**MONITORING & COMMUNICATION SOFTWARE** 

# Installation and Service Manual

XP

# **Contains Instructions For:**

- Software Installation
- Configuration
- Operation



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# 1 ABOUT SMARTWATCH XP

🚰 SmartWatch XP		
<u>File E</u> dit <u>V</u> iew Interfaces <u>H</u> elp	)	
Clients Alarms Reminder	Contacts Groups Schedules Settings	
<u>R</u> ecipients	Message to send	
Name		<
	Notes Common Time Date	Priority
	Se <u>n</u> d Clear	
User name: Maint	Connected to: OPTIMUS Message length	:0

#### 1.1 Features

SmartWatch XP represents the single most significant achievement in the history of wireless messaging, marking the beginning of the next phase of evolution for messaging systems. SmartWatch XP is a messaging platform designed for Microsoft Windows ® enabling the seamless integration of all forms of text messaging. Whether you are dealing with an on site paging system, Short Message Service, email or DECT - SmartWatch XP can deliver messages effortlessly.

SmartWatch XP integrates with a myriad of third party systems such as fire alarms, security systems, nurse call and building management systems enabling alarms to be directed immediately to the appropriate staff. In addition, messages may be initiated from any PC on the network or via a telephone interface.

#### **Client Server Architecture**

SmartWatch XP is a true client/server application with dynamic, real time updating of all database modifications from any PC on your network. By utilizing TCP/IP, clients may be connected to the server via the LAN, WAN or remotely via the Internet. As each client makes modifications to the centralized database these alterations are reflected instantaneously to all clients. This approach enables any PC (with sufficient security clearance) to make modifications to any aspect of the system, regardless of whether they are adding pagers, booking reminder messages or even performing maintenance.

#### **Message Dispatch**

Messages may be dispatched directly from PC's either via the SmartWatch XP client software or directly from your email application. Users simply select who they wish to contact from a list of

recipients (or groups), type in their messages and click on send. SmartWatch XP then determines *how* to send the message. Access to on site pagers, citywide pagers, DECT handsets and mobile phones occurs transparently to the operator. And being a non-dedicated application you can happily utilise your PC for other applications.

#### **PBX Interface**

A voice prompted telephone interface enables staff to send messages directly to recipients without the assistance of an operator. The user is guided through the entire paging process via a series of voice instructions. In addition, users may send a combination of predefined alphanumeric messages and numeric digits (such as 'Call extension: 432' or 'Cardiac Arrest Room 432'). Messages may be prioritized for emergency conditions.

#### **Email Integration**

Email has become the communications medium of choice for the business community. Around 40% of the average work force is mobile, and virtually all professional people have a mobile phone or pager. SmartWatch XP embraces the email phenomenon enabling email messages to be sent directly to wireless recipients. In addition, SmartWatch XP is able to send messages directly to email. For example, when an alarm is activated it could send the message to a DECT handset and a copy of the alarm to your email address.

#### Alarm Monitoring

SmartWatch XP may be interfaced into numerous third party alarm systems enabling virtually any aspect of your premises or alarm conditions to be monitored. Coupled with SmartWatch XP's unique rostering and escalation system alarms may be dispatched to the appropriate staff depending on the time of the day, and which day of the week the alarm was activated. Alarm information may be sourced directly from 'intelligent' serial or TCP/IP connections or via low level alarm inputs. In addition, all alarms are logged to the hard disk for future reference and should an alarm not be resolved then SmartWatch XP can escalate the alarm to another recipient.

#### **City Wide Paging**

SmartWatch XP has been designed to communicate with commercial paging / SMS carriers to send messages directly to citywide pagers and mobile phones. By employing intelligent queuing techniques, SmartWatch XP can 'batch' calls together reducing outbound call costs. Furthermore, multiple SmartWatch XP systems can be networked together (via direct connections or via the Internet) to create 'virtual' wide area networks. This is ideally suited for sites that have multiple campuses and require contacting staff roaming between each of their sites.

#### **Recipient Management**

SmartWatch XP makes recipient maintenance a breeze for administrators. Simply enter in the name of the recipient, their contact address and select how to send the message to them.

All operations such as new, delete and save are situated on a single screen ensuring that all operations are only one click away.

#### **Rostering Management**

The rostering facility within SmartWatch XP enables different staff members to be contacted depending on what time of the day and which day of the week a call is placed to them. The rostering system is identical to traditional manual rostering. Rosters are highlighted in various colours so you can quickly see who is rostered on for a particular shift.

When a call is placed to a roster (regardless of the origin) SmartWatch XP looks up which staff are on the roster schedule and then contacts all staff that are assigned to the shift.

#### Group Management

It is often a requirement to notify more than one person at the same time. A typical example of this would be a fire alarm where, several people need to be informed simultaneously.

Groups may consist of any combination of pagers, DECT handsets, mobile phones or citywide pagers.

Adding members to a group is as simple as clicking on the *add recipients* button and dragging the required recipients into the group.

#### **Escalation Management**

Occasionally it is a requirement that a call unconditionally must be answered - if it is not then it could mean the difference between life and death.

Under these circumstances SmartWatch XP employs *escalation* management and priority queuing. The escalation management enables a sequence of staff to be contacted, at varying time intervals, until the call is answered. In addition, the priority system ensures that the call is sent immediately, by moving it to the front of the queue.

#### **Email Integration**

Email has become the medium of choice for the business community. There is a clear need for mobile email services that staff can employ and configure to match their individual messaging needs.

SmartWatch XP is both an email client (able to send emails) and an email server (able to receive email for dispatch to mobile recipients).

Mobile email services take advantage of the ease with which mobile users can be reached. The service monitors a user's mailbox, detects the arrival of new email and notifies the user by sending a message to the user's phone, pager or DECT handset. In addition, any message that is generated by SmartWatch XP can be easily dispatched as an email.

#### Alarm Monitoring

SmartWatch XP can monitor a myriad of alarms such as door alarms, duress systems, building management systems, fire alarms and security systems. Alarms may be generated from virtually any source, either via a telephone line (Med-Call dialler units via an SCU Receiver), a direct serial connection (e.g. SmartWire and SmartLine), over TCP/IP or via Alarm Interface Modules.

Once an alarm is triggered a message describing the alarm, its location and any other required information, will be instantly sent to the appropriate staff members. SmartWatch XP provides a full suite of rostering and call escalation capabilities that enables the system to determine which staff to page, depending on what time of the day the alarm was triggered.

All alarms are logged to the hard disk providing confirmation of when, and to whom an alarm was sent. Furthermore, alarms may be sent to any combination of pagers, email addresses, DECT handsets and mobile phones.

#### High Level Interface

One of the primary benefits of SmartWatch XP is it's inherit ability to be interfaced into third party systems. The 'Generic Input' interface inspects a serial data stream and searches for particular keywords.

This facility enables it to communicate with virtually all alarm systems that maintain a real time log.

Should a keyword exist in the data stream then SmartWatch XP may be configured to extract sections of the text to be sent to recipients.

In addition to the 'Generic Input' interface several custom interfaces are also available. The two most predominant interfaces are the Nursecall and the gaming interfaces.

SmartWatch XP enables you to establish a series of zones (wards in a hospital environment) so that you can assign staff to service particular areas within your premises.

Whenever a call comes in from a particular zone, SmartWatch XP analyses which staff are assigned to the area, and if they are available, SmartWatch XP will contact them.

Staffing levels may be adjusted either automatically based on a roster schedule or manually by the staff on duty.

#### **Reporting and Statistical Analysis**

If there were one single 'buzz' word that has governed the past decade it would be accountability.

Paging is one of the primary forms of communication within your organization – it is essential to be able to review and examine the paging traffic on your system.

The reporting facilities available in SmartWatch XP provide management with the ability to:

- Review response times to alarms.
- Solve disputes on when and to whom messages were sent.
- Track messages generated from particular sources you can see which departments are busy.
- In the event of litigation you can easily review what happened during a particular time period.
- On screen graphical analysis allows management to review peak periods within your premises.

#### **1.2 About This Manual**

This manual is designed to assist electrical and electronic contractors to install SmartWatch XP.

This manual is set out in a series of easy to follow step by step instructions followed by a checklist to confirm the steps as outlined. Following the steps and checklists correctly will ensure that there will be no problems when installing SmartWatch XP.

- NOTE: A note preceded with this symbol indicates secondary information pertaining to the topic under discussion.
- IMPORTANT: A Right-pointing arrow followed by text in this manner presents important information.
- ▲ WARNING: Warnings like this alert you to the fact that you might damage your equipment or lose data if you don't follow instructions carefully.

# 2 SMARTWATCH XP INSTALLATION

## 2.1 Components

Your SmartWatch XP package should contain:

- SmartWatch XP Installation and Service Manual
- SmartWatch XP Installation CD
- Security Device (Dongle)

## 2.2 Software Installation

#### 2.2.1 PCs and Operating Systems

#### **Specifications**

For the minimum and recommended hardware requirements refer to the readme.txt file on the CD-ROM disk containing the SmartWatch XP files.

#### Training

A technician with knowledge of radio communications and electronic and electrical concepts is required to install the hardware (such as transmitters) included with your SmartWatch XP system.

Installation of SmartWatch XP software requires a familiarity with the administration of Windows operating systems.

# IMPORTANT: Please note that SmartLink will not provide technical support for equipment not provided by SmartLink.

#### Windows Versions

SmartWatch XP runs on any of the following Windows operating systems:

- Windows 95 2nd Service Release 2 (Client Software Only)
- Windows 98 2nd Edition (Client Software Only)
- Windows ME (Client Software Only)
- Windows NT 4 with Service Pack 6 installed
- Windows 2000 with Service Pack 3 installed
- Windows XP Professional with Service Pack 1 installed

SmartLink recommends Windows NT, 2000 or XP based operating systems for the PC that will be running SmartWatch XP server. These operating systems are more secure, more stable and better manage system resources than 95, 98 and ME. The significant performance advantages offered by these operating systems will prove especially beneficial if your SmartWatch XP system handles critical operations.

#### Power Management

The Windows operating system and your PC BIOS both provide the facility to reduce power consumption on your PC through a series of power management option.

You will need to ensure this power management is disabled on the server PC, both in the BIOS and the operating system.

▲ WARNING: If you fail to disable power management on the server then you will experience problems with your SmartWatch XP system. SmartWatch XP clients will be disconnected from the server if it sleeps or hibernates.

#### **Power Management in Windows**

Launch the *Power Management* or *Power Options* item in the **Control Panel** (the actual name of the power management utility on your system will vary according to the version of Windows you are running and the brand of PC).

Select the this compu the selecte	powers iter. Note d schen	cheme with e that chang ne.	the most a ing the se	appropriate ttings belo	e settings for w will modify
Power schemes					×
Settings for Always	On pow	ver scheme Vever	Save A	s ] [	
Turn off hard disks	: N	ever			~
System standby:	N	ever			~
System hibernates	N	ever			~

Locate the settings for the current power scheme. These will include system standby, turn off monitor and turn off hard disks, and perhaps also hibernate and other system options.

Set the system standby, turn off hard disks and hibernate options to **never** occur. You may wish to leave power saving for the monitor allowed (as illustrated in the screen above).

#### **Power Management in the BIOS**

The BIOS is a low level interface to the motherboard on your PC. An experienced computer technician should confirm that BIOS power management is disabled on the server.

▲ WARNING: Do not attempt to make changes to the BIOS settings unless you are confident that you understand the changes you are making. It is a good idea to write down any changes you have made in the BIOS so they can be reset if needed.

#### 2.2.2 Proxy Servers

If you are running a proxy server then you will need to configure Internet Explorer to view the HTML online help on the server PC.

▲ WARNING: If you *do not* set up Internet Explorer correctly then the following error message will be displayed when you attempt to access the online help:

Error: Connection to 127.0.0.1 failed: connection refused.

If you encounter this error message on the server PC then you will need to bypass the proxy server for local addresses.

# NOTE: This error will only occur on the server; you do not have to change the settings on clients.

#### **Bypass Proxy Server for Local Addresses**

To bypass the Proxy Server for Local Addresses, follow these steps:

- Launch Internet Explorer.
- Select Internet Options from the Tools menu.
- Select the Connections tab.
- Click the LAN Settings button to display the following screen:

Automatic conl use of manual	figuration may ove settings, disable a	rride mani utomatic c	ual setting onfigurati	is. To ensure the on.
Automatica	lly detect settings			
Use automa	atic configuration s	cript		
Address				]
Proxy server				
Use a proxidial-up or V	y server for your L PN connections).	AN (These	e settings	will not apply to
	400 440 0 4	Port:	8080	Adupped
Address:	192.168.0.1		0.000	Auvanceu

- If you are already using a proxy server then the *Use a proxy server* box should already be ticked, and the address and port of the server entered.
- Make sure there is a tick in the Bypass proxy server for local addresses field.
- Click [OK] to confirm the changes.
- Click **[OK]** to exit the *Internet Options* screen.
- Exit Internet Explorer.

#### 2.2.3 Service Packs

- WARNING: If you are using Windows NT then you must ensure that Service Pack 6 has been installed. If you are using Windows 2000 then you must ensure that Service Pack 3 has been installed. If you are using Windows XP then you must ensure that Service Pack 1 has been installed. Every PC on your network that will run the server or client application under Windows NT must have these service pack upgrade.
- IMPORTANT: If you are unsure what Service Pack you have, or if you know that you have an old version, then you should follow the directions below.
  - Make sure that no other programs are running.
  - Place the SmartWatch XP Installation CD in the CD-ROM drive.
  - The auto-run screen will startup as shown below.
- NOTE: If the auto-run screen does not startup, browse the contents of the CD-ROM drive containing the SmartWatch XP Installation CD using Windows Explorer or My Computer and double click *autorun.exe*.

Autorun	
Smar	TWOITCH SHARTLINE INTERNATIONAL PTY LTD
MONITORING & CON	MUNICATION SOFTWARE
<u>R</u> eadme	Views the prerequisites for installing this software.
OS Service <u>P</u> ack	Installs NT/Win2000 or XP Service pack.
Client & <u>S</u> erver	Installs BOTH the Client and the Server software.
<u>Client software</u>	Install the Client software only.
<u>W</u> eb Page	Get updated on the latest messaging solutions by visiting our website.
Cl <u>o</u> se	Closes this screen.

- Click the OS Service Pack button. The software will automatically detect what operating system you are running and if any updates are required.
- Follow the instructions on screen. You will be notified when the service pack has installed completely. Restart the PC to let the update changes take effect.
- Check the SmartLink website regularly for SmartWatch XP for the latest available updates: www.smartlink.com.au.

#### 2.2.4 Windows XP Service Pack 2 – Firewall Setup for SmartWatch XP

# ▲ WARNING: If the Windows XP operating system is running Service Pack 2 then follow the instructions below to setup the firewall options. If the firewall options are not set the SmartWatch XP clients will not be able to access the SmartWatch XP server.

Either go to **Control Panel | Security Centre | Windows Firewall | Exceptions**, or locate the network connection for your Local Area Network (LAN) by going through to **Control Panel | Network Connections** to find this.



Select properties for the LAN connection, then select the **Advanced** tab and press the **Settings** button.

General	Authentication Ac	lvanced		
Wind	ows Firewall			
Prote or pre the Ir	ct my computer and r venting access to th ternet	network by limiting is computer from	Settings.	i V
5				

#### Adding SmartWatch XP Server

In the Exceptions tab, click Add Program.

Windo	ws Firewa	ill				N
General	Exceptions	Advanced				
Window from out General	vs Firewall is t tside sources I tab and sele	urned off. Your co such as the Interr ct On.	mputerisa 1et. Werec	at risk of attac commend that	ks and intrusions tyou click the	
Program	ns and Servic	es:				
Name	e					
File	e and Printer (	Sharing				
Go	ogle Talk					
He	mote Assistar	nce				
Пис	mote Deskto	P -I.				
	me Framewo	к				
					N	
					N	
Add F	<sup>D</sup> rogram	Add Port	] [ 6	Edit	Delete	
Disp	lay a notificat	ion when Window	s Firewall I	blocks a prog	ram	
				10 E		
<u>What a</u>	<u>re the risks of</u>	allowing exception	<u>ns?</u>			

Browse for SmartWatch XP and click OK. This is normally located in

C:\Program Files\SmartLink\SmartWatch XP\Client\SmartWatchXP.exe



Select **OK** to save these changes.

SmartWatch XP Clients should now be able to access the SmartWatch XP Server.

General       Exceptions       Advanced         Windows Firewall is turned off. Your computer is at risk of attacks and in from outside sources such as the Internet. We recommend that you click General tab and select On.         Programs and Services:         Name         Image: Ima	trusions the
Windows Firewall is turned off. Your computer is at risk of attacks and in from outside sources such as the Internet. We recommend that you click General tab and select On.         Programs and Services:         Name         ☑ File and Printer Sharing         ☑ Google Talk         ☑ Remote Assistance	trusions < the
Name ✓ File and Printer Sharing ✓ Google Talk □ Remote Assistance	
<ul> <li>✓ File and Printer Sharing</li> <li>✓ Google Talk</li> <li>□ Remote Assistance</li> </ul>	
☑ Google Talk □ Remote Assistance	
Remote Assistance	
Remote Desktop	
SmartWatch XP	
Add Program Add Port Edit De	lete
Display a notification when Windows Firewall blocks a program     What are the risks of allowing exceptions?	

# 2.3 Multi Port Serial Cards

Most computers provide two serial ports, which are traditionally referred to as COM1 and COM2.

SmartWatch XP relies on serial connections for many of its advanced features. If you are going to be using more than the 1 or 2 serial ports provided with most PC's then you will need an 8-port serial card installed in the PC.

Each of the following requires a separate serial port:

- Security Device (dongle)
- Serial Interfaces



A SmartWatch XP system with a multi port serial card supplied by **SmartLink** will include the following components:

- An 8-port PCI multi-port serial card
- Octopus cable with 8 serial outlet ports

The installation of PCI cards varies according to the version of Windows you are running. Refer to the following installation instructions that are appropriate to your situation.

IMPORTANT: Technical support is only provided for multi-port serial cards supplied by SmartLink.

#### 2.3.1 PCI Serial Card Installation with Windows XP

Turn off the computer and insert the card in a spare PCI slot.

Ensure the SmartWatch XP Installation CD is in the CD ROM drive.

Start Windows and login as an administrator. The PCI card is automatically detected.

Windows will detect the new card and initialize the Found New Hardware Wizard.

Found New Hardware Wiz	ard Carl Carl Carl Carl Carl Carl Carl Carl
	Welcome to the Found New Hardware Wizard This wizard helps you install software for: Decision PCCOM PCI 8 Port
	If your hardware came with an installation CD or floppy disk, insert it now. What do you want the wizard to do? Install the software automatically [Recommended] Install from a list or specific location (Advanced) Click Next to continue.
	< <u>B</u> ack <u>N</u> ext > Cancel

Select Install the software automatically (Recommended) and Click [Next] to get the Wizard to search for new drivers.

The Wizard will then search for drivers for the PCCOM PCI 8 Port card.

Found New Hardware Wizard	
Please wait while the wizard searche	s
Decision PCCOM PCI 8 Port	
	8
	Kack Next > Cancel

The Wizard should find drivers SmartWatch XP Installation CD is in the CD ROM drive.

Decision PCCOM PCI 8 F	Port	
Description	Version	Location
Decision PCCOM PCI 8 Port	1.0.1.0	d:\drivers\serial\winxp\pcicard.inf
Decision PCCOM PCI 8 Port	1.0.1.0	d:\drivers\serial\win2000\pcicard.inf
This driver is not digitally <u>Tell me why driver signing is in</u>	v signed! nportant	

Select the drivers for the location d:\drivers\serial\winxp\pcicard.inf and Click [Next].

The Wizard will warn you that the drivers have not been verified by Microsoft.

Hardware Installation		
<u>.</u>	The software you are installing for this hardware: Decision PCCOM PCI 8 Port has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.	
	Continue Anyway STOP Installation	

Click [Continue Anyway] to proceed with the installation.

The Found New Hardware Wizard will then proceed to install the new drivers for the PCI card.

Found New Hardware Wizard		
Please wait while the wizard installs the software		
Decision PCCOM PCI 8 Port		
6		
Setting a system restore point and backing up old files in case your system needs to be restored in the future.		
< <u>B</u> ack Next > Cance		



Click **[Finish]** once the installation of the Decision PCCOM PCI 8 Port card is complete. Windows XP will then proceed to find the 8 new individual Decision PCCOM serial ports.

Found New Hardware Wizard		
	Welcome to the Found New Hardware Wizard	
	This wizard helps you install software for:	
	Decision PCCOM COM Port	
	If your hardware came with an installation CD or floppy disk, insert it now.	
	What do you want the wizard to do?	
	<ul> <li>Install the software automatically (Recommended)</li> </ul>	
	Install from a list or specific location (Advanced)	
	Click Next to continue.	
	< Back Next > Cancel	

Select *Install the software automatically (Recommended)* and Click **[Next]** to get the Wizard to search for new drivers.



The Found New Hardware Wizard will then proceed to install the new drivers for each of the 8 port cards.

➢ IMPORTANT: The individual port installation process will repeat a total of 8 times, each with it's own separate *Found New Hardware Wizard* window.

#### 2.3.2 PCI Serial Card Installation with Windows 2000

Turn off the computer and insert the card in a spare PCI slot.

Start Windows and login as an administrator. The PCI card is automatically detected.

Windows will detect the new card and initialize the Add New Hardware Wizard but will be unable to find the driver. Click **[Next]** to get the Add New Hardware Wizard to search for new drivers.

Select *Specify a location* then click [Browse] to manually specify the folder Drivers\Serial\Win2000 on the SmartWatch XP Installation CD, and then click [Next].

The installation procedure is similar to that of Windows XP. Simply follow the prompts to continue the driver installation.

#### 2.3.3 PCI Serial Card Installation with Windows NT

Make sure that your version of Windows NT has Service Pack 4 or higher installed. Refer to 'Appendix B: Service Packs' if you need to install a new Service Pack or if you are unsure what service pack you currently have installed.

Turn off the computer and insert the card in a spare PCI slot.

Start Windows and login as an administrator. Windows does not detect the card.

Run the PCCOM set up program from the **Drivers\Serial\NT** folder on the **SmartWatch XP Installation CD**. The set up program will initialize and display the *Welcome* screen shown below. Click **[Next]** to continue.



Click [Finish] to accept the driver.

Information	PCCOM Driver Package for Windows NT     This package includes device drivers for the following:         PCCOM ISA Cards         PCCOM PCI Cards     This setup application will automatically install     and start the device drivers needed, and will     launch the configuration utility located in
InstallSh	Please note that PCI cards will be autodetected when being installed into your computer. You have to configure ISA-based cards manually using the configuration utility applied.

Click [Next] to continue.

Make sure there is a tick in the Launch the PCCOM configuration utility and click [Finish]. If you do not run the PCCOM configuration utility now then you can do so later by running the Decision PCCOM Adapters item under the control panel.



The PCCOM configuration utility will automatically detect your plug and play PCI multi port serial card (see the list of installed devices in the screen below). Click **[OK]** to accept the settings. Done!

PCCOM Serial Card Setup	
Installed Devices: Global Settings PCI 8 Port RS-232/422/485(0) Bus 0 Slot 8	Device Details: PCCOM Device Driver Configuration V2.11 Control: Completely Remove Drivers! Configure: First COM Port to assign for PCI cards: COM3:
Add Remove	PCCOM Windows NT configuration applet.
<u>0</u> K <u>0</u>	Configure <u>D</u> OS Driver

# **3 SERVER INSTALLATION AND SETUP**

### 3.1 Installing the Server

Once you have installed all the hardware required for SmartWatch XP then you are ready to commence software installation.

Make sure that no other programs are running.

Place the **SmartWatch XP Installation CD** in the CD-ROM drive. The auto-run screen should startup automatically.

To begin installation of the server, click the [Client & Server] button.

NOTE: If the auto-run screen does not startup, browse the contents of the cd rom drive containing the SmartWatch XP Installation CD, using Windows Explorer or My Computer and double click *autorun.exe*.

Autorun	
Smar	Watch SHOTLINK INTERNATIONAL BY LTD
MONITORING & COM	NUNICATION SOFTWARE
Readme	Views the prerequisites for installing this software.
OS Service <u>P</u> ack	Installs NT/Win2000 or XP Service pack.
Client & <u>S</u> erver	Installs BOTH the Client and the Server software.
<u>Client software</u>	Install the Client software only.
Web Page	Get updated on the latest messaging solutions by visiting our website.
Cl <u>o</u> se	Closes this screen.

The installation process will then begin. The following screen is displayed after setup initializes.



Click **[Next]** to display the software license agreement. Read the license agreement and signal your agreement to these terms by clicking **[Yes]**.

NOTE: The terms of the SmartWatch XP license agreement are also stated at the end of this document.



The readme file is then displayed which contains important information relating to installing and using SmartWatch XP. Read the text on this screen and then click **[Next]** to continue with the installation.

InstallShield Wizard		×
Information Please read the following text.		
	Read Me	
	Release 2.6.5 01/12/2003 Installation Notes  Before installing, please ensure that your system is compliant with the following specifications: MINIMUM Server Specifications:	
	Pentium III 600 MHz 128 MB RAM	
InstallShield	< Back Next > Cancel	ס

The next screen asks for information such as a username and company name for the current machine. Enter this information and then click **[Next]**.

InstallShield Wizard		
Customer Information Please enter your information.		
	∐ser Name:	
	SmartLink International	
	Install this application for: <u>Anyone who uses this computer (all users)</u> Dnly for <u>m</u> e (John Coppola)	
InstallShield	< Back Next > Cancel	

The next screen asks for a license key. Enter the license key into the field on this screen or browse to the location of a license key file by clicking **[Browse]**. Once you have entered in the details, click **[Next]** to proceed. You can use SmartWatch XP in demonstration mode by leaving the license key field blank and clicking **[Next]**.

InstallShield Wizard	
Product Licensing Enter your product licen	nse number here.
	If You have a valid license file, click Browse to select the file. For Demonstration mode please leave this field blank.
	License Number- Browse
InstallShield	< Back Next > Cancel

The next screen asks where setup should install SmartWatch XP. Click browse to choose a different location if needed. It is recommended that you use the default location. Click **[Next]** once you are satisfied with the install location. Setup will then begin copying files.



After setup has finished copying files, you may or may not be asked to restart the computer. If so, select "Yes, I want to restart my computer now" and then click **[Finish]**. Once the computer has restarted (if need be), the installation will be complete.

You will now be able to logon to the server. A shortcut to the client is placed on the desktop and start-menu named *Client*. Double click this icon to start the client.

The default name that you should enter is **maint**. Leave the password field blank. You will also need to enter the IP address or DNS name of the server in the *Server* field. Click **[Log in]** to login to the server.

NOTE: If you are running a SmartWatch XP client on the server then you may specify the server as being either 'localhost' or enter the IP of your server.

XP	<u>N</u> ame	maint
<b>_</b>	<u>P</u> assword	<u> </u>
	<u>S</u> erver	localhost 💌
CILTWC		To log into the system, type your log in name followed by your password and then press <enter> or click on the "Log in" button. If a guest account is enabled for your system then you may press the "guest" button.</enter>

A successful log in will display the *Main Screen* for the client program as shown below. The communication ports and gateways for the server and the contact database may now be configured.

🕺 SmartWatch XP		
<u>File E</u> dit <u>V</u> iew Interfaces <u>H</u> elp	p	
Clients Alarms Reminder	Contacts Groups Schedules Settings	
<u>R</u> ecipients	Message to send	
Name		<
	Notes Common Time Date	Priority
	Sending Send Clear	
User name: Maint	Connected to: OPTIMUS Message length	n: O

#### 3.2 Running the Server

There are 3 components to SmartWatch XP:

- MSDE database server
- SmartWatch XP server
- SmartWatch XP client

#### **Taskbar Status Indicators**

The MSDE and SmartWatch XP servers will both run automatically when you start Windows. A *task bar icon* (in the bottom right hand corner of your screen) is available to indicate the status of the server as shown below. This icon is displayed by clicking the *Server Status* icon on the desktop or Start Menu.



If you are unable to run a SmartWatch XP client then it is likely to be because either the MSDE or the SmartWatch XP server is not operating correctly.

# 4 CLIENT INSTALLATION AND SETUP

If you are running SmartWatch XP on a network then you should install the client software on each machine from which you wish to send messages. There are two methods of doing so:

- Across the network (recommended)
- From the SmartWatch XP Installation CD
- ► IMPORTANT: The SmartWatch XP server and client applications communicate over a network using the TCP/IP protocol. Your network administrator will be able to tell you whether your network supports TCP/IP (you can investigate the configuration of your LAN by right clicking on the Network Neighborhood or Network Neighborhood icon on your desktop and selecting Properties). If you know that your network supports TCP/IP and you can see the server machine by browsing the network neighborhood on the client then you should be able to setup a SmartWatch XP server/client network.

#### 4.1 Installing the Client across the Network

Once you have installed the Server application it is best to install client applications directly across the network. You should contact your LAN system administrator to facilitate the network installation.

On the server machine, share the folder that contains the setup.exe file to allow read access to other machines on the network. This folder is installed to the C:\Program Files\SmartLink\SmartWatch XP\Client folder on the server by default.

From the client machines, browse the shared folder on the server machine using the Network Neighborhood icon on the desktop and then run **setup.exe**.

This method of client installation will automatically set up the client to communicate with the server so that it is ready to run SmartWatch XP.

If you have already set up the hardware and configured the ports, gateways and contact databases for SmartWatch XP then you should be able to send test messages from the client machines.

#### 4.2 Installing the Client from CD

It is possible to install client applications directly from the installation CD – though it is not advised. Installing the client across the network achieves the same results, without the need to manually configure the connection.

WARNING: If you choose to install the SmartWatch XP client software using this method then you must have sufficient knowledge of your network architecture to manually connect the client with the server. If you wish to proceed to install client applications directly from the installation CD, follow these steps:

• Place the **SmartWatch XP Installation CD** in the CD-ROM drive. The auto-run screen should be launched automatically, and the following screen displayed:

Autorun	
Smart	Watch HARTLINK INTERNATIONAL PTY LTD
MONITORING & COM	NUNICATION SOFTWARE
<u>R</u> eadme	Views the prerequisites for installing this software.
OS Service <u>P</u> ack	Installs NT/Win2000 or XP Service pack.
Client & <u>S</u> erver	Installs BOTH the Client and the Server software.
<u>Client software</u>	Install the Client software only.
Web Page	Get updated on the latest messaging solutions by visiting our website.
Cl <u>o</u> se	Closes this screen.

- NOTE: If the auto-run screen does not start, browse the contents of the CD ROM drive containing the SmartWatch XP Installation CD using Windows Explorer or My Computer and double click autorun.exe.
  - Click the [Client software] button to begin installation.
  - Click **[Next]** at the ensuing prompts to accept the default installation parameters.

• You will then be notified when setup is complete. The screen shown below will be displayed. Click [Finish] to complete installation.



A shortcut to the client is placed on the desktop and start-menu named *Client*. Double click this icon to start the client software. A login screen will be shown as below.

×	<u>N</u> ame	maint
2	<u>P</u> assword	I
SOFTWA	<u>S</u> erver	localhost 👱
NG & COMMUNICATION		To log into the system, type your log in name followed by your password and then press <enter> or click on the "Log in" button. If a guest account is enabled for your system then you may press the "guest" button.</enter>

You will need to enter the IP address or DNS name of the server in the *Server* field as well as the login details. Click **[Log in]** to login to the server.

NOTE: If you are running a SmartWatch XP client on the server then you may specify the server as being either 'localhost' or enter the IP of your server.

#### **Server Name**

If you install the SmartWatch XP client across the network using the **setup.exe** program, then the client login will have automatically detected the server name and port. When you attempt to login across the network you should not modify the data in the *Server* field of the login screen.

If the server name is wrong then you will receive the following error message:

SmartV	VatchXP 🔀
8	A connection to the server could not be established. This may be due to a number of reasons:
	<ol> <li>The specified server name is unknown.</li> <li>The server is not running.</li> <li>A network problem occurred.</li> </ol>
	Socket receive error (10022) 'An invalid argument was supplied.
	(OK]

#### Server TCP/IP Port

The SmartWatch XP server normally listens on port 5100 for connections from the client software. Most configurations of Windows systems leave port 5100 available, but in some situations this port is used by other applications.

If you are installing client software and are unable to login to the server then it may be possible that the port you are trying to access is not available for SmartWatch XP communications. If this is the case, an error message will be displayed suggesting you should check that the SmartWatch XP server is running, that your network is functioning and that you are able to browse the network neighbourhood. If the problem persists then you should attempt to establish a connection on another port.

Click the *Settings* button on the main screen, select the *Server Options* tab and enter an alternative TCP/IP connection port between 1024 and 65534.

This example shows port 5100 being used. After entering a new connection port you must click save, exit the client, restart the server and then login to the client with the new port settings.

🕅 Settings 🛛 🗙
Maint   Global   Text Messaging   Server   Database   Client   License
Server     June of the path     C:\BP2000.log     Log file path     C:\BP2000.log     Log Details     Image: Comparison of the path     Log file path     C:\BP2000.log     Log Details     Image: Comparison of the path     Log file path     C:\BP2000.log     Log Details     Image: Comparison of the path     Log file path     C:\BP2000.log     Log Details     Image: Comparison of the path     Log file path     C:\BP2000.log     Image: Comparison of the path     Log file path     C:\BP2000.log     Image: Comparison of the path     Log file size is not restricted   Image: Comparison of the path     Log file gestricted to   Image: Comparison of the path     Log file size is not restricted   Image: Comparison of the path     Log file gestricted to   Image: Comparison of the path     Log file gestricted to   Image: Comparison of the path        Log file gestricted to   Image: Comparison of the path
Save Close

You will be able to login using the same name and password as previously, but you MUST add the server port number to the server name in the <u>Server</u> field on the login screen. The example above demonstrates how **devserver:5100** specifies a server called *devserver* listening on port 5100 by separating the server name and port by a colon.

<u>N</u> ame	john
Password	1
<u>S</u> erver	devserver:5100
	To log into the system, type your log in name followed by your password and then press <enter> or click on the "Log in" button. If a guest account is enabled for your system then you may press the "guest" button.</enter>

You will have to make the same change on any clients that you have already installed. Every client remembers the server name and port to which it last connected so you only have to make the change once. Further, any future clients installed using the **setup.exe** program will automatically be configured with the correct server name and port settings.



NOTE: You will not have to change the TCP/IP connection port on most SmartWatch XP systems.
# **5 SMARTWATCH XP CONFIGURATION**

Configuration for some of the most common interfaces is outlined in the sections below.

For more detailed configuration of SmartWatch XP, see the *SmartWatch XP Online Help* by pressing **[F1]** at any time in the software.

# 5.1 Transmitters

SmartWatch XP provides the ability to send messages to local area pagers using a POCSAG transmitter. Messages are sent from a serial port, through a POCSAG encoder and then onto the transmitter. Multiple transmitters may be used if care is taken to avoid overlap of concurrent signals.

Most transmitters create a significant power drain on the serial data connection to the PC. When possible you should use shielded cable such as CAT5, especially if the transmitter is not situated near the PC. Do not connect other devices (except **SmartLink** approved line drivers to boost the signal) between the PC and the transmitter. Devices such as line activity monitors with LED displays or lights should NOT be used because the power needed to activate the LED display will draw too much current and weaken the signal to the transmitter.

Further, you should ensure that the transmitter is not located within 3 meters of any electronics equipment to prevent interference.

If you are not using a POCSAG transmitter supported by **SmartLink** then you will have to obtain details of the pin outs for the transmitter and match them to the serial port on SmartWatch XP. The pins for some common transmitters are outlined in the table below.

Transmitter Pins	SmartWatch XP DB25	SmartWatch XP DB9	AIMPS DB9	PT500 DB9	PT400 DB15	Motorola Syntax DB15	Tait 2010 DB9	Maxon DB9
PTT	20	4	3	3	5	6	3	3
POCSAG Data	4	7	5	5	13	1	2	9
Transmit Inhibit	5	8		9	-	13	-	6
Ground	7	5	7	6	1	9	5	4

# 5.1.1 Components

A SmartWatch XP system with a transmitter supplied by **SmartLink** will include the following components:

- A POCSAG encoder/security device (dongle)
- A transmitter connector set
- Transmitter
- Power supply

In addition to these items you will also require:

- One spare serial port for each transmitter on the SmartWatch XP server PC.
- RJ45 cable of sufficient length to connect the server PC to the transmitter.

You may also require the following:

- Line drivers if the distance between the transmitter and SmartWatch XP server PC is too long.
- A multi-port serial card if the SmartWatch XP server PC has no free serial ports left.



## 5.1.2 Hardware Installation

Every SmartWatch XP that is licensed to more than one user includes at least one Dongle that serves as a security device. The dongle acts as a security device to prevent unauthorized distribution of multi-user SmartWatch XP. You need to successfully install the security device in order to configure Gateways and send messages.



#### **Dongle Installation Steps**

- Attach the female end of the device to a spare serial port on the server PC (if you are currently running SmartWatch XP then you must restart the program to detect the security device).
- You may attach the device to a spare DB9 serial port on your PC if you have a DB9F to DB25M converter.

#### MPORTANT: The female end (with holes) connects to the PC end.

• Take note of the COM port number the dongle is connected to as this information will be required during software setup. This information is usually written next to the actual com port on the rear panel of the PC.

▲ WARNING: The security device is a *serial* Dongle. Do not put the Dongle on the printer port because this will damage the Dongle.

#### **Transmitter Hardware Installation**

To install a transmitter, follow these steps:

- Find a spare POCSAG encoder/security device on the server PC (installed previously).
- The transmitter connector set consists of two connectors; one connects to the POCSAG encoder, the other to the data port on the transmitter.
- Run RJ45 cable between the two connector set components.
- Connect the antenna to the BNC/PL259 port on the transmitter.
- Plug in the power supply to the transmitter.

#### WARNING: Do <u>NOT</u> locate the transmitter within 3 meters of any electronics equipment (interference may occur if the transmitter is too close to the electronics). This includes other SmartLink equipment.

## 5.1.3 Setting up the Port

To configure a port for the transmitter to use select Interfaces > Ports from the Main Screen.

5/1 Ports			
Maxon	Name Protocol Type Serial port Flow control	Maxon POCSAG Direct RS-232 COM1 (In use) RTS/CTS	<ul> <li>■</li> <li>■</li></ul>
	New	Save	Close

Click New to create a new Port.

In the Name field type a name to describe the transmitter being connected.

In the Protocol field select Pocsag from the drop down list.

In the Type field choose Direct RS-232.

In the Serial Port field select the COM port that the transmitter is connected to.

#### NOTE: This COM port number is usually written next to the COM port connector on the back of the PC or on the multi port serial card cables.

In the Flow Control field choose RTS/CTS.

Click Save > Close when finished to return to the Main Screen.

# 5.1.4 Setting up the Gateway

To configure a gateway for the transmitter select **Interfaces > Pocsag** from the *Main Screen*.

Maxon		
	Pocsag speed	512 💌 baud
	Po <u>w</u> er up time	250 milliseconds
	Power <u>d</u> own time	250 milliseconds
	Sync time	10 batches
	Msg per sync	0 (0 for max)
	Presets	Contains security device
		✓ P <u>I</u> T invert
		Data invert
		I <u>B</u> usy invert
		Transmitter test
	Common Pocsag s	ettings
	Ma <u>x</u> , msg. length	192 characters
	T <u>h</u> reshold	100 messages
		🔲 Split long messages
		Ports enabled

Click the name of the *Port* on the left side of the window. The details for the transmitter will then show up on the right side.

The *Pocsag* speed drop down menu refers to the baud rate of the transmissions. This speed must match that of any pagers being used at the site.

The *Power up time* field refers to the time in milliseconds that the Push To Talk (PTT) signal will be asserted before data modulation begins. This parameter can normally be left as default, but may need to be set to meet the timing requirements of your POCSAG transmitter.

The *Power down time* refers to the time in milliseconds that the PTT signal remains asserted after the completion of data modulation. It should normally be left as default.

The *Sync Time* field refers to the number of POCSAG batches that may be sent without retransmitting preamble for resynchronization of pagers. It should be left at the default setting unless otherwise instructed.

The *Messages per sync* field is the maximum number of messages that are sent without retransmitting preamble for resynchronization of pagers. If you are having problems with message corruption then trying low values e.g. 1, 2 or 3 may fix some issues.

The *Contains security device* tick-box should be checked for exactly one POCSAG Gateway on the system; the Gateway containing the dongle that will act as the security device. If you attempt to enable this setting for more than one POCSAG Gateway, an error will be presented.

The *Exclusive* tick-box will cause this POCSAG Gateway to transmit only when no other POCSAG Gateways are transmitting. Use this setting for POCSAG transmitters on the same frequency with overlapping coverage areas to avoid RF interference problems. If this option is not set, the Gateway will transmit simultaneously with all other Gateways that do not have the *Exclusive* option enabled.

The next set of tick-boxes, refer to advanced transmitter properties. You can click the *Presets* button to choose from a selection of some common transmitters.

Field	
PTT Invert	Will change the polarity of the Push To Talk output signal to suit certain transmitters when checked.
Data Invert	Will change the polarity of the Data output signal to suit certain transmitters when checked.
lgnore Busy	Will disregard any channel busy signal from the transmitter. If the POCSAG transmitter supports a Channel Busy signal, this option should not be set, in order to ensure that SmartWatch XP it only transmits when there is no other traffic on the radio channel.
Busy Invert	Will change the way the polarity of the Busy input signal is interpreted to suit certain transmitters when checked.

The *Transmitter test* tick-box will cause the output data signal to oscillate at the POCSAG speed. This setting is used for testing only, and should not be used in normal operation as it causes the transmitter to heat up when used for prolonged periods of time.

The *Max Msg Length* text box refers to the longest message that can be sent through POCSAG Gateways. Messages longer than this will either be truncated or split, depending on the setting. This setting affects all POCSAG Gateways.

The *Threshold* field sets the size of the outgoing message queue threshold.

The *Split long messages* tick-box will cause messages longer than the maximum message length setting to be sent as separate sequential messages for all POCSAG Gateways.

The *Ports enabled* will allow POCSAG transmissions through all POCSAG Gateways when checked. It should be enabled for normal operation.

# 5.1.5 Setting up a Contact

To setup a contact that will receive POCSAG messages from a transmitter follow the directions below.

Right mouse click in the *Recipients* window within the SmartWatch XP *Main Screen* and select *New Contact*.

The screen shown below will be displayed.

🗑 John	News		
	Name	John	
	Address	0000008	
	Send <u>v</u> ia	Pocsag Gateway	-
	<u>R</u> eceiver type	Alpha Page 💌	
	<u>L</u> ocal ID	1	
	D <u>e</u> partment	<none></none>	•
	Time/date stamp	<none></none>	_
	T <u>o</u> ne override	<none></none>	
	Notes		~
			~
		Eriority contact	
		Fidden in the paging screens	
		Prohibit paging from PBX	

In the Name field enter a name to describe the contact.

In the Address field enter the cap code that the message will be sent out on, to the receiving device.

From the Send via drop down menu choose Pocsag Gateway.

In the *Receiver type* drop down menu choose the type of pager the messages will be sent to. These are outlines below.

Option	
Tone only	No text may be sent to this contact.
Numeric page	Only digits and some limited punctuation characters may be sent.
Alpha page	Full text messaging is supported by this contact.

Click Save > Close when ready to return to the Main Screen.

# 5.1.6 Testing and Troubleshooting

To attempt to send a message to the recipient, from the *Main Screen* click the contact in the *Recipient* window, type a message in the *Message to send* window and click the *Send* button.

Should you experience difficulties with your transmitter, the following section identifies some of the issues and outlines some tips for resolving these issues.

Thick steel and concrete, large magnetic and electric fields, and terrain and weather conditions will affect transmitter efficiency, so you will need to test the coverage of your local area transmitter at some stage of installation.

When you perform the test you should pay particular attention to the quality of the messages that you receive on the test pager. If you receive corrupted messages then it is possible that you will have problems sending messages to that region.

If you find that you are receiving corrupted messages then you should consider the following methods for improving transmission quality:

- Move the antenna to a position that gives it a clear line of site to all areas you wish to cover.
- Reduce the length of the cable connecting the aerial to transmitter.
- Use the appropriate coaxial cable to connect the aerial to transmitter which will suit the length of the cable run. For example use RG213 for runs up to 20 meters and use LDF440 for runs over 20 meters.
- Choose another type of antenna for the transmitter.
- Position the antenna in a higher location.

If you find that you cannot send a message to an on site pager at all then you should check the following:

- Check that you have configured the transmitter correctly in SmartWatch XP. E.g.: PT500 transmitter use an inverted data signal, most other transmitter use a normal signal. Most POCSAG transmitters communicate at 512bps.
- Check that you are using the correct transmitter connector set, and that the connections are tight.
- If your transmitter has a Busy light then check that it is not on, this may indicate that another transmitter in the area is flooding the frequency on which you are trying to transmit.
- Check that you have the POCSAG transmitter port with the pager in the contacts database in SmartWatch XP.

#### **Coverage of Areas with Poor Reception**

Dependant on the size and situation of the problem areas there are a number of practical solutions.

- Have the cable between transmitter and aerial as short as possible.
- Raising the Aerial can increase the range of the transmitter doubling the height increases the free field range by a factor of 1: 41 (square root).

#### The Installation of Multiple Transmitters and Aerials

For buildings in an area with good field strength outside but weak reception within, possibly caused by shielding due to reinforcement in suspended slabs, metal plating and other building materials:

- The supply lead to the aerial can serve as a radiator, effectively providing a 5 meter (yard) range form the cable.
- The supply from open (leaky) coaxial cable as a line radiator lead to a 50 Ω terminator (the cable is in effect the aerial).

#### **VHF/UHF Transmitter and Aerial Installation Methods**

**Increasing the Transmitter Power:** There are a number of objections to this method, such as local restrictions on aerial power. In addition, doubling the transmitter power to the aerial only gives an increase in range of a factor of 1:19 (fourth root).

Increasing the Aerial Height or Using an Aerial with a Gain in Certain Directions: These methods may also be limited by local regulations.

#### **Raising the Aerial**

Ensure allowance is made for a properly tuned antenna, base, building entry sealing boot, correct coaxial cable and connectors.

# 5.2 SmartLink Receivers

## 5.2.1 Setting up the Port

The SmartLink Receiver Port can handle Ademco "High Speed" and "Contact ID" formats for a variety of SmartLink products and systems including SmartLink Medi-Call Dialler Units.

This SmartLink Receiver Port allows receipt of information from these diallers and other systems where on it is automatically linked to Clients and passed to the Pending Calls screen.

🕺 Ports			
SCU Receiver	Name Protocol Type Serial port Flow control	SCU Receiver SmartLink Receiver Direct RS-232 COM1 (In use) <none></none>	▼ ▼ Refresh
	New	Delete Save	Close

In the Name field enter a name to describe the SmartLink Receiver port.

In the *Protocol* field select *SmartLink Receiver*. (You will see the configuration fields appear to reflect the example above).

If you are intending to receive SmartLink Medi-Call dialer alarms via a MCU modem select *Rockwell Modem* or if you intend to use a SCU Receiver (Linecard) then choose *Direct RS-232*. For other SmartLink system such as SmartWire or SmartLine choose Direct RS-232.

➢ IMPORTANT: Choosing Direct RS-232 as the Type ensures that the port will be polled to monitor for activity. In the event a SmartLink Receiver is disconnected or fails, a message will automatically be generated to the Maintenance Recipient indicating the fault. The (MCU) Rockwell Modem does not use Polling and therefore can not guarantee that alarms are being received.

In the Serial Port field select the COM port that the transmitter is connected to.

Leave the Flow Control field to None

Click Save > Close when finished to return to the Main Screen.

NOTE: When the SmartLink Receiver port is configured, the default gateway configuration is automatically enabled.

# 5.2.2 Port Configuration

Further Port configuration such as baud rate, data bits, parity and stop bits may be adjusted via the SmartLink Receiver Serial Ports screen. This screen is accessed via the menu item Interfaces > SmartLink Receiver > Ports. Settings may vary depending on which SmartLink System you plan to connect to SmartWatch XP as defined below:

## **SCU Receiver**

For connecting a single SCU Receiver directly using RS-232 serial communications:

Parity Stop	None
	Parity Stop

#### **SmartLine Wireless**

For connecting a single SmartLine Master Interface directly using RS-232 serial communications:

🕺 SmartLink Receiver Serial	Ports	
SCU Receiver     SmartLine Wireless     SmartWire Nurse Call	Baud Data Parity Stop	9600 V 8 V None V 1 V
	[	Save Close

#### SmartWire Hard-Wired Nurse Call

For connecting a single SmartLine Wireless Interface directly using RS-232 serial communications:

SCU Receiver SmartLine Wireless SmartWire Nurse Call	Baud 9600 _
	Stop 1

# 5.2.3 Testing and Troubleshooting

## SmartLink Receiver Polling

When a SmartLink Receiver port is set to Direct RS-232 and is communicating correctly, it will respond to polling from SmartWatch XP with an ACK (acknowledgement). This can be seen via the *Port Communications Monitor* screen found under **Interfaces > Port Communications**.

In the example below a SmartLine Wireless system is responding to all polls or ENQ (enquiries) specific to it's address.

9 Port Communications		
SCU Receiver SmartLine Wireless SmartWire Nurse Call	Display Type Non printing characters display Data transmitted (red), received ( ACK% ENQ ! ENQ ACK . ENQ !	Ascii Viewer
	ACK * ENQ ACK * ENQ ACK * ENQ A ACK * ENQ ACK \$ ENQ ACK * ENQ A ACK * ENQ ACK \$ ENQ * ENQ A ENQ ACK " ENQ ! ENQ ACK * ENQ * ENQ ACK # ENQ - ENQ * ENQ A ENQ ACK & ENQ ! ENQ ACK * E ENQ ACK * ENQ / ENQ * E ENQ ACK * ENQ / ENQ * E ACK + ENO ! ENO ACK * ENQ * E	CK ! ENQ ACK ! ENQ ACK ! ENQ ENQ ! ENQ ACK ! ENQ ACK ! ENQ ENQ ACK ! ENQ ACK . ENQ ! ENQ ACK ! ENQ ACK ! ENQ ACK ! ENQ ACK ! CK ! ENQ ACK ) ENQ ! ENQ ACK ! NQ ACK . ENQ · ENQ ! ENQ ACK ! CK ! ENQ ACK " ENQ ! ENQ ACK ! CK ! ENQ ACK ! ENQ ACK ! ENQ CK % ENO ! ENO ACK ! ENO ACK #
	ENQ (ENQ ! ENQ ACK ! ENQ A ACK ! ENQ ACK ! ENQ ACK ! E ENQ ACK " ENQ ! ENQ ACK \$ E	CR ! ENQ ACR, ENQ · ENQ ! ENQ NQ ACK & ENQ ! ENQ ACK ) ENQ ! NQ Clear Close

► IMPORTANT: The port communications monitor in SmartWatch XP provides a method of viewing serial communications for all port interfaces in real time. More than one window for different ports can be open at one time making this feature particularly useful for diagnosing faults with communications, as well as assisting in configuration of the protocol interfaces and port gateways.

#### Ademco Alarm Strings

When an alarm is received at the SmartLink Receiver port you should see a **<STX>** start character followed by the **13 digit Ademco String** and ending with a **<ETX>** end character.

The 13 digits that make up the Alarm String consist of:

- 4 digits for the Client Code
- 8 digits Zone/Channel alarm data
- 1 digit for Alarm Type Identifier
- 1 digit for the Checksum
- NOTE: Consult the Ademco Protocol for more information on understanding the workings of Ademco codes.

# 5.2.4 SmartLink Call Types

Call Types are used to organise Contact ID alarm types and define how SmartLink Alarms/Calls are displayed on the SmartLink Alarm Calls screen.

To configure Call Types, select **Edit > SmartLink Call Types** from the main menu. The following window will be displayed:

M SmartLink Call Types			
<ul> <li>General</li> <li>Alarm</li> <li>Supervision</li> <li>Trouble</li> <li>Power</li> <li>Receiver Fail</li> <li>Nurse Presence</li> <li>Call</li> <li>Wet Area</li> <li>Staff Assist</li> <li>Fire</li> <li>Emergency</li> </ul>	Name Colour Message tone Priority Alarm Sound File	Emergency A 1 High_Call.wav Send resets Maintenance	Ţ
	New Del	ete Save .	Close

NOTE: Default Call Types are already specified during installation according to the most common application of SmartLink products.

## Adding Call Types

To add a new call type, simply click the **[New]** button.

Enter a Name to describe the call type.

Then choose the colour that this call type will be displayed with by clicking on the Colour box.

*Choose the Colour* to be displayed on the SmartLink Alarm screen when an alarm of this type is active. If you wish to choose a colour that is not shown, click the Define Custom Colours button to extend the window as shown:

Color	? 🛛
Basic colors:	
Custom colors:	
	Hue: 160 Red: 0
	Sat: 0 Green: 0
Define Custom Colors >>	Color Solid Lum: 0 Blue: 0
OK Cancel	Add to Custom Colors

This extended window allows you to choose the colour graphically, or enter the RGB or HSL values directly. When the desired colour has been selected, click the Add to Custom Colours button, select the new custom colour, and click the OK button. Clicking on Save will commit the new call type to the database.

Select a *Message tone* if you wish to override pager tones for that particular call type.

Enter a level of *Priority* from 1 (highest) to 99 (lowest). The highest priority call type will have it's Alarm Sound File played in a loop when the SmartLink Alarm Calls window is active.

Choose an *Alarm Sound File* from the default install set that will be used as an audible indicator on the SmartLink Alarm Calls window when the active call type is of the highest priority. Alternatively you can select your own .wav file by Select a tone from the list or alternatively add your own .wav file to the ...\Program Files\SmartLink\SmartWatch XP\Client directory on the Client computer and select it from the list.

If you don't want alarm restorals, cancellations and reset messages sent for a particular call types then un-check the *Send Resets* check box.

Check the *Maintenance* check box to define the Call Type as a system alarm that will be sent to the Maintenance recipient defined under the *Edit* > *SmartLink Clients* window.

## **Editing Call Types**

To edit an existing call type, select the Call Type and modify the options you want changed.

Clicking Save will commit these changes. If the call types screen is closed before a changed record has been saved, the following warning will appear, giving you the choice to save the changes, discard the changes, or return to call type editing:



It is not possible to have a blank call type. If you try to save a nameless call type, the following message will appear:

SmartW	/atchXP 🔀
⚠	You have not specified a name for this Call Type. Please enter a value for the name.
	ОК

# 5.2.5 Contact ID

The Contact ID screen is used to map textual descriptions to Event Codes. When a system event occurs the event code is used to lookup the alarm meaning and alarm event text, which can then be used for sending messages or displaying the alarm details. This screen may be accessed using the Interfaces > SmartLink Receiver > Contact ID menu option.

🕺 SmartLin	k Receiver - A	larm Contact ID					
SA SmartLin Event Code ■ 100 ■ 101 ■ 101 ■ 101 ■ 102 ■ 110 ■ 111 ■ 112 ■ 113 ■ 114 ■ 115 ■ 116 ■ 117 ■ 118 ■ 120 ■ 121 ■ 122 ■ 123	k Receiver - A Alarm Meaning EMERGENCY EMERGENCY FIRE FIRE FIRE FIRE FIRE FIRE FIRE FIRE	Larm Contact ID Alarm Event	Alarm Call Type Emergency Emergency Emergency Fire Fire Fire Fire Fire Fire Fire Fire		Event Code Alarm Meaning Alarm Event Call Type	100 EMERGENCY # Emergency	
≝ 130 ≝ 131 ≝ 132	CALL CALL CALL	# # #	Call Call Call	<b>×</b>	New	Delete S.	ave Close

NOTE: The # character indicates that when an alarm is activated, the alarm information reported will also include the zone number. For example the settings for Event Code 100 above will generate the following text "EMERGENCY #2", which indicates that the alarm originated from Zone 2.

#### **Adding Alarm Contact IDs**

To add a new Alarm Contact ID, simply click **[New]** and enter the required parameters.

Enter a new Event Code to be used as a unique number used to identify the event.

Enter an *Alarm Meaning* and an *Alarm Meaning*. These will be used in combination with the Alarm Event text to create an alarm string.

Clicking [Save] will commit the details to the database.

#### **Editing Alarm Contact IDs**

To edit an existing Alarm Contact ID, select the Event Code from the panel on the left, change the required parameters on the right, and click **[Save]** to commit the changes to the database.

#### **Deleting Alarm Contact IDs**

To delete an existing Alarm Contact ID, select the gateway from the panel on the left, and click Delete to remove it. Alternatively, you can select it from the list and press the **Delete** button on the keyboard. It will ask for confirmation before removing the gateway:

SmartW	atchXP 🛛 🕅
?	Are you sure that you want to delete the selected record(s)?
	Yes No

## 5.2.6 SmartLink Clients

*Clients* in SmartWatch XP are records describing customer or sites for whom SmartLink devices such as Medi-Call Dialler Units, SmartWire and SmartLine Call Points etc. are installed and registered with SmartWatch XP. The alarm information will come in through the ports configured as SmartLink Receivers.

A single screen is provided to work with Chents	A single	screen is	provided	to work	with	Clients
---	----------	-----------	----------	---------	------	---------

5∳L	SmartLink Clients						
	Name Code	Name Code Phone Address	Mrs Brown		~		
		Recipient Notes	Roster	n every days	Maintenance	× <use-recipient></use-recipient>	•
		Zones 1 5 Contacts	Medical Pendant Patient Name	2 Medical Pendant 6 Wet Area Association	3 Smoke Detector 7 Staff Assist Phone 1	4 Dementia 8 Duress Pendant Phone 2	Add
					New Dele	te Save	Edit Remove

#### Adding SmartLink Clients

► IMPORTANT: The Name and Code fields are the minimum required to add a SmartLink Client. Each Client must have a unique code between 0001 to 9999. Some Codes are fixed in to various other SmartLink products and Systems. If you are unsure which codes are available, simply increment starting from 0001 and consult your hardware manuals for further details.

To add a new SmartLink Client, simply click [New].

Enter a *Name* to appear on the main Clients list and on the client alarms screen.

Enter a Client *Code* as the unique four digit identifier for the selected client.

Enter the *Phone* number for the location if applicable. Leave this field blank for systems that do not require a *Phone* number.

Enter the *Address* for the location if applicable. Leave this field blank for systems that do not require an *Address*.

Choose a Recipient to which messages regarding call activations and cancels will be sent.

Choose a *Maintenance* recipient to which system and maintenance messages (see SmartLink Call types) are sent.

Check the *Expect Check-in* box and enter a period in days if the client equipment is required to call in within the specified period (primarily for Medi-Call dialler units).

Use Notes to annotate pertinent facts regarding this Client.

Enter a description for each of the *Zone* fields. Zone (or Channel) names should match the actual SmartLink Devices. For example, Medi-Call dialers can handle up to 8 separate wireless devices which can be programmed to report on each of the available zones.

NOTE: The Medi-Call Unit's default reporting zone for the unit button (red) is Channel 6. Consult the Medi-Call Installation Manual as to how this can be modified for particular applications.

Contact details can be added under *Contacts*, including Name, Relationship and two contact Phone numbers in the event of an emergency.

#### Editing SmartLink Clients

To edit an existing SmartLink Client, select the Name/Code from the panel on the left, change the required parameters on the right, and click **[Save]** to commit the changes to the database.

#### **Deleting SmartLink Clients**

To delete an existing SmartLink Client, select the gateway from the panel on the left, and click Delete to remove it. Alternatively, you can select it from the list and press the **Delete** button on the keyboard. It will ask for confirmation before removing the gateway:



# 5.2.7 Client Call Manager

The Client Call Manager window allows the modification of behaviour specific to SmartLink alarm call messaging. The Client call manager is part of the server that is responsible for keeping track of external clients and for generating and processing alarms. The client call manager settings may be modified by selecting the **Interfaces > Client Call Manager** menu option.

Ensure clients have checked in Message Settings Excluded Message Items	each day at: 11:05
Code Notes Contacts	<ul> <li>→ Name</li> <li>Phone</li> <li>Address</li> <li>Alarm Meaning</li> <li>Alarm Event</li> <li>Zone Description</li> </ul>
	Apply Close

Enter a time for the *Ensure clients have checked in each day at* field. This refers to the time in hours and minutes in which the server will examine client check-in times. If clients have not checked in as expected then an alarm will be raised. When you change the value for the time the client check-ins will only be checked when that time is reached. In the above example, the system will check at 11:05 in the morning each day that clients have checked in within the time specified in the Clients screen.

# NOTE: When the server is started all clients will be checked according to the expected check-in time as specified in the Clients screen.

Select which items of the outgoing SmartLink alarm message that you wish to exclude or include under the *Message Settings*. In the above example, any client alarms that are generated will be composed of Name, Phone, Address, Alarm Meaning, Alarm Event and Zone Description.

The format of the actual message sent will be dependent on the content of the selected message items defined under *Edit* > *SmartLink Clients*.

The order of the message content can also be modified by selecting the item in the list and using the arrows to the right of the window to move the item up or down in the list order. Items at the top will be at the start of the message.

IMPORTANT: The Alarm Meaning and Alarm Event can only be modified globally for a under Interfaces > SmartLink Ports > Contact ID. All other message/alarm items can be modified on an individual basis using Edit > SmartLink Clients.

# 5.3 Viewing SmartLink Alarms

# 5.3.1 SmartLink Alarm Calls

Active *SmartLink Alarm Calls* can be viewed by selecting **View > SmartLink Alarm Calls** or by pressing the Alarms button on the Main Messaging screen. The SmartLink Alarms Calls window also allows the processing of active Alarms that have entered via the SmartLink Receiver ports, provided the user has processing privileges.

5	🕯 Sr	martLink Alarm (	Calls				
	<ul> <li>▼</li> <li>1</li> <li>30</li> <li>90</li> </ul>	Date 11 February 2004 11 February 2004 11 February 2004	Time 14:52:33 14:52:24 14:54:31	Client Code 0002 0001 0003	Client Name Bed 4 Room 11 Mrs Brown Bed 13 Room 8	Alarm Event EMERGENCY #1 Medical Pendant CALL #1 Medical Pendant Nurse Present	Recipient Genie Roster
and the second se	9	Staffed Awa	w	Mute	<u>S</u> ettings		<u>0</u> K

The list of *SmartLink Alarm Calls* may be ordered on any field displayed in ascending or descending order by clicking on the name of the field along the top row of the window. By default, alarms are ordered from newest to oldest. The Recipient column shows the recipient that received notification of the alarm condition.

The window size, location, column order etc. will be remembered such that the layout can be customised to suit your particular application.

The Staffed options define that an operator is present at the computer and the *SmartLink Alarm Calls* window will automatically pop-up when a new alarm is activated. The Away option prevents this behaviour by keeping the *SmartLink Alarm Calls* window in it's current state.

The Mute button will override any audible alarm sounds applicable to an active alarm with the highest priority. To define your own audible alarm sounds see *SmartLink Call Types*.

## **Processing Alarms**

To manually process a single alarm at the computer, select the alarm in the *SmartLink Alarm Calls* window then click **[Process]**.

The following window will be displayed allowing the operator to enter additional alarm notes:

Cancel

Press [OK] to confirm or Cancel to leave the alarm active in the SmartLink Alarm Calls window.

## **Modifying Alarm Display Settings**

Settings for the SmartLink Alarm Calls Screen can be modified by Clicking Settings.

Settings	
Display alarms	
3. Assigned to anyone	
Text Size	ormal
ОК	Cancel

Choose which alarms will be visible, either:

- 1. Assigned to me.
- 2. Assigned to me and any unassigned.
- 3. Assigned to anyone (default).

NOTE: Options 1 and 2 are typically suitable for Call Centre applications and option 3 will ensure ALL active alarms are displayed making it most suitable for Nurse Call applications.

Select the Text Size. Normal is for displaying larger amounts of information where as Large is used to increase visibility in Nurse Call applications.

S	🕯 Sn	nartLink Alarm C	alls	
	▼	Time 16:10:09	Client Name Bed 4 Room 11	Alarm Event EMERGENCY #1 Medical Pendant
]	SI	affed Away	y Mute	Settings Test Alarm Process OK

IMPORTANT: When using the Large Text Size it is recommended that the SmartLink Alarm Calls window is adjusted to include only a few columns of fixed width to ensure only the relevant information is included whilst allowing it to be easily identified.

# 5.3.2 Client Call Details

The client call details can be viewed by double clicking on an active alarm in the *SmartLink Alarm Calls* window. Below you can see the summary information regarding the example alarm for Mrs Brown:

(03) 9596 0770		
4/5 Nepean Hwy Brighton	<u>~</u>	
Head Office		4
Roster	No Check in	~
John Borwn Son	(03) 9596 8195	<u>~</u>
CALL #1 Medical Pendant		×
	Head Office Roster John Borwn Son CALL #1 Medical Pendant	Head Office Roster No Check in John Borwn Son (03) 9596 8195 CALL #1 Medical Pendant

Normally an alarm should be cancelled at its physical origin however if necessary the alarm can alternatively be processed with the option to leave recorded *Alarm notes*.

## 5.3.3 Test Alarms

The Test Alarm screen allows you to generate *Contact ID* or *High Speed* format alarms. You can change between *Contact ID* or Ademco *High Speed* by selecting the *Method* drop down list.

Test Alarm		×
Client Code	0001	
Method	High-Speed 💌	
Alarm Event	7 - Zone Alarm	
🚽 Zone Alarm	8	-11
1	1 - New Alarm 📃	
2	<none></none>	
3	<none></none>	
4	<none></none>	
5	<none></none>	
6	<none></none>	
7	<none></none>	
8	<none></none>	
	Configure Send Close	

Enter a Client Code:

Select the Method as either Ademco High Speed or Contact ID.

Select which Zone Alarms you wish to generate alarms for.

NOTE: Generally a 1 - New Alarm will activate most Alarm Events and a 3 - Zone Alarm restores Alarm Events. For further details on the High Speed method consult the Ademco Protocol for details on possible combinations of Alarm Event and Zone Alarm types.

# 5.3.4 Configure Test Alarms

The *Configure Test Alarms* window can be accessed by clicking **[Configure]** on the Test Alarm window and allows you to customise the look of the Test Alarms.

Configure Test Alarms			
High Speed - Event Meanings 1 - Duress/Extra 2 - Opening Report 3 - Zone Excludes 4 - Closing Report 5 - Zone Trouble 6 - System Alarms 7 - Zone Alarm 9 - Test Report	7 - Zone Alarm	Alarm Meanings 2 · Opening Report 3 · Restore 4 · Closing Report 5 · Normal 6 · Previously Reported 7 · Tamper 8 · Low Battery	1 - New Alarm
		I	Save Close

In order to modify an item, first select the item that you want to change, type in the associated edit box and then Click **[save]**.

# 5.4 The PBX Interface

SmartWatch XP uses modems for PBX messaging.



## 5.4.1 Components

A SmartWatch XP system with the PBX interface supplied by **SmartLink** will include the following components:

- Modem (one per PBX phone line required).
- A serial modem cable to connect the modem to a PC (one per modem).
- 2-wire analogue RJ11 telephone cable (one per modem).
- A suitable power supply (one per modem).

In addition to these items you will also require:

- One spare serial port on the SmartWatch XP server PC per PBX modem.
- One free telephone sockets (one per modem).

## MPORTANT: Two wire analogue extensions are required - digital lines will not work.

## 5.4.2 Hardware Installation

To install a modem for SmartWatch XP, follow these steps:

With the PC turned off, use the modem cable to connect the modem to a spare serial port on the server PC.

Use the RJ11 cable to connect the line socket on the modem to the telephone socket.

▲ WARNING: SmartWatch XP will not be able to communicate with the modem if you mistakenly connect the RJ11 cable into the "phone" socket of the modem instead of the "line" socket.

Plug in the power supply and turn the power on. Boot up the PC into Windows.

NOTE: Each PBX line requires a separate modem. Technical inquiries relating to the PBX interface are only supported if SmartLink has supplied the modems being used at the site.

## 5.4.3 Setting up the Port

To configure a port for the modem select Interfaces > Ports from the Main Screen.

SAL Ports			
Maxon PBX Modem	Name Protocol Type Serial port Flow control Initialisation string Dial string Answer after	PBX Modem   PBX   Rockwell modem   COM4 (Available)   RTS/CTS   AT&Z   3   modem rings.	<u>R</u> efresh
	New	Delete Save	Close

Click New to create a new Port.

In the Name field type a name to describe the modem.

In the Protocol field select PBX from the drop down list.

In the Type field choose the type (brand) of modem being connected.

In the Serial Port field select the COM port that the modem is connected to.

#### NOTE: This COM port number is usually written next to the COM port connector on the back of the PC or on the multi port serial card cables.

In the Flow Control field choose RTS/CTS.

The *Initialization String* field may be left blank if a generic modem is being used. If the modem is not generic, an initialization string may be required. Consult the modem manual for details.

The *Dial String* field may be left blank if a generic modem is being used. If the modem is not generic, a special dial string may be required to request the modem to dial a number. Consult the modem manual for details.

The *Answer after* <u>modem rings</u> field should be a number greater than zero. If 0 is entered the modem will not auto answer. This is how long the server should wait before answering an incoming call.

Click Save > Close when finished to return to the Main Screen.

## 5.4.4 Setting up the Gateway

To configure a gateway for the PBX modem, select Interfaces > PBX > PBX from the Main Screen.

PBX Gateways - Edit		
PBX Modem	Access PIN	Use PIN
	Maximum of	<ul> <li>Limit number of messages</li> <li>messages per call</li> <li>Enable escalations</li> </ul>
	This port is extension	Enable extended functions
2		Save Close

Click the name of the *Port* on the left side of the window. The details for the PBX interface will then show up on the right side.

The Access PIN field is used to enter an optional four digit access number for users to gain access to the PBX line. It is only used only if the following option is enabled.

When ticked, the Use *PIN* field will force the *Access PIN* defined above, to be required. In this case the first voice message sent upon call connection will be "Enter PIN Number" If the *Access PIN* is entered correctly, the call will proceed as normal, otherwise the call will be terminated after one PIN retry.

If enabled, the *Support priority calls* tick box requires callers to add an extra digit after the Pager Number. A "1" will make the call a priority call, whereas a 0 will be treated as a normal call. Please note that this extra digit is mandatory when this option is enabled – calls will not be initiated if it is not used.

The *Limit number of messages* field limits the number of messages a user may send during a single call. The number of messages is defined below.

The *Maximum* of \_\_\_ messages per call field is the maximum number of messages a user may send during a single call if *Limit number of messages* is set above.

The *Enable escalations* tick-box enables or disables the ability to send to escalations, even if the escalation is embedded in a group, roster etc.

The *Enable extended functions* tick-box enables or disables advanced PBX functions such as absence/presence and cancel escalation. This is discussed in more detail below.

The *This port is extension* \_\_\_\_ *on PBX* field, is the number of the PBX extension to which this port is connected.

Click Save > Close when finished to return to the Main Screen.

## 5.4.5 Setting up the PBX messages

PBX Messages allow alphanumeric messages to be sent via a touchtone telephone connected to the PBX. Entering a \* followed by a two digit number as part of the message phase of a telephone call will invoke the corresponding predefined alphanumeric message.

To configure these messages select **Interfaces > PBX > PBX Messages** from the *Main Screen*.

M PBX Messages			
01 Urgent staff meeting 02 Your shift has started	ID M <u>e</u> ssage text	02 Your shift has started	
1	<u>N</u> ew <u>D</u> e	elete <u>Save</u>	<u>C</u> lose

Click New to create a new message entry.

In the *ID* field, enter a number that will correspond to the PBX message text. The maximum length of this number is defined in the *Edit* > *Settings* > *Global tab* > *No. digits (PBX Messages)* field.

In the Message text field, enter the actual text that will be included in the sent message.

Click Save > Close to save changes and return to the Main Screen, or New to create another entry.

# 5.4.6 Using PBX Messaging

The following section outlines how to send messages using the PBX system.

#### Normal PBX Messaging

PBX messaging provides the ability to dispatch messages via telephones capable of sending DTMF tones using the following procedure:

Dial the extension number used by the PBX Interface in SmartWatch XP.

The PBX Interface will answer your call after a preset number of rings (two by default).

The PBX Interface will prompt you with Enter PIN or Enter Pager Number or Select Function. In the latter situation, skip to step 7.

Enter the four-digit access PIN using the numbers on your telephone. This information will be available from your SmartWatch XP administrator.

If the PIN is incorrect, the PBX Interface will revert to Step 2.

The PBX Interface will prompt you with Enter pager number or Select Function.

Enter the Local ID of the recipient for this message. This number will be a preset length configured by your SmartWatch XP administrator, and hence may need to be padded with zeros. For example, you should type 003 to contact the recipient with a Local ID of 3 if your system uses three digit Local IDs. You should type 0003 to contact the same recipient in a four digit Local ID configuration.

You may need to enter an extra digit to set the priority of this message. Entering a 0 will make the message a normal priority, whereas entering 1 will render the message high priority.

If the Local ID entered is not available in SmartWatch XP, the PBX Interface will respond with Pager Not Registered, and revert to Step 6.

The PBX Interface will prompt you with Enter Message.

Enter the message you wish to send using the numbers on your telephone. More information on the formation of messages is presented below.

Press the \* key twice to send the message. The PBX Interface in will respond with Message Sent, and revert to step 6. If you have no more messages to send, simply hang up.

#### Example:

A typical PBX Interface transaction is outlined below:

- SmartWatch XP: Enter pager number or Select Function
- User Enters: 003
- SmartWatch XP: Enter message
- User Enters: 1234567\*\*
- SmartWatch XP: Message sent

## **PBX Function Options**

The PBX Interface can be used to execute certain functions as well as for sending messages. These functions are mostly concerned with Absence/ Presence and the setting of Diversion and Buddies to recipients.

In order to execute a Function Option, type \* and the Function Option digit when prompted for *Enter Pager Number*.

The Function Options are as follows:

- Makes the recipient absent.
- Makes the recipient present.
- Cancel Escalation.
- Sets a Diversion.
- Clears Diversion.
- UNUSED.
- Sets a Buddy.
- Clears Buddy.
- Self Test simply sends a test message to the given recipient.

#### Example

As an example of a Function Option, say you want to make pager number 44 absent, and then divert it to pager number 55. The procedure for this is as follows:

- Enter Pager Number or Select Function
- User Enters: \*1 44
- You are now Absent
- Enter Pager Number or Select Function
- User Enters: \*4 44 55
- Diversion Activated

Now you change your mind, and want to make 44 present again and clear the diversion:

- Enter Pager Number or Select Function
- User Enters: \*2 44
- You are now Present
- Enter Pager Number or Select Function
- User Enters: \*5 44
- Diversion Cleared

To cancel an escalation:

- Enter Pager Number or Select Function
- User Enters: \*3 000000001
- Message sent

#### Sending Alphanumeric Messages

SmartWatch XP maintains a list of alphanumeric PBX Messages, which can be inserted into messages initiated via the PBX Interface. These messages are configured in the *Setting up PBX Messages* section previously.

To insert a PBX Message, simply press \* followed by the two digit number of the PBX Message you wish to send. You can insert multiple alphanumeric PBX Messages as part of the message you wish to send, and mix and match alphanumeric messages with numeric digits.

For example, if you have configured message number 01 as *Contact Extension Number* then you would type \*01 123 to send the message Contact Extension Number 123. In this example the \*01 portion of the message specifies the PBX Message to insert into the text, and the 123 specifies the extension number to append to the end of the PBX message. You can combine as many PBX messages and numeric characters as you like within a single message, in any order.

# 5.5 AIM Networks

SmartWatch XP uses Alarm Interface Modules (AIM's) to monitor alarm conditions. An AIM network consists of an AIM controller attached to SmartWatch XP and a number of AIM's.



# 5.5.1 Components

A SmartWatch XP system with an AIM network supplied by **SmartLink** will include the following components:

- One AIM controller and independent power supply per 63 AIM boards.
- One or more AIM boards, each with an independent power supply.

In addition to these items you will also require:

- One spare serial port on the SmartWatch XP server PC per AIM controller.
- 2-wire cable for AIM data communications.
- •

## **AIM Controllers**

This small device interprets data passed between the RS232 style serial ports on a PC and the data ports on AIM boards.



If you are upgrading an existing SmartWatch XP system that includes an AIM network then you may possess an AIM controller card, which you may use in lieu of an external AIM controller. The appendix at the end of this manual describes the installation of AIM controller cards.

## 5.5.2 Hardware Installation

The AIM Network will not work if the two switches on the face of the converter are not in the following positions:



- The left hand switch must be set to the **MIDDLE** position to indicate T-RTS/R-RTS.
- The switch on the right must be in the **UP** position to select DCE.

Bridge some of the 4 lines of AIM controller data output via the green block at the bottom of the converter. The cover of the converter identifies the lines as 1, 2, 3 and 4. Use a short (4cm) strand of wire to bridge the lines as follows:



- Lines 1 and 4 are bridged.
- Lines 2 and 3 are bridged.

Attached the DB25 end of the converter to a serial port on the SmartWatch XP server PC.

Remove the cover of the first AIM board to be used in the network. Identify the blue 8-switch box labeled SW1 and the green 5-line block labeled I/O.

The 8 switches on SW1 allow you to configure the baud rate and ID of the AIM board. Normally you will setup AIM boards with a BAUD rate of 9600, for which switches 7 and 8 should be in the 'ON' position. The first aim on the network has an ID of 1, indicated by setting switch 1 'ON' and pins 2 through 6 'OFF'.

Two of the five lines on the I/O block are used to connect the AIM board to the AIM controller. Use 2-wire cable to connect the line labeled 'RS485+' on the AIM to line 1 on the converter, and 'RS485-' to line 2.

Connect the power supply to the lines labeled +12V and 0V on the I/O block. The orange power LED on the AIM will light.

Up to 63 AIM's can be connected to the same network.

- You can interconnect AIM's by wiring RS485+ to RS485+ and RS485- to RS485-. Alternatively, multiple AIM's can be wired directly into the converter in the same manner as the first AIM on the network.
- All AIM's on the network must be set to the same baud rate. Switches 7 and 8 may be adjusted as follows:

Baud Rate	Switch 7	Switch 8
1200	OFF	OFF
2400	ON	OFF
4800	OFF	ON
9600	ON	ON

• Each AIM must be given a unique ID. The first AIM on the network has an ID of 1, the second 2, and so on. Switches 1 to 6 of SW1 control the ID of an AIM using a binary sequence.

AIM ID	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6
1	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF
63	ON	ON	ON	ON	ON	ON

- SmartWatch XP can monitor multiple AIM Networks. Each network requires a separate serial port and AIM controller.
- The SmartWatch XP software must be configured to communicate with the AIM Network. Refer to the online help.

# 5.5.3 Setting up the Port

To configure a port for the AIM's to use select **Interfaces > Ports** from the *Main Screen*.

S/L Ports			
Maxon PBX Modem RS-485 Converter on COM5	Na <u>m</u> e <u>P</u> rotocol Type Seri <u>a</u> l port Flow control	RS-485 Converter on COM5 AIM Direct RS-485 COM5 (In use) <none></none>	<u>R</u> efresh
	New	Delete Save	<u>C</u> lose

Click New to create a new Port.

In the Name field type a name to describe the serial port the AIM controller connected to this port.

In the Protocol field select AIM from the drop down list.

In the Type field choose Direct RS-485.

In the *Serial Port* field select the COM port that the *Serial* > *RS-485 converter* is connected to. Installation of this converter is discussed previously.

## NOTE: This COM port number is usually written next to the COM port connector on the back of the PC or on the multi port serial card cables.

In the *Flow Control* field choose *RTS Toggle*. If an external *Serial* > *RS-485 converter* is present then this field can be set to none.

Click Save > Close when finished to return to the Main Screen.

# 5.5.4 Setting up the Gateway

To configure a gateway for the AIM's select **Interfaces > AIM > AIM** from the *Main Screen*.

Click the name of the *Port* on the left side of the window. This refers to the serial port the AIM controller is connected to. The details for the AIM node will then show up on the right side.

👫 AIM Gateways - Edit				
RS-485 Converter on COM5	Baud Controllers	9600         Image: Unit 1         Image: Unit 2         Unit 3         Unit 4         Unit 5         Unit 6         Unit 7         Unit 8         Unit 10         Unit 11         Unit 12         Pass on undefined means         Inputs on this port defaults	It to normally oper	: Selected
			Save	Close

The *Baud* field refers to the serial communications speed of the AIM modules attached to this gateway. For more information on how to configure the baud rate for the AIM modules, please refer to the *AIM Installation Manual*.

The *Controllers* window provides a list of AIM modules that may be connected to the AIM Gateway, and their current polling status. A green tick indicates that polls are being sent to the AIM, whereas a red cross indicates that the AIM is not being polled. AIM's can be enabled and disabled by clicking on these icons.

If unticked, the *Pass on undefined messages* tick-box alarms for which no *alarm input* has been defined will not be forwarded further into the system. When set, alarm activations and resets for which no *alarm input* have been defined will be passed into the system.

When ticked, the *Inputs on this port default to normally open* tick-box, forces the default for all inputs which don't have an *alarm input* defined to normally open. Otherwise they will default to normally closed.

# 5.5.5 Setting up Alarm Inputs

Each alarm input on each AIM module must be setup individually. To configure these inputs select **Interfaces > AIM > Alarm Inputs** from the *Main Screen*.

Click New to create a new entry for an alarm input.

In the Name field, type a name that defines the alarm input.

🕺 AIM Alarm Inputs		
[01,01] Fridge Door	Name Port Device ID Input ID Recipient Initial delay Activation message Activation tone Reset message	Fridge Doof   Image: RS-485 Converter on COM5   Image: Image
	New	Delete Save Close

In the *Port* field choose the serial port setup previously that contains the alarm input you are setting up.

The *Device ID* field refers to the AIM module number (*RS-485 ID*) that this alarm input resides on. For more information on how to configure Alarm Interface Modules, please refer to the *AIM Installation Manual.* 

*Input ID* is the actual input number of this alarm on a given AIM, and may be between 1 and 32. For more information on AIM input numbering, please refer to the *AIM Installation Manual*.

The *Recipient* field refers to the device or group of devices that should be contacted upon activation of this alarm input.

*Initial delay* specifies the time that the alarm should remain active before being added to the list of active alarms in SmartWatch XP. This setting is particularly useful for applications like door alarms, where short periods of alarm activation are acceptable, but prolonged activation should initiate messaging.

Activation message is the actual text that should be sent to the recipient upon alarm activation.
Activation tone refers to the beep code (or function digit) used to send the activation message. The functionality of this setting may depend on the type of gateway through which the message is being sent.

*Priority Message* determines if the activation message should be treated as a priority message.

Reset message is the actual text that should be sent to the recipient upon alarm deactivation.

*Enabled* determines if this alarm input will cause a message to be initiated upon activation. It should be checked for normal operation.

*Normally closed* should be selected if this alarm input presents a short circuit for its inactive state, and an open circuit for the active condition.

*Latching* will cause the alarm input to remain active in SmartWatch XP after it becomes electrically inactive. The alarm will continue to escalate until it is manually cancelled.

### 5.5.6 Testing

To test an alarm input is working:

Wire the alarm input up to the switch or device it is going to be monitoring.

Ensure the SmartWatch XP software is setup properly so that activation occurs correctly. This process is outlined previously.

Activate the alarm input by switching the contact. (turning on a light, opening a door, pressing a button etc).

A message will be dispatched to the recipient specified, as outlined in the Setting Up Alarm Inputs section above.

If no message was received, review all settings in the software to ensure everything is setup correctly.

# 6 GLOSSARY

# 6.1 Further Help and Support

## **Online Help**

You can access the SmartWatch XP online help from any client on the network. You should read the **Getting Started** section of the online help to find out how to install Ports and Gateways for Communications once you have installed the hardware and client/server software for SmartWatch XP. Online help is accessed by pressing *F1* within the software at any time.

#### **Contact your Place of Purchase**

A SmartLink International Authorized Distributor or Dealer sets up most systems. Contact your place of purchase with inquiries beyond the scope of this manual.

## This Product is Not Field Serviceable

Should a fault develop with the hardware or software, contact your place of purchase for the most appropriate form of action. Do not attempt to open or repair any of the products as this may void any warranty.

# 6.2 Glossary

Term	Definition
AIM	Alarm Interface Module
ANSI	American National Standards Institute
Baud	The baud rate, the number of data bits and stop bits, and the parity are all properties of the data format to be used for the serial port. You must make sure that you use the same settings for these variables on both ends of a serial connection. The Baud rate is the speed at which data is transmitted along the serial connection. A Baud rate of 9600 is common though you may find older devices that use slower connections. Some modems have problems establishing a connection at the lowest baud rates.
Cap Code	Seven-digit capacity code number used to identify a pager. See also RIC Number.
Contact Closure	An alarm input that is activated by closing a dry contact.
LED	Light Emitting Diode
Message	Enter the alphanumeric message you wish to send to the selected contact. Alphanumeric pagers and mobile phones may receive letters and numbers. If you have selected numeric pagers SmartWatch XP will automatically strip the numeric portion of the alphanumeric message to send to these devices.
Mobile Number	Mobile phones with SMS messaging capabilities can receive text messages from SmartWatch XP using the mobile phone number.
Node	Nodes in SmartWatch XP represent the method of delivery. Select the node that will be used to send messages that will be sent to the device.
Opto Coupled	An alarm input that is activated by applying a voltage.
PABX	Private Automatic Branch Exchange
Pager Number	Wide area pagers have a pager number that identifies them to the wide area carrier that transmits their messages. As you type in the name of a pager you wish to send a message to, SmartWatch XP will search through the pager database to find the pager with the name that most closely matches the characters you type. This means that you do not have to type the full pager name.
РВХ	The PBX Number is a unique label given to a pager to identify it in the SmartWatch XP database.
PET	Pager Entry Terminal (see TAP)
POCSAG	RF Protocol used to communicate to pagers written by the Post Office Code Standardization Advisory Group.
RIC Number	The RIC number is programmed into receiver devices such as pagers and identifies which transmitted messages are intended for that device. All pagers have a Cap Code that they use to determine which messages are meant for them.
RS232	Point to Point Serial communications
RS485	Point to Multipoint Serial Communications
ТАР	Telelocator Alphanumeric Protocol. Defined by the PCIA the TAP protocol allows messages to be sent between paging systems (typically for city wide paging) Depending on your location the TAP protocol is known under different names. In Australia, New Zealand and South East Asia the TAP protocol is generally referred to as PET (Pager Entry Terminal). In Europe and North America TAP and IXO are utilised interchangeably.
TNPP	Telelocator Network Paging Protocol. Defined by the PCIA, the TNPP protocol allows large scale paging networks to be created. Ideal for hospital paging networks.
Windows	Windows NT, Windows 2000, Windows XP, Microsoft are trademarks of Microsoft Corporation

# 6.3 SmartWatch XP User License Agreement

## SmartWatch XP User License Agreement

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# 6.4 SmartWatch XP Standard Features

# NOTE: Specifications subject to change without any notice

Recipient capacity	. 1,000,000 Pagers, mobile phones, DECT handsets or email addresses	
Group capacity		
Department capacity		
Concurrent clients		
Serial Port capacity		
System Architecture	Client/Server, TCP/IP Communications. Server runs as a service	
Internal Communications	Encrypted Transport Control Protocol / Internet Protocol (TCP/IP)	
PBX Port capacity		
PBX Interface	Two Wire Analogue Extension (FCC, Austel & CE Approved)	
PBX Messages		
Alarm capacity		
Escalation capacity		
Roster capacity		
Reminder Messages		
Terminal capacity	64 Operator Terminals (VT100, WYSE or ANSI Compliant Terminals)	
High Level Interfaces		
Carrier capacity		
Outbound email		
Inbound email	Received via Simple Mail Transfer Protocol (SMTP) Server	
Security Configuration	User Configurable, each item individually selectable	
Paging Protocols	POCSAG CCIR #584 at 512/1200bps	
	Telelocator Alphanumeric Protocol (TAP, IXO, PET)	
DECT Protocols		
	Alcatel DECT SMS	
Nursecall Protocols	CallGuard, DigiAlert, Dukane, Gladstone, Jeron, Medicom, Sedco,	
Slot Machines Protocols	Aristocrat (Dacom), Bally, IGT, Tattersalls, Turbo Bonus	
Fire Alarm Protocols	Ampac, FFE 9000/10000, Simplex 4100, Wormald MXL/XL3	
Additional Protocols	Citect, Honeywell BMS, Macroview, Modbus	
Server/Client System Requirements see readme.t		



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