

Aquitron

AquiWave

Wireless Leak Detection System



**INSTALLATION
INSTRUCTIONS**



aquilar
leak detection solutions

AquiWave™ Wireless Leak Detection System

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incorrectly it is likely that the fuse will blow. The wiring should be corrected and the fuse



The PSU will only charge batteries measuring 10.5V and above. Batteries measuring less than 10.5V are regarded by the system as faulty and will not be charged. A 'Battery Fault' will be displayed on screen. If the battery voltage is below 10.5V it will need to be removed from the panel to be charged and reconditioned, or replaced. The battery voltage can be viewed on the PSU Info section of the 5.5 – Panel Info menu. When replacing the battery always do so with a product of equal specification. Always dispose of batteries responsibly. Never dispose of batteries in general waste. If unsure contact your local authority for guidance.

ANTENNA (IF FITTED)

The standard helical stub antenna (part no: 6775) supplied with the panel should be fitted to the antenna bracket assembly before it is mounted into the panel. Fit the antenna onto the SMA connector as shown below. This should be screwed hand tight. Over tightening will cause the antenna to break. The supplied antenna retaining washer should then be placed over the top of the antenna. The antenna and bracket assembly should then be inserted through the antenna aperture and mounted using the supplied M3 screw and an M3 serrated locking washer. Once mounted, the antenna retaining washer prevents the stub antenna being unscrewed from outside the panel. Connect the antenna assembly to the main processor board using the SMA connector. If a high gain remote antenna is being used, the stub antenna and the antenna bracket assembly should be

removed. The new antenna should be fitted using a 50Ω SMA connector, suitable for use with RG58 c/u coaxial cable, to the processor board. When making off the cable, ensure that no stray shielding wires are shorting. Do not use non-radio connectors as they will reduce the performance of the panel.



MONITORED INPUTS

The panel features two monitored inputs that can be programmed either as latching or non-latching. It is important to note that before using these inputs they must be enabled by programming them in the panel options menu. If the inputs are enabled then 4K7Ω end of line resistors must be fitted at the termination. Applying a 470Ω resistor across the inputs will produce a 'LEAK' message. The inputs are labelled 'INPUTS' and 'No1' and 'No2'. These inputs can be assigned a zone and text location, and then cause and effects can be programmed for them. See 5.12 – Input Options for further information.

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Relays 3 & 4: Leak Relays -Default setting is volt free. These relays are each capable of supplying 500mA at 12V. Both the sounder circuit fuses should be fitted in the fuse holders and the links fitted in the left or lower positions as shown on the PCB layout diagram. The circuit should be connected between the S+ and the S- terminals. A 4K7Ω end of line resistor should be fitted to monitor the circuit. The relays can be

configured as accessory circuits, sounder circuits, monitored outputs or volt free clean contact relays. The relay type can be changed in 5.7 – User Options and by positioning the jumper links and fuses as detailed below. When relays are configured as ‘Volt Free’ accessory or as sounder circuits, the associated terminal pin (V+) must not be used.

Relay Type	Normal State	Contacts in Alarm	Fuse	EOL	Link Position
1. Leak Relay	Not energised	Clean contact	None	None	Up/Right
2. Fault Relay	Not energised	Clean contact	None	None	Up/Right
3. Sounder Circuit	-4.5V 500mA	+15V 500mA	500mA	4K7	Down/Left
4. Fault Relay Safe	Energised	Clean contact	None	None	Up/Right
5. Accessory Circuit	-4.5V 500mA	+15V 500mA	500mA	4K7	Down/Left

DISPLAY CABLE

A ribbon cable connects the two panel boards together. It should be connected to the system link/bus connections on the boards.

Do not remove or connect the ribbon cable while the panel is powered up, as damage can occur to the processor board.

BUZZER LINK

The buzzer can be disabled by removing the buzzer link (see page 8 – PCB Layout).

MEMORY CARD

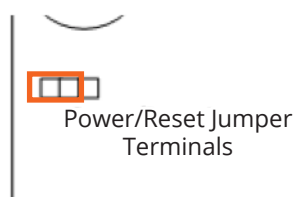
The memory card stores a complete set of the system settings including device/zone text and options. The memory card should be fitted at all times unless instructed by the panel (i.e. when adding a repeater panel).

USB SOCKET

The USB socket can be used for connecting a keyboard to program device text. It is also used to plug in a memory stick to download the event log, device info and the verify table so a hardcopy can be retained for records.

1.2 TRANSMITTER (AQW-RTX) INSTALLATION

The AquiWave radio transmitter units (AQW-RTX) contain delicate electronic components and should always be handled with care.



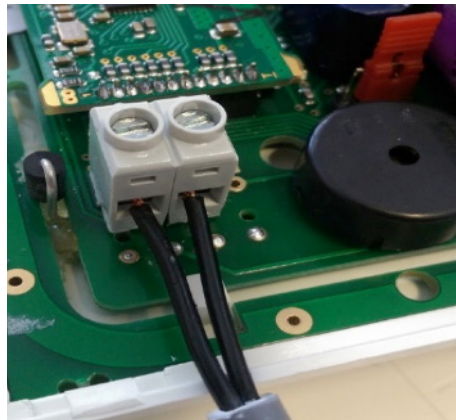
ON JUMPER POSITION



OFF JUMPER POSITION

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The two core leader cable should be terminated into the sensor cable terminals. Only connect one leader cable/sensor to each AQW-RTX.



NOTE : By default this is set for device open only. For Device removal the retaining clips must be removed to allow the button to protrude from the rear of the box. In this case the box must be fixed to a flat surface to prevent a removal fault showing on the control panel.

Once the back box is in place and sensor connected follow the instructions in section 5.26 to add the device to the system.

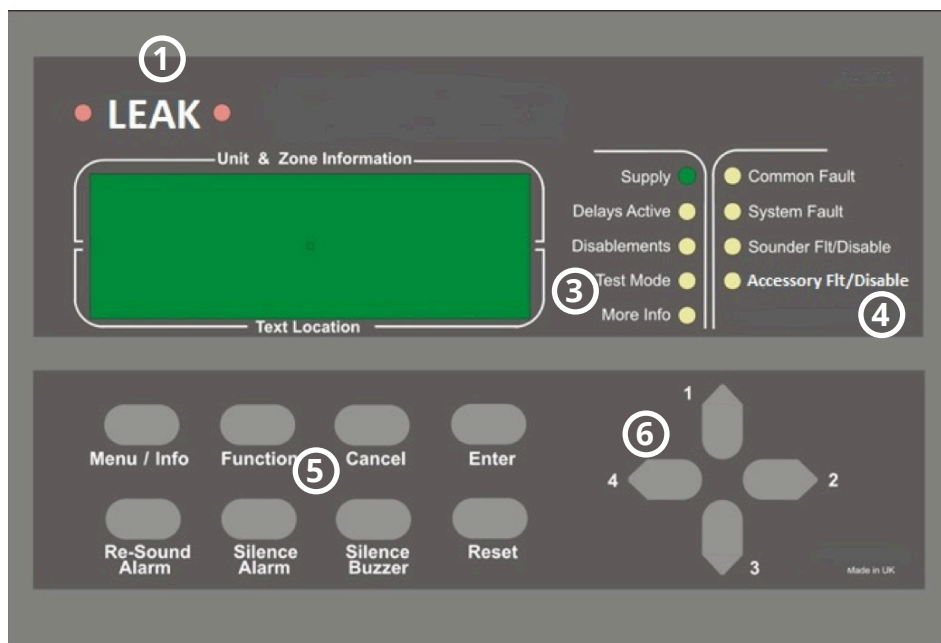


The AQW-RTX has anti-tamper and sensor fault monitoring. Both removing the sensor and/or the box will register as a fault on the control panel.

The ant-tamper can monitor both device removed and device open. Both are achieved by using the spring loaded button positioned on the back box.

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2.0 FRONT PANEL LAYOUT



1 LEAK LEDS

In a Leak condition, these LEDs will flash

3 STATUS LEDS

Supply: This LED will be illuminated when mains power is present.

Delays Active: Illuminated if delays are enabled.

Disablements: Illuminated for any disablement.

Test Mode: Illuminated if any test modes are operational.

More Info: More information on the system condition is available in the event log.

4 FAULT LEDS

Common Fault: Device or panel has a fault. See main display for details.

System Fault: Fault that affects system performance. See main display for details.

Sounder Flt/Disable: If the LED is flashing, there is a fault with one or more sounders. If the LED is solid, the sounders have been disabled.

5 KEYS

Menu/Info: Press to initiate the menu system. If held down for longer than 2 seconds, the LEDs will follow a test sequence (lamp test).

Function: This button is disabled by default, though it can be programmed to do a number of functions. See 5.7 – User Options.

Cancel: Used to return to the main screen from a menu or to return to the menu from a programming screen.

Enter: This is used to accept information programmed into the panel.

Re-sound Alarm: Following an alarm condition that has been silenced, this button will re-sound the alarm.

Silence Alarm: If the panel is in a leak condition this will silence the sounders.

Silence Buzzer: Silences the panel buzzer for all currently displayed faults or alarms.

Reset: Resets the panel from an alarm or fault condition. Note that the system must be silenced before it can be reset from a leak condition.

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6 NAVIGATION KEYS

Use to navigate through the menu structure and programming/status screens. In a multiple fault or alarm condition, the up and down arrow keys allow the user to scroll through all the current events. The display will also scroll automatically every 4 seconds. The navigation keys are numbered 1 to 4. This is to allow the user to enter a 4 digit access code when prompted.

3.0 USER OPERATION

3.1 SYSTEM NORMAL

In normal operation the screen will show either the date and time, or the supplier/service contact details. The unit can also be configured to alternate between the two. If configured this way, the display will change every 4 seconds. See 5.4 – Programming Agent Details. Also a single green 'Supply' LED will be illuminated.

Tuesday
01-01-2013

12:04:36

3.2 FAULT CONDITIONS

If a fault occurs, the internal buzzer will sound and a message will be displayed. The first line details the current fault number, the zone and the type of fault. The second line details the device type and the device number. The third and fourth lines display the device location text (if programmed). The description has a maximum length of 40 characters across 2 lines. Appropriate action should be taken to remedy the fault as this may affect the operation of the leak alarm system. If in doubt, the system maintenance company should be contacted. If more than one fault exists on the system they will scroll round every 5 seconds. Pressing the **↑** or **↓** cursor key will display the next or previous fault.

001 Zn:001 VFY FAULT
Leak Detection TX
001
Entrance Hall

3.3 SILENT BUZZER

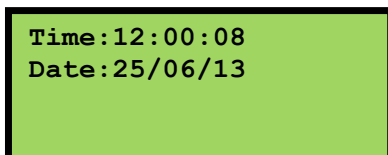
If the panel buzzer is sounding following a fault or alarm, it can be silenced with the Silence Buzzer key. Once the Silence Buzzer button has been pressed the panel assumes that the fault has been acknowledged and does not re-sound the buzzer, unless a new fault occurs. The LED on the device will continue to flash until the fault is reset – see below.

3.4 RESET A FAULT

A fault will be displayed on the panel until the system is reset, even if the fault condition has been rectified. Assuming the fault has been rectified; pressing **Reset** on the panel will reset the panel and the devices on which the fault has occurred. The system normal screen will then be displayed. If the fault is still present or re-occurs, it will be re-displayed. Where there are multiple faults, all will be reset at the same time. It is not necessary to silence a fault before resetting it. The particular device or devices in fault will also flash a green LED and beep. The system silence and reset function can be protected with an access code by turning on 'Code Protect'; see 5.8 – System Options.

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Pressing the → key will display the time and date that the event happened.

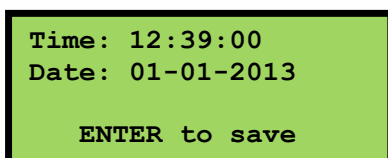


5.0 SETUP MENU

5.1 CHANGING THE SYSTEM TIME AND DATE - ALL ACCESS LEVELS

1. Main Menu>>1.Setup>>1.Time & Date

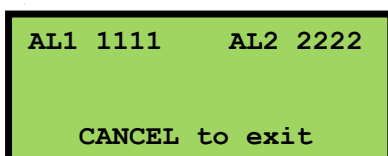
To change the time and date settings use the ← and → keys to navigate to the value, and the ↑ or ↓ keys to select the desired value. Press Enter to accept or Cancel to exit. The AquiWave panel automatically adjusts the clock for daylight savings. Should complete power be lost the panel will revert the time back to the default of 01/01/2013 12:00:00



5.2 - VIEW ACCESS CODES - ADVANCED, SERVICE AND COMMISSIONING USERS

1. Main Menu>>1.Setup>>2.Access Codes>>1. View Codes

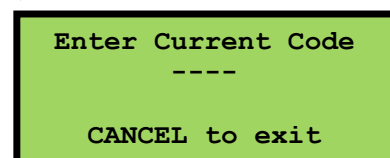
The access code is a 4 digit number; with each digit ranging from 1 to 4. Selecting '1-View Codes' will display the screen opposite. Only access codes for the access level you have entered and those below it will be displayed.



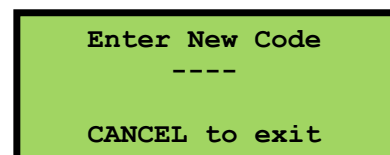
CHANGING ACCESS CODES - ADVANCED, SERVICE AND COMMISSIONING USERS

1. Main Menu>>1.Setup>>2.Access Codes>>2. Change Codes

Using the cursor keys select the access level for which the access code is to be changed. Users can only change the access code for their level and below. Once selected, press the → key to continue. Using the numbered keys enter the current access code.



If correct, you will be prompted to enter your chosen new access code, then to re-enter it to confirm. Press Enter to save the new access code, a message will be displayed that the access code is being saved. Press Cancel to exit without saving at any time.



SET ACCESS CODES TO DEFAULT - COMMISSIONING USERS

1. Main Menu>>1.Setup>>2.Access Codes>>3. Set to Default

Use this option to reset the user access codes to their default settings. Press Enter to confirm

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5.3 - DEFAULT ACCESS CODES

Basic User (AL2A): 1111
Advanced User (AL2B): 2222
Service Engineer (AL3A): 3333
Commissioning Engineer (AL3B): 4444

```
AL2A 1111  AL2B 2222
AL3A 3333  AL3B 4444

CANCEL to exit
```

Note: Ensure that the access codes AL3A & AL3B are changed from the default settings to ensure that only authorised personnel can make changes to the system

5.4 - PROGRAMMING AGENT DETAILS - SERVICE AND COMMISSIONING USERS

1.Main Menu>>1.Setup>>3.Panel Display

The system normal screen can be adjusted to display either the date and time, the agent's name and telephone number or alternating between the two every 4 seconds. In order to display the agent's details, they will need to be programmed into the panel. 20 characters per line can be programmed.

```
Tuesday
01-01-2013

12:04:36
```

Text can be programmed into the control panel using a USB keyboard or via the panel buttons. From the 'Panel Display' menu select '1-Agent Name'. Enter text then press Enter to save. Select '2-Agent Phone'. Enter text then press Enter to save. If entering text via the panel use the ↑ key to display the characters. Browse the characters using ← → the keys; select the highlighted character using the ↓. **Menu** key is SPACE and **Function** is a BACKSPACE. Once complete press ↑ to hide the characters and press →. Confirm the text is correct and press Enter to save. To return to the menu press **Cancel**.

```
A.N Other Firm
01403 216100

12:04:36
```

CHANGE DISPLAY OPTIONS - SERVICE AND COMMISSIONING USERS

1.Main Menu>>1.Setup>>3.Panel Display>>3. Display Options

Using the ↑ or ↓ keys, select 'Time/Date', 'Agent Details' or 'Alternating'. Press → to select the option. Press Enter to save.

```
Alternating↑

Use ← → keys
```

5.5 - PANEL INFORMATION

1.Main Menu>>1.Setup>>4.System Setup>>1. Panel Info

It is possible to view information regarding the panel, such as the software version, system number and the number of devices programmed onto the system.

PANEL STATUS - SERVICE AND COMMISSIONING USERS

1.Main Menu>>1.Setup>>4.System Setup>>1. Panel Info>>1.Status

Using the or keys, select 'Time/Date', 'Agent Details' or 'Alternating'. Press to select the option. Press Enter to save.

```
Sys No:00699
Devices:001

Use → key
```

```
Panel No:01/01
Antennas:01

Use ← → keys
```


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```
Ver:01.00    20Mar13
Uptime:0000d 03h 13m

Use ← key
```

```
Vbus:14.9
Light:00.00V

Use ← key
```

```
TxRx
Version:01.02
Uptime:0000d03h13m45
```

```
Display
Version:01.01
Uptime:0000d04h16m33
```

Sys No: System number.
Devices: Number of devices added to the panel.
Panel No: Panel number and last panel number on system.
Antennas: Number of antennas assigned to the panel.
Ver: Software version.
Uptime: Operational time since panel was last powered down.

VIEW ANTENNA INFORMATION - SERVICE AND COMMISSIONING USERS

1.Main Menu>>1.Setup>>4.System Setup>>1.Panel Info>>3.Antenna Info

Ant: The currently selected antenna.
Sys: The system number programmed at the antenna.
RSSI: Received signal strength indicator, from -20 to +20.
RF Chan: The channel the system is using.
Pan: The number of the panel programmed at the antenna.
Slot: Device protocol slot.
Squelch: RF interference filter. Non-user adjustable.

```
Ant:01↑    Sys:00699
RSSI:20
RF Chan:09 Pan:01
Slot:195   Sqlch:100
```

PANEL READINGS - SERVICE AND COMMISSIONING USERS

1.Main Menu>>1.Setup>>4.System Setup>>1.Panel Info>>2.Panel Readings

IP1: The resistance level on input 1.
IP2: The resistance level on input 2.
OP1: The resistance level on output 1.
OP2: The resistance level on output 2.
OP3: The resistance level on output 3.
OP4: The resistance level on output 4.
Vbus: The voltage of the PSU.
Light: Light sensor voltage

```
IP1:4535Ω IP2:4513Ω
OP1:4579Ω OP2:>10KΩ
OP3:4528Ω OP4:4671Ω
01314    01862
```

VIEW PAGER INFORMATION - SERVICE AND COMMISSIONING USERS

1.Main Menu>>1.Setup>>4.System Setup>>1.Panel Info>>4.Pager Info

This menu displays information for any alert pagers that have been set up on the system.

VIEW POWER SUPPLY INFORMATION - SERVICE AND COMMISSIONING USERS

1.Main Menu>>1.Setup>>4.System Setup>>1.Panel Info>>5.PSU Info

Vin: Input Voltage.
Vbus: The voltage of the PSU.
Vbat: The voltage of the battery.
Ib: Battery current.

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5.29 - EDIT DEVICE OPTIONS - COMMISSIONING USERS

1.Main Menu>>1.Setup>>5.Device Setup>>4.Edit Device>>1.Device Options

Use this menu to change the zone number or any cause and effects for a device. Some options can only be changed by reprogramming the device; see **5.31 – Reprogram Device**. Device options are listed below. Once the device options have been edited, press → until 'press **Enter** to save' is displayed.

Zone	The zone the device is located in.
Delay1	The first delay before the sounders operate
Tone1	The tone that the sounders should operate after delay1.
Area1	The area that should sound after delay1 (sounders will have to be programmed to this area to operate); see 5.31 – Reprogram Device .
Relay1	Hardwired relay operation inside the control panel after delay1.
Delay2	The second delay before the sounders operate.
Tone2	The tone that the sounders should operate after delay2.
Area2	The area that should sound after delay2.
Relay2	Hardwired relay operation inside the control panel after delay1.
IP1 Device	Activates the device's secondary input.

5.30 - DEVICE TEXT - COMMISSIONING USERS

1.Main Menu>>1.Setup>>5.Device Setup>>4.Edit Device>>2.Device Text

Each device can have location text programmed into the control panel using either a USB keyboard or via the control panel. The text can be programmed when the device is being added or can be entered or amended at a later date. If using a keyboard connect it to the panel before entering the main menu. From the Device Setup menu select '4-Edit Device', then select '2-Device Text'. If entering text via the panel use the ↑ key to display the characters. Browse the characters using the ← → keys; select the character using the ↓. Menu key is **SPACE** and **Function** is a **BACKSPACE**. Once complete press ↑ to hide the characters and press . Confirm the text is correct and press **Enter** to save. If more text is to be amended press Enter. To return to the menu press → **Cancel**.

5.31 - REPROGRAM DEVICE - COMMISSIONING USERS

1.Main Menu>>1.Setup>>5.Device Setup>>5.Reprogram Device

Some settings such as operating mode, sensitivity, volume, device alarm verification period and sounder area are stored on the device rather than the control panel. In order to change these settings the device will need to be put into programming mode. First remove the device from its base or back plate.

1. If a leak detection transmitter is being reprogrammed; hold the reset button down while you place the jumper link to the ON position.
2. If a sounder, beacon, transmitter or I/O unit is being reprogrammed; hold down the unit removal button while holding a magnet over the reed switch and place the jumper link to the ON position. Some newer devices are equipped with a 'log on' button. Hold this while placing the jumper link to the ON position.

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8.0 - EVENT LOG

8.1 - VIEW ALARM COUNT - ADVANCED, SERVICE AND COMMISSIONING USERS

1.Main Menu>>4.View Events>>1.View Alarm Count

Select this option to view the total number of times the panel has entered the alarm condition since the system was installed. Whilst the panel is in the alarm condition, subsequent alarm events from devices will not increment the counter.

```
Alarm Count 0004
CANCEL to exit
```

8.2 - VIEW EVENT LOG - ADVANCED, SERVICE AND COMMISSIONING USERS

1.Main Menu>>4.View Events>>2.View Event Log

The panel stores up to 1000 fire or fault events in memory. A description of the fault or fire is recorded along with the date and time of the event. When the log becomes full the oldest entries are automatically removed to make room for new ones. Scroll through the events using the ↑ and ↓ keys. Pressing → will display the date and time of the current event, while pressing ← will return to the event description.

```
002 Zn:001 REMOVAL
LEAK DET 001
```

```
Time:13:32:05
Date:05/06/13
```

8.3 - CLEAR EVENT LOG - SERVICE AND COMMISSIONING USERS

1.Main Menu>>4.View Events>>3.Clear Event Log

The event log can be cleared by selecting '3-Clear Event Log' and then pressing **Enter** to confirm

8.4 - DUMP THE EVENT LOG TO A USB FLASH DRIVE - COMMISSIONING USERS

1.Main Menu>>4.View Events>>4.Dump Log to USB

From the 'View Events' menu select '4-Dump Log to USB'. Insert a USB flash drive into the USB port on the processor board. Once connected; press Enter to dump the log to the USB drive. The log will be saved under the filename: 'ELOG0001'. Subsequent log dumps from the same panel will be named 'ELOG0002' and so on.

```
Dumping Event Log
/
Please Wait
```

8.5 - SAVE EVENT LOG - COMMISSIONING USERS

1.Main Menu>>4.View Events>>5.Save Event Log

Select this option to save the event log to the memory card.

8.6 - VIEW SAVED LOG - COMMISSIONING USERS

1.Main Menu>>4.View Events>>6.View Saved Log

Select this option to view a saved event log from the memory card.

8.7 - VIEW SHUTDOWN LOG - COMMISSIONING USERS

1.Main Menu>>4.View Events>>7.Shutdown Log>>1.View Log

If the panel has lost power use this option to view the event log information once power is restored.

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VIEW THE LOCAL VERIFY INFORMATION FOR ALL DEVICES - COMMISSIONING USERS

1.Main Menu>>5.Verify Table>>1.View Table>>3.View System>>1.View Local

This will display the local information for each device. The strengths shown are between the device and the antenna to which it is assigned.

VIEW THE VERIFY INFORMATION FOR THE WHOLE SYSTEM - COMMISSIONING USERS

1.Main Menu>>5.Verify Table>>1.View Table>>3.View System>>2.View All

Allows the user to select a panel or antenna and see the count and RSSI values for any device.

9.3 - CLEAR THE VERIFY INFORMATION FOR A SINGLE DEVICE - SERVICE AND COMMISSIONING USERS

1.Main Menu>>5.Verify Table>>2.Clear Table>>1.Clear One Device

It is often necessary to clear the verify table. If devices have been moved around the building or devices have been replaced, then any historical information needs to be deleted and any new information recorded. Use the cursor keys to select which device to clear, and press **Enter** to confirm

Select Device 001 ↓
SOUNDER
Use ← → keys

CLEAR THE COMPLETE VERIFY TABLE - SERVICE AND COMMISSIONING USERS

1.Main Menu>>5.Verify Table>>2.Clear Table>>2.Clear All

This option will clear the verify information for all devices on the system. Press **Enter** to confirm

9.4 - DUMP THE VERIFY TABLE TO A USB FLASH DRIVE - COMMISSIONING USERS

1.Main Menu>>5.Verify Table>>3.Dump Table to USB

It is advisable after commissioning is complete and at least once a year as part of routine service to record the verify information for the system. The easiest way to do this is to dump the information to a USB flash drive and record this on a disk or print out a copy. The filename will be saved as 'VTAB0001' and for each successive dump the file number will be incremented for this panel. Repeater panels can dump the verify table to USB by inserting a flash drive and pressing the 'Dump Verify Table' button inside the door.

Insert Flash Drive
ENTER to continue

9.5 - VIEW PANEL TABLE - COMMISSIONING USERS

1.Main Menu>>5.Verify Table>>4.Panel Table

The panel table gives the user the same information as the verify table, but for any panels on the system rather than devices. As with the verify table, users can view a summary of the information or a detailed view; by selecting either '1-View Summary' or '2-View Detailed'. See 9.2 - View Detailed Verify Information for explanations of the readings displayed. Note: panels transmit every 30 seconds, unlike devices which transmit every 60 seconds.

9.6 - CLEAR ONE PANEL - COMMISSIONING USERS

1.Main Menu>>5.Verify Table>>4.Panel Table>>3.Clear One Panel

As with the device verify table, the verify information for a single panel can be cleared. If a panel has been moved the historical verify information for the panel should be cleared, to give an accurate indication of performance in its new location.

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WHAT IS A VERIFY FAULT?

Devices will transmit a verify message (containing device status information) to the main panel every 60 seconds. If these transmissions are not received from the device within the verify period (default is 390 seconds), then a 'verify fault' is generated. The device number, zone and text location will be displayed on the screen. Check the RSSI and max count in the verify table.

WHAT IS A COMMS FAULT?

A comms fault is generated when the control panel has lost communication with another panel on the system. The panel number and text location will be displayed on the screen. To check the signal strength between panels, see **9.5 – Panel Table**.

WHY AREN'T MY DELAYS WORKING?

Check the 'delays active' LED is illuminated. Any programmed delays need to be enabled. The Function key or a keyswitch can be used as a delay toggle to turn delays on or off. See 13.0 – Delays for further information.

15.0 – MAINTENANCE

The AquiWave Wireless Leak Detection system should be maintained in accordance with the regulations and codes appropriate to the country of installation.

WEEKLY ACTIONS

The user should check that the panel indicates normal operation. If any faults exist, they should be recorded and the responsible person or maintenance company should be notified.

QUARTERLY ACTIONS

The user or maintenance engineer should test at least 25% of detectors. The devices tested should be varied so that each device will have been tested at some point in any given 12 month period. The panel battery connections and any relay or input connections should be checked. A visual inspection of the panel should be carried out. Check that there are no outstanding issues in the logbook to be addressed. A lamps test should be carried out and any inactive LEDs reported.

ANNUAL ACTIONS

The maintenance engineer should carry out a complete system test. The panel battery should be tested (see information below) and replaced if necessary. A dump of the verify table and panel table should be taken and analysed for any change to previous records. A visual inspection of the panel should be carried out. A lamps test should be performed and any inactive LEDs reported.

PANEL BATTERY

AT-BU (part no: 3485)
3-5 years expected life (20oC ambient temp)
72 hour standby

The battery may vent hydrogen while being charged. This is normal. For this reason do not install the panel in a sealed enclosure.

AquiWave Wireless Leak Detection System

16.0 - COMPONENT REPLACEMENT

There are no user serviceable parts within the AquiWave panel. Only trained service engineers should carry out the repairs listed below. Contact your installer or Aquilar Technical for further information.

POWER SUPPLY

Before removing the PSU remove the mains fuse from the terminal block and disconnect the battery. The display should be off and no LEDs should be illuminated; inside or outside the panel. Unplug the PSU connector on the AquiWave processor board (see diagram on page 8). Remove the live, earth and neutral wires that run from the terminal block to the PSU. Undo the two M3 nuts that secure the PSU to the panel chassis and remove the PSU. Fit the replacement PSU and secure with the two M3 nuts. Plug the connector back into the main processor board and reconnect the live, earth and neutral wires to the terminal block. Insert the mains fuse into the terminal block and wait until the panel has powered up before reconnecting the battery.

DISPLAY BOARD

Power down the panel by disconnecting the battery and removing the mains fuse from the terminal block. Unplug the ribbon cable from the display board and remove the 5 screws holding it in place. Once the new display board has been screwed into place, fit the ribbon cable and apply power to the panel. Once the panel has powered up, reconnect the battery.

PROCESSOR BOARD

Power down the panel by disconnecting the battery and removing the mains fuse from the terminal block. Unplug the ribbon cable connecting the display and processor boards. Unscrew the antenna connector and unplug the PSU connector. Undo the terminal blocks used to connect any external equipment from the panel relays, inputs, sounder circuits and

RS485 terminals. The board is held in place by 4 push pins. Press the tab into the middle of the pin and pull upward gently on the board to release each corner, until the board can be removed from the chassis. The replacement board can simply be pushed down onto the pins until each corner clicks into place. Reconnect all wiring before fitting the mains fuse to the terminal block. Once the panel has powered up, reconnect the battery.

FUSES

This panel uses 5 x 250V 500mA and 1 x 250V 3.15A fuses.

