THE SCIENCE ACR OF SURVIVAL

ResQLink AIS

PERSONAL LOCATOR BEACON WITH AIS TECHNOLOGY

USER MANUAL

© 2022 ACR Electronics

The technical data, information and illustrations contained in this manual were believed to be correct at the time of print. ACR Electronics reserve the right to change specifications and other information contained in this manual as part of our continual improvement process.

No part of this manual may be reproduced, stored in a retrieval system or transmitted in any form, electronic or otherwise, without the prior permission of ACR Electronics.

No liability can be accepted for any inaccuracies or omissions in this manual.

⚠ IN CASE OF EMERGENCY ⚠

Use only in situations of grave and imminent danger

MANUAL ACTIVATION

Take great care to keep well clear of eyes and face as the antenna will be released very quickly. Keep at least 30cm (12") clear to avoid possible injury.

- **Following activation ensure the antenna is fully released and the unit has the best possible view of the sky for optimal performance.**

- **If the strobe light does not start flashing, manually switch the ResQLink AIS on by pressing the ON Key**

- **Always turn off the ResQLink AIS immediately after you have been rescued to avoid interference with other users.**

- **To turn off the beacon press and hold the TEST/OFF button until the red LED flashes twice.**

1. ABOUT YOUR RESQLINK AIS 5

1.1 Cospas-Sarsat System 5
1.2 Return Link Service 5
1.3 AIS System 5
1.4 Introduction 6
1.5 Exposure to RF Energy 6
1.6 Warnings 6
1.7 What's in the box 7
1.8 Spares and Accessories 8
1.9 NFC and Mobile App. 8
1.10 ResQLink AIS Overview 9

2. OPERATION 10

2.1 Activation when installed in a life jacket 10
2.2 Manual activation 10
2.3 Optical indications on activation 11
2.4 Deactivation 11
2.5 AIS message reception 12
2.6 Rewinding the antenna 12
2.7 False Alerts 12

3. TESTING 12

3.1 Functional test 13
3.2 GNSS Test 14

4. BEACON REGISTRATION 15

4.1 Advice to owners of Personal Locator Beacons (PLBs). 15
4.2 Country Specific Registration information 15

5. LIFE JACKET INSTALLATION 16

5.1 Remove the Activation Slider 17
5.2 Securing the Activation System 17
5.3 Attach the tape to the Activation Slider 18
5.4 Insert the Activation Slider 19
5.5 Attach the Oral Tube bracket to the Oral Tube 20

6. BEACON CONFIGURATION 22

6.1 Pre-configured Beacons 22

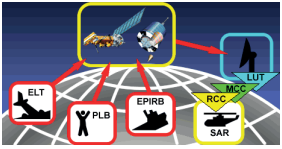
7. APPENDIX 22

7.1 Maintenance and Troubleshooting 22
7.2 Batteries 22
7.3 Decommissioning and Disposal 23
7.4 Transport 23
7.5 Specifications 24
7.6 Approvals 25
7.7 Warranty Information 26

8. YOUR BEACON DETAILS 27

1. ABOUT YOUR RESQLINK AIS

1.1 Cospas-Sarsat System



The basic Cospas-Sarsat concept is illustrated in the adjacent figure. The System is composed of:

- distress radio beacons (ELTs for aviation use, EPIRBs for maritime use, and PLBs for personal use) which transmit signals during distress situations
- instruments on board satellites in geostationary and low-altitude Earth orbits which detect the signals transmitted by distress radio beacons
- ground receiving stations, referred to as Local Users Terminals (LUTs), which receive and process the satellite downlink signal to generate distress alerts
- Mission Control Centers (MCCs) which receive alerts produced by LUTs and forward them to Rescue Coordination Centers (RCCs), Search and Rescue Points Of Contacts (SPOCs) or other MCCs

The Cospas-Sarsat System includes two types of satellites:

- satellites in low-altitude Earth orbit (LEO) which form the LEOSAR System
- satellites in geostationary Earth orbit (GEO) which form the GEOSAR System

The future Cospas-Sarsat System will include a new type of satellite in the medium-altitude Earth orbit (MEO) which will form the MEOSAR System. The ResqLink AIS is fully compatible with the new MEOSAR satellites.

1.2 Return Link Service

The Galileo Return Link Service (RLS) is a free-of-charge global service available to Cospas-Sarsat RLS compatible beacons. The RLS feature is an indication on the PLB3 that confirms to the User that the distress signal from the PLB3 has been localised by the Cospas-Sarsat system and is being sent to the SAR authorities. It does NOT mean that a search and rescue mission has been launched, but only confirms that the distress alert has been received by the Cospas-Sarsat system and is being routed to the appropriate SAR agencies. The RLS aims to send an acknowledgment to the beacon within 30 minutes following activation (the response may not be received by the beacon for significantly longer). RLS is an optional function and may not be permitted in all countries. The full RLS specification can be found here:
https://gsc-europa.eu/sites/default/files/sites/all/files/Galileo-SAR-SDD.pdf

1.3 AIS System

AIS systems operate on VHF radio bands and transceivers are fitted to all commercial shipping and an ever growing number of recreational vessels globally. Shortly after activation an AIS Man Over Board device will activate an alarm on all AIS equipped vessels within VHF range alerting them to the fact that a person is in the water needing assistance. Often it is a vessel in the close vicinity of an incident that is able to react and effect a rescue quicker than the emergency services.

Emergency service craft are fitted with AIS receivers allowing them to pinpoint a casualty in the water more precisely than any other system.

1.4 Introduction

The ResQLink range of products provides the user with the latest technology specifically designed for compact size and ease of operation. In the event that you fall overboard, the ResQLink AIS is intended to alert your vessel and plot your location on a suitable AIS equipped chart plotter on other vessels within VHF radio range. At the same time the ResQLink AIS will alert the 406MHz Cospas-Sarsat satellite global emergency system. Equipped with the latest RLS technology, in the event of activation, the ResQLink AIS will indicate that the emergency signal has been received via the satellite system and passed to land based Mission Control Centres to initiate appropriate rescue services.

The Galileo Return Link Service allows people in distress to receive automatic acknowledgement that their signal has been received.

1.5 Exposure to RF Energy

This product has been evaluated for compliance with the FCC RF exposure limits given in CFR 47 part 1.307(b) at a distance of greater than 5cm and complies with EN62479 (EU) and RSS-102 (Canada).

1.6 Warnings

Take great care to keep well clear of eyes and face as the antenna will be released very quickly. Keep at least 30cm (12") clear to avoid possible injury.

Contains Lithium batteries:
- **store between -30°C (-22°F) to+70°C (+158°F)**
- **DO NOT ATTEMPT TO REPLACE THE BATTERIES YOURSELF unauthorised opening and battery replacement may put your life at risk.**
- **do not short circuit, incinerate or recharge.**

The battery in your ResQLink AIS should be replaced immediately if it has been activated, or if the test indicator shows the battery as "used", or if the expiry date marked on the unit has been exceeded.

Battery replacement must be carried out at an ACR Electronics authorised battery replacement centre using manufacturer supplied battery components.

THE ResQLink AIS WILL NOT FLOAT and should be attached securely to a life jacket when fitted. The ResQLink AIS is not designed to be operated floating in water. Hold clear of water when activated.

This equipment is intended for emergency use only and it should not be used for routine tracking of persons or property, including routine tracking of divers.

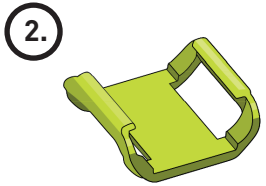
Operate the ResQLink AIS in open space rather than operating inside a life raft or under any similar cover or canopy.

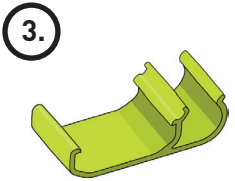
If self-test is performed more frequently than once a month, then battery life may be reduced.

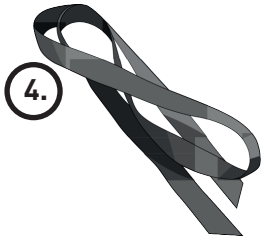
It is a legal requirement to register your ResQLink AIS with your National Authority.

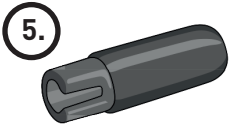
1.7 What's in the box

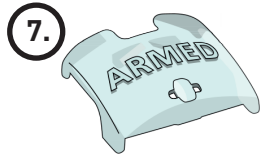
1. ResQLink AIS
2. Belt/ Webbing attachment bracket
3. Oral Tube attachment bracket
4. Activation Tape
5. Antenna Rewind Tool
6. Attachment Lanyard
7. Activation Slider (Armed) Cover
8. Product Documentation and Quick Start Guide











1.8 Spares and Accessories

1.*	9649	Floatation Pouch	
2.	9646	Fittings Kit	

* The floatation pouch is supplied permanently attached to units sold in Australia and New Zealand to comply with local regulation

1.9 NFC and Mobile App.

The ResQLink AIS is capable of connection to devices using Near Field Communication. NFC technology allows communication between two electronic devices over a distance of 4cm (1.5") or less. The benefit of using NFC in the ResQLink AIS is that the power used for communication comes from the mobile device and not the beacon.

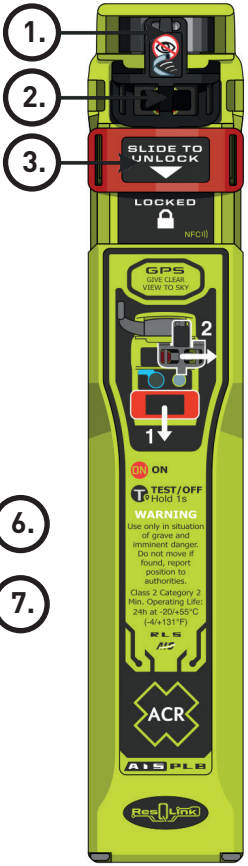
The ACR Electronics mobile App. allow a user to access the ResQLink AIS and see the programmed details and the latest test results giving a clear indication of the beacons condition.

Download the App. here: Android iOS

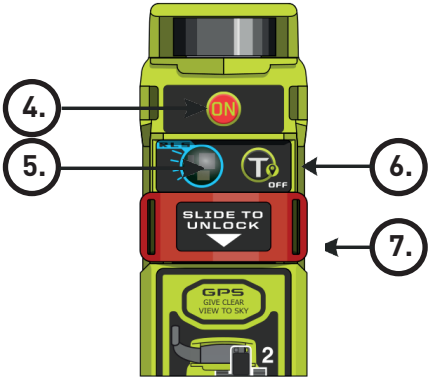
To use the App. touch your mobile device to the front of the ResQLink AIS where you see "NFC".

1.10 ResQLink AIS Overview

1. Antenna behind activation slide
2. Activation Slide
3. Arming Slide (shown in safe position)
4. ON Key (for manual activation)
5. Strobe and Indicator LED
6. TEST/OFF Key
7. Arming Slide (in armed position)



ResQLink AIS Controls shown in activated condition



2. OPERATION

⚠ **WARNING: Use only in situations of grave and imminent danger. Misuse may result in a severe penalty.**

Hold the ResQLink AIS with the antenna standing vertically. Keep the area marked 'DO NOT OBSTRUCT' below the red arming slider in clear view of the sky. Covering this area will interfere with the GNSS reception and position accuracy.

When left on land ensure the antenna is vertical and the area marked 'DO NOT OBSTRUCT' below the red arming slider in clear view of the sky.

When operated in a life raft hold the ResQLink AIS outside of the canopy in clear view of the sky.

When fitted to an inflated life jacket being worn by a person in the water the ResQLink AIS will naturally tend to lay on top of the jacket with the antenna vertical. Should the ResQLink AIS become dislodged from the jacket's oral tube it should be repositioned.

2.1 Activation when installed in a life jacket

When correctly packed in a life jacket the ResQLink AIS will activate when the life jacket inflates. Should the life jacket fail to fully inflate, it may be necessary to assist the Activation Slide by pulling on the Activation Tape to fully release the Activation Slide.

2.2 Manual activation

⚠ **Only activate your ResQLink AIS in situations requiring assistance in an emergency. Deliberate misuse of your ResQLink AIS may result in a fine.**

- **To manually activate your ResQLink AIS in an emergency:**
  Slide the red Arming Slide down.
  Slide the grey Activation Slide to the Left or Right.

Take great care to keep well clear of eyes and face as the antenna will be released very quickly. Keep at least 30cm (12") clear to avoid possible injury.

⚠ **If the ResQLink AIS fails to activate when the slide is removed, press the ON Key until the green LED (blue if RLS is enabled) illuminates for 1 second and starts flashing. Release the key.**

2.3 Optical indications on activation

- The green LED will illuminate (blue if RLS is enabled) for 1 second.
- The strobe light will start flashing.
- Within 30 seconds of activation, the indicator LED will flash indicating AIS transmission.
- Within 1 minute of activation, the indicator LED will flash a quick burst of 5 indicating 406MHz transmission.

2.3.1 LED Indications with RLS Enabled

LED	When	Transmit	GNSS	RLS
(x1)	Every 5 s		Searching	
(x3)	Once		Fix acquired	
(x5)	At transmit	406MHz	No Fix	Request sent
(x5)	At transmit	406MHz	Fix acquired	Request sent
(x8)	At transmit*	AIS	No Fix	
(x8)	At transmit*	AIS	Fix acquired	
(x1)	Every 2.5 s**	121MHz		Reply not received
(x1)	Every 2.5 s**	121MHz		Reply received
(x1)	Every 2.5 s			

2.3.2 LED Indications for units configured with non-RLS Protocol

LED	When	Transmit	GNSS
(x1)	Every 5 s		Searching
(x3)	Once		Fix acquired
(x5)	At transmit	406MHz	No Fix
(x5)	At transmit	406MHz	Fix acquired
(x8)	At transmit*	AIS	No Fix
(x8)	At transmit*	AIS	Fix acquired
(x1)	Every 2.5 s**	121MHz	
(x1)	Every 2.5 s		

NOTE:
Non-RLS Protocol is usually country specific and is not a user changeable function.

* The AIS transmissions will show as 8 flashes (1 every 2 seconds) as a sequence repeated once every minute

** The 121MHz Homer will not transmit until after the first 406MHz transmission.

2.4 Deactivation

To deactivate your ResQLink AIS after use or if it is accidentally activated, press the TEST/OFF Key until the LED flashes red twice, then release. As long as it is turned off within 30 seconds of activation there is no requirement to contact the authorities (see section 2.7 False Alerts).

2.5 AIS message reception

The method in which an AIS message is displayed will depend on the reception equipment being used. AIS enabled plotters will display a target either as a ship or SART target with the ResQLink AIS's preprogrammed MMSI number that identifies it as an AIS Location device.

2.6 Rewinding the antenna

⚠ **If the ResQLink AIS is activated during this process, turn it off by pressing the TEST/OFF Key until the red LED flashes twice.**

⚠ **Rotating the antenna rewind tool in the clockwise direction will damage the antenna**

- Use the Antenna Rewind tool supplied in the box.
- Place the moulded cap of the antenna into the space
- Pass the tool through the round hole in the top of the ResQLink AIS and place over the antenna just behind the cap.
- Rotate the tool anti-clockwise until the antenna is fully wound.
- Hold the tool keeping the antenna coiled
  Do not remove the tool until the slider is in place
- Push the Activation Slider into place
- Release and remove the rewind tool to allow the antenna to rest behind the Activation Slider

NOTE: Refer to section 5 when installing in a life jacket regarding attachment of the Activation Tape to the Slider.

2.7 False Alerts

If the ResQLink AIS is accidentally activated, it should be immediately turned off. If active for more than 30 seconds the nearest Coast Guard Centre or Rescue Coordination Centre should be contacted to explain that the ResQLink AIS has been activated in error and there is no follow up rescue actions required. See inside the back cover for information required in the event of a false activation. If appropriate make a call on the VHF radio to announce the same information.
The information that should be reported includes-

- the ResQLink AIS 15-Hex ID;
- date, time, duration and cause of activation; and
- location at time of deactivation.

Note: In the event of a false activation in the USA call toll free: 1-800-851-3051

3. TESTING

Routine testing of your ResQLink AIS once a month is recommended to ensure it is in good working order. Follow the guidance notes below on the frequency that tests should be carried out. Remember that each test will reduce the battery capacity slightly and reduce the operation time of your ResQLink AIS during an emergency.

Should a test fail it is advised to repeat the test to confirm failure before returning the ResQLink AIS to ACR Electronics or an approved service agent.

⚠ **When carrying out any test the antenna should be extended.**
If the ResQLink AIS activates during the removal of the antenna retainer, press and hold the Test/Off button until the LED flashes red twice to deactivate.
See section 2.6 above for antenna rewind instructions.

3.1 Functional test

To test your ResQLink AIS is functioning correctly, press and hold the TEST/OFF Key. The LED will illuminate red to indicate the key has been pressed, then start flashing. Release the TEST Key now. After a short pause the strobe will flash and the indicator LED will produce a flash sequence.

The flash sequence indicates the total number of hours that the battery has already been in use, up to the time that the test was initiated.

3.1.1 LED Indications with RLS Enabled

No. of Flashes	Functional Test Pass	Fail
1	0 to 59min 1hr to 1hr 59min	121.5MHz homer
2	2hrs to 3hrs 59min	406MHz power
3	4hrs to 5hrs 59min	AIS signal
4	6hrs to 7hrs 59min	AIS Power
5	8hrs to 9hrs 59min	Battery failure
6	10hrs +	No GNSS

3.1.2 LED Indications for units configured with non-RLS Protocol

No. of Flashes	Functional Test Pass	Fail
1	0 to 59min 1hr to 1hr 59min	121.5MHz homer
2	2hrs to 3hrs 59min	406MHz power
3	4hrs to 5hrs 59min	AIS signal
4	6hrs to 7hrs 59min	AIS Power
5	8hrs to 9hrs 59min	Battery failure
6	10hrs +	No GNSS

⚠ **Because this test transmits a short burst on the aircraft distress frequency of 121.5MHz, please only carry out this test in the first 5 minutes of each hour.**

⚠ **The battery must be replaced either prior to the expiry date shown on the rear label or after the ResQLink AIS has been activated.**

⚠ **If, during a self test, the LED flashes magenta or amber the ResQLink AIS may not have sufficient energy to operate for the specified 24-hour period. Battery replacement is recommended.**

NOTE: **The flash sequence will be repeated after a short pause and then the ResQLink AIS will automatically power off.**

NOTE: **A single AIS transmission will occur during a Functional Test indicating "MOB TEST" on AIS receivers within range.**

3.2 GNSS Test

⚠ **This test should only be performed where the ResQLink AIS has a clear and unobstructed view of the sky. This is required to allow the GNSS receiver to acquire a signal from sufficient satellites to allow it to determine a position. Ensure the area marked "GNSS Antenna" is not obstructed.**

It is recommended that a GNSS test is carried out at least once every six months to ensure correct operation of the ResQLink AIS.

Press and hold the TEST key. The LED will illuminate red to indicate the key has been pressed, then start flashing. Shortly after, the LED will cease flashing and become a steady red light. Release the TEST Key now.

During the GNSS test the LED will repeat a short green flash until either a position fix is obtained or the GNSS test fails.

A successful test will be indicated by long red followed by a number of green LED flashes and an unsuccessful test will be indicated by a number of red LED flashes. The number of flashes indicates the number of GNSS tests remaining (e.g. 7 flashes = 7 tests remaining).

The test result flashes will be repeated after 2 seconds.

If there are 10 or more tests remaining then the LED will flash 10 times only (repeated).

The ResQLink AIS has the capacity to carry out 60 GNSS tests within the lifetime of the battery.

If there are no tests remaining immediately after the current test, the LED will flash green or red rapidly for three seconds (not repeated) depending on whether the GNSS test was successful or not, respectively.

When there are no tests remaining, the LED will flash red rapidly for three seconds (not repeated).

The test can be ended at any time by holding the TEST key for three seconds.

For further information regarding Self Test and Self Test history use the ACR Electronics App. to connect to your ResQLink AIS using Near Field Communication (NFC).

GET THE MOBILE APP.:

Android

iOS

4. BEACON REGISTRATION

⚠ **It is the owner's responsibility to register this beacon with the appropriate National Authority before operation.**

The preferred method of registration is online but documentation is provided within the packaging with information regarding registration with the relevant body to comply with the configuration of the beacon.

4.1 Advice to owners of Personal Locator Beacons (PLBs).

Registration of 406 MHz satellite PLBs:

- Registration with the National Authority is **mandatory** due to the global alerting system.
- The information provided in the registration card is used for rescue purposes only.
- See below for details on how to register your beacon upon completion of the sales transaction. Before a beacon enters service, it **must** be registered with the National Authority.
- If the beacon is being transferred to a new owner, the current owner needs to inform the National Authority of the name and address of the new owner.
- The subsequent owner of the beacon is required to provide the National Authority with the information as shown in the owner registration card.
- This obligation transfers to all subsequent owners.
- Some national authorities require periodic renewal. It is the owner's responsibility to ensure registration details are current and valid.

4.2 Country Specific Registration information

USA

NOAA-Sarsat, USMCC, NSOF, E/SPO53, 1315 East West Hwy, Silver Spring, MD, 20910
Fax: (1.301) 8174565, Tel: (1.301) 8174515 (1.888) 2127283
Email: beacon.registration@noaa.gov, Web: www.beaconregistration.noaa.gov/

CANADA

Beacon Registry, CMCC Trenton, 8 Wing Trenton, Box 1000 Stn Forces, Astra, Ontario, K0K 3W0
Fax: +1 877 406 3298, Tel: +1 800 211 8107 / +1 613 965 7265
Email: cbr@sarnet.dnd.ca, Web: www.cbr-rcb.ca

UK

Distress & Security Beacon Registry, Pendennis Point, Castle Drive, Falmouth, TR11 4WZ
Fax: +44 (0) 13 2631 9264, Tel: +44 (0) 20 3817 2006
Email: ukbeacons@mcga.gov.uk, Web: www.gov.uk/406beacon

AUSTRALIA

Australian Maritime Safety Authority, GPO Box 2181, Canberra, Australia, ACT 2601
Fax: 1800 406 329 (+61 2 9332 6323 (Int.)), Tel: 1800 406 406 (+61 2 6279 5766 (Int.)
Email: ausbeacon@amsa.gov.au, Web: www.amsa.gov.au/beacons

NEW ZEALAND

JRCC NZ, Avalon Studios, Percy Cameron Street, P.O. Box 30050, Lower Hutt, 5040
Fax: +64 4 577 8041, Tel: +64 4 577 8030 +64 4 577 8034
Email: 406registry@maritimenz.govt.nz, Web: www.beacons.org.nz

For other countries visit: www.406registration.com/countriessupported.aspx

5. LIFE JACKET INSTALLATION

If your ResQLink AIS is not already installed into a life jacket, please follow the instructions below carefully.

⚠ **The following guide is a generic guide to installation of the ResQLink AIS to a life jacket. Although the ResQLink AIS is designed to fit most life jackets, always check with your Life Jacket manufacturer to ensure there are no special fixing instructions for that model.**

⚠ **When fitted to a life jacket, to prevent accidental activation, please ensure the clear cover is fitted over the grey slider as described in Section 5 with enough free length of the activation tape so it will not pull on the slider during normal activity of the life jacket. When carrying the ResQLink AIS please ensure the Arming Slider is in the up position.**

⚠ **For installation to life jackets where the bladder is permanently attached to the cover, please see the separate instruction sheet, available from the ACR Electronics website.**

⚠ **Once completed the installation should be tested to ensure correct activation takes place. Refer to the life jacket manufacturer for the manual inflation process.**

The ResQLink AIS is activated when the activation slider is pulled from the front of the device by the tension in the tape created by the inflation of a life jacket. Unless the life jacket inflates the ResQLink AIS will not activate.

To activate the ResQLink AIS the activation tape must be wrapped around a substantial part of the life jacket bladder. Many modern life jackets taper towards the neck for comfort and support in the water and correct installation of the ResQLink AIS must ensure that the tape is around the larger part of the bladder rather than a tapered section where expansion may not be sufficient.

Fitting the Oral Tube bracket as low down the Oral Tube as possible usually assists in ensuring the tape is passed around the main section of bladder.

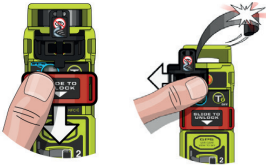
The diagrams above assume that **the life jacket inflation tube is on the left hand side of the jacket (as viewed from the front).**
If the oral tube is on the right hand side then the ResQLink AIS should be fitted on the other side of the tube.

5.1 Remove the Activation Slider

⚠ **The ResQLink AIS will turn on during this process, make sure it is turned off by pressing and holding the TEST/OFF Key until the LED flashes red twice and release.**

Take great care to keep well clear of eyes and face as the antenna will be released very quickly. Keep at least 30cm (12") clear to avoid possible injury.

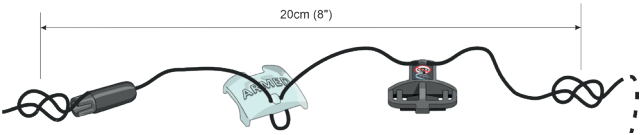
- Slide the red arming tab down.
- Slide the grey slide sideways off the unit.



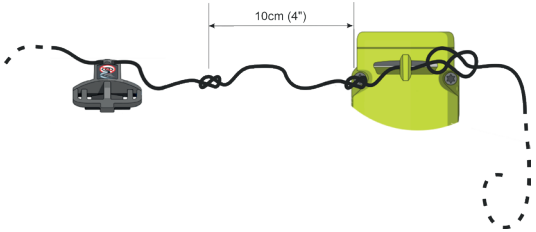
⚠ **Turn off the ResQLink AIS by pressing the TEST/OFF Key until the LED flashes red twice and release.**

5.2 Securing the Activation System

1. To prevent accidental loss, use the provided length of cord to tether the Antenna Rewind tool, Activation Slider and Protective cover. Attaching these parts will prevent them falling into the water upon activation and ensure they are available for re-use.
2. Tie a knot in one end of the cord and pass the other end through the Rewind tool, Activation Cover and Activation Slider tying another knot as shown below.



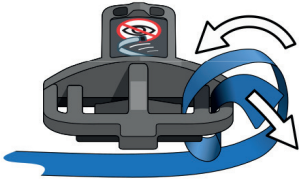
3. Pass the remaining cord through the attachment point on the rear of the ResQLink AIS Antenna housing and tie one more knot to secure



5.3 Attach the tape to the Activation Slider

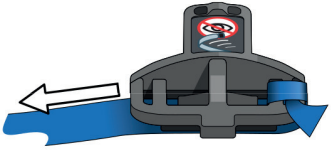
1. Pass the Activation Tape down through the inner slot in the Activation Slider

2. Pass the Activation Tape up through the outer slot in the Activation Slider



3. Pull the tape through the slider to leave approximately 5cm (2") free at the end.

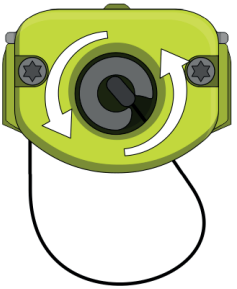
4. Pass the other end of the Activation Tape across the underside of the Activation Slider and pull tight to trap the tape to the slider.



5.4 Insert the Activation Slider

⚠ **The ResQLink AIS will turn on during this process. Make sure it is turned off as soon as the Activation Slider is in place by pressing and holding the TEST/OFF Key until the LED flashes red twice and release.**

Use the antenna rewind tool supplied in the box



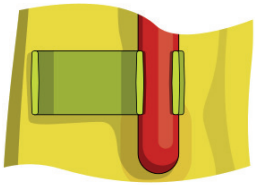
1. Place the antenna end cap into the recess
2. Pass the tool through the hole in the top of the ResQLink AIS and place over the antenna just behind the end cap
3. Rotate the tool anticlockwise until fully wound
   Hold the tool keeping the antenna coiled
   Do not remove the tool until the slider is in place

4. Push the Activation Slider into place ensuring the tape lies flat between the slider and the ResQLink AIS
5. Release and remove the rewind tool to allow the antenna to rest behind the Activation Slider

⚠ **Ensure the ResQLink AIS is turned off by pressing the TEST/OFF Key for 2 seconds.**

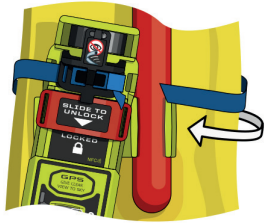
⚠ **Slide the red Arming Slide upwards to lock the Antenna Slider in place.**

5.5 Attach the Oral Tube bracket to the Oral Tube



1. Place the Oral Tube bracket as low down the oral tube as possible

2. If there are whistles and lights fastened to the Oral Tube then place them above the ResQLink AIS bracket or attach them elsewhere to the life jacket,



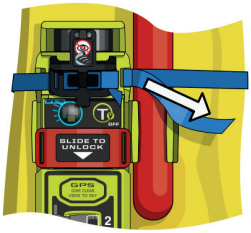
3. Rest the ResQLink AIS on the Oral Tube and pass the free end of the tape around the back of the life jacket bladder taking care not to twist the tape.

4. Pass the tape over the oral tube

5. Feed the tape into the rearmost slot in the side of the ResQLink AIS so that it emerges from the front slot

6. Loop the tape around and into the foremost slot on the side of the ResQLink AIS so that it emerges alongside the inserted tape

7. Pull approximately 25mm (1") of tape through the slots in the ResQLink AIS

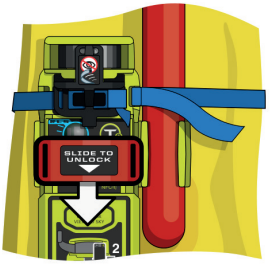


8. Clip the ResQLink AIS into the Oral Tube bracket taking care not to trap any loose tape

9. Pull the tape tight with the free end of the tape so that the bladder is free to inflate and remains folded in accordance with the life jacket manufacturer's instructions. Do not over tighten the tape

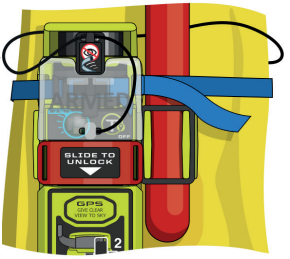
10. Test for tightness by ensuring you can freely insert a finger in between the tape and the bladder.

11. Once the ResQLink AIS is fully attached to the life jacket, you are ready to arm the device, by sliding the red arming tab down.



⚠ **Failure to arm the ResQLink AIS will inhibit the auto activation of the ResQLink AIS when needed and will STOP the life jacket inflating correctly.**

12. A protective cover is provided to protect the ResQLink AIS from accidental activation if the grey slide is knocked or otherwise moved under the life jacket cover. After arming the ResQLink AIS, fit the protective cover, then clip the protective cover into the slots immediately adjacent to the arming slider. Make sure that both sides of the cover are clipped in place.



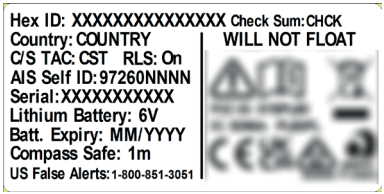
⚠ **Ensure the ResQLink AIS is securely tied to a fixed point on the life jacket that will NOT inhibit inflation.**

Repack the bladder into the cover, ensuring the bladder does not get trapped in the fastening mechanism or tangled up.

6. BEACON CONFIGURATION

6.1 Pre-configured Beacons

ResQLink AISs are supplied to the user already configured. The configuration details will be clearly marked on the product labels and the packaging. In all cases the user must register the ResQLink AIS with the relevant National Authority using the information supplied on these labels.



Configuration Details

Beacon unique Identification Number
Country for which the beacon is programmed
Cospas Sarsat TAC Number
RLS On (Enabled) / Off (Disabled)
AIS self identification number
Unit Serial Number
Battery Expiry Date

7. APPENDIX

7.1 Maintenance and Troubleshooting

Your ResQLink AIS will require little maintenance except periodic cleaning, if required. Always use a damp cloth to clean the case and dry thoroughly.

⚠ **Do not use solvents or other cleaning fluids as this may cause the plastics to deteriorate.**

⚠ **Ensure the antenna is free to unwind.**

⚠ **Should the ResQLink AIS turn on during cleaning, make sure it is turned off as quickly as possible by pressing and holding the TEST/OFF Key until the LED flashes red twice and release.**

7.2 Batteries

The ResQLink AIS contains Lithium iron batteries for long operating life. The battery must be replaced either prior to the expiry date shown on the rear label or after the ResQLink AIS has been used, even if only activated for a short period of time. The battery condition can be determined by carrying out the Self Test procedure shown in section 3 of this manual.

⚠ **Battery replacement must be carried out at an ACR Electronics authorised battery replacement centre using manufacturer supplied battery components.**

⚠ **DO NOT ATTEMPT TO REPLACE THE BATTERIES YOURSELF**
The ResQLink AIS is a life saving device and unauthorised opening and battery replacement may cause the unit to fail upon activation putting your life a risk.

⚠ **Store between -30°C (-22°F) to+70°C (+158°F)**

⚠ **Do not short circuit, incinerate or recharge.**

7.3 Decommissioning and Disposal

Care should be taken when disposing of your ResQLink AIS when it is no longer required. It is recommended to remove the battery from the ResQLink AIS by removing the case bottom. It may also be necessary to remove the rear case to facilitate removal.

⚠ **The ResQLink AIS is not user serviceable and opening the case will invalidate the warranty.**

⚠ **Once removed the battery and other components of the product should be disposed of following guidelines and laws applicable within the relevant country.**

⚠ **Do not short circuit, incinerate or recharge the battery.**

⚠ **Incorrect handling and disposal of batteries may lead to leakage and explosion.**

It is the owner's responsibility to inform the National Authority under which the beacon was registered that the beacon has been decommissioned.

7.4 Transport

When shipping your ResQLink AIS the following guidance and regulations should be followed, but you are advised to contact your nearest battery replacement centre or ACR Electronics prior to shipping as regulations may have changed.

- Always pack your ResQLink AIS securely in a stout cardboard carton. ACR Electronics advises that you keep the original packaging in case of return for service.
- For surface transport the ResQLink AIS may be shipped under Special Provision 188.
- For air transport the ResQLink AIS should be shipped as category UN3091 and packed under IATA packing instruction 970 section II. If you are hand carrying your ResQLink AIS on an aircraft please contact you airline for advice.
- Consult the manufacturer's instructions for information on carrying a life jacket in your luggage on board aircraft.

Safety Data sheets for all ACR Electronics products can be found on the ACR Electronics website:

www.acrartex.com/products/resqlink-ais

7.5 Specifications

406MHz Transmitter	
Transmit Power	5W Typical
Frequency	406.031 MHz ±1KHz
Modulation	Phase ±1.1 Radians (16K0G1D)
Encoding	Biphase L
Rate	400 bps
AIS Transmitter	
Transmit Power (EIRP)	1Watt ±3dB
Frequency	161.975/162.025MHz ±500Hz
Baud rate	9600baud
Synchronisation	UTC
Messages	Message 1 (Position), Message 14 (Status)
Repetition interval	8 messages/minute Message 14 sent twice every 4 minutes
121.5MHz Transmitter	
Transmit Power (PERP)	25-100mW
Frequency	121.5 MHz
Modulation	Swept Tone AM (3K20A3X)
Modulation Factor	0.85-1.0
Modulation Duty Cycle	>35%
Frequency Stability	±50ppm
Duty Cycle	98%
Visible Light Strobe	
Light Type	High Intensity LED
Light Colour	White
Intensity	>1 candela
Flash Rate	20-30 per minute
Infra Red Strobe	
Light Type	IR LED
Light Colour	850nm
Intensity	7.5mW/sr
Flash Rate	20-30 per minute
Battery	
Type	Lithium/Iron Disulfide (Li/FeS2)
Operating lifetime	>24hours @ -20°C (-4°F)
Lithium Metal Weight (for air transport)	<2g per battery
Replacement Interval	6 years from date of manufacture or 5 years from being placed into service
GNSS Receiver	
Satellite Channels	72 acquisition
Sensitivity	-167dBm
Cold Start Re-acquisition	-148dBm
GPS Antenna	Microstrip Patch
Environmental	
Temperature range (operational)	Class 2 -20°C (-4°F) to +55°C (+131°F)
Temperature range (storage)	Class 2 -30°C (-22°F) to+70°C (+158°F)
Damp Heat (humidity)	40°C (104°F) at 93%
Drop (hard surface)	1m : 6 sides)
Water immersion	>10m (1.0bar) : >60minutes
Thermal Shock	45° into 100mm of water : >1hour

General

Category (Ref RTCM 11010)	2
Class (Ref RTCM 11010)	2
Group (Ref RTCM 11010)	3
Size (Length / Width / Depth)	200mm (7.87") / 36mm (1.41") / 22mm (0.86")
Weight	190g (0.42lbs)

Environmental

Temperature range (operational)	Class 2 -20°C (-4°F) to +55°C (+131°F)
Temperature range (storage)	Class 2 -30°C (-22°F) to+70°C (+158°F)
Damp Heat (humidity)	40°C (104°F) at 93%
Drop (hard surface)	1m : 6 sides]
Water immersion	>10m (1.0bar) : >60minutes
Thermal Shock	45° into 100mm of water : >1hour

General

Category	2
Class	2
Group	3
Size (Length / Width / Depth)	200mm (7.87") / 36mm (1.41") / 22mm (0.86")
Weight	190g (0.42lbs)

7.6 Approvals

7.6.1 USA

The ResQLink AIS is approved for use in the USA under CFR47 part 95K,

7.6.2 Canada

The ResQLink AIS is approved for use in Canada with AIS only under RSS287. PENDING

7.6.3 European Declaration of Conformity

Hereby, ACR Electronics Inc. declares that the radio equipment type ResQLink AIS is in compliance with Directive 2014/53/EU.
See: www.acrartex.com/products/resqlink-ais

Country of Intended Use (The Country of Intended Use table is an EU requirement only)

Austria	✓	Finland	✓	Latvia	✓	Romania	✓
Belgium	✓	France	✓	Lithuania	✓	Slovakia	✓
Bulgaria	✓	Germany	✓	Luxembourg	✓	Slovenia	✓
Cyprus	✓	Greece	✓	Malta	✓	Spain	✓
Czech Republic	✓	Hungary	✓	Netherlands	✓	Sweden	✓
Denmark	✓	Iceland	✓	Poland	✓		
Estonia	✓	Italy	✓	Portugal	✓		

7.6.4 UK

The ResQLink AIS is compliant with UK Radio Equipment Regulation 2017

7.6.5 Australia

The ResQLink AIS is compliant with AS NZS 4208.2 and AS NZS 4869.4 PENDING

7.7 Warranty Information

7.7.1 Limited Warranty

Your ACR Electronics product is warranted against manufacturing defects in materials and workmanship for a period of 2 years from the date of purchase and in accordance with the following conditions.

ACR Electronics will at its discretion, repair or replace faulty product free of charge excluding the cost of shipping. Proof of purchase shall be required in order for a warranty claim to be valid from the original purchaser. All claims shall be made in writing to ACR Electronics or an approved service dealer or distributor.

ACR Electronics shall not be liable to the buyer under the above warranty:

- for any repairs or modifications carried out on the product using parts that are not supplied or approved by the manufacturer ACR Electronics including batteries and for work carried out other than by ACR Electronics or approved service dealers,
- for any part, material or accessory that is not manufactured by ACR Electronics the consumer will be covered by the guarantee / warranty offered to ACR Electronics by the manufacturer or supplier of such a component,
- for product which has not been fully paid for,
- for any product supplied by ACR Electronics to a customer under an alternative warranty or commercial agreement,
- for the cost of shipping product to and from the customer.

The Battery is only warranted until the date of expiry and provided the unit is tested in accordance with the information in the user manual as noted by the electronic witness stored within the product. The following specific item is excluded from this warranty:

- Damage to the antenna

This warranty does not affect your statutory rights.

7.7.2 Extended Warranty

⚠ **ENTER YOUR PRODUCT DETAILS TO GAIN THE EXTENDED WARRANTY PERIOD**

Apply for free at: www.acrartex.com/login

By entering your product details you can add 3 years to the warranty period.

For further assistance please contact our Technical Service Department.
www.acrartex.com/support/

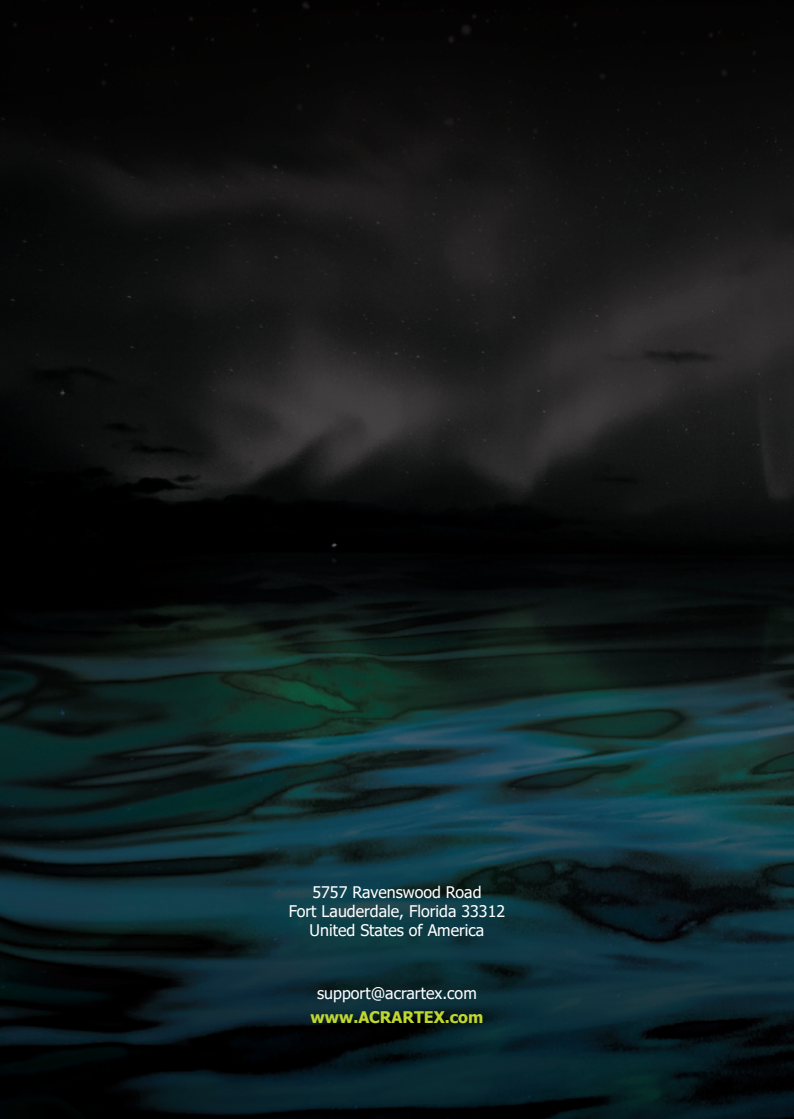
8. YOUR BEACON DETAILS

In the event of a false activation please contact the nearest Coast Guard Centre or Rescue Coordination Centre to explain that the ResQLink AIS has been activated in error and there are no follow up rescue actions required.

Information required is:

- the 15 digit HEX ID (UIN) shown above
- the date, time, duration and cause of activation
- the location at the time of de-activation

ATTACH YOUR REGISTRATION DOCUMENTS HERE FOR SAFE KEEPING



5757 Ravenswood Road
Fort Lauderdale, Florida 33312
United States of America

support@acrartex.com
www.ACRARTEX.com