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**SUMO ST370 Quick Start Guide**

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## Introduction

Featuring a robust magnesium alloy enclosure, the sub 1kg ST370 with an 8.4" TFT display is powered by the Intel StrongARM processor providing "instant-on" capability.

The operating system is Windows CE .NET bringing with it numerous applications, including support for handwriting recognition, advanced thin client/server computing client software (RDP and ICA), Windows Media Player, local email client, dynamic display rotation and word processing.

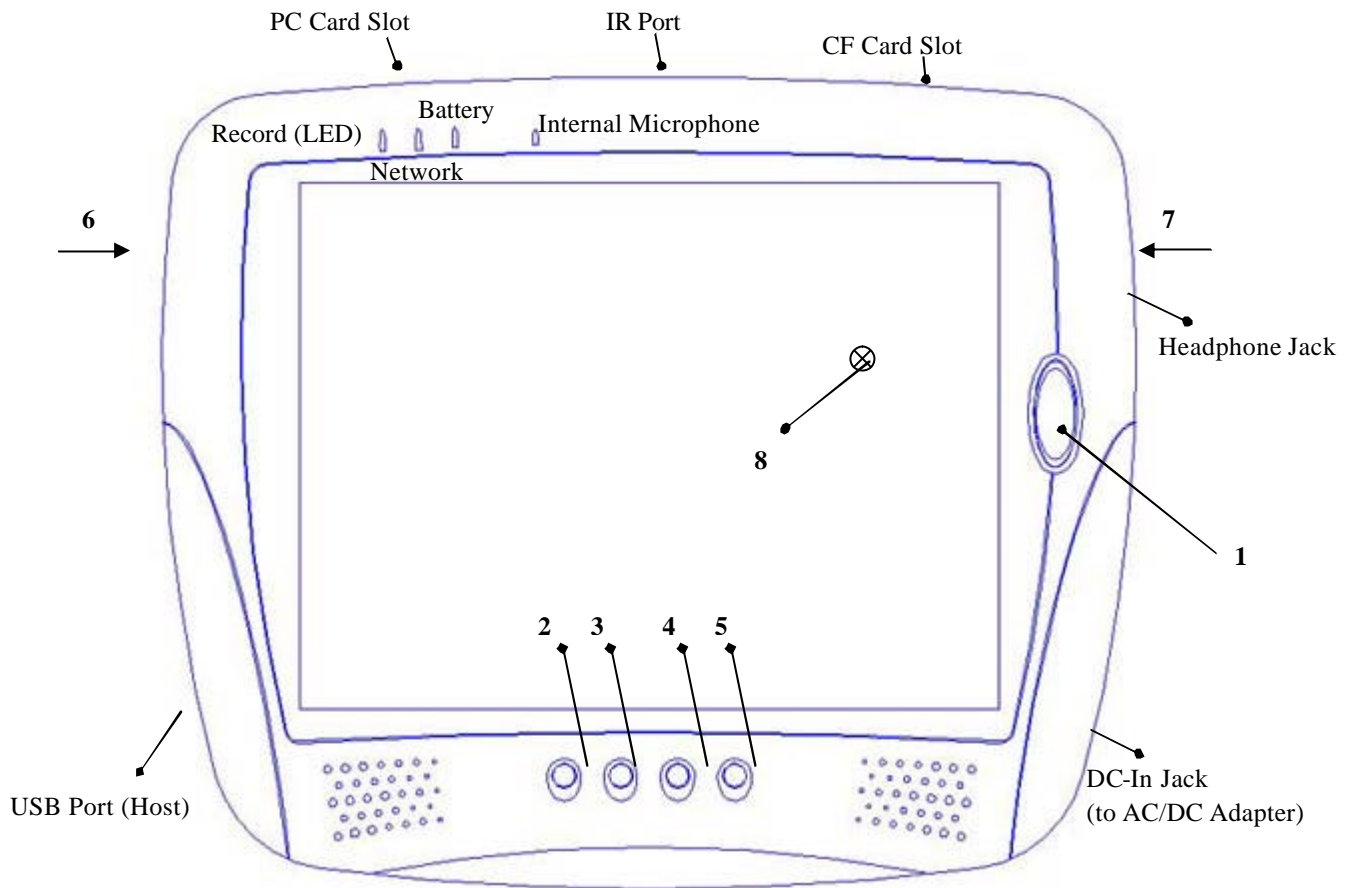
## Precautions

- Always exercise care when operating and handling the ST370.
- Do not apply excessive pressure to the display screen.
- Do not touch the display screen directly with your fingers. This may damage the screen, and oil from your skin may be difficult to remove. Please use the Stylus provided with the unit.
- Avoid exposing the panel screen to direct sunlight or other heat source. Where possible, the ST370 should be facing away from direct lighting to reduce glare.
- If the AC-DC power adapter is used to recharge or power the device, DO NOT use any AC-DC adapter other than the one provided with the device or acquired from the manufacturer or its distributors.
- In the unlikely event that smoke, abnormal noise, or strange odour is present, immediately power the ST370 off. Please report the problem to the provider of the device immediately.
- Never attempt to disassemble the ST370. This will void any product warranty on the ST370.

## Package Contents

- ST370 (with built-in battery pack) with Stylus
- Protective Jacket
- AC-DC Power Adapter.
- Charging Cradle with USB slave port and IR keyboard interface
- Power Cord (Country specific)
- USB Cable
- Quick Start Guide
- Options, depending on configuration:
  - External Battery Pack
  - In Car Battery Charger
  - IR keyboard
  - Embedded wireless LAN adapter with antenna
  - Carrying pouch.

### Front-View Layout



### • Button Functions

Button	Description	Function
1	Navigate	Push on the sides of the button to navigate left, right, up and down.
2	Soft keyboard	Toggle: Launch/Close soft keyboard.
3	Cradle I/F (USB and IR) Enable	Enables IR keyboard and USB link with cradle after device is secured on the cradle.
4	Remote Desktop Connection	Launch Remote Desktop Connection application.
5	Desktop	Minimize current application and return to the desktop.
6	Suspend	Quick Push: enters or exits suspend mode.
7	Record Button	Push: launches the Recorder application or toggles between record and stop/pause functions.
8	Power Button (Rear Cover)	Push and Hold to Power Off the device (hold for 4+ seconds until display goes off). Then push to restart and complete the reboot process.

## REQUIREMENTS

The ST370 features a CompactFlash (CF) slot and a PC Card slot. It is anticipated that the PC Card interface will be mostly used to provide 802.11b wireless LAN connectivity. The ST370 may also support other devices, including modems, tethered Ethernet connectivity and Bluetooth devices.

The use of 802.11b wireless Access Points or Gateways is required to adequately utilize the ST370. If the ST370 was not supplied with a wireless LAN (802.11b) adapter, it is recommended that a Cisco Aironet 350 802.11b PC Card be used. The compatibility is expected to widen as other 802.11b PC Card vendors provide support for the Windows CE .NET operating system.

**NOTE:** If you elect to use a WLAN adapter where the vendor offers a driver to operate under Windows CE .NET on an ARM processor-based platform, you should be able to install the driver onto the ST370 by referring to the “Software Installation, Development and Synchronization” section in this document.

### Notes for setting up the 802.11b-based wireless communication

- Under the *zero configuration* design of the wireless 802.11b LAN support under CE .NET, the ST370 will detect all 802.11b basestations in the vicinity for you to select the basestation of your choice for connection.
- The ESSID and WEP Parameter (if enabled) on the ST370 and the basestations have to match. *Zero configuration* will guide the ESSID setup. WEP is “Disabled” as default on the ST370 – it is recommended that you enable WEP encryption for more secure access.
- Click on the wireless LAN icon (see below) on the Windows CE Taskbar, to configure the wireless adapter in the ST370.
- Refer to the basestation operating manuals for setting up the 802.11b basestations.
- **NOTE:** The network connectivity icon changes appearance as follows:



**Connection Established**  
(Blinking icon indicates activity)



**Connection Lost**

**NOTE:** Neither of the icons above will appear in the Taskbar if the network adapter is not detected or supported by the ST370.

# OPERATION

## Power ON and OFF

### NOTE:

- The battery in the ST370 may have become drained whilst in transit: it may be necessary to use the AC-DC adapter with the ST370 when setting up the device for the first time and to fully charge the internal battery. To start the ST370 for the first time, press the reset button located in the recessed opening at the back of the ST370.
- DO NOT use the Reset button as part of normal device operation – this may lose all software settings and other information stored in the ST370.
- Use the suspend button to “shut off” the device while not in use. Pushing briefly on the suspend button will wake up the system within a few seconds.

To activate the ST370 in normal circumstances, push and quickly release the suspend button to the left of the front bezel. The display will appear in about 1-2 seconds. To turn the ST370 display off, push and quickly release the suspend button.

## Start Up

1. If powering up (from suspend or otherwise) is successful, the Windows CE Desktop will be displayed after a launch sequence of several seconds, or within 2-4 seconds if recovering from suspend mode.
2. The wireless LAN adapter may take 10-15 seconds to (re-) establish connectivity.
3. Choose from any of the icons on the Desktop to activate the corresponding application.

## Calibration

The Calibration Properties screen will appear before the Windows CE desktop if the device has been reset or is used for the first time. When the ST370 prompts you to calibrate the touchscreen, use the Stylus (stored in the upper right surface of the ST370) and tap where indicated on the touchscreen in accordance with the instructions.

(This document refers to “**clicking**” or “**tapping**” interchangeably. The latter is applicable when the touchscreen is utilized).

**NOTE:** It is possible to recalibrate at any point using either:

- 1) “**Start**” → “**Settings**” → “**Control Panel**” → “**Stylus**” or
- 2) Pressing the "soft keyboard" button (the left-most of the four buttons on the bottom of the ST370) AND the "right" button of the 4-way navigation switch (located on the right) simultaneously.

## Wireless Network Card and Antenna System

The ST370 has a PC Card slot along the upper left edge of the device. This slot is designed to house a wireless LAN adapter. In certain configurations, the slot is left open for the user to insert a supported network adapter. In many instances, the ST370 is delivered with an embedded PC card with a custom antenna in a snap-type housing. In the latter case, the antenna may be left in the snap-on position (A) or the antenna tip may be pulled off the retainer snap in order to attempt to obtain better wireless connectivity through varying orientations up to near vertical (B).

(A)



(B)



## Battery and Power Management

Battery life is dependent upon the usage of the ST370 and in particular if any additional PC Cards or CompactFlash cards are inserted into the unit. The period between battery recharges can be significantly lengthened by putting the device into Suspend mode through the Suspend button (see Buttons Function Table) whenever the device is not in use. The ST370 may also be configured to automatically enter into power-saving mode after a user-definable period of device idle – see **Start > Settings > Control Panel > Power Properties**. The period of continuous operation can be extended with the aid of an optional external battery pack that clips onto the back of the device.

**NOTE:** The ST370 battery pack may be recharged with the provided AC-DC adapter connected directly to the DC-in jack on the device or connected to the device Cradle.

## Reset Button

The Reset button resides in a small cavity at the back of the ST370. Use a fine-tip instrument (such as the stylus) to operate this button.

### Cold Reboot

The reset button can be used to perform a cold reboot on the ST370 in the unlikely event of device lock-up and if a warm reset (see below) is unable to revive the device. To execute, push the reset button for at least 4 seconds to activate the reset. The device will be turned off and will need to be restarted pushing briefly on the button again. This Reset/Power Off will clear software settings and any information not saved to flash memory.

## Suspend/Resume Button

This is the slightly recessed button along the left side of the ST370. A quick push of the button toggles between Suspend and Resume modes. Note that the machine cannot re-enter suspend mode within 15 seconds of resuming normal operation. This is designed to protect external file systems, such as a FAT file system on a CompactFlash card.

**NOTE:** Holding on to the button may not engage suspend/resume – it may only dim the display.

## Low Battery Condition

A warning message will be generated when the battery power becomes low: the ST370 will then be placed into suspend mode. The provided AC-DC adapter should be used to power the unit as soon as possible in order to return the machine to its previous state.

After the ST370 enters suspend mode due to low battery power levels:

- The Suspend/Resume button will not resume the machine unless an AC-DC adapter or a second battery is used.
- If an extended period of time elapses without one using the AC-DC adapter or the external battery pack to resume the system operation, the battery power will drain entirely and the only way to recover the system is by using an AC-DC adapter to cold reboot the system – use the reset button at the back of the device. The Suspend/Resume button will not work in this situation.

## Configuring the ST370

1. Click **“Start”** on the Windows CE Taskbar, select **“Settings”**, and then click on **“Control Panel”**.
2. The Control Panel displays several icons associated with utilities for configuring the ST370. Many of these are self-explanatory. Some major applications are discussed below.
  - a) **Display Quality/Properties set up**
    - i) Click on **“Display”** to change display properties. It is possible to choose the desktop background image and colour scheme. Additionally the properties of the backlight may be configured in order to maximise battery life.
    - ii) Click on the **“Brightness”** icon to adjust the brightness of the display. Tap on the left arrow to darken the display or the right arrow to increase the brightness.

## b) Network Configuration

Double-click on the “**Network and Dialup Connections**” icon.

The displayed window will guide the configuration or provide information largely identical to accessing the Network icon displayed in the Taskbar when a supported network adapter is inserted and detected into the ST370.

In general for any selected adapter, click on “**Properties**”.

- i) There are two options: “**Obtain an IP address via DHCP**” or “**Specify an IP address**”.
- ii) If “**Obtain an IP address via DHCP**” is selected, it is expected that an IP address can be automatically assigned to this device.
- iii) If “**Specify an IP address**” is selected; please specify the necessary details (IP Address, Subnet Mask, and Default Gateway) in the space provided. In addition it may be necessary to specify additional **WINS** or **DNS** addresses in the “**Name Servers**” tab. Consult your systems administrator to obtain this information.
- iv) Click on “**OK**” at the top of the window to apply the settings.

## c) Stylus Setup and Calibration

- i) Double-click “**Stylus**”; the Stylus Properties window will appear.
- ii) To test the “**Double-Tap**” function: follow the instructions to double click the two squares right of the Window. If it is correct, then click on “**OK**” at the top of the window for confirmation.
- iii) If you want to recalibrate or your device is not responding properly to your taps, select “**Calibration**”, follow the instruction to recalibrate. When finished, click on “**OK**” to continue.

## d) System Properties Set Up

Click on “**System**”; the System Properties window will appear.

- i) In the “**General**” page, system information (software version, system memory etc) will be displayed. Click on “**OK**” at the top of the window to return to the System Properties window.
- ii) In the “**Memory**” tab, you can adjust the allocation of unused RAM to run programs or for storage (by moving the arrow right or left). After making changes, click on “**OK**” at the top of the window to apply them.
- iii) In the “**Device Name**” tab, a unique name can be assigned to the ST370 as identification for network resource access such as file sharing, etc.

## Reading and Sending E-mail

The local email client (Inbox) can be used to access IMAP or POP3/SMTP servers.

### Inbox Configuration.

- i) Open the Inbox program.
- ii) Go to Services tab and select "**Options**". After you click on "**Options**" you will see in a new window five tabs, which are: "**Services**", "**Compose**", "**Read**", "**Delete**" and "**Storage**".
- iv) Select "**Services**", click "**Add**", choose which type of email service you are connecting to, (IMAP and POP3 protocols are supported), and select one.
- v) In the Setup Mail definition (IMAP or POP3) you must provide the following information: "**Connection**", "**Server**", "**User ID**", and "**Password**". If you don't have this information contact your Network Administrator.
- vi) Click "**Next**".
- vii) In the following window configure the "**Connection Settings**". There are several options – use the default values and click "**Next**".
- viii) The last window contains "**Mail Inbox Preferences**". Select the options suitable to your needs – you may either retrieve the full text of the messages or only the headers.

**NOTE:** Files with .TXT, .DOC, .DOT, .RTF, HTML, .GIF and .JPG formats may be read.

## Accessing the Internet with the Internet Explorer

1. To access the Internet click on "**Internet Explorer**" in the Desktop screen – the ST370 will display the default web site, You can change the default web site by using View/Internet Options in the menu bar of IE.
2. To return to the Windows CE desktop without shutting down the web browser, minimize the browser window. You can click on the Internet Explorer icon in the Windows Taskbar at any time to return to the browser.

The IE browser in CE .NET is based on the IE 5.5 engine.

## Other Features

- **Terminal Clients: ICA and RDP**

You may use the ST370 to connect to Citrix and Microsoft Terminal Servers.

- i) "Start" → "Programs" → "Terminal Client" → "Citrix ICA", or activate the desktop icon (Citrix ICA) to connect to terminal servers running Citrix Winframe or Metaframe.
- ii) Activate "**Remote Desktop Connection**" on the Desktop to connect to Microsoft Terminal Server, or to a PC running Microsoft Windows XP Pro.

- **Word Processing**

Windows CE .NET provides the WordPad word processing application, which is similar to the Pocket Word application available in previous releases of CE. This is included with the ST370.

- **Inking**

Write messages or take notes using the touch screen for records or for transmission via e-mail as attachments. Depending on the software version on the ST370 this application may or may not be active.

- **Transcriber**

This is a versatile handwriting recognition application. Transcriber may be activated by double tapping on its icon on the desktop or by selecting **Start > Programs > Transcriber**. In order to avoid mouse taps getting confused with handwriting entries, it is advised that you start the Application (e.g., WordPad) before activating Transcriber. A help menu is available for guidance with the Transcriber application.

- **Screen Rotation**

The ST370 offers software for the dynamic rotation of the display between landscape and portrait modes. The display may be rotated 90, 180 or 270 degrees relative to the default landscape mode. The mode change will be effective immediately, without the need to re-start the device. Invoking a mode change will not fully apply to applications that are already open.

- **Voice Recorder**

A Voice Recorder application and its recording function will be activated if the Record button is pushed. Pushing the button again will stop or pause the recording action. Subsequent pushes toggle between record and stop. The application may only be closed manually.

- **Device Registry**

The device registry characterizes the device, defining supported device components and peripherals, application and content. Many registry elements are changed or updated during normal use.

At key events such as low battery level or upon adding favourites in the browser, the registry contents will be saved from volatile memory to flash ROM automatically, ensuring persistence of the registry settings, even after total power loss. A typical save process takes about 4 seconds. Additionally the "Registries Save/Restore" utility in the control panel can be used to manually save registry contents to flash ROM

- **Document Viewer**  
Quick View Plus allows viewing of Microsoft Office and PDF documents as well as metafiles and bitmaps.
- **Taskbar Highlights**  
Right-mouse function has been added to the Windows CE Taskbar. Select the mouse icon on Taskbar to enter right-mouse mode. The system will automatically switch back to left-mouse mode after a single use in right-mouse mode or by selecting the mouse icon again on the Taskbar.  
Volume control icon has been added to the Windows CE Taskbar to allow easier access to adjustment of the audio volume

## Operating the ST370 with the cradle

The ST370 is complemented by a cradle that enables support, pass-through battery charging and communication with a PC. On the cradle are the following interfaces: a DC-in jack for the AC-DC adapter and a USB port. Always seat the ST370 securely in the cradle and use the procedure outlined in this section to activate and verify the connection between the ST370 and the cradle.

1. The battery pack in the ST370 may be charged either by connecting the AC-DC adapter directly to the DC-in port on the ST370 or through the DC-in port on the Cradle while the ST370 is docked on the Cradle.

### DC-in Port and Cradle Connector



### USB Slave or Type B Port and Cradle

#### Connector

2. The Slave-type USB port on the cradle is used for connection between a desktop computer and the ST370 when the device is docked in the cradle. This connection may be used for software installation, software update, and software development purposes. The ActiveSync software also leverages this connection for synchronization between a PC and the ST370.

**NOTE:** It is necessary to press the cradle enable button on the front panel (see buttons definition) to enable the USB Slave port (e.g., to use ActiveSync) on the cradle. Removing the unit from the cradle or putting the device into suspend mode will cause the connection to be lost. An “X” will re-appear across the Cradle Connection icon if the connection is lost or if the ST370 is not properly seated in the cradle. The cradle enable button needs to be pressed again to re-establish a lost or improperly set up connection.



**Connection Established**



**Connection Not Established**

### **Software Installation, Development and Synchronization**

Software and data may be installed, developed and synchronized via connection to a host PC where the primary software resides. A USB cable-based connection between the host PC and the cradle of the ST370 enables this.

The following process should be followed:

- i) Install ActiveSync 3.5 on host PC. (available from <http://www.microsoft.com/mobile/pocketpc/downloads/activesync35.asp>)
- ii) Securely seat the ST370 in the cradle.
- iii) Connect the USB cable between the ST370 cradle and the host PC.
- iv) Enable the USB connection by engaging the cradle enable button on the ST370 (see the Button Function table earlier in this document). Verify that the Cradle Connection icon is active.
- v) Install the driver for the ST370 cradle USB connector on the host PC (this may be obtained from the support section of the Sumo Technologies website at <http://www.sumotech.com>. Registration is required.)
- vi) Use the ActiveSync application to select and initiate file/software transfer.

**NOTE:** Suspend/Resume or removing ST370 from the cradle will turn off the connection between the ST370 and the host PC. The cradle enable button needs to be pressed again to re-establish the connection. Always refer to the Cradle Connection icon on the Windows CE Taskbar for verification.