

EXHIBIT 3

Technical Description

Para. 2.1033(b)(4)



Retlif Testing Laboratories

Test Report No. R-3293N
FCC ID: KF5ORTOVOXM1

Technical Explanation of the Operation of the Ortovox M1 Transceiver

Technical function of the M1:

The avalanche beacon consists of a transmitting and a receiving circuit. The antenna for both is a ferrit antenna. It works either in transmitting or receiving mode.

The transmitter:

The transmitter has a local x-tal-stabilized oscillator - working frequency: 457kHz + or - 100 Hz. A pulsegenerator modulates the 457 kHz-oscillator; that means modulation is of type A1A (pulsed carrier). On-time is approximately 160 msec; off time is approximately 650 msec. An amplifier amplifies the modulated signal and drives the ferrit antenna.

The Receiver:

The ferrit antenna receives the signal from a transmitting avalanche beacon. After amplifying the 457 kHz signal is mixed with the signal of the 455 kHz oscillator. On the output of the demodulator is getting a 2 kHz signal.

The low frequency amplifier amplifies the 2 kHz signal and drives the loudspeaker. The second path of the amplified 2 kHz signal goes to a rectifier.

The m-processor makes an analog-digital conversion and controls the LCD-driver and LCD. The LCD shows different parameters to the seeking person like the distance to the buried, field strength and other useful information.

Technical Report 2.1033(b)(4)

Equipment Manufacturer

ORTOVOX Sportartikel GmbH
Rotwandweg 5
D - 82024 Taufkirchen
Germany

FCC Identifier

KF5ORTOVOXM1

Operating Instructions

See Exhibit 5

Trade Name

Not Applicable

Model Number

M1

Additional Model Numbers and Trade Names

Not Applicable



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| | |
|---|--|
| APPLICANT ORTOVOX Sportartikel GmbH Rotwandweg 5 D - 82024 Taufkirchen Germany | MANUFACTURER ORTOVOX Sportartikel GmbH Rotwandweg 5 D - 82024 Taufkirchen Germany |
|---|--|

TEST SPECIFICATION: FCC Rules and Regulations Part 15, Subpart C, Para. 15.209

TEST PROCEDURE: ANSI C63.4:1992

TEST SAMPLE DESCRIPTION

BRANDNAME: Ortovox

TYPE: Transceiver

POWER REQUIREMENTS: Battery, 1.5 V


FREQUENCY OF OPERATION: 457 kHz

TEST PERFORMED

Para. 15.209, Radiated Emissions

I HEREBY CERTIFY THAT: The measurements shown here were in accordance with the procedure indicated and that the energy emitted by this equipment was found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements and vouch for the qualifications of all persons taking them.

I FURTHER CERTIFY THAT: On the basis of the measurements made, the device tested is capable of operation in compliance with the requirements of Part 15 of the FCC Rules under normal use and maintenance.

| | | |
|--|---------------------------------|--------------------------------|
| SIGN  | PRINT Scott Wentworth | TITLE Branch Manager |
|--|---------------------------------|--------------------------------|



Retlif Testing Laboratories

Test Report No. R-3293N
 FCC ID: KF5ORTOVOXM1

TABULAR DATA SHEET

| | | | |
|---------------------|--|-------------|---------|
| TEST METHOD: | Radiated Emissions, 90 kHz to 5 MHz | | |
| CUSTOMER: | Ortovox | JOB No.: | R-3293N |
| TEST SAMPLE: | Avalanche Transceiver | | |
| MODEL No.: | M1 | SERIAL No.: | N/A |
| TEST SPECIFICATION: | FCC Part 15, Subpart C | PARAGRAPH: | 15.33 |
| OPERATING MODE: | EUT operated in Transmitting mode. | | |
| TECHNICIAN: | M. Hippert | DATE: | 9-9-98 |
| NOTES: | Detector Function: Average Test Distance = 3 Meters Distance Correction Factor Par. 15.31 f2) | | |

[illegible]

TABULAR DATA SHEET

Radiated Emissions, 30 MHz to 1 GHz

Ortovox

JOB No.:

R-3293N

SAMPLE:

Avalanche TranSceiver

M1

SERIAL No.:

nia

SPECIFICATION:

FCC Part 15, Subpart A

PARAGRAPH: 15.33

MODE:

EUT operated alternately in transmit and receive modes in order to fully exercise the eut circuitry.

T. Hannemann

DATE:

8-28-98

Detector Function: Quasi-Peak Test Distance = 3 Meters
NO emissions observed from the EUT.

The complete frequency range was scanned and all emissions from the EUT were examined and recorded.

TEST EQUIPMENT LIST

| EN | Model No. | Type | Manufacturer | Frequency Range | Serial No. | Cal Date | Due Date |
|--------|-----------|-------------------|-----------------|-----------------|------------|----------|----------|
| 3118 | BPA-1000 | Pre-AMPLIFIER | Electro-Metrics | 10kHz - 1000MHz | 139 | 06/24/98 | 06/24/99 |
| 3207 | 6502 | Active Loop | EMCO | 10kHz-30MHz | 1033 | 01/09/98 | 01/09/99 |
| 4202 | 3142 | Biconilog Antenna | EMCO | 26MHz-2.0GHz | 1299 | 06/10/98 | 06/10/99 |
| 4921 | 7550A | Graphics Plotter | Hewlett Packard | n/a | 244A 09691 | 04/17/98 | 04/17/99 |
| DNI007 | 8593EM | Spectrum Analyzer | Hewlett Packard | 9 KHZ to 22 GHz | 3820A00242 | 07/28/98 | 07/28/99 |



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