF2000 is properly working the LED will indicate its current state. The LED indicates three states of the TF2000. On leaving your computer the TF2000's LED will go through the sequence below, each color indicating the state the TF2000 is in.

LED Status on Walk-Away

Green: Person Detected within the "Distance" setting

Yellow: Person has left the range of the "Maximum Detection Distance" setting and the "Walk-Away" delay timer is counting down

Red: Person has left range of "Maximum Detection Distance" setting and TF2000 has sent "Walk-Away" Key Sequence

When you return to your computer the TF2000's LED will go through the sequence below, each indicating the state it is in.

LED Status on Walk-To

Red: Person not in range of "Maximum Detection Distance"

Yellow: Person has entered range of the "Maximum Detection Distance" setting and the "Walk-To" delay timer is counting down

Green: Person detected within the "Maximum Detection Distance" setting and "Walk-To" Key Sequence has been sent.

Configuration

The TF2000 has several configurable settings that are controlled via the TF2000 Configuration program. Place the supplied TF2000 Configuration CDROM into your CDROM drive and run the supplied program (TF2000.exe). Click on the "Sonar" tab and you will see the screen below.

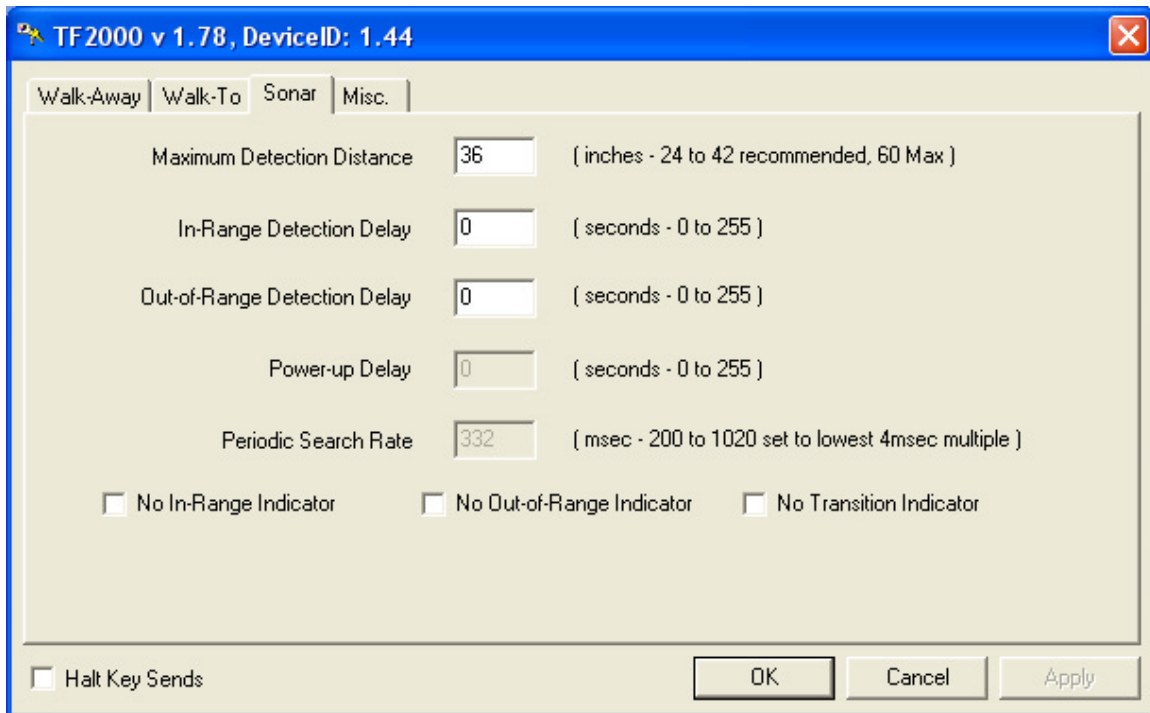


Figure 2. TF2000 Sonar Configuration Screen

Configuration: Maximum Detection Distance

The first order of business will be to set the “Maximum Detection Distance”. The TF2000 can be set to detect a person at a distance of up to 42”¹. It is important to understand that the “Beam Angle” of the TF2000 is approximately 60 Degrees and the detectable distance is as specified in the configuration program. Move around in your normal workspace and observe the LED. The LED should remain GREEN while you are in your normal computer work zone and should go RED when you leave this zone. Enter and exit your normal work zone and observe that the LED is changing from GREEN to RED when leaving the zone and from RED to GREEN when re-entering the zone. Lower the “Maximum Detection Distance” to the lowest value that allows you to be detected in your work zone. You can change the “Maximum Detection Distance” by typing the new value in the field and clicking the “Apply” button. Repeat the above LED test until proper operation is observed. Please note that the LED will always transition through YELLOW for at least 1 second. The “Walk-To” and “Walk-Away” delay settings, will lengthen the YELLOW transition between the RED and GREEN state.

¹ The TF2000 can actually be set to 60”, however, 42” is the recommended maximum distance for best operation.

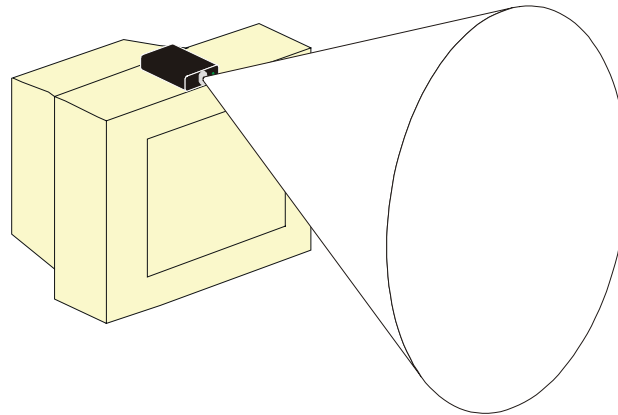


Figure 3. Approximate 60° Beam Pattern of TF2000

Important Note:

The TF2000 detects people AND objects that are in this zone. Large objects, such as high backed chairs can be viewed by the TF2000 as a person. It is important to understand this behavior and it may be necessary to reduce the “Maximum Detectable Distance” and/or raise the angle of the TF2000 to a slightly higher bias. If you are using the TF2000 in an office setting as opposed to a kiosk or standing workstation setting, be sure not to allow your chair to swing into the ‘view’ of the TF2000. It is also important not to set large objects on your desk that may be ‘viewed’ by the device. Once you have used the TF2000 for a short period of time, you will quickly learn the view zone.

It is also important to understand that the TF2000 will only reliably detect objects that are outside the minimum detectable distance of 14”. If users are approaching the computer and are often within this minimum distance, you may need to move the TF2000 father away from the users for best performance.

Configuration: In-Range Detection Delay / Out-of-Range Detection Delay

The TF2000 has programmable delays that suppress the immediate sending of the locking sequence. This is especially useful when using the TF2000 in a private office setting where you may leave the work zone briefly and not want the system to lock. The maximum settable delay is 255 seconds. After this delay time has elapsed, the programmable key sequences are invoked.

The TF2000 has separate delay to handle both the “In-Range” and “Out-of-Range” events. Adjust the delay by specifying the value and clicking the “Apply” key. You can test these settings by observing the LED. When the LED is in a Yellow state, the TF2000 is in the delay mode. Adjust the settings to delays that work best for your work habits.

LED Indicator Configuration

The check boxes at the bottom of the Sonar window allow you to control the state of any of the LEDs. This is useful if you wish to turn off LEDs. A common use would be to turn off the GREEN state in the event you find this light annoying while you are working at the computer.

Important Note:

When using the TF2000 in a kiosk or standing workstation that have many users changing logins, it is best to use the absolute shortest delay possible (i.e. zero). This will assure that the computer will lock prior to the next user walking into the detectable distance.

Configuration: Walk-Away / Walk-To

As stated, the primary function of the TF2000 is to detect two events; when you walk away from the computer and when you return. The most important of these events occur when you when you leave your computer. On this event, the TF2000 can send to the computer a series of keystrokes that are configured in the device. These keystrokes can be up to 4 characters with modifiers (ALT, CTL, Shift). Click on the “Walk-Away” tab and you will see the screen below.

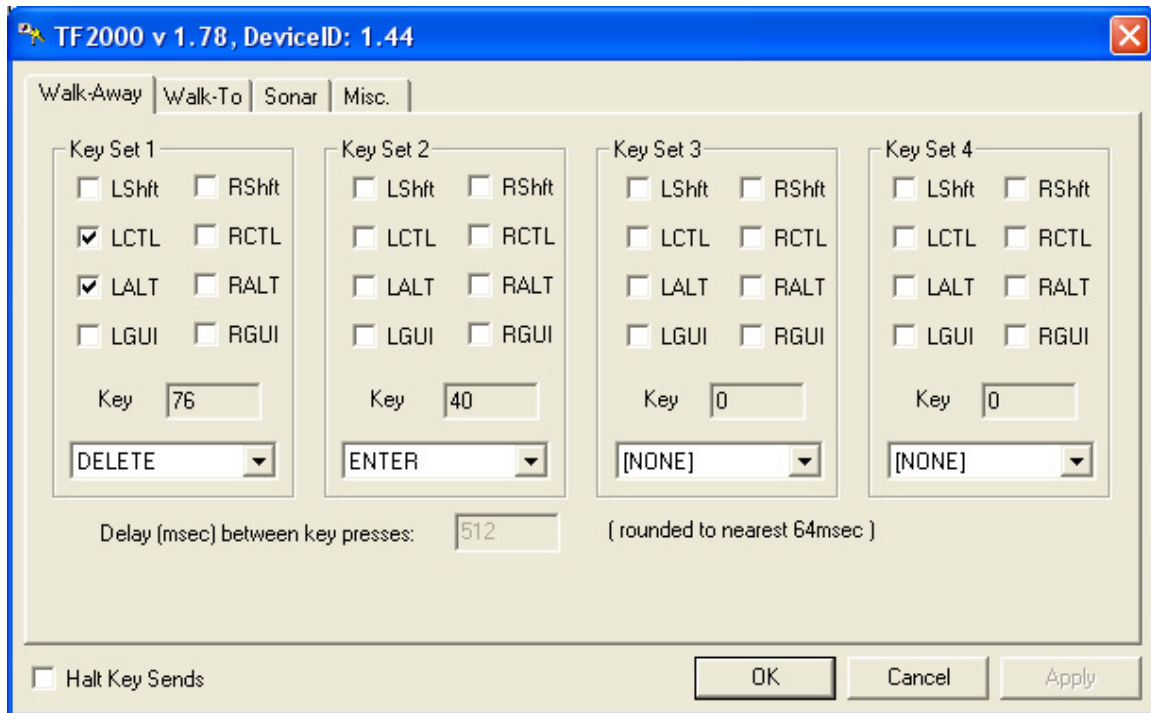


Figure 4. TF2000 “Walk-Away” Configuration Screen

In the above screen shot, the unit has been configured to send CTL-ALT-DEL ENTER key sequence. This key sequence is used to lock Windows 2000 workstations.

Note: The TF2000 units are shipped from the factory, without any keystrokes programmed into the device and therefore will not lock your computer until you configure the keystrokes.

You will need to configure the TF2000 for the keystrokes you currently use to lock your computer. If you click on the “Misc” folder, there are some quick settings that will help get Windows 2000 and Windows XP users quickly configured with the most common settings for these operating systems.

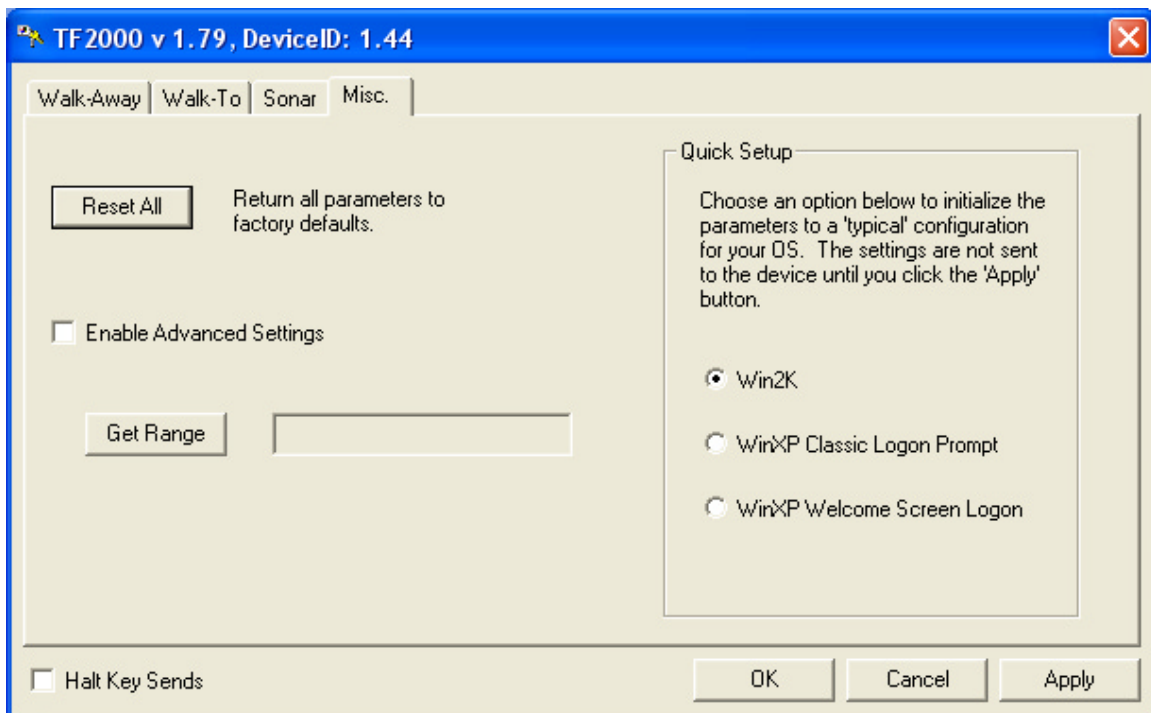


Figure 5. Misc folder for Quick Configuration of Walk-To and Walk-Away Keystroke Settings.

By selecting the Win2K option the TF2000 will be set with:
Walk-Away : CTL-ALT-DEL, K, Backspace, Escape²
Walk-To : CTL-ALT-DEL

² The Backspace and Escape characters are sent to clear any entries made if the user does not log into the password dialog box prior to leaving the proximity.

By selecting the WinXP Classic Logon Prompt option the TF2000 will be set with:

Walk-Away : LGUI-L
Walk-To : CTL-ALT-DEL

By selecting the WinXP Welcome Screen Logon option the TF2000 will be set with:

Walk-Away : LGUI-L
Walk-To : None

Windows 98se and Windows ME users will need to make a short-cut on the desktop to launch a screensaver. The shortcut needs to have a shortcut key assigned to it. This key is what needs to be assigned in the “Walk-Away” sequence.

After selecting you Quick Setting, be sure to click the apply button to save your new settings.

Note: Once you have set the TF2000 with keystrokes, these keystrokes will be sent during the next Walk-Away event. To prevent keystrokes from being sent while the configuration program is being used, click the “Halt Key Sends” check box in the lower left corner of the application screen. This will temporarily stop sending the keystrokes. This check box is cleared once the application has been exited.

If you want you can customize the key sequence by selecting the appropriate keys and modifiers for your particular usage. For example, you may choose to place the system in the log off mode or standby mode instead of simply locking the system. Simply configure the keystrokes to do these functions and click the “Apply” or “OK” button to save the new settings.

The “Walk-To” configurations as handled pretty much in the same manner. Simply customize the “Walk-To” folder entries to your preferred settings and click the “Apply” button.

Configuration: Miscellaneous

Under the miscellaneous folder, you can perform the quick configurations, as well as, reset the unit to its factory default settings.

There is also an advanced settings tab that should only be used after talking with ComputerProx technical I support. The advance settings allow adjustments to the more primitive features in the unit, such adjusting the ultrasonic “ping rate”, and the TF2000 power-up delay. Adjustments to these setting are not normally required and should be left alone.

The "Get Range" button when clicked will display the distance of the closest object in the 'view' of the TF2000. This can be used to help determine the distance that should be configured in the "Maximum Detection Distance" under the Sonar tab.

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