WISE AIR 4.0
MEASURE TO MANAGE

USER MANUAL · 2026 EDITION

WA-EUS-720

Ultrasonic Leak Detector

Models covered: WA-EUS-720 (Receiver kit), WA-EUS-730 (Receiver + Transmitter kit)



20–90 kHz
Frequency range

3 filters
Auto noise filtering

2.5" TFT
Colour display

3 levels
Transmitter signal

INSTALLATION · OPERATION · CONFIGURATION · MAINTENANCE

WISEAIR TECHNOLOGIES INDIA LLP

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ABOUT WISEAIR

WiseAir Technologies India LLP designs and supplies smart measurement instruments for compressed air and industrial gases — flow, dew point, pressure and power sensors, data loggers, smart drains and leak detection tools. Every WiseAir product is built to make compressed-air energy use **visible, measurable and manageable**.

WiseAir sensors work on their own or as part of the **WiseAir WASM-604 Smart Monitoring platform**, which collects data over Modbus / 4–20 mA, analyses it and reports energy, demand and leakage in real time.

DOCUMENT

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01 Safety and general information

Read this manual completely before you use the WiseAir WA-EUS-720 / WA-EUS-730 ultrasonic leak detector. Keep it with the instrument.

Intended use

The WA-EUS-720 is a hand-held ultrasonic instrument for locating leaks of compressed air and other non-flammable gases, and for detecting ultrasound from vibration and electrical discharge. With the WA-EUS-720-T Transmitter it can also check the tightness of unpressurised objects. It is intended for use by trained personnel in industrial (commercial) environments.

WARNINGS

- Do not use the instrument in flammable or explosive atmospheres, and do not use it to detect leaks of combustible gases.
- Take great care when working near pressurised air or gas lines.
- Take great care when working near rotating equipment. Keep the probe, cable and headphone lead clear of moving parts.
- Take great care when working near live electrical equipment. Keep a safe distance and follow site electrical safety rules.

BATTERIES

- Use only 4 × AA (LR6) 1.5 V alkaline batteries in the Receiver and 2 × AAA (LR03) 1.5 V alkaline batteries in the Transmitter.
- Insert batteries with the correct polarity, as marked in the battery compartment.
- Remove the batteries if the instrument will not be used for a long time, or if it is stored above 50 °C. Leaking batteries can damage the instrument.
- Follow the battery manufacturer's handling and disposal instructions.

Markings and compliance

Marking	Meaning
Warning triangle	Caution – read the explanation in this manual.
Book symbol	Consult the user documentation.
CE	Complies with the applicable European directives, including the EMC Directive 2014/30/EU (EN 61326-1).
Crossed-out wheelie bin	Do not dispose of this product as unsorted household waste. Take it to an approved collection point for electrical and electronic equipment (WEEE category: monitoring and control instruments).

NOTE

This is Class A (industrial) equipment for electromagnetic compatibility. It is intended for use in business and industrial environments, not in homes.

02 Product overview

Ultrasound is sound with a frequency above 20 kHz – higher than the human ear can hear. When air or gas escapes through a small opening, the turbulence produces ultrasound. Vibrating or moving parts and electrical discharges also produce ultrasound. Ultrasound is very directional, so it can be used to pinpoint the exact location of a leak, vibration or discharge.

The WA-EUS-720-R Receiver picks up ultrasound in the 20 kHz to 90 kHz range, the optimum range for many kinds of leaks. It converts the ultrasound to a sound you can hear through headphones and shows the signal strength on its colour display. A change in the ultrasound produced by a machine can also indicate that it is beginning to fail.

Key features

Visual and audible
2.5" colour display with signal number and bar graph, plus audio through headphones.

Noise filter
Automatically finds and filters up to three background noise frequencies.

Adjustable sensitivity
Set the Receiver sensitivity to suit the leak size and distance.

Transmitter
Three signal levels for tightness testing of unpressurised objects (WA-EUS-730).

Accessories
Power parabola for noisy areas; flexible probe and extension for hard-to-reach points.

Auto power-off
Switches off after 60 minutes without use to save the batteries.

Typical applications

- Compressed-air and gas leaks
- Valves, tanks and pipes
- Heat exchangers, boilers and condensers
- Air-conditioning and refrigeration systems
- Motors and machinery
- Electrical and mechanical systems
- Plumbing
- Tightness of tanks, doors, windows, vents (with Transmitter)

03 What's in the box

Kit comparison

Feature	WA-EUS-720	WA-EUS-730
Receiver with sensitivity and volume adjustment	Yes	Yes
Automatic noise filter (up to 3)	Yes	Yes
Transmitter with 3 signal levels	Optional	Included

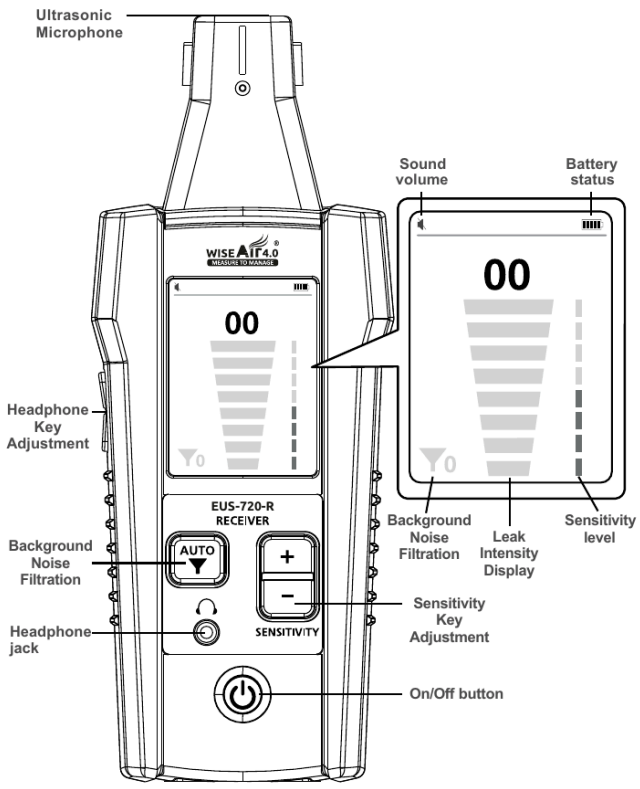
Item	WA-EUS-720	WA-EUS-730
WA-EUS-720-R Receiver	1	1
WA-EUS-720-T Transmitter	Optional	1
Headphones (3.5 mm jack)	1	1
Earbuds (for use with a hard hat)	1	1
Power parabola	1	1
Flexible probe	1	1
Probe extension	1	1
Hard carrying case	1	1
User manual	1	1
AA batteries (Receiver)	Not included	Not included
AAA batteries (Transmitter)	–	Not included

NOTE

Batteries are not supplied and are not fitted at the factory. Fit them as described in Maintenance before first use. Noise-cancelling headphones are available as an option.

04 Instrument description

WA-EUS-720-R Receiver



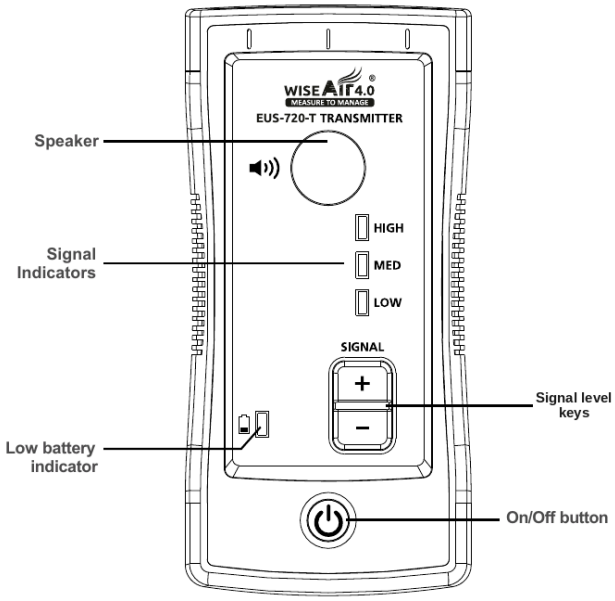
Controls and display

Ultrasonic microphone	Sensor at the top of the Receiver. Point it at the area to be checked.
AUTO (filter) key	Starts automatic background noise filtering.
+ / − SENSITIVITY keys	Increase or reduce the Receiver sensitivity.
Volume keys (left side)	Adjust the headphone volume.
Headphone jack	3.5 mm jack for headphones or earbuds.
On/Off button	Switches the Receiver on and off.
Signal number and bar graph	Leak intensity (relative).
Sensitivity level bar	Current sensitivity setting.
Filter icon	Number of noise filters applied (0–3).
Battery and volume icons	Battery status and sound volume.

NOTE

The Receiver has no loudspeaker. You hear the leak only through headphones or earbuds.

WA-EUS-720-T Transmitter

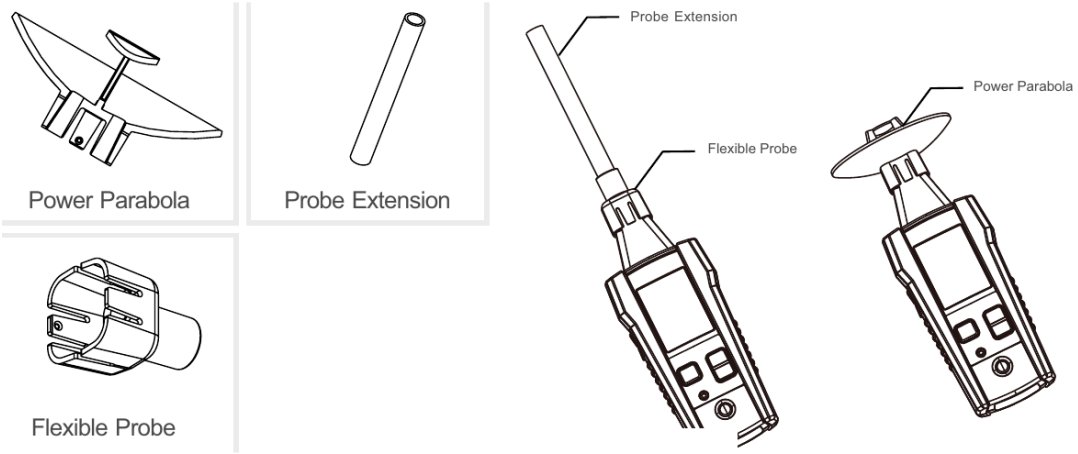


Transmitter controls

The Transmitter is included in the WA-EUS-730 kit and is optional for the WA-EUS-720 kit. It emits ultrasound so that openings can be found where there is no pressure, or not enough pressure, to produce ultrasound.

Speaker	Emits the ultrasonic test signal.
HIGH / MED / LOW indicators	Selected signal level.
SIGNAL + / – keys	Select the signal level.
Low battery indicator	Red LED lights when the batteries need replacing.
On/Off button	Switches the Transmitter on and off.

Accessories



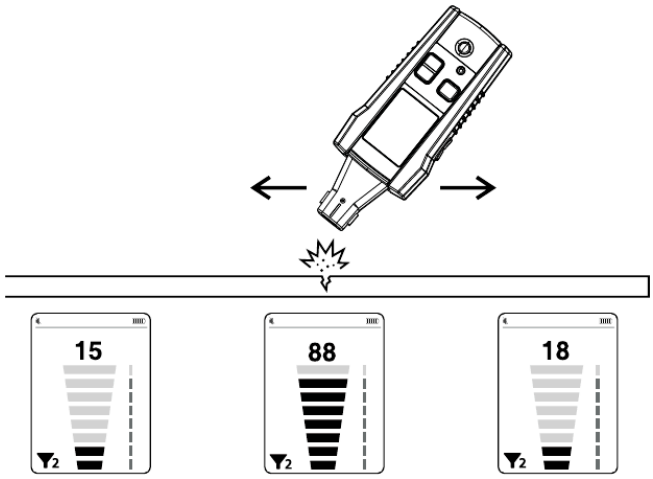
Power parabola, probe extension and flexible probe, and how they fit on the Receiver.

Accessory	Use
Headphones / earbuds	Listen to the leak to confirm its source – for example the hiss of an air leak or the ticking of an electrical discharge. Use the earbuds under a hard hat.
Power parabola	Directs ultrasound onto the microphone in areas with high background noise.
Flexible probe with probe extension	Reaches leaks in places where you cannot point the Receiver directly.

05 Operation

Finding a leak with the Receiver

1. Switch on the Receiver and plug the headphones into the jack. Any standard headphones with a 3.5 mm jack can be used.
2. Before you approach the target area, press **+** or **–** to set the highest sensitivity at which the bar graph still shows 0 or close to 0.
3. If the display stays at maximum whatever the sensitivity setting, there is strong background ultrasound. Press the **AUTO** (filter) key – see Noise filter below.
4. Scan the target area slowly with the microphone. As you move closer to the leak, the signal number and bar graph increase.
5. When the signal reaches maximum, press **–** to lower the sensitivity until the signal is below 75. Repeat until you have found the exact source.
6. Listen through the headphones to confirm the source. The display alone does not show what kind of source it is.



The signal is highest directly at the leak.

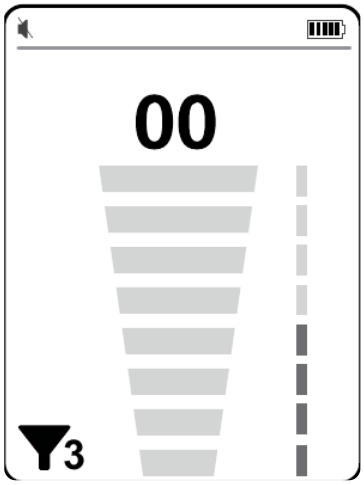
TIP

- In noisy surroundings, fit the power parabola to direct the ultrasound onto the microphone.
- Where you cannot point the Receiver directly at the leak, use the flexible probe with the probe extension.
- The bar graph is a relative indication, not a measurement of leak flow.

Noise filter

Running machinery, motion sensors and other equipment can produce strong ultrasonic noise. This drives the Receiver to maximum signal regardless of the sensitivity setting and makes leak detection impossible.

Press the **AUTO** (filter) key. The Receiver automatically finds the main noise frequency and removes a band of ±5 kHz around it. If the signal does not fall to near 0, it repeats the process for the next noise frequency, up to three frequencies. The filter icon shows how many filters are applied (0 = no noise found, up to 3).



Filter icon showing three filters applied.

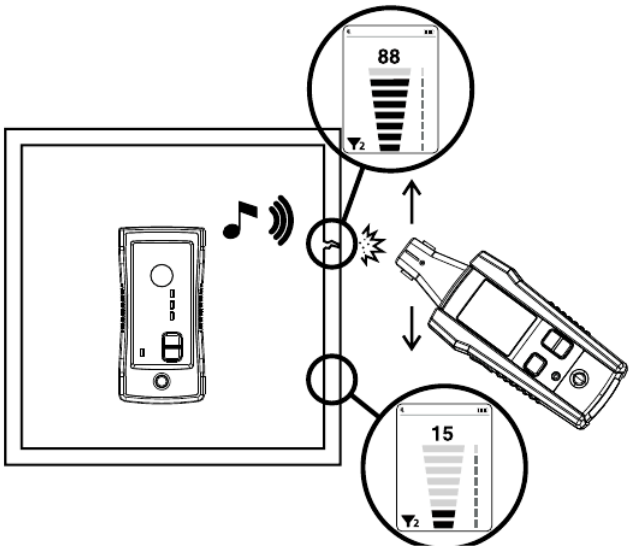
NOTE

- The filter acts only on the displayed signal (number and bar graph). The headphone sound is not filtered, so you can still hear the true sound of the leak.
- When you use the Transmitter, apply the filter **before** switching the Transmitter on, or where its signal cannot be detected. Otherwise the Receiver filters out the Transmitter frequency and cannot detect it.

Tightness testing with the Transmitter

Use the Transmitter where there is no gas or air pressure, or not enough pressure for the Receiver alone, for example:

- Fluid or gas tanks
- Windows, doors and roofs of buildings
- Vehicle windows and windscreens
- HVAC ducts and vents
- Refrigerant pipelines



Transmitter inside the object, Receiver scanning outside.

1. Switch on the Transmitter. It starts at the HIGH signal level.

2. Select the signal level with the SIGNAL + / – keys. HIGH suits most applications and large objects. If HIGH drives the Receiver to maximum away from the leak even at the lowest sensitivity, press – once for MED or twice for LOW.

3. Place the Transmitter inside the object and close all openings.

4. Scan the outside of the object with the Receiver, as described in Finding a leak with the Receiver. Ultrasound escaping through any opening shows the leak position.

06 Technical specifications

RECEIVER WA-EUS-720-R

Frequency range	20 kHz to 90 kHz
Noise filter	±5 kHz around each main noise frequency, up to 3 filters
Adjustments	Sensitivity, headphone volume
Display	2.5" (6.35 cm) TFT-LCD, 240 × 320 pixels, 262 K colours (16-bit)
Display area	36.7 × 49.0 mm
Audio output	3.5 mm headphone jack (no loudspeaker)
Power supply	4 × 1.5 V AA (LR6) alkaline batteries
Current consumption (typical)	75 mA
Battery life (typical)	105 h
Low battery indication	Yes
Auto power-off	After 60 minutes without use
Dimensions	183 × 75 × 43 mm
Weight	0.235 kg

TRANSMITTER WA-EUS-720-T

Output signal	40 kHz square wave (typical)
Signal levels	HIGH, MED, LOW
Power supply	2 × 1.5 V AAA (LR03) alkaline batteries
Current consumption (typical)	33 mA
Battery life (typical)	60 h
Low battery indication	Red LED
Dimensions	137 × 65 × 33 mm
Weight	Approx. 0.152 kg

ENVIRONMENT AND COMPLIANCE

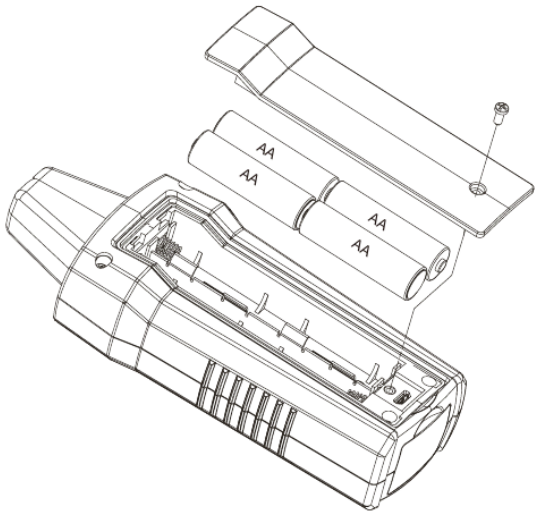
Operating temperature	−20 °C to +50 °C
Storage temperature	−20 °C to +70 °C (without batteries above +50 °C)
Operating humidity	Below 80 % RH
Pollution degree	2
Protection class	IP40
EMC	EN 61326-1, Class A (industrial)

07 Maintenance

The only routine maintenance the instrument needs is battery replacement, inspection and cleaning.

Replacing the Receiver batteries

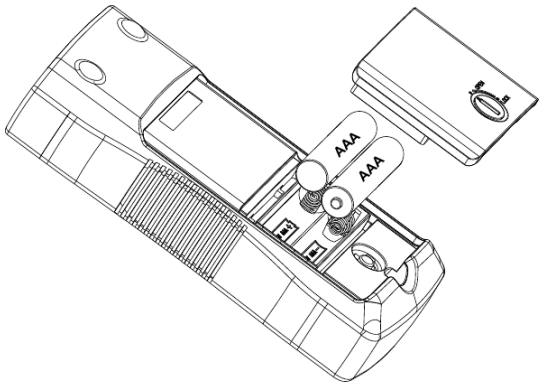
1. Switch off the Receiver.
2. Undo the captive screw of the battery cover with a screwdriver.
3. Remove the battery cover.
4. Fit four new AA (LR6) batteries, observing the polarity marked in the compartment.
5. Refit the cover and tighten the screw.



Receiver battery compartment (4 × AA).

Replacing the Transmitter batteries

1. Switch off the Transmitter.
2. Turn the battery-cover lock with a flat screwdriver.
3. Remove the battery cover.
4. Fit two new AAA (LR03) batteries, observing the polarity marked in the compartment.
5. Refit the cover and turn the lock to the locked position.



Transmitter battery compartment (2 × AAA).

Cleaning

Wipe the outside of the instrument from time to time with a soft cloth lightly dampened with a mild detergent solution. Let it dry completely before use. Do not use aromatic hydrocarbons, petrol or chlorinated solvents.

Storage

Store the instrument and accessories in the carrying case in a dry place, within the storage temperature range. Remove the batteries before long-term storage.

08 Troubleshooting

Symptom	Possible cause	Action
Receiver or Transmitter does not switch on	Batteries missing, flat or fitted the wrong way round	Fit new batteries with the correct polarity.
Receiver switches off by itself	Auto power-off after 60 minutes without use; batteries flat	Switch on again. Replace the batteries if the low battery indication is shown.
No sound	Headphones not connected (the Receiver has no loudspeaker); volume too low	Plug in headphones or earbuds. Increase the volume.
Display stays at maximum whatever the sensitivity	Strong background ultrasound from machinery or equipment	Press the AUTO (filter) key. Fit the power parabola.
No signal at a known leak	Sensitivity too low; leak pressure too low	Increase the sensitivity. For unpressurised objects, use the Transmitter.
Receiver does not detect the Transmitter	Filter was applied while the Transmitter was on, so its frequency is filtered out	Apply the filter before switching the Transmitter on, or where its signal cannot be detected.
Receiver reads maximum everywhere around the object	Transmitter signal level too high	Reduce the Transmitter level to MED or LOW and lower the Receiver sensitivity.

If the problem continues, contact WiseAir support (details on the back cover).

09 Warranty and service

The warranty terms are those stated in your WiseAir quotation, order confirmation or invoice. The warranty does not cover damage caused by misuse, dropping, battery leakage, operation outside the specified limits, failure to follow this manual, or unauthorised repair.

For accessories, service or technical help, contact WiseAir support (details on the back cover).

10 Handover record

CUSTOMER AND INSTRUMENT	
Customer / site	
Kit (WA-EUS-720 / WA-EUS-730)	
Receiver serial number	
Transmitter serial number	
Date of delivery	
CHECKS AT HANDOVER	
Kit contents complete	
Batteries fitted, power-on OK	
Display and keys OK	
Headphone audio OK	
Noise filter demonstrated	
Transmitter signal levels OK	
User trained (name)	
Remarks	

Handed over by (name, signature)	Received by (name, signature)	Date

WISE AIR 4.0
MEASURE TO MANAGE

Need help with your WA-EUS-720?

Our product specialists support installation, commissioning, configuration and calibration — remotely or on site.

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> When you contact support, please keep the instrument serial number and a short description (or video) of the problem ready.

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