



Engineers Manual

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Version 1.0

WebWayOne Ltd, Kingfisher Court, Hambridge Road, Newbury, Berkshire. RG14 5SJ.

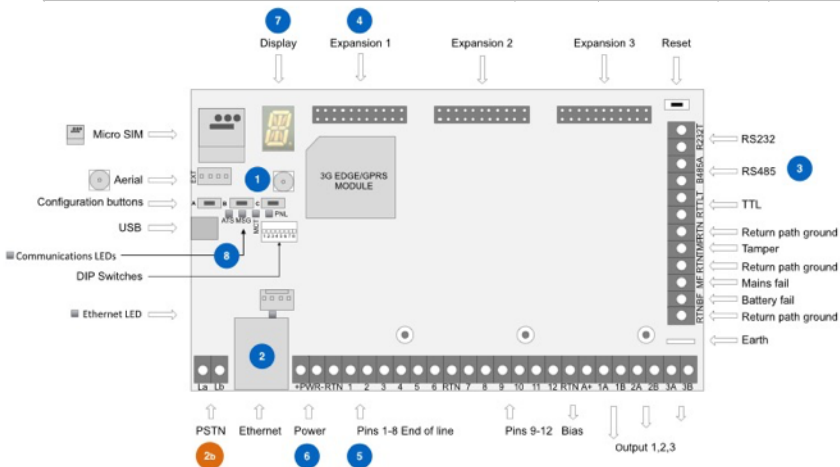
www.webwayone.co.uk
www.webwayworld.com

+44 1635 231500

Quick start for Communicator Pro

First configure your WebWay Communicator Pro using www.webwayworld.com. If you are not using WebWay World go to Page 16 for manual configuration. Follow the instructions below and when the status lights are green you can test signals. View them in the Connections section of WebWay World from your smart phone, or any other screen. Now commission to your ARC. If you have any problems call WebWay Technical Support.

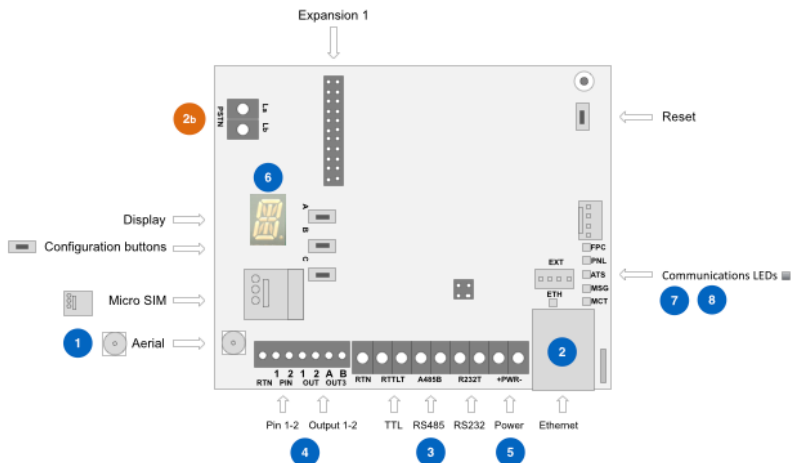
Instruction	IP/3G	3G/PSTN	IP	IP/PSTN	3G
Fit antenna.	1	1			1
Fit Ethernet cable.	2		2	2	
Fit PSTN (phone line).		2b		2b	
Wire panel connection (serial connection shown).	3	3	3	3	3
Fit any sub boards.	4	4	4	4	4
Connect any hardwire pins required.	5	5	5	5	5
Connect 12V or 24V power supply.	6	6	6	6	6
Check signal strength.	7	7			7
Check for green LED lights.	8	8	8	8	8



Quick start for Mini, Smart, Go Plus & Go

First configure your WebWay Communicator Pro using www.webwayworld.com. If you are not using WebWay World go to Page 16 for manual configuration. Follow the instructions below and when the status lights are green you can test signals. View them in the Connections section of WebWay World from your smart phone, or any other screen. Now commission to your ARC. If you have any problems call WebWay Technical Support.

Instruction	IP/3G	3G/PSTN	IP	IP/PSTN	3G
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Fit Ethernet cable.	2		2	2	
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Fit any sub boards.	4	4	4	4	4
Connect any hardwire pins required.	5	5	5	5	5
Connect 12V or 24V power supply.	6	6	6	6	6
Check signal strength.	7	7			7
Check for green LED lights.	8	8	8	8	8



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Terminology

SPT	Secure Premises Transceiver. Your WebWay signalling device.
IP	IP is used to describe either a public or private internet protocol connection between the SPT and the WebWay receivers. i.e. IP signalling. The IP path may include a VPN if required by the customer. VPNs are not required by WebWay as all information is encrypted at the SPT prior to transmission.
RADIO	If your SPT is IP/3G or 3G/PSTN or 3G single path it is provided with a Radio Module (hardware) that supports all 3G/EDGE/GPRS Radio networks and frequencies. Connected to the Radio Module is our Micro SIM which is registered to all mobile/radio network providers.
ROAMING	Your SPT will automatically hunt across the available 3G/EDGE/GPRS networks to achieve an acknowledged poll from the WebWay receivers. WebWay's unique network scanning protocol is designed to ensure that the WebWay can achieve bi-directional communication with the WebWay receivers.
PSTN	Public Switch Telephone Network. A shared or dedicated analogue telephone line. WebWay PSTN calls are transmitted to our freephone numbers (for UK signalling solutions). For Republic of Ireland connections calls are made to receivers locally.
ATS	Alarm Transmission System (ATS). Each SPT is designated as a Single Path ATS or Dual Path ATS. Each ATS is made up of Alarm Transmission Paths (ATPs). Single and Dual Path ATS's have multiple ATPs.
ATP	Alarm Transmission Path. A Single Path SPT has 2 routes to the WebWay receivers. (e.g. IP or 3G). A route is called an Alarm Transmission Path. A Dual Path SPT has 4 routes to the WebWay receivers (IP/3G or 3G/PSTN).

Terminology continued ...

Plug on sub board	Your SPT has either 1 (Mini) or 3 (Pro) expansion interfaces. WebWay manufactures plug on boards for adding Modem Capture, Pins or additional standard or bespoke serial data connections. See Page 11 for Plug on boards.
MCM	Modem Capture Module. Interfaces the alarm panels modem to the WebWay SPT. Contact ID, SIA and UDL can all be transmitted via the MCM. MCM provides line voltage and dial tone to the panels modem. All transmissions are digitised by the SPT before transmission over any external network.
CLI	Calling Line Identifier. A service which must not be withheld on a PSTN line for WebWay 3G/PSTN (Smart 3Gi Pins, Smart 3Gi S and Smart 3Gi M) or WebWay IP/PSTN solutions.
REN	Ringer Equivalence Number. PSTN equipment all have a REN value. The maximum number of devices a PSTN line can power/support creates a REN of 4.
MCT	Monitoring Centre Transceiver. WebWay's connection management and alarm routing platform.
RCT	Receiving Centre Transceiver. WebWay's receiving servers installed within an ARC which uses our hosted platform.

Basics of site surveys ... PSTN

CHECK	ADVICE
Is the line shared or dedicated?	<ul style="list-style-type: none"> - A dedicated line is suitable for all Grades. - A shared line is suitable for Grade 2 and 3.
Is the PSTN line presenting 50VDC and dial tone?	Lack of a voltage and/or dial tone will suggest a line fault prior to installation.
What is the telephone line number?	<p>If the customer does not know the telephone line number use the line to call your mobile phone or other destination where the number can be captured.</p> <p>It is useful to know the number prior to installation, but not 100% necessary.</p>
Are telephone calls made via a PBX?	If yes then you will need to add a "9" to the SPT's telephone
How many devices are connected to the line?	<p>Each device connected to the line will have a REN (Ringer Equivalence Number).</p> <ul style="list-style-type: none"> - PSTN lines support a REN of 4. - In general devices have a REN of 1. - If the REN exceeds 4 the the line will not operate.
Does the line have CLI WITHHELD?	WebWay requires the telephone number to be received as part of the call identification. If the subscribers number is with held the system will not work.
Is the PSTN service provided by BT?	If the PSTN service is NOT provided by BT there is potential that latency (delays in transmit/receive) can occur. WebWay can remotely program the SPT to force the dial up to use BT services (if supported by the provider). Calls are made to WebWay's freephone service (UK).
What if the line is shared and REN is exceeded?	If the PSTN line has multiple devices operating the end user may want to add a broadband service to it (best option) or order a separate PSTN line dedicated to security.

Basics of site surveys ... IP (ADSL/Broadband)

Check	Advice
Is there a spare Ethernet port?	The SPT will need an RJ45 connection to a switch, hub or router on the customer LAN.
Is the LAN/router operating DHCP?	If the LAN is operating DHCP you will not need to collect any IP address information. The SPT will automatically configure on the customer LAN.
The customer wants to allocate a fixed IP address.	Ask the customer for the IP address, subnet mask and default gateway address. Record these and enter them into the Site Creation form via your WebWay World log in. The address can be entered by the field engineer via buttons on the SPT, but the process is easier on line.
Firewall configuration on DHCP networks	<p>If the LAN/router is operating DHCP the firewall is likely to allow any outbound connection request.</p> <p>Tip If the site is a domestic property and the end user has connected other devices such as phones, games consoles, laptops etc themselves the LAN will be running DHCP and the firewall will be configured to allow outbound connections automatically.</p> <p>No other actions are required.</p>
Firewall configuration on fixed IP networks	<p>Provide the customer with the firewall configuration information in this document. Check on line for updates.</p> <p>The SPT does NOT require any inbound ports.</p>
Network facing address of router	The SPT does NOT require a fixed network facing address for the router.

Basics of site surveys ... Radio

<p>3G, IP/3G and 3G/PSTN SPTs are provided with a Radio Module which operates GSM/GPRS/EDGE/3G.</p> <p>The SIM is registered to local network (check on line for a full list of partners) e.g. UK O2, Vodafone, Orange, T-Mobile.</p>	
<p>3G services operates at frequencies which penetrate material/buildings better than 2G (EDGE/GPRS).</p> <p>Signal strength readings are less important with 3G than 2G.</p>	
<p>Electronic Radio Signal Survey</p>	<p>Open Signal is a free of charge website/mobile application.</p> <p>Open Signal provides signal strength readings from users mobile phone Apps. You can check 3G and 2G services for the site post code on line (remotely) or via the Open Signal App (free download). The site and App will show you the base stations locally, their geographic position etc. The App will record your data to benefit all Open Signal App users.</p> <p>www.opensignal.com</p> <p>You can also check the coverage of individual operators using their website links.</p>
<p>Interference</p>	<p>Check the location in which the SPT will be installed. Avoid installation next to other electronic/wireless devices and in basements/underground.</p> <p>A range of antenna are available.</p>

Installation process

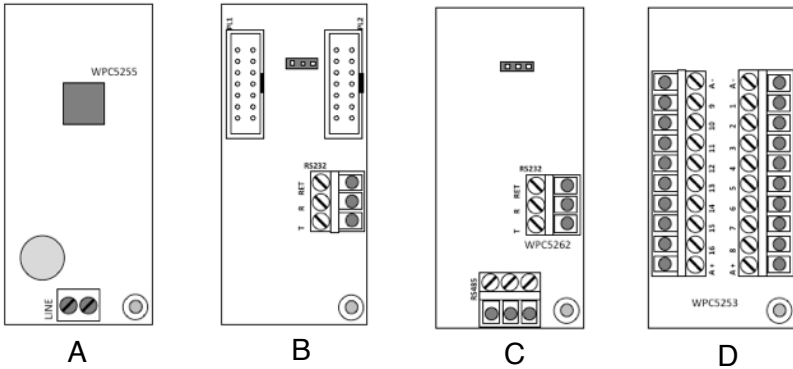
Identifying your WebWay

Check the size	<ul style="list-style-type: none"> - Pro platform is 89 x 157mm, weight is 175 grams. - Mini platform is 89 x 107 mm, weight is 125 grams.
Check expansion	<ul style="list-style-type: none"> - Pro has 3 expansion interfaces across the “top” edge, expansion interfaces are fitted horizontally. - Mini has 1 expansion interface (fitted vertically).

Power consumption

SPT platform	CURRENT	SPT STATE	USEAGE
Pro	12VDC	Display unlit	63mA
Pro	12VDC	Display lit	73mA
Pro	12VDC	MCM fitted and off hook	113mA
Pro	24VDC	Display unlit	44mA
Pro	24VDC	Display lit	40mA
Pro	24VDC	MCM fitted and off hook	90mA
Mini	12VDC	Display unlit	61mA
Mini	12VDC	Display lit	66mA
Mini	12VDC	MCM fitted and off hook	110mA
Mini	24VDC	Display unlit	38mA
Mini	24VDC	Display lit	41mA
Mini	24VDC	MCM fitted and off hook	88mA

Identifying WebWay Plug On Boards



- A Modem Capture
- B Aritech 7090 for Advisor range of panels
- C Additional RS232 interface
- D 16 Input plug on

Physical Installation, Auto Take On and trouble shooting

Installation, Auto Take On and trouble shooting procedures are identical for Pro and Mini formats.

- Your WebWay is designed to automatically configure itself (Auto Take On).
- Submit your configuration online (using your www.webwayworld.com log in).
- Follow the steps in the Quick Start Guides and the WebWay will download it's configuration and commission ready for you to test signals to the ARC.

How to use the buttons

Use button A or B to scroll through menu's to select numbers or letters when in entry mode.

Use button C when a menu is selected to start entering data. Use button C again to finish data entry.

STEP	SELECTING A MENU AND ENTERING DATA	
	HOW TO SELECT A MENU	WHAT YOU SEE
1	Tapping A will scroll the menu backwards.	... D,C,B,A,9, 8,7,6 ...
2	Tapping B will scroll the menu forwards.	... 7,8,9,A, B,C,D ...
	HOW TO ENTER DATA	WHAT YOU SEE
3	Hold down C button when your preferred menu is displayed to select that menu.	The name of the menu scrolls in the display followed by underscore “_”.
4	Tap either A or B to scroll to the menu.	e.g. “... D,C,B,A,9, 8,7,6 ...”
5	Tap C to select and save the value you want.	Display returns to “_” for next value selection.
Repeat from Step 1 to select and enter all your data.		
	HOW TO FINISH DATA ENTRY	WHAT YOU SEE
6	Tap C twice	Display shows rotating dashes as your data is saved and return to the menu number.
You can check your data entry by tapping C again. Your saved data will scroll through the display.		

Installing your WebWay

STEP	ACTION	HELP
PHYSICAL INSTALLATION		
<p>The WebWay is fitted with a plastic base for installation in your chosen alarm panel using the adhesive pads provided. In some cases the WebWay will be provided in its own boxed PSU, either fix the WebWay into the alarm panel using the adhesive pads or fix the box system to the wall following the instructions provided with the enclosure.</p>		
FOR EVERY INSTALLATION DO THIS FIRST		
1	Disconnect power/turn off power from the intended feed to the SPT.	
FOR 3G SINGLE PATH OR IP/3G OR 3G/PSTN INSTALLS DO THIS NEXT		
2	Fit supplied antenna. Tips: <ol style="list-style-type: none"> i. Do not affix the aerial until you have confirmed radio path operation. ii. Do not coil the aerial cable tightly. iii. Take care not to crush the antenna cable with clips or tie wraps. iv. Do not put the aerial inside the panel enclosure. v. Where you are replacing a system with a WebWay we can provide an SMA to MMCX convertor so that you can reuse the existing antenna. 	Page 33.
FOR IP SINGLE, IP/PSTN OR IP/3G INSTALLS DO THIS NEXT		
3 A Signalling with an IP path.	Connect supplied Ethernet cable to WebWay and customer equipment. If the site is configured to use DHCP your SPT will be automatically given an IP address by the network. If the site requires a fixed IP address we have either configured this for you before shipment, or you can enter it manually. See Page 39-40 for button use and menus. Tip: Add the Ethernet tamper shroud after you have successfully commissioned.	Page 24.

Installing your WebWay ... continued

STEP 3B ONLY REQUIRED FOR IP/PSTN OR 3G/PSTN INSTALLS. SKIP TO 4A.		
3 B Signalling with a PSTN path.	<ul style="list-style-type: none"> - Check that the PSTN line is presenting 50VDC. - Check that the PSTN line is presenting a dial tone. - Call your mobile to identify that CLI is not withheld. (You will see the telephone number of the line presented). - Connect the two wire PSTN cores to La and Lb. - Locate La (Line a) and Lb (Line b) 	Page 29.
4 A	Connect any WebWay sub boards.	
4 B	Connect any hardwire pins if required.	Page 19
4 B i	Connect WebWay Remote Pins board(s).	
4 C	Connect to panel serial data bus.	
<i>If wiring from the SPT to the panel for ATS fault reporting for intruder/fire signalling follow 4 below.</i>		
4 D i	Connect outputs to panel for EN50131 I&HS Mode 1 fault reporting	Page 20
4 D ii	Connect outputs to panel for EN50131 I&HAS Mode 2 fault reporting	Page 20
4 D iii	Connect outputs to panel for EN54-21 Fire Mode	Page 20
5	Connect to power and initialise. +ve feed to the SPT +PWR terminal. -ve feed to the SPT PWR- terminal.	
<i>If you have not used WebWay World to submit your configuration go to Page 16 and follow the instructions to enter your Site ID manually.</i>		
DUAL PATH IP/3G, 3G/PSTN and SINGLE PATH 3G SPTs will complete Step 6.		
SINGLE PATH IP SPTs will reboot, see display messages for IP Single Path systems on Page 16.		
6	Your WebWay is downloading it's configuration. The display will read out the messages below until you input more information, access a menu or leave the unit alone for 30 minutes.	

Installing your WebWay ... continued

DUAL PATH IP/3G, 3G/PSTN and SINGLE PATH 3G SPTs display these messages on reboot.	
SPT will scroll through these messages in order until "All OK" or will stop and continue to scroll the message related to that status.	
Firmware version	The software version running on the SPT.
"-"	Simply separates the firmware version readout from the radio readout.
SIM not ready	The SIM is initialising.
0 to A or "no GSM"	The SIM has initialised. GSM signal strength is read as between 0 and A (representing a 10). "no GSM" indicates the device is not yet registered for GSM.
0 to A or "no GPRS"	The SPT has scanned the radio networks and will indicate whether it sees radio data services from the local cells. GPRS signal strength is read as between 0 and A (representing a 10). no GPRS indicates the device is not yet registered for radio data (3G/EDGE/GPRS).
0 to A 3G	E.g. Displays "4 3G" when the SPT is operating on 3G signal of 4. 3G signal strength is read as between 0 and A (representing a 10). no 3G indicates there are no 3G services locally.
0 to A 2G	E.g. Displays "4 2G" when the SPT is operating on 2G (EDGE/GPRS) signal of 4. 2G signal strength is read as between 0 and A (representing a 10). no 2G indicates there are no 2G services locally.
"2G All OK" or "3G All OK"	SPT is fully commissioned and signalling on all available paths. If showing "2G All OK" the device does not have local 3G services at this time. Displays after 30 minutes of no other inputs to the display.

Installing your WebWay ... continued

IP SINGLE PATH SPTs will display these messages on reboot.	
no eth	As the SPT boots it will detect whether Ethernet is connected.
negot	SPT detects the LAN and negotiates its connection with the router.
no router	If router Ping is enabled and the router does not respond this message will display. Once the router responds (soon after the SPT boots) this message will disappear.
	When the SPT has negotiated with the LAN/router it will display the speed of connection. "t" stands for 10. "h" stands for 100. A "." indicates full duplex.
t	10BaseT half duplex LAN
t.	10BaseT full duplex LAN
h	100BaseT half duplex LAN
h.	100BaseT full duplex LAN

Manual configuration from Step 6

Manual Step 1	<p>Enter the Site ID from your ARC using the buttons.</p> <ul style="list-style-type: none"> - Scroll to menu D. - Press and hold button C until "_" is on the display to go to entry mode. - Enter your Site ID using A and B to select each digit, pressing button C each time to save. - After the final digit is saved press button C again. - A moving circle is displayed temporarily. - The display returns to menu D.
How to check the Site ID	<ul style="list-style-type: none"> - Press button C. - Scroll to Menu D. - Your Site ID will be played on the display.
Manual Step 2	Press the Reset button.
<i>Now go back to Step 6 on Page 14.</i>	

Testing signals to the ARC

SIA signalling

You will need to be connected to the panels serial bus or modem. If you need help go to WebWay World for detailed instructions for your panel, including videos.

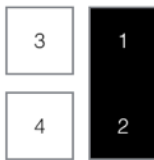
Communicator Pro

Switch 7 = RS485 Termination = Termination of the RS485 bus at 600ohms

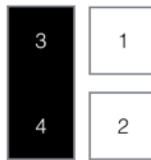
Switch 8 = RS485 Termination = Termination of the RS485 bus at 124ohms

Tip for Mini Platform (Smart, Go Plus and Go)

If connecting RS485 you can alter the termination as follows:



120 ohm



600 ohm



No termination

Testing signals to the ARC continued ...

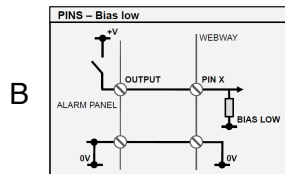
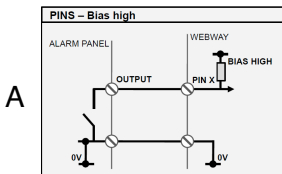
STEP	DESCRIPTION
1	Log out of the panel's Engineering Mode if required.
2	<p>Activate the alarm system. Trigger all necessary signals as true alarms.</p>
	<p>Tip If you have a WebWay World log in you can view all your alarms on your mobile phone, tablet, laptop or even the customers PC with internet connection.</p> <p>Call the ARC to verify when you are satisfied that alarms are being sent.</p>
CHECKING THE STATUS OF THE PANEL CONNECTION	
PNL LED	DESCRIPTION
Flashing red/ green.	<p>Good connectivity with the alarm panel.</p> <p>Tip The speed of the flashing will depend on your panel type because of the messaging format. E.g. a Honeywell Galaxy (RS485 connection) will constantly flash. A Texecom Premier Elite will flash every 10 seconds.</p>
Off	No activity between SPT and panel.
Solid red	<p>Physical connection problem between SPT and panel.</p> <ul style="list-style-type: none"> - Check your alarm panel wiring. - Check the alarm panel profile. - See page 37 for more help. (Trouble Shooting Sending Signals). <p>Tip If you have a WebWay World log in you can check your sites complete configuration.</p> <p>You can also check the panel configuration by selecting Menu 9 using the buttons and display.</p>

Hardwire inputs (Pro) (channels/pins) ...

If your SPT is powered by 24V (Fire) the A+ and RTN terminals will deliver a steady 12V.

Diagram A: Pins 1-12, high. Input threshold high-low 2.0V DC (max input: 30V DC)

Diagram B: Pins 1-12, low. Input threshold low to high 4.0V DC (max input 30V DC)



Pin	Code	Alarm text	Restore code	Restore text	Alarm number	Pin sense
1	FA	Fire alarm	FR	Fire restore	8001	-
2	PA	Panic alarm	PR	Panic alarm restore	8002	-
3	BA	Intruder alarm	BR	Intruder restore	8003	-
4	CL	Close	OP	Open	8004	-
5	BB	Burglar bypass	BU	Burglar unbypass	8005	-
6	IA	Equipment fault	IR	Equipment fault restore	8006	-
7	BV	Intruder confirm	BW	Intruder confirm restore	8007	-
8	FT	Fire fault	FJ	Fire fault restore	8008	-
9	KA	Freezer alarm	KR	Freezer restore	8009	-
10	LB	Engineer mode	LX	Engineer exit	8010	-
11	TA	Lid tamper alarm	TR	Lid tamper restore	8011	-
12	AT	Mains fail	AR	Mains restore	8012	-
13	YT	Battery fail	YR	Battery restore	8013	-
14	TA	General tamper alarm	TR	General tamper restore	8014	-

Hardwire inputs (Mini) (channels/pins) ...

WebWay Mini (Smart, Go+ and Go brands) have 2 on board inputs, expandable to 18 with the 16 Pin plug on (see Page 11). On board inputs can be configured as required, or for Fire alarm and Fire Fault.

Pin	Code	Alarm text	Restore code	Restore text	Alarm number	Pin sense
1	FA	Fire alarm	FR	Fire restore	8001	-
2	FT	Fire fault	FJ	Fire fault restore	8010	-

EN54-21 Compliant Fire Signalling

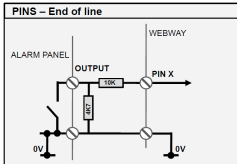
For EN54-21 compliant Fire signalling Pins 1 and 8 must be configured for EOL. When selecting Fire Alarm signalling in WebWay World's site creation this profile will be automatically selected.

Changing the Pin bias using the buttons (Pro or Mini)

BUTTON	WHAT TO DO	WHAT IT DOES
A	Press until L selected on display.	Selects Pin Bias change menu.
C	Press and release.	Display will read out the current bias, either: - Pin-Bias=Low or - Pin-Bias=High
C	Press and hold.	Display will display “_” indicating data entry mode.
A or B	Press to toggle display between “H” or “L”	Enables you to change to High or Low bias.
C	Press and release.	Selects and saves your choice.
Display will show a rotating pattern as the SPT saves your setting. No reboot required.		

EOL inputs wiring

Alarm and restore conditions may be reversed.



For hardware inputs 1-8 configured as EOL	
STATE	EOL WIRING
Alarm	10K +/- 5%
Restore	14k7 +/- 5%
Open circuit loop	> 100k ohms
Short circuit loop	< 5 ohms
Tamper conditions	Loop between > 5 ohms and < 10k ohms -5%
	Loop between > 10k ohms + 5% and < 14k7 ohms -5%
	Loop between > 14k7 ohms +5% and < 100k ohms

Testing paths

During a site inspection it is useful to be able to send "Test Alarms" over each path which do not get delivered to the ARC. You can instruct the SPT to send "Test Path" messages over each of its transmission paths using the buttons.

BUTTON	WHAT TO DO	WHAT IT DOES
A	Press until S appears in display	Selects Test Path mode.
C	Press and release	Sends test alarms over each path.

Simulating path faults/failures

You can fail the transmission paths without disconnecting the Ethernet, PSTN line or aerial.

Kill paths using buttons

BUTTON	WHAT TO DO	WHAT IT DOES
A or B	Press either to scroll to menu N or O.	Scrolls you to the menu N:Primary interface failure control. O:Secondary interface failure control.
C	Press C when you have menu N or O on the display.	Selects the menu and displays the current state. "PRI Fail = Yes" or "PRI Fail = No"
C	Hold C and you will see "_ " sign.	Ready to fail path.
A or B	Pressing A or B will toggle between "Y" or "N".	Selecting Y will fail the path selected. N will restore the path.
C	Press C to confirm selection.	Display shows rotating dashes as your data is saved and return to the menu number.

Signalling ATS faults to the CIE using SPT outputs

Important note. Not all Outputs are used for each application. Wire as per table.

PIN OUTPUT	SIGNAL	DESCRIPTION
EN50131 I&HAS Mode 1		
1	Radio failure	Single signalling path failure.
2	IP or PSTN failure	Single signalling path failure.
EN50131 I&HAS Mode 2		
1	Catastrophic failure	<ul style="list-style-type: none"> - SPT failure. - No communications paths available.
EN54-21 Fire mode		
1	Catastrophic failure	<ul style="list-style-type: none"> - SPT failure. - No communications paths available.
2	Fire alarm acknowledged	Received acknowledgement from the fire ARC.
3	Fault warning	<ul style="list-style-type: none"> - No acknowledgement received for 100s (EN54-21 Mode 1) or 240s (EN54-21 Mode 2) - SPT fault or power failure. - No communications paths available. - A PIN fault. Open or Short circuit etc.

Trouble shooting the IP transmission path

The SPT provides detailed diagnostics using LEDs and the Display to prove the cause of an IP network problem. If you have a WebWay World login you can see diagnostics in your browser.

You can identify if the problem is with:

- The SPT configuration.
- The customers LAN, switch, router or firewall.
- The internet connection to the WebWay MCT receivers.
- The registration of the SPT with the WebWay MCT receivers

Using the SPT LEDs to check the status of the LAN, Switch and Router

STATUS	DESCRIPTION
Find and check the Ethernet Status LED.	
Ethernet Status LED	<ul style="list-style-type: none"> - Located just above and right of centre of the silver, metal RJ45 connection on the SPT. - Has a "Top" and "Bottom" section, defined by the orientation of the board as in the Quick Start Guide. - Top section identifies the speed of the LAN (10BaseT or 100BaseT) - Bottom section indicates whether the SPT is active on the LAN.
Top segment (Red) off	SPT is correctly connected to a 10BaseT LAN.
Top segment (Red) on	SPT is correctly connected to a 100BaseT LAN.
Flashing green	SPT and LAN are exchanging data.
Green solid	LAN cable is connected to the SPT correctly.
Off	No connection between the SPT and the LAN. See trouble shooting on Page 25 - 26.

Trouble shooting the LAN, switch and router

TROUBLE SHOOTING	CHECKS TO MAKE
LED is unlit	Check that the Ethernet cable is securely connected to the SPT and the customer switch/router.
	Ethernet cable may be faulty. Check and replace if required.
	Customers LAN socket may not be live. Complete the WebWay PING test. See Page 28.
	Switch/router may be powered off. Complete the WebWay PING test. See Page 28.
	Switch/router port may not be live. Complete the WebWay PING test. See Page 28.
	Structured cabling is not connected to the router. Check router connection.
	Structured cabling is faulty. Check and replace if required.

Checking the IP transmission path to the WebWay Receivers

STATUS	DESCRIPTION
ATS LED	<ul style="list-style-type: none"> - Located under the 3 buttons on the left hand side of the SPT. - The first bi-colour LED, just under and between buttons A and B. - Labelled "ATS" (Alarm Transmission System). - See arrow "Communications indicators", Quick Start. - A Green flash indicates a single working route. - A Red flash indicates a route is not available. - A Dual Path SPT will always provide 4 flashes. - A Single Path SPT will always provide 2 flashes.
ATS LED "Green-Green"	<p>The status of the IP ATPs is displayed first. "Green - Green" indicates 2 working IP ATPs. No action required.</p>
ATS LED "Red-Green" or "Green-Red"	<p>One IP ATP is not working, but the SPT is correctly connected to the customer LAN and sending data to the WebWay receivers via one route.</p>
ATS LED "Red-Red"	<p>The SPT has no working ATPs.</p>

Checking the SPT registration with the WebWay Receivers

MCT LED	<ul style="list-style-type: none"> - Located under the 3 buttons on left hand side of SPT. - Third bi-colour LED, under buttons B and C. - Labelled "MCT" (Monitoring Centre Transceiver). - See arrow "Communications indicators", Quick Start.
Alternative red/green	<p>The SPT is registering with the MCT. No action required. The LED will change to Flashing Green on success. If not, call WebWay Support.</p>
Flashing green	<p>The SPT is successfully registered with the MCT.</p>
Red	<p>Registration has failed, check Site ID is correct.</p> <ul style="list-style-type: none"> - Press button C. - Scroll to Menu D. - Your Site ID will be played on the display.

Display readings for IP transmission path

In IP/3G operation the display defaults to indicate radio operation. You can switch the display to show IP related information by using Menu M.

MESSAGE	DESCRIPTION
no eth	- Ethernet cable is not connected to the SPT and/or hub/switch.
negot	- SPT is initialising/negotiating communications with the router.
no router	- WebWay "Router Ping" feature is enabled. - Router is not responding.
t	- 10BaseT half duplex LAN connection
t. (dot)	- 10BaseT full duplex LAN connection
h	- 100BaseT half duplex LAN connection
h. (dot)	- 100BaseT half duplex LAN connection
no ip	- SPT is not configured for IP operation. - SPT does not have an IP interface.
no router	- WebWay "Router Ping" feature is enabled. Router is not responding.
no dhcp	- SPT configured for automatic assignment of the IP address using DHCP. - No DHCP server/router has been found on the network. - SPT has not been given its address.
Ping good	- WebWay "Router Ping" feature is enabled. - Router is responding.
Ping fail	- WebWay "Router Ping" feature is enabled. - Router is not responding.

How to do the PING test

You are sending a “PING” command to the local router. This will help identify if the problem is with local cabling.

Step 1	Scroll to Menu P.
Step 2	Press button A. The WebWay will do the Ping test.
Step 3	Read the starburst display.
Starburst display messages	
Ping good	<p>The local IP address of the router is configured in the SPT correctly. The issue will be with the customers firewall.</p> <ul style="list-style-type: none"> - If the ATP LED remains flashing red ... - Provide IT with the WebWay firewall configuration details. - Contact WebWay Support for assistance.
Ping Fail	<p>The local IP address of the router is configured in the SPT incorrectly. You will need to record the current (incorrect) configuration, talk to the customers IT department and then contact WebWay Technical Support to assist.</p> <ul style="list-style-type: none"> - Go to Menu 1 - Local IP address. Record the number. <p>“no dhcp” means the WebWay is configured for DHCP. The DHCP server is not responding.</p> <ul style="list-style-type: none"> - Go to Menu 5 - Local router address. Record the number. - Go to Menu 6 - Subnet mask. Record the number. - Check the IP addresses you recorded with IT. - If different contact WebWay Support for assistance in amending.
No Eth	<p>There is no physical connection between the WebWay and the router.</p> <ul style="list-style-type: none"> - Check that the Ethernet cable is securely connected to the WebWay and the customers network equipment. - The network port may not be enabled or faulty. Contact IT. - The structured cabling may be at fault. Contact IT. - The WebWay may be at fault. Contact WebWay.

Trouble shooting the PSTN transmission (telephone line) path

The SPT provides detailed diagnostics using LEDs and the Display to prove the cause of a PSTN network problem. If you have a WebWay World login you can see diagnostics in your browser.

You can identify if the problem is with:

- The SPT configuration.
- The customers PSTN line.
- The WebWay MCT/PSTN receivers.
- The registration of the SPT with the WebWay MCT receivers.

Checking the PSTN transmission path to the WebWay Receivers

STATUS	DESCRIPTION
ATS LED	<ul style="list-style-type: none"> - Located under the 3 buttons on the left hand side of the SPT. - The first bi-colour LED, just under and between buttons A and B. - Labelled "ATS" (Alarm Transmission System). - See arrow "Communications indicators", Quick Start. - A Green flash indicates a single working route. - A Red flash indicates a route is not available. - The PSTN ATPs are the final 2 flashes.
ATS LED "Green-Green"	<ul style="list-style-type: none"> - "Green - Green" indicates 2 working PSTN ATPs. - No action required.
ATS LED "Red-Green" or "Green-Red"	<p>One PSTN ATP is not working The SPT is correctly connected to the customer's line Data is being acknowledged by one ATP route.</p>
ATS LED "Red-Red"	<p>The SPT has no working PSTN ATPs.</p>

Checking the SPT is registered with the WebWay Receivers

STATUS	DESCRIPTION
MCT LED	<ul style="list-style-type: none"> - Located under the 3 buttons on the left hand side of the SPT. - The third bi-colour LED, just under and between buttons B and C. - Labelled "MCT" (Monitoring Centre Transceiver). - See arrow "Communications indicators", Quick Start.
Alternative red/green	<ul style="list-style-type: none"> - The SPT is registering with the MCT. - No action required.
Flashing green	<ul style="list-style-type: none"> - The SPT is successfully registered with the MCT. - No action required.
Red	<ul style="list-style-type: none"> - Registration has failed because - The telephone number is withheld or - The site's telephone number is entered incorrectly. - Call WebWay for assistance.

Checking the PSTN line

CHECK	WHAT TO DO
Is ADSL present?	If ADSL is enabled on the line, check that the ADSL filter is correctly fitted.
Check line voltage	<ul style="list-style-type: none"> - Check PSTN line cabling and retest. - If fault persists, report line fault to service provider. - If Broadband is available, request switch to IP.
Check CLI	<ul style="list-style-type: none"> - Use a phone connected to the telephone line to dial your own mobile phone, or any external phone with a display. - If CLI is present the telephone number will be displayed on the called phone. - If you cannot carry out the test, call WebWay Support. We will perform the test remotely.
Outbound call bar	<ul style="list-style-type: none"> - If outbound call barring is configured on the line the SPT will not be able to signal. - If the service cannot be disabled advise the customer to switch to broadband.

Checking the PSTN line continued ...

CHECK	WHAT TO DO
Is a PBX used?	<ul style="list-style-type: none"> - If yes, call WebWay support. - We will reconfigure your SPT remotely, adding a "9" prefix to the called number.
Has the REN value been exceeded?	<ul style="list-style-type: none"> - Check how many devices are installed on the PSTN line. - If there are more than 4 devices (rule of thumb), advise the customer that the REN may have been exceeded. <p>Options</p> <ul style="list-style-type: none"> - Remote a device from the line to enable the SPT to communicate. - Order a new line to cater for the additional equipment. - Alternatively recommend the end user switches to broadband.
Is the line from BT?	<p>Non BT supplied PSTN services may introduce latency (delay) to transmitting signals, effecting the operation of the SPT.</p> <ul style="list-style-type: none"> - Call WebWay technical support. - We will reconfigure the device to enable BT as the carrier selection (if supported by original provider). - Alternatively recommend the end user switches to broadband.

Your options if these actions have failed

SPT fault	<ul style="list-style-type: none"> - If you have a spare SPT, install and call WebWay support to assist.
Go single path	<ul style="list-style-type: none"> - We can reconfigure your SPT remotely for 3G single path operation until the fault is fixed.
Upgrade to IP	<ul style="list-style-type: none"> - We can reconfigure your SPT to operate IP/3G if broadband is available.

Display readings for PSTN transmission path

When configured for IP/PSTN or 3G/PSTN operation the display defaults to indicate IP or radio operation. You can switch the display to show PSTN related information by using Menu M.

MESSAGE	DESCRIPTION
NO PSTN	- SPT is not configured for PSTN operation.
GOOD	- SPT is seeing 50V on the line and dial tone.
ERROR	- SPT is not seeing/seeing a very low voltage on the PSTN line.
B	- PSTN line is in use by another device. - The voltage of the line is/may be less than 20V. (B indicates Busy)
C	SPT is dialling the WebWay receivers. (C indicates Calling).
O	- SPT has made a connect PSTN call. - Signals are being transmitted to the WebWay receivers. (O indicates On line).
T	SPT is checking the line for dial tone. (T indicates Tone).
I	SPT is checking the line for voltage. (I indicates Idle). Physical line is good.

Trouble shooting the Radio transmission path

The SPT provides detailed diagnostics using LEDs and the Display to prove the cause of a Radio network problem. If you have a WebWay World login you can see diagnostics in your browser. You can identify if the problem is with:

- The SPT configuration.
- SPT Radio Module, Micro SIM and it's configuration.
- Local cell signal strength.
- The communications between SPT and WebWay MCT receivers.

PART NUMBER	ANTENNA TYPE	DESCRIPTION
Supplied with SPT	T-Bar	<ul style="list-style-type: none"> - Provided as standard with the SPT. - 3.0 meter cable length. - Suitable for the majority of installations where Radio coverage is good. - Not suitable for outdoor use.
07-0049	Disc antenna	<ul style="list-style-type: none"> - Tuned antenna, 2.5m. - Suitable where the Radio coverage is known to fluctuate. - Not suitable for outdoor use. - A chargeable upgrade.
22-5049 - 5M 22-5049 - 10M 22-5049 - 15M 22-5049 - 20M	High gain antenna	<ul style="list-style-type: none"> - Use where the Radio reception at the installation site is poor. - Extends fixing point of antenna by 5, 10, 15 or 20 meters from the SPT. - Suitable for external use.

If you are replacing a signalling device which has an antenna and the signal reception is known to be good you can connect it to your SPT. You may require an SMA to MMCX convertor which can be purchased from WebWay.

Tips

- Avoid installation near
 - electrical conduits.
 - devices which may cause interference such as electrical/radio/wireless
- Installations below ground will require
 - a High Gain antenna or re-positioning of the SPT.
- Do not coil the antenna cable for T-Bar, Disc or High gain.
- Take care not to crush the antenna cable with clips or tie wraps.
- Do not extended or shorten the cable yourself.
- Do not put the aerial inside the panel enclosure.

Display readings for Radio transmission path

During installation the SPT's display will read out the messages in the order below. When attending site to fix a problem the SPT display will be reading out one of those messages. If the display is asleep (off), tap the A button once and the display will light up.

Tips

- Do not affix the aerial until you have confirmed radio path operation.
- Do not coil the aerial cable tightly, crush the antenna cable with clips or tie wraps or put the aerial inside the panel enclosure.
- If replacing a system with a WebWay order our SMA to MMCX convertor to use existing antenna.
- 3G Radio frequencies which provide improved material/building penetration.
- 3G Radio will operate well at signal strength readings below that of 2G.
- GPRS is a low frequency service.
- Without good reception performance may be poor.
- Attempt to achieve a signal strength indication of 3 or better.

RADIO MESSAGE	DESCRIPTION
Not ready	- SIM is initialising.
0 to A or "NO GSM"	- SIM has initialised. - GSM signal strength is read as between 0 and A (10). - "NO GSM" indicates there is no GSM signal
0 to A or "NO GPRS"	- SPT sees GPRS services from the local cells. - GPRS signal strength is between 0 and A (10). - "NO GPRS" indicates there is no GPRS service.
0 to A 3G	- SPT sees 3G services from the local cells. - 3G signal strength is between 0 and A (10). - "NO 3G" indicates there is no GPRS service.
0 to A 2G	- SPT sees GPRS services from the local cells. - GPRS signal strength is between 0 and A (10). - "NO GPRS" indicates there is no GSM service.
All OK	SPT is fully commissioned and signalling on all available paths. Displays after 30 minutes of no other inputs to the display.
ATS LED	The Radio signalling paths status is represented by 2 flashes of the ATS LED. In 3G/PSTN or 3G single path configuration the Radio paths are displayed first. In IP/3G configuration the radio paths are shown second. If showing Red-Red the SPT has no working Radio ATPs.

Checking the SPT is registered with the WebWay Receivers

STATUS	DESCRIPTION
MCT LED	<ul style="list-style-type: none"> - Located under the 3 buttons on the left hand side of the SPT. - The third bi-colour LED, just under and between buttons B and C. - Labelled "MCT" (Monitoring Centre Transceiver). - See arrow "Communications indicators", Quick Start.
Alternative red/green	The SPT is registering with the MCT.
Flashing green	The SPT is successfully registered with the MCT.
Red	Registration has failed.

Checking the status of the Radio module and hardware

MESSAGE	DESCRIPTION AND ACTION
Display off	<ul style="list-style-type: none"> - SPT has no power. - SPT has been inside the tamper proof enclosure, "Display Unlit" mode. - Tap any button and the display will light up.
All OK	<ul style="list-style-type: none"> - SPT is operational on all paths.
no module	<ul style="list-style-type: none"> - SPT Radio Module is missing/faulty. - Call WebWay.
no SIM	<ul style="list-style-type: none"> - SPT Micro SIM is missing. - Call WebWay.
no signal	<p>No radio signal is being received from any network on 3G/EDGE/GPRS.</p> <ul style="list-style-type: none"> - Re-position WebWay and/or antenna. - Purchase a Disc or High Gain antenna from WebWay.
phone fault	<ul style="list-style-type: none"> - SPT Radio module is in fault. - Call WebWay.
SIM error	<ul style="list-style-type: none"> - SPT Micro SIM is in fault. - Call WebWay.

Checking the status of the Radio module and hardware continued ...

MESSAGE	DESCRIPTION AND ACTION
no PIN	<ul style="list-style-type: none"> - WebWay supplied SIM has been incorrectly configured. - Call WebWay. - Non WebWay SIM requires a PIN and none is configured. - Call the supplier of the SIM.
PIN error	<ul style="list-style-type: none"> - WebWay supplied SIM has been incorrectly configured. - Call WebWay. - Non WebWay SIM requires a PIN and it is incorrectly configured. - Call the supplier of the SIM.
PUK error	<ul style="list-style-type: none"> - An incorrect PIN has been sent to the SIM to unlock it. - SPT is now locked and will not operate over Radio. - SPT now requires a PUK code sent to it. - Call WebWay for our own supplied SIMs. - Call the supplier of the SIM if a non WebWay SIM.
not ready	<ul style="list-style-type: none"> - SPT Radio module is being initialised. - No action required.
unknown error	<ul style="list-style-type: none"> - SPT Radio module has received an unidentified/non standard network CME error message from the mobile network. - Call WebWay.

Trouble shooting sending signals

If signals are not being received at the ARC you can use the LEDs, display and WebWay World to check the configuration of the device and receivers for the following:

- SPT Power.
- SPT Commissioned state.
- Operation of ATPs.
- Message acknowledgement/queuing.
- Site ID.

CHECK	DESCRIPTION
Power	<ul style="list-style-type: none"> - Display will light up and read out the radio service and signal strength. - If the display does not light up: <ul style="list-style-type: none"> - check the power supply feeding the SPT. - check the AUX fuses and power cables. - If the SPT does not respond the unit may be faulty. Call WebWay Support.
Commission state	<p>If the SPT is not commissioned to the WebWay receivers alarms will not be received at the ARC. Use the MCT LED to check the commissioned status.</p> <ul style="list-style-type: none"> - Located under the 3 buttons on the left hand side of the SPT. - The third bi-colour LED, just under and between buttons B and C. - Labelled "MCT" (Monitoring Centre Transceiver). - See arrow "Communications indicators", Quick Start. <p>Alternative red/green</p> <ul style="list-style-type: none"> - The SPT is registering with the MCT. - No action required. - If the alternating state persists call WebWay Support. - We will check the site details on the WebWay receivers. <p>Flashing green</p> <ul style="list-style-type: none"> - The SPT is successfully registered with the MCT. - No action required. - If the Flashing green state persists call WebWay Support. <p>Red</p> <ul style="list-style-type: none"> - Registration has failed. - Check the Site ID by ... - Scroll to Menu D and press button C to select. - Site ID will be played on the display. If incorrect, call WebWay Support.

Trouble shooting Pins

If you have a WebWay World log in you can check your original configuration on line.

STATUS	DESCRIPTION
Pins not triggering	- Change the polarity of the Pins if this does not resolve.
Reversed alarms	- Change the polarity of the Pins if this does not resolve call WebWay to check the configuration.
Bias settings	- Confirm the bias settings are correct (you can check this in Menu L).
Voltage	- Use a multimeter to check that the panel is generating a change of polarity.
For Fire Systems which require a change of polarity:	
Polarity	<ul style="list-style-type: none"> - Some panels allow the Pin Polarity to be changed via the keypad. - If the panel does not allow a polarity change fit a relay.

How to use the buttons

Use button A or B to scroll through menu's to select numbers or letters when in entry mode. Use button C when a menu is selected to start entering data. Use button C again to finish data entry.

STEP SELECTING A MENU AND ENTERING DATA		
	HOW TO SELECT A MENU	WHAT YOU SEE
1	Tapping A will scroll the menu backwards.	... D,C,B,A,9, 8,7,6 ...
2	Tapping B will scroll the menu forwards.	... 7,8,9,A, B,C,D ...
HOW TO ENTER DATA		WHAT YOU SEE
3	Hold down C button when your preferred menu is displayed to select that menu.	The name of the menu scrolls in the display followed by underscore “_”.
4	Tap either A or B to scroll values.	e.g. “... D,C,B,A,9, 8,7,6 ...”
5	Tap C to select and save the value you want.	Display returns to “_” for next value
Repeat from Step 1 to select and enter all your data.		
	HOW TO FINISH DATA ENTRY	WHAT YOU SEE
6	Tap C twice	Display shows rotating dashes as your data is saved and return to the menu number.
You can check your data entry by tapping C again. Your saved data will scroll through the display.		

Menu structure

MENU	MESSAGE	DESCRIPTION	CONFIGURABLE
1	IP-Addr =	SPT's local (LAN) IP address.	Yes
2	IP-Port =	SPT's local (LAN) IP port.	No
3	GW-IP-Add =	IP address of the destination WebWay receiver.	No
4	GW-IP-Port=	IP port at the destination WebWay receiver.	No
5	Router=	Local router IP address.	Yes
6	NetMask=	Local network subnet mask.	Yes
7	GSM-Pin=	SIM card PIN number.	No
8	GSM-PUK=	SIM PUK code.	No
9	Panel=	Alarm panel type for connection.	Yes
If a panel type is selected but the SPT and panel are not connected (serial bus or modem capture) this menu will read out "Panel Lost".			
A	Path=	Networks that the SPT will use in priority order.	No
B	PINS=	Status of each Pin. R=Restore. A=Alarm.	No
C	Rem-Access=	Remote access value.	No
D	Account=	ARC account number.	Yes
This is the Chip Number or Site ID provided by the ARC to monitor this premises.			

Menu structure continued ...

E	SerialNum=	Serial number of the SPT.	Locked
F	GPRS-Access=	Access Point Name for Radio paths.	No
G	GPRS-User=	User name for the APN configured in F.	Locked
H	GPRS-Pass=	Password for the APN configured in F.	Locked
I	Callback=	PSTN callback number for SPT commissioning.	Locked
J	GSR-Code=	Sets the GSR code for Guardall panels.	Yes
K	HKC-Code=	Sets the security code for HKC panels.	Yes
L	Pin-Bias=	Reads and sets the inputs bias.	Yes
M	Alt-Disp=	Change display to show alternative transmission path statuses.	Yes
N	Pri-Fail=	Fails the primary transmission path. Times out after 15 minutes if not manually cleared.	Yes
O	Sec-Fail=	Fails the secondary transmission path. Times out after 15 minutes if not manually cleared.	Yes
P	Pri-Status=	Reads out status of primary interface.	Yes
Q	Sec-Status=	Reads out status of secondary interface.	Yes
R	Panel-Status=	Reads out status of panel interface.	Yes
S	Paths-Test=	Sends signals over all paths for testing.	Yes

LEDs

LEGEND	DESCRIPTION	OPERATION
ATS	<p>Alarm Transmission System</p> <p>Indicates the status of the transmission interface (local) and path (end to end).</p> <p>Single path SPTs have 2 ATPs so the ATS LED will flash twice to show good operation.</p> <p>Dual path SPTs have 4 ATPs so the ATS LED will flash four times to show good operation.</p>	<p>Green Good ATP (Alarm Transmission Path).</p> <p>Red No communication on this ATP.</p>
MSG	<p>Message Status</p> <p>Indicates the progress of a transmitted message to the ARC.</p>	<p>Off No message in SPT and non in SPT queue.</p> <p>Green Message has been sent by the SPT, but not acknowledged.</p> <p>Red Message is queued in the SPT and has not been sent.</p>
MCT	<p>Monitoring Centre Transceiver</p> <p>Indicates whether an SPT is registered on the WebWay receivers.</p>	<p>Flashing green Registered on the WebWay receivers.</p> <p>Alternating red and green Awaiting registration on the WebWay receivers.</p> <p>Red Registration has failed.</p>

LEDs continued ...

LEGEND	DESCRIPTION	OPERATION
PNL	<p>Alarm Panel Connection</p> <p>Indicates the connectivity status between the SPT and the alarm panel data bus.</p>	<p>Alternate red and green SPT is correctly connected to the alarm panel. The red indicates good transmit from the panel to the SPT. The green indicates good transmit from the SPT to the panel.</p> <p>Solid red There is no connection between the SPT and the panel, or the wiring is incorrect.</p>
ETH	<p>Ethernet status</p> <p>Indicates the connectivity status and speed of the LAN.</p> <p>Has a "Top" and "Bottom" section, defined by the orientation of the board as in the Quick Start Guides.</p>	<ul style="list-style-type: none"> - Top section identifies the speed of the LAN - Top section off indicates 10BaseT LAN. - Top section flashing indicates 100BaseT LAN. - Bottom section indicates whether the SPT is active on the LAN.
FPC	<p>Indicates data exchange on the EXT terminal.</p> <p>EXT interface is for future expansion.</p>	<ul style="list-style-type: none"> - Mini Platform, top LED. - No LED on the Pro platform.

System description

Connection to the alarm panel

The WebWay SPT is connected to the alarm panel using any of the following interfaces:

Inputs
Modem Capture
RS232, RS485, TTL or a bespoke panel interface

Connecting to the communications paths

Your WebWay SPT connects the alarm panel to any of the following communications paths:

PSTN Telephone Line
ADSL Broadband
Radio GPRS, EDGE or 3G

Site ID

Your ARC will provide you with a Site ID (Chip Number) for your site. This is unique to your Alarm Panel/WebWay for the ARC.

Signalling to the WebWay platform

Your SPT sends network polls and alarms to the WebWay MCTs (Monitoring Centre Transceivers). The MCTs are either located in our host data centres or your preferred ARC (Alarm Receiving Centre).

Host located MCTs will transmit your alarms to your preferred ARC. MCTs installed directly in your ARC will receive network polls and alarms without being routed via the host.

Resilience

Each SPT can communicate with a minimum of 2 MCTs. A failure of one MCT will not effect the operation of an SPT.

Network monitoring

Your SPT is configured for a Grade of signalling in conformance to European Standards, see compliance statement or www.certalarm.org.

Alarms

Your SPT can transmit Contact ID or SIA alarm events, dependent on the alarm panel configuration and integration. For more information on integration visit www.webwayworld.com.

Remote management

Your SPT can be managed using either www.webwayworld.com or our downloadable software Command Centre.

Alarm panel management

Your alarm panel manufacturer can provide an Upload/Download remote management software package to enable you to remotely manage and service the system. WebWay Remote Manager software creates a secure internet connection between your remote management PC and the WebWay MCT. The secure connection supports UDL, and Remote Routing Inspection. The remote connection operates over IP or Radio either between your remote management PC or between the SPT and MCT.

WebWay World

Our on line self service portal. Reduces ARC administration for installers. All installers register free of charge. Equipment is delivered inclusive of 3G Roaming SIM.

Managed architecture

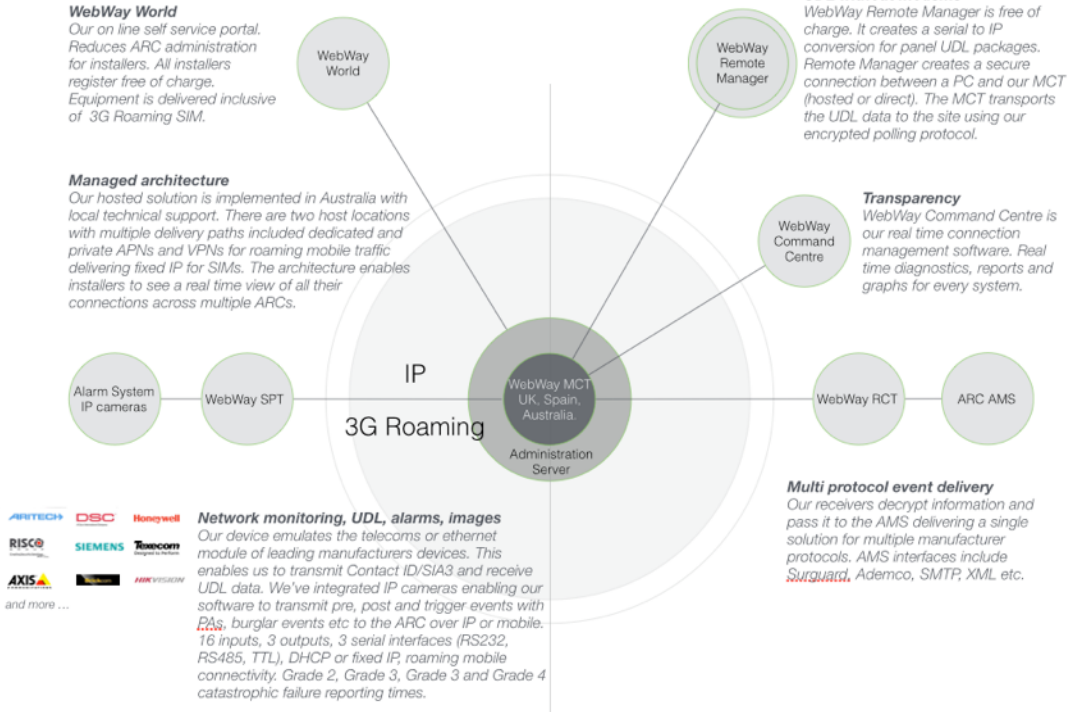
Our hosted solution is implemented in Australia with local technical support. There are two host locations with multiple delivery paths included dedicated and private APNs and VPNs for roaming mobile traffic delivering fixed IP for SIMs. The architecture enables installers to see a real time view of all their connections across multiple ARCs.

UDL without modems

WebWay Remote Manager is free of charge. It creates a serial to IP conversion for panel UDL packages. Remote Manager creates a secure connection between a PC and our MCT (hosted or direct). The MCT transports the UDL data to the site using our encrypted polling protocol.

Transparency

WebWay Command Centre is our real time connection management software. Real time diagnostics, reports and graphs for every system.



Network monitoring, UDL, alarms, images

Our device emulates the telecoms or ethernet module of leading manufacturers devices. This enables us to transmit Contact ID/SIA3 and receive UDL data. We've integrated IP cameras enabling our software to transmit pre, post and trigger events with **EAs**, burglar events etc to the ARC over IP or mobile. 16 inputs, 3 outputs, 3 serial interfaces (RS232, RS485, TTL), DHCP or fixed IP, roaming mobile connectivity. Grade 2, Grade 3, Grade 3 and Grade 4 catastrophic failure reporting times.



and more ...

Multi protocol event delivery

Our receivers decrypt information and pass it to the AMS delivering a single solution for multiple manufacturer protocols. AMS interfaces include **Surguard**, Ademco, SMTP, XML etc.

Compliance statement - SPT - EN 50136

EN 50136-2:2013 requires the following information is to be provided.

1. The WebWayOne range of SPTs are manufactured and supplied by WebWayOne Ltd whose registered address is:

11 Kingfisher Court
Hambridge Road
Newbury
Berks RG14 5SJ
United Kingdom

2. The product description is provided elsewhere in this document.

3. The WebWayOne range of SPTs are compliant with the requirements of EN 50136-1:2012 and EN 50136-2:2013 and all relevant standards referred to from these documents.

4. The WebWayOne range of SPTs are suitable for use in ATS security grades 1, 2, 3 and 4 as defined in EN 50131-1:2006+A1:2009.

5. The WebWayOne range of SPTs are suitable for use in environmental classes 1 and 2 as defined in EN 50131-1:2006+A1:2009.

6. Information on the power requirements for the product range is provided elsewhere in this document

7. The WebWayOne range of SPTs support the following Alarm System (AS) interfaces as defined in EN 50136-2:2013:

Parallel interface (hardwire pin inputs) - supervised (EOL) and non-supervised operation supported. Full details provided elsewhere in this document

Serial interface - the following serial interface types are supported:

RS485

2 wire multi-drop RS485 interface - SPT operates as a slave device as defined by the RS485 interface specification. The AS is always the master. The interface supports data rates up to and including 115 200bps. The messaging protocol is defined by the AS model connected. There is no common interface solution currently defined. AS interface failure determined by failure of the AS messaging protocol.

RS232

3 wire (Tx data/Rx data/signal reference) point to point interface. The interface supports data rates up to and including 115 200bps. The messaging protocol is defined by the AS model connected. There is no common interface solution currently defined. AS interface failure determined by failure of the AS messaging protocol.

TTL

3 wire (Tx data/Rx data/signal reference) point to point interface. The interface supports data rates up to and including 115 200bps. The messaging protocol is

defined by the AS model connected. There is no common interface solution currently defined. AS interface failure determined by failure of the AS messaging protocol.

Modem Capture (via the ModemCaptureModule)

Interface emulating a 2 wire POTS (plain old telephone service) providing line voltage, ring and all necessary supervisory signals. DTMF dial signalling only supported. AS interface failure detected by a break in the 2 wire connection. Alarm signalling modes supported:

Ademco FastFormat (BSIA Form No. 255),
Contact ID (SIA DC-05-1999.09),
SIA level 1/2/3/4 (SIA DC-03-1990.01(R2003.10))

The functionality supported for each AS model connected on each serial interface type is dependent on what is supported by that AS. Refer to the individual panel type integration documents for further details.

8. The WebWayOne range of SPTs are compatible with the EN 50136-3:2013 compliant WebWayOne Alarm Transmission System (ATS).
9. In all configurations the WebWayOne range of SPTs can signal ATS faults to the AS via a parallel output conforming to the requirements of EN 50136-2:2013 Annex A1.3.3. In addition where it is supported by an AS connected via a serial type interface the SPT can signal the ATS status across the interface in the messaging protocol specific to that AS type and model.

Options are also available for the SPT to signal individual transmission path type faults in accordance with the requirements of EN 50136-1:2012 Table 5 (ATP status reporting is optional for DPx configurations).

10. The WebWayOne SPT supports three transmission interface types - Ethernet(Broadband), GSM/GPRS (2G/Edge/3G) and POTS/PSTN. The SPT can be configured to operate with the following transmission interface configurations:

Ethernet(Broadband) only
GSM/GPRS/EDGE/3G (2G/Edge/3G) only
Ethernet(Broadband) with GSM/GPRS (2G/Edge/3G) as alternate
GSM/GPRS/EDGE/3G (2G/Edge/3G) with POTS/PSTN as alternate
Ethernet(Broadband) with POTS/PSTN as alternate

For each transmission interface type a set of parameters are monitored to ensure that the interface is operating within the reporting time requirements for the configured ATS category.

Ethernet (Broadband)

Wired Ethernet interface, 10BaseT/100BaseT, full/half duplex, auto MDI/MDIX. SPT local interface monitoring to confirm connection to a LAN. End to end polling between SPT and RCT interfaces to confirm working transmission network. Interface status timeouts and to end polling rates appropriate to the reporting time requirements configured.

GSM/GPRS (2G/Edge/3G)

GSM radio interface supporting worldwide interface standards across all appropriate radio bands. SPT local interface monitoring to confirm connection a valid and operational GSM service. Includes monitoring of signal strength, service registration, IP address assignment and active data service session. End to end polling between SPT and RCT interfaces to confirm working transmission network. Interface status timeouts and and to end polling rates appropriate to the reporting time requirements configured.

POTS/PSTN

Wired POTS interface. SPT local interface monitoring to confirm connection to serviceable telephone line. End to end polling between SPT and RCT interfaces to confirm working transmission network. Interface status timeouts and and to end polling rates appropriate to the reporting time requirements configured.

12. The WebWayOne SPT and alarm transmission system operates in the store-and-forward mode of operation as defined in EN 50136-2:2013 section 6.1.2.

13. Substitution security - Communications between the RCT and the SPT are protected from substitution by including an SHA-1 hash in every message with the content of the message hashed together with a shared secret known only to the SPT and the RCT. The shared secret is unique to each SPT irrespective of the RCT it is signalling to.

14. Information security - the SPT/RCT message payload is encrypted using AES128 in counter mode where the nonce is recalculated and is unique for each message. The session key is negotiated between SPT and RCT when communication is established and is created from the SPTs unique key, known only to the SPT and RCT, and other random sources. The key is unique to each SPT irrespective of the RCT it is signalling to.

Annex B - Compliance statement - SPT - EN 54-21

EN 54-21:2006 requires the following information is to be provided.

This installation and user documentation provides the general description of the equipment including the functions relating to the relevant parts of EN 54 and associated ancillary functions.

Alarm transmission and acknowledgement times – EN 54-21:2006

In order to comply with requirements of EN54-21 7.4.1 a hard wired fire alarm input must use pin 1 to ensure that in the event of the fire alarm being triggered at the same time as any other event, the fire alarm will be transmitted first.

Where the WebWayOne SPT is installed in a separate enclosure to the fire alarm system and using a serial interface for the transmission of the fire alarm and fire fault conditions, then the interface must operate in compliance with the requirements of EN54-21 clause 5.3b4.

Availability classification

In all configurations the WebWay Alarm Transmission System will identify ATS that do not meet availability classification as specified in the EN50136-1:2012 ATS Category that has been selected or configured.

The WebWay Alarm Transmission System provides management information systems so that ATS's not meeting the necessary performance levels can be identified and steps taken to resolve the causes. WebWayOne issues regular reports for Alarm Companies to maximise the availability of al ATP and ATS

Fault detection and reporting - General

The WebWay SPT shall detect all appropriate fault conditions within the times specified in EN 50136-2:2013. These include failure of the interconnection between the SPT and the CIE. Typically fault conditions are detected in less than 10 seconds and reported within the normal alarm transmission times.

The SPT is compliant with the requirements of EN54-21 when configured for dual path operation. In its EN 54-21 IP/GPRS configuration it is compliant with Type 1 as defined in EN 54-21:2006 Annex A. In its EN 54-21 GPRS/PSTN configuration it is compliant with Type 2 as defined in EN 54-21:2006 Annex A.

Input and output signal requirements

The specification of the various inputs and outputs to the WebWay SPT are as follows:

Ethernet interface

In compliance with the relevant industry standards for a 10BaseT & 100BaseT Ethernet interface

GSM/GPRS/3G interface

In compliance with the statutory requirements for this type of interface.

Serial panel interface – RS232 configuration – compliant with the electrical specification for this type of interface (RS232 – V24/V28) at the data rate for the panel configuration used.

Serial panel interface – RS485 configuration - compliant with the electrical specification for this type of interface (RS485/RS422) at the data rate for the panel configuration used.

Serial panel interface – TTL configuration – compliant with a TTL type interface running on a 3.3V supply rail but tolerant to 5.0V logic levels at the data rate for the panel configuration used.

Hardwired outputs – open collector outputs requiring an external pull up load or volt free relay contacts depending on the model of SPT. Maximum current sink per output is 30mA. Maximum voltage, output terminal to ground, is 30VDC.

WebWay Pro – 3 x Volt free relay outputs

WebWay Mini – 3 outputs: 1 is Volt free and 2 are Open collector

WebWay Pro

Hardwired inputs 1 to 8 – In ‘End of Line’ mode the inputs will detect and report open circuit, short circuit, alarm and restore states.

Open circuit	loop >100k
Short circuit	loop <5R
Alarm state	10k +/-5%
Restore state	14k7 +/-5%
Tamper	5R < loop < 10k-5% 10k+5% < loop < 14k7-5% 14k7+5% < loop < 100k

Hardwired inputs 9 to 12 – Maximum input voltage is 30VDC. Input threshold high to low is 2.0VDC. Input threshold low to high is 4.0VDC.

Dedicated Tamper, battery fail and mains fail inputs. They have 5V compliance fed through 10K resistor, voltage supplied from PCB.

WebWay Mini

Hardwired inputs 1 to 2 – In ‘End of Line’ mode the inputs will detect and report open circuit, short circuit, alarm and restore states.

Open circuit	loop >100k
Short circuit	loop <5R
Alarm state	10k +/-5%

Restore state	14k7 +/-5%
Tamper	5R < loop < 10k-5%
	10k+5% < loop < 14k7-5%
	14k7+5% < loop < 100k

Power requirements - General

Any enclosure supplied with the WebWay SPT will be compliant with the appropriate EN 50131-1 I&HAS Grade.

If the SPT is to be installed in an enclosure provided by the client the power supply should conform to the relevant grade stipulated in EN50131-1 and the following power supply requirements must be considered.

The WebWay SPT will operate from any power source in the range 10 to 35VDC. It will not operate from an AC voltage source.

Current consumption**SPT Display (Live)**

13.8vDC supply*

60mA

50mA

SPT Display (Unlit)

24vDC supply*

40mA

30mA

*Nominal Voltage

Power connection requirements – EN54

For use in EN54 compliant installations where it is necessary to supply the routing equipment from two separate power sources, it is sufficient to common the 0V/power ground connection and to combine the two +ve power sources via two suitable diodes. The current rating for the diodes should be at least 1.0A continuous with a reverse voltage rating of at least 40V.

Use of alarm transmission system on shared networks.

Note that in accordance with the requirements of the EN standards it is acceptable for the WebWay SPT to be connected to an Ethernet network which is shared with other applications as long as a) the recommendations for connection to the network given in the 'Step by step installation guide' are followed and b) the end user is informed that if they make changes to the Ethernet network and router they may cause the system to report an Ethernet transmission failure.

Annex C - Compliance statement - SPT - EN 50130-10:2012

EN 50131-10:2012 requires the following information is to be provided.

- 1) The product description is provided elsewhere in this document.
- 2) In order to meet the requirements of EN 50131-10 the SPT must be mounted in a EN 50131-3 or EN 50131-6 compliant housing.
- 3) Refer to the section on labelling and marking for details of the relevant certification bodies
- 4) The product is compliant for operation within the limits of Environmental Class II. This implies an operating temperature range of -10degC to +55degC, 93% humidity maximum.
- 5) Weights and dimensions are given elsewhere in this document
- 6) Details for fixing the SPT in its host enclosure are given elsewhere in this document
- 7) The product contains no user serviceable parts
- 8) For terminal identifications refer to the diagrams and notes provided elsewhere in this document
- 9) Details for the average current consumption of the SPT are provided elsewhere in this document
- 10) Details of the peak current consumption of the SPT are provided elsewhere in this document.
- 11) ATS categories:

3G only	SP5, SP4, SP3, SP2
IP only	SP5, SP4, SP3, SP2
3G/PSTN	DP4, DP3, DP2, DP1
IP/3G	DP4, DP3, DP2, DP1
IP/PSTN	DP4, DP3, DP2, DP1

Brands, Part Numbers and ATS Categories

Brand	Part no.	ATS Category			
		DP1	DP2	DP3	DP4
Pro IP/3G S	22-6005-PRO	DP1	DP2	DP3	DP4
Pro IP S	22-6014-PRO		SP2	SP3	
Pro IP/PSTN S	22-6087-PRO		SP2	SP3	SP4
Pro 3G S			SP2	SP3	
Pro 3G/PSTN S		DP1	DP2	DP3	
Mini IP/3G PINS	22-6005-MINI-P	DP1	DP2	DP3	DP4
Mini IP/3G S	22-6005-MINI	DP1	DP2	DP3	DP4
Mini IP/3G M	22-6005-MINI-M	DP1	DP2	DP3	DP4
Mini IP/PSTN	22-6087-MINI		SP2	SP3	SP4
Smart IP/3G S	22-6005-SM	DP1	DP2	DP3	DP4
Smart IP/3G M	22-6005-SM-M	DP1	DP2	DP3	DP4
Smart IP/3G PINS	22-6005-SM-P	DP1	DP2	DP3	DP4
Smart 3G/PSTN S	22-6015-SM	DP1	DP2	DP3	
Smart 3G/PSTN M	22-6015-SM-M	DP1	DP2	DP3	
Smart 3G/PSTN PINS	22-6015-SM-P	DP1	DP2	DP3	

Brands, Part Numbers and ATS Categories

Brand	Part no.	ATS Category		
Go IP S	22-6014-GO	SP2	SP3	
Go IP M	22-6014-GO-M	SP2	SP3	
Go IP PINS	22-6014-GO-P	SP2	SP3	
Go 3G S	22-6005-GO	SP2	SP3	
Go 3G M	22-6005-GO-M	SP2	SP3	
Go 3G PINS	22-6005-GO-P	SP2	SP3	
Go Plus IP S	22-6005-GO-PLUS	SP2		
Go Plus IP M		SP2		
Go Plus IP PINS		SP2		
Go Plus 3G S		SP2		
Go Plus 3G M		SP2		
Go Plus 3G PINS		SP2		

CERTIFICATES AND LOGOS

Monitoring the Modem Capture/CIE interconnect

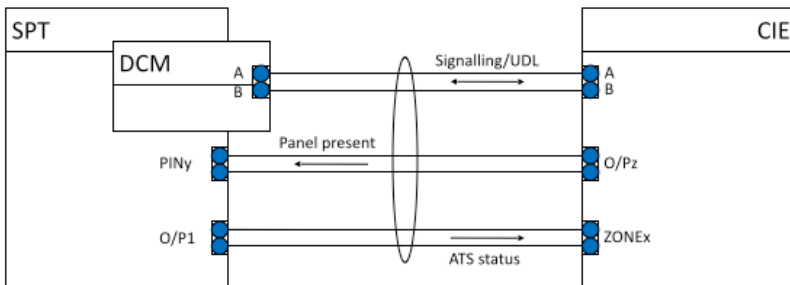
The SPT and DCM are normally installed in the CIE enclosure. Therefore the chances of the interconnect being compromised maliciously are low. An O/P from the CIE is configured to change when the CIE detects a problem with the DCM interface – line fault.

The CIE line fault O/P is connected to an input on the SPT (Mini – Pin2, Pro – Pin6). The SPT is configured to signal an equipment fault when the O/P changes.

The polarity of the output and the sense of the input need to be selected to match the capabilities of the panel but should be set so that a break in the wiring results in a fault being reported.

The SPT uses one of its outputs to signal the status of the ATS to the alarm panel. This should be monitored at the CIE in the same way as a detector zone with a suitable fault indication i.e. line fault, being indicated by the CIE.

The SPT can also have the option of disabling its DCM interface in the event of an ATS failure. For some CIE this will be detected as a line fault condition





WebWayOne Ltd, Kingfisher Court, Hambridge Road, Newbury, Berkshire. RG14 5SJ.

www.webwayone.co.uk
www.webwayworld.com

+44 1635 231500