

## Instruction Manual

# WaveMan 27



Read and understand this instruction manual thoroughly before using the product. It contains important information for your safety as well as operating and maintenance advice. Keep this instruction manual for future use. Should this product be passed on to a third party, this instruction manual must be included.

# Important Safety Instructions

SAVE THESE INSTRUCTIONS.

- Read all instructions, warnings and cautions in this manual and printed on the device before using it.
- **DO NOT** use the device near water or in damp environments.
- **DO NOT** expose the device to extreme heat or cold.
- **KEEP** the device **AWAY** from flammable materials.
- Use of an attachment not recommended or sold by Fabrimex X-Tec may result in a risk of fire, electric shock or personal injury.
- **DO NOT** attempt to disassemble the device. Take it to the Fabrimex X-Tec Services team when service or repair is needed.
- **ALWAYS** check the device for proper functioning with the test device WaveDok 27 (available separately) before starting your shift. Replace the two AAA-batteries of WaveMan 27 immediately if you notice a weakened vibration or lower volume beep.

## Introduction

WaveMan 27 is a PPE (personal protective equipment) device, designed to warn its bearer about the presence of possibly harmful electromagnetic fields in the range of 27 MHz.

When WaveMan 27 detects any electric field stronger than 3 V/m or magnetic field stronger than 8 mA/m, it will sound an alarm (beeping), start vibrating and flash two red LEDs for as long as the detected field is present and meets any of the thresholds.

While it was designed for railroad applications, it will work for every field in the 27 MHz range. It was therefore built to withstand general industrial conditions.

WaveMan 27 is available in two versions:

- The bracelet version contains an elastic band to wear the device on the upper arm.
- The clip version has a built-in retaining clip to fix the device to a belt or waistband.

Thanks to its unique design, WaveMan 27 will work continuously for about 5 years before the need to change its batteries. Nevertheless, do not forget to check proper functioning at least daily before starting your shift. The function test with the WaveDok 27 (available separately) checking device will indicate a low battery as well as other possible problems.

## Technical Specifications WaveMan 27:

- Min. electric field to be detected: 3 V/m within 27 MHz range (+/- 1 500 kHz)
- Min. magnetic field to be detected: 8 mA/m within 27 MHz band (+/- 1 500 kHz)
- IP protection class (EN 60529): IP50
- Battery powered operation (2x AAA; battery life around 5 years corresponding to appr. 1 000 alarms yearly)
- Operating temperature: -10 °C to +50 °C
- Dimensions [mm]: 80 x 96 x 36 (length x width x height)
- Weight: 120 g (including batteries)
- Certificates:
  - EU directives: 2014/30/EU, RoHS 2011/65/EU
  - EN 55011:2016 + A1:2017 + A11:2020 (class B)
  - EN IEC 61000-6-2:2019, EN IEC 61000-6-3:2019
  - EN IEC 63000:2018

## Scope of Delivery

The device is shipped ready to use with two AAA batteries (non-rechargeable) installed and active. Depending on the version, the device is either equipped with a belt clip or an elastic strap for the bracelet version.

## Installation

The device gets shipped ready to use and does not need any kind of activation before first use. Nevertheless, do not forget to perform the WaveMan 27 function test (see "Operation" step (2)) before getting close to any possibly live antenna.

Bracelet version:

Slide the free end of the elastic band through the loops in the back of the device and through the buckle. Close the buckle, slide the device onto your arm and tighten the strap until it sits securely in place without causing any discomfort.

Clip version:

Whether using a belt or directly attaching the device to a waistband, slide the clip over your belt or waistband and make sure the device is securely fixed before starting your shift.

## Operation

WaveMan 27 detects electrical and magnetic fields with a frequency of 27 MHz. In the presence of electric fields stronger than 3V/m and magnetic fields stronger than 8mA/m, the device activates its alarm functions (beeping sound, blinking LED's and vibration), thus warning about the presence of possibly harmful fields.

To ensure proper functioning, always check the device before getting into close proximity to a possible live electromagnetic field, or at least once a day by following these steps:

(1) WaveMan 27 self-test: \*)

Press the TEST button of the WaveMan 27 to check the battery status and vibration motor function. Please replace batteries of the WaveMan 27 if necessary.

(2) WaveMan 27 function test:

By pressing the TEST button on any WaveDok 27 device, a low-level field will be generated. By bringing the WaveMan 27 to be tested into close proximity (appr. 10 cm or 4 inches) of the WaveDok 27, the alarm functions on the WaveMan 27 will be triggered. If there is no alarm (no sound, no vibration and no light), check the batteries and replace them if necessary. If the device still does not work, do not use it to work on equipment. Get a different WaveMan 27 device to perform your work and make sure the defective device gets returned for repairs to the Fabrimex-X-Tec Services team.

\*) Please note that the WaveMan 27 self-test cannot be used to test the high frequency detection feature (magnetic field detection). This feature can only be tested by performing the WaveMan 27 function test in conjunction with the WaveDok 27.

## Frequently Asked Questions

Q1: What is the battery life?

A1: The battery life is life around 5 years corresponding to appr. 1 000 alarms yearly.

Q2: How can I change the batteries?

A2: Please loosen the two screws on the backside of the device and remove the cover carefully. Remove the old batteries. Insert the fresh batteries as indicated on the stickers. Put the cover back and tighten the two screws. Perform at least a WaveMan 27 self-test.

Q3: How can I test the function of the device?

A3: Please see the steps described in the section "Operation".

Q4: How can the device be recalibrated?

A4: Generally, it is not necessary to calibrate the product. If you feel the device needs a recalibration, please get in contact with the Fabrimex X-Tec Services team to arrange for proper recalibration.

## Spare Parts

The only customer replaceable parts are the 2 AAA batteries. Please make sure to only use industrial grade batteries (conventional or rechargeable).

## Limited Warranty

The WaveMan 27 products carry a three (3) year limited warranty against defects in material and workmanship under normal use. At its own discretion, Fabrimex X-Tec agrees to repair or replace any defective part(s) free of charge, within the stated limited warranty period.

In case of problems, please reach out to the Fabrimex X-Tec Service team by email ([rma@fabrimex-xtec.ch](mailto:rma@fabrimex-xtec.ch)) to get an RMA number as well as further instructions to return the defective device.

This limited warranty does not cover any problem caused by regular wear and tear, improper handling, any alterations to the device, misuse, abuse or similar actions.

## Further Information

If you need any further information, please visit [www.fabrimex-xtec.ch](http://www.fabrimex-xtec.ch) for up-to-date manuals and other support materials.

This instruction manual is also available in the following languages:

- French
- German
- Italian
- Spanish

