iriComm 3.0 is developed, designed and manufactured by

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iriComm 3.0

IRIDIUM WATERPROOF COMMUNICATION SYSTEMS APS

IWCS
COMMUNICATION CAN SAVE LIVES
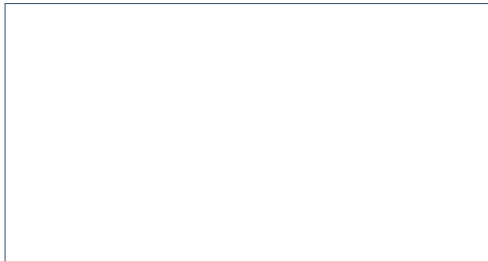
CONGRATULATIONS ON YOUR NEW PRODUCT FROM

IRIDIUM WATERPROOF COMMUNICATION SYSTEMS

iriComm 3.0
WIRED/WIRELESS HEADSET

IWCS HOPE YOU WILL ENJOY THE BENEFITS OF TROUBLE FREE HIGH QUALITY INTERCOM. PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE FIRST USE. IF INSTALLED, OPERATED AND MAINTAINED ACCORDING TO THIS MANUAL, IRICOMM 3.0 WILL BE A RELIABLE PARTNER IN MANY YEARS TO COME.

Thomas B Svenningsen

THOMAS B SVENNINGSEN

CO-FOUNDER OF IWCS

6.4 Declaration of Conformity

DECLARATION OF CONFORMITY

Iridium Waterproof Communication Systems ApS
PORTHUSVEJ 7A
DK-3490 KVISTGAARD
DENMARK

Product type no.:	IR-34-1XXX-XX-XXXXX
Product name:	iriComm3.0 – Wired headset

Product description: iriComm 3.0 is a wired communication headset designed for use in mission-critical and marine environments. iriComm3.0 has a noise-cancelling boom microphone and integrated PTT function (if supported by cabling option). The headset is available in different versions with optional active hear-through function and LED light, GEL ear-pads, for helmet mount or headband etc. iriComm 3.0 wired comes with radio-specific cable termination.

We as manufacturer hereby declare that the products, to which this declaration relates, are in conformity with the Council Directives on the approximation of the laws of the EU Member States relating to the following:

Directives: Radio Equipment Directive 2014/53/EU
                 RoHS Directive 2011/65/EU

and

Standards: RED Directive 2014/53/EU:
                 EN 300 328 V2.1.1 (concerning RED article 3.2)

                 EN 301 489-1 V1.9.2 og EN 301 489-3 V1.6.1 (concerning RED article 3.1.b)

                 EN 60950-1:2006 with A1:2010, A2:2013, A11:2009, A12:2011 and EN
                 62479:2010 (concerning RED article 3.1.a)

                 RoHS Directive 2011/65/EU:
                 EN 50581:2012: Technical documentation for the assessment of electrical and
                 electronic products with respect to the restriction of hazardous substances

Kvistgaard, 2019.03.07

Lars Haugh, CEO

DECLARATION OF CONFORMITY

Iridium Waterproof Communication Systems ApS
PORTHUSVEJ 7A
DK-3490 KVISTGAARD
DENMARK

Product type no.:	IR-34-2XXX-XX-XXXXX
Product name:	iriComm 3.0 – Wireless, waterproof headset

Product description: iriComm 3.0 is a wireless communication headset designed for use in demanding marine environments. The headset provides full-duplex wireless communication to a host system—e.g. an IriSound Intercom system. Remote PTT function is supported using both IWCS and Peltor standards. The headset is available in different versions with optional active hear-through function and LED light, GEL ear-pads, for helmet mount or headband etc.

We as manufacturer hereby declare that the products, to which this declaration relates, are in conformity with the Council Directives on the approximation of the laws of the EU Member States relating to the following:

Directives: Radio Equipment Directive 2014/53/EU
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Kvistgaard, 2019.03.07

Lars Haugh, CEO

IWCS
COMMUNICATION CAN SAVE LIVES

SPECIFICATIONS

Specifications	Wired Headsets	Wireless Headset
Weight	380 g + cable	420 / 480 g (Helmet attachment / Headband)
Bluetooth Class	N/A	Class 1
Battery	Non or 1000 mAh (up to 24h use between charges)	1000 mAh (up to 24h use between charges)
Range	N/A	Up to 100 meters LOS
Volume control	Handled by radio	15 steps, digital
Curly lead - type	Black, flexible Polyurethane (varies based on radio termination)	N/A
Curly lead - length	40/120 cm (varies based on radio termination)	N/A
Curly lead - tension	Max Force 100 N*	
Microphone type	Balanced electret or Dynamic 5/150/300 ohms)	Balanced electret
Boom flexibility	>1000 x 180°bends (max 70 mm bend radius)	
Temperature range	-15 to + 55 degrees Celsius	-15 to + 55 degree Celsius
Waterproof	IPX7, seawater resistant	IPX7, seawater resistant
Power	Non, from radio or built-in battery (depends on variant)	3,3 Volt / <55 mA
Audio Output power		
S/N ratio	>20dB	>20dB

* Can be limited by the 3rd party connector specifications. Refer to 3rd party for accurate limitations.

CONTENT

CONTENT

Revision	Date	Description
1.2	2021.08.01	A4 printing
1.1	2020.11.23	A4 printing
1.0	2019.04.03	First release of this document

TROUBLESHOOT

Problem	Cause	Action
Headset will not start up (Wireless versions only)	Battery level too low	Charge battery
Headset will not start up (Wired versions only)	Radio battery low Appliance Power Missing Cable defect	Charge Battery Look up appliance Manual Send for repair
Headset will not Pair (Wireless versions only)	Pairing failure	Perform a Master Reset
"Device Connected" fails (Wireless versions only)	Initialization failure	Turn OFF and Turn ON the headset
TX audio is too low	Microphone is twisted	Turn microphone into right position Replace windmuff
Excessive noise on TX audio	Windmuff too small Windmuff damaged	Mount bigger Windmuff Replace Windmuff
Hear Through is too low or too high	Wrong settings	Adjust volume
Distortion on Hear Through	Windmuff is missing Volume level too high	Insert new windmuff Adjust Hear Through Volume

Consult the FAQ on our website.
If your headset is still not working properly, please contact your local dealer.

6.1 MAINTENANCE

Do not use chemicals or solvents to clean your iriComm 3.0 headset. Use only a damp cloth, and cold/lukewarm freshwater and wipe/rinse carefully the visible surfaces on your iriComm headset.

Saltwater crystals may be removed with cold/lukewarm freshwater. Rinse carefully over the earcup, to removed any salt residue. Also rinse the microphone, and replace the microphone windmuff if it has absorbed salt crystals or in any other way is marked by salt. Let the microphone dry out totally, before installing a new windmuff.

Do not flush fresh water directly into the speaker openings. Rinse carefully. The speaker is a fragile component.

When the headset is clean and salt residue and dirt removed, let the headset dry with the speakers facing downwards allowing for water to run out.

Pressure, friction, sharp objects, etc. can damage the product and the warranty may be void.

If the headset is not in use for a longer period of time, remember to charge the battery every 2 months to extend battery life.

The charge connector is gold plated and require a minimum of maintenance. Salt crystals must be removed to secure full connection. Remove with cold/lukewarm water, and dry with a cotton swab or soft tissue. Apply a thin layer of acid-free silicone based lubricate to protect the conductive gold surface.

To maintain hygiene standards, the earpads and the inside of the headband must be wiped with a non-alcoholic antibacterial swipe.

After wet use, the headband must be dried completely to extend the life of the stitches. The windmuff must be removed after wet use. Flush and dry the windmuff.

INTRODUCTION

1.1 DISCLAIMER

Any responsibility or liability for loss or damage in connection with the use of this product and the accompanying documentation is disclaimed by IWCS. The information in this manual is provided for information purposes only, is subject to change without notice and may contain errors or inaccuracies.

Manuals issued by IWCS are periodically revised and updated. Anyone relying on this information should acquire the most current version e.g. upon request at info@iwcs.eu

IWCS is not responsible for the content or accuracy of any translations or reproductions, in the whole or in part, of this manual from any other source.

1.2 COPYRIGHT

2019 Iridium Waterproof Communication Systems ApS. All right reserved. Printed in Denmark.

1.3 TRADEMARK ACKNOWLEDGEMENTS

iriComm 3.0 is a Trademark by Iridium Waterproof Communication Systems ApS

1.4 SAFETY WARNING

The following general safety precautions must be observed during all phases of operation, service and repair of this equipment. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture and intended use of the equipment. IWCS assumes no liability for the customer's failure to comply with these requirements.

EMC / RF EXPOSURE

iriComm 3.0 is CE certified as stated in the Declaration of Conformity, which is included in this manual.

FIRE

In case of fire, harmful gases and fumes may occur. One should immediately leave the area and seek help. In case of suspected smoke in the lungs, a doctor should be consulted.

POWER LOSS

In the event of a power outage, iriComm 3.0 will turn off and will automatically restart when power is restored.
Power interruptions limited to iriComm 3.0 will not affect other users communication. A general power outage will turn off the entire intercom system. IWCS is not responsible for any power outages or consequences thereof, of any kind

WARRANTY LIMITATIONS

IMPORTANT - This unit is a sealed waterproof unit (classified IP67). To create and maintain its waterproof integrity it has been assembled in a controlled environment using special equipment. This unit is NOT a user serviceable unit, and under no circumstances should the unit be opened except by authorized personnel. Unauthorized opening of the unit will invalidate the warranty.

DISPOSAL

When disposing of iriComm 3.0 and related equipment, it must happen in accordance with applicable national law. There can be batteries in iriComm 3.0 (wireless versions and some wired versions)

5.13 HEADSET - PLUS VERSION

L

Wireless PTT
If supported by radio

LIGHT

Low

High

Strobe

OFF

Hear Through

Push

Hear Through Mode - Active

Intercom reduced by 24dB

Push

Hear Through Mode - Deactivated

5 sec. - Enter Settings

Adjust volume UP/DOWN on the right earcup

Push - Save Settings
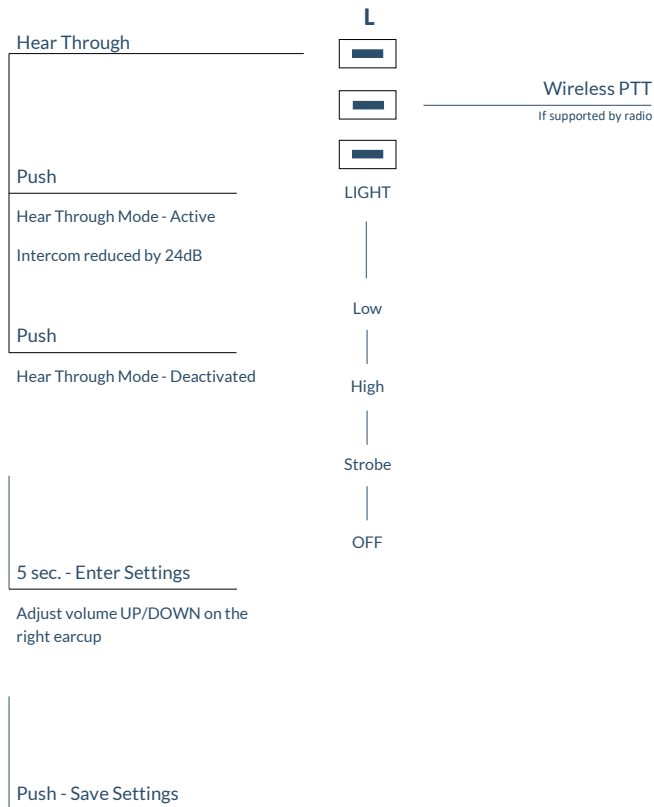
5.13 HEADSET - PLUS VERSION

iriComm 3.0 comes in versions with additional features - referred to as a PLUS version. Both Wired and Wireless versions of iriComm 3.0 can be ordered with the PLUS option.

The PLUS versions have two additional features - Active Hear-Through and LED light.

Active Hear-Through:

Active Hear-Through provides ambient hearing without having to remove the headset. A small, waterproof microphone picks up the ambient sound and passes it to the headset speakers. Simultaneously, the primary sound (intercom/radio/phone) is attenuated by 24dB. This allows for monitoring primary communication at reduced volume while having a normal conversation with someone.

Hear-Through volume (sensitivity) is adjustable and setting is stored in the headset's permanent memory.

LED light:

A forward-facing white LED (Light Emitting Diode) has been incorporated into the left earcup. This LED can be used for e.g. map reading (low intensity light), for orientation at night while moving around (high intensity light) and for emergency distress alerts (flashing beacon).

UNBOXING

2.1 IN THE BOX

The following items are included in the delivery of your new iriComm 3.0 from IWCS

- iriComm 3.0 Wireless Headset

- Windmuff Kit

- USB Charge cable (only for versions including a battery)

- User manual

- Neckband

2.2 VERSIONS

iriComm 3.0 comes in different versions

IRICOMM 3.0	WIRELESS	WIRED	STD/PLUS	HEADBAND	HELMET
IR-34-1111-AA-BBBBB		√	STD	√	
IR-34-1211-AA-BBBBB		√	STD		√
IR-34-1112-AA-BBBBB		√	PLUS	√	
IR-34-1212-AA-BBBBB		√	PLUS		√
IR-34-2111-AA-XXXXX	√		STD	√	
IR-34-2211-AA-XXXXX	√		STD		√
IR-34-2112-A1-XXXXX	√		PLUS	√	
IR-34-2212-AA-XXXXX	√		PLUS		√

EAR-PAD OPTIONS	STD	GEL
AA = 01	√	
AA = 02		√

CABLE OPTIONS	CABLE/CONNECTOR FOR
BBBBB = AX001	Axnes/Polycon MP20
BBBBB = IR001	IWCS cable for iriHS (long)
BBBBB = IR002	IWCS cable for iriBelt (short)
BBBBB = NX001	Nexus TP120 (Peltor pinning)

These are only examples. Many more versions avalable.

5.3 to 5.12 - FUNCTIONS

iriComm 3.0 Wireless Headset can communicate with most Bluetooth devices. For any pairing make sure that the other device is in pairing mode and all other near-by Bluetooth devices are OFF. Please follow the instructions for pairing for the paired device along with this manual.

R

△   Volume UP

〔O〕   Press and Hold   From ON position

▽   Volume DOWN

Press and Hold   From OFF position

2 sec.   ON

7 sec.   Pairing ONE   Mobile Phone

12 sec.   Pairing TWO   Intercom/Radio/ Peer To Peer - Master

17 sec.   Pairing THREE   Peer To Peer - Slave

22 sec.   Master Reset

32 sec.   Automatic Shut Off

2 sec.   OFF

Press   Incoming Phone Call   Answer

Press   Ongoing Phone Call   Hang Up
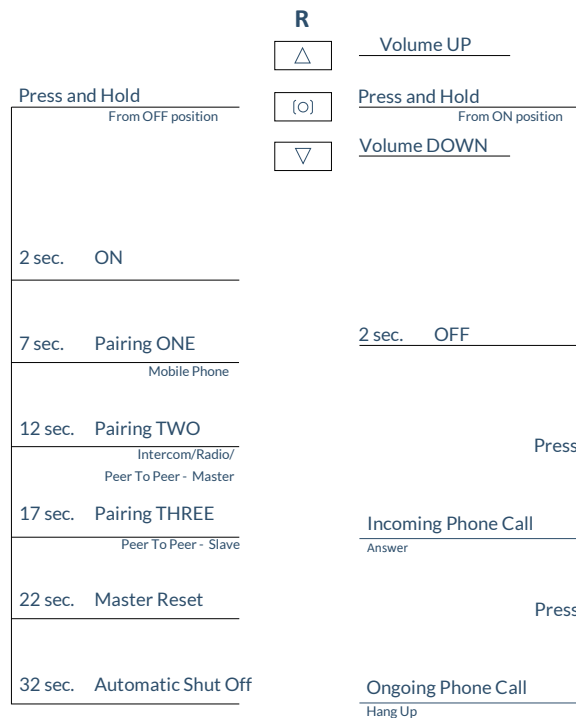
5.2 CHARGING

iriComm 3.0 wireless (and some wired PLUS versions) has an advanced battery and charge circuit. The 1000 mAh LiPo/LiIon battery provides long life and long operational time.

When the headset is turned ON, a Voice Prompt will inform of the present battery status with a "Battery High" (80-100%), "Battery Medium" (20-80%) or "Battery Low" (10-20%). At the 10% battery level there is an automatic Cut Off, which will turn off the headset.

When the Low Battery level is reached, the Status LED on the rear of right-side earcup, will flash RED every 5 seconds.

To charge the headset place the magnetic connector in the bottom of the right earcup. As soon as the charge plug is connected, the battery is being charged. The Status LED will flash RED every 2 seconds, as long as the battery is being charged. When the battery is fully charged the Status LED will stop flashing and turn off.

It doesn't matter if the headset is ON or OFF during charging.

Discharge characteristics, 3.7V/1000mAh LiPo through 82 & 150 ohms
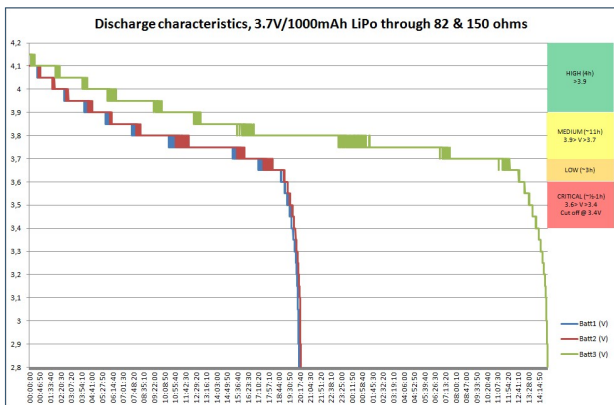
OPERATION

3.1 MAIN DESCRIPTION

iriComm 3.0 is a rugged waterproof headset, that comes in many versions, for both wireless or wired use, with headband or for helmet attachment and with a variety of options.

The softshell earcup provides a robust and shock absorbing housing for protection against seawater, dirt, impacts etc. The softshell earcup itself requires a minimum of maintenance.

The wired version must be connected to a suitable radio or a headset interface to establish RX and TX connections. If supported by the radio interface, PTT can be activated from the buttons on the earcup. For radios supporting external power, PLUS version can be chosen.

The wireless version can communicate wirelessly with another Bluetooth device. iriComm 3.0 is not restricted to Master/Slave pairings, (HFP / HFP-AG) but can also handle Peer-To-Peer connectivity.

For wired versions Simplex/Semi Duplex/Full Duplex is limited only by the radio and not the headset.

For wireless versions communication iriComm 3.0 is Full Duplex.

3.2 HEADBAND ADJUSTMENT

The position of the headband is important to secure a perfect fit to the head. Loosen the 4 adjustment screws on the 4 brackets, and position the earcups in a comfortable position, and tighten the screws.
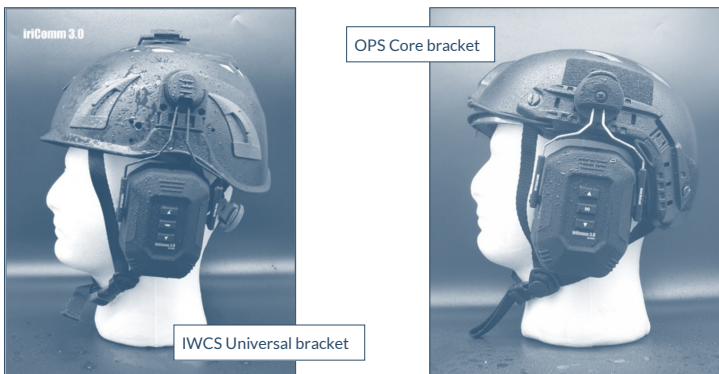
3.3 HELMET ATTACHMENT

iriComm supports many different helmet attachments.

If ordered as helmet attachments, the interconnect wire between the 2 earcups is 70 cm. Mount the wire in a secure way, behind the neck of the helmet or inside the helmet. Consult the helmet supplier if any further assistance is needed.

The distance between the 2 holders is 88mm, and fits standard IWCS, Peltor bracket etc.

Mount the helmet brackets according to Helmet instructions.

OPS Core bracket

IWCS Universal bracket

Supported Helmets	Bracket	IWCS Part number
Team Wendy EXFIL SAR	MARK Rail	UT-MKIT-TWRail
OPS Core SAR	OPS Core Bracket	UT-MKIT-ARCRail
KASK Plasma	KASK bracket + IWCS universal bracket	KA-PTA-01 + SG-IC-0001
Future Safety Manta	FS bracket + IWCS universal bracket	FS-HS-BRCKT + SG-IC-0001
Many other helmets supported—consult your dealer or IWCS for advice		

5.1 WIRELESS HEADSET

iriComm 3.0 Wireless is a multifunctional communication tool, which lets you handle several connections at the same time.

As part of an iriSound intercom system:

iriComm 3.0 is paired with an iriConnect as the primary connection.

In a pier to pier (P2P) setup :

iriComm 3.0 paired with another iriComm 3.0. This gives the possibility for 2 persons to be in Full Duplex Intercom without using an iriSound Audio Mixer.

In addition to any of the above mentioned use cases, the iriComm 3.0 can be paired with a mobile phone, allowing the user to answer incoming phone calls.

Pairing of iriComm 3.0:

The first time you start up your iriComm 3.0 headset it has no pairings.

When attempting to establish a new pairing with your iriComm 3.0, always make sure only the two active BlueTooth units are turned on. All other BlueTooth units must be switched off.

When attempting to establish a new pairing of your iriComm 3.0 with another unit (iriComm 2.0/3.0, iriConnect or mobile phone), keep the two units within 1m of each other.

Before trying to re-pair to a device being paired with previously, you should perform a Master Reset of the headset.
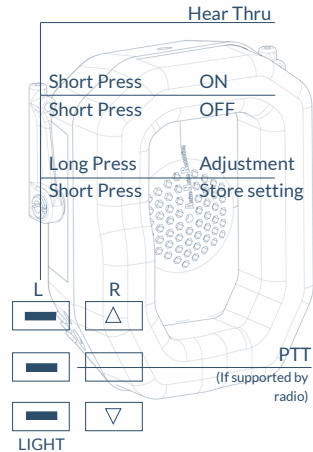
4.3 WIRED HEADSET - PLUS VERSION

Connect your headset connector to the radio's external connector. Mount according to the radio user guide.

When the radio is turned ON, the headset will work. If the radio supports external PTT (read radio instructions) the middle button on the left earcup can be used as PTT.
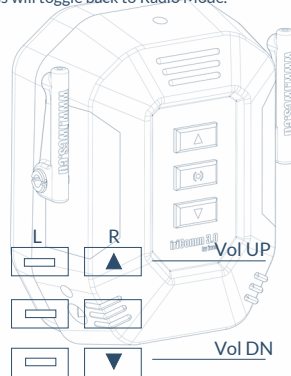
When your headset includes the PLUS option:
If your radio supports power to external equipment (Voltage of 3-6VDC/100mW), the headset will typically not have an internal battery.
If your radio does not supply power to external equipment, the headset will have an internal, rechargeable battery.

Hear Thru

Short Press	ON
Short Press	OFF
Long Press	Adjustment
Short Press	Store setting

When Hear Through Mode is enabled, the next Press will toggle back to Radio Mode.

L   R

L   R

PTT
(If supported by radio)

Vol UP

LIGHT

Vol DN

Dimmed
|
High
|
Strobe
|
OFF

3.4 MICROPHONE

- Place the microphone at a distance of less than 1 cm in front of your mouth. The noise cancelling, directional microphone is a very sensitive component, and must be placed in the right position for optimal performance. Underneath the wind muff there is a flat surface indicating which side must point towards your mouth.
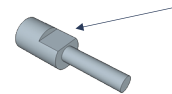
IMPORTANT :

This flat surface MUST point towards your mouth

3.5 EARPADS

- Ear Cushions can be replaced if needed. Please order our hygiene kit through your local dealer. Due to the fully sealed and waterproof construction, earpad replacement involves a gluing process. To maintain the warranty of your product we strongly recommend that you let your authorized dealer do this for you.

3.6 LEAD WIRE (WIRED VERSIONS ONLY)

- For models with wired connections (see page 8) the headset must be connected to iriSound via an active headset interface (iriHS), or directly to a handheld radio.

- The right side earcup has a curly lead, which typically extends from 40cm up to 120cm when pulled. Actual length vary depending on cable and termination type.

Your wired headset is now connected and ready to use.

4.1 WIRED HEADSET - BASIC FUNCTIONALITY

iriComm 3.0 Wired is a rugged, waterproof communication headset designed for maritime and mission critical use.

As part of an iriSound intercom system:

iriComm 3.0 is connected to the intercom system via an iriHS (headset interface unit).

Volume control is handled by the iriHS unit.

PTT function on the headset is available to activate a radio through the intercom system. Consult the manuals for the iriSound intercom system for details.

Used in connection with a handheld radio:

Your iriComm 3.0 headset is supplied with a radio-specific connector matching your handheld radio. Depending on radio model, attaching the headset may disable the radio's internal microphone and speaker.

Volume control is handled by operating the radio's volume setting.

PTT function on the headset is available to activate the radio for outgoing calls. Consult the manuals for the radio for additional details.

4.2 WIRED HEADSET - RADIO CONNECTIVITY

How to use your wired iriComm Headset

1. Headband adjustment
2. Boom
3. Microphone
4. Lead wire or charge connector
5. Control buttons (some models)

Connector	Weipu SC	Weipu PC	Nexus / Jack	To Be Specified
Application	IWCS HS interface IWCS Garmin	IWCS iriBelt	Speaker Mics	Portable Radio
Remarks			Connect according to 3rd party equipment User Guide	Connect according to Radio User Guide