GEBRAUCHSANLEITUNG

Lawinen-Verschütteten-Suchgerät

MANUAL

Avalanche Transceiver

MODE D'EMPLOI

DVA

ZOOM+

ISTRUZIONI PER I'USO

Localizzatore a.r.t.va.

INSTRUCCIONES DE USO

Aparato de búsquuda de victimas de avalanchas

ORTOVOX
VOICE OF THE MOUNTAINS



SMART-ANTENNA





BESSER GEFUNDEN WERDEN!

Automatische Umschaltung auf die optimale Sende-Antenne.

BE FOUND EASIER!

Automatic switchover to the best transmission antenna.

ETRE RETROUVÉ PLUS FACILEMENT!

Connexion automatique à l'antenne émettrice optimale.

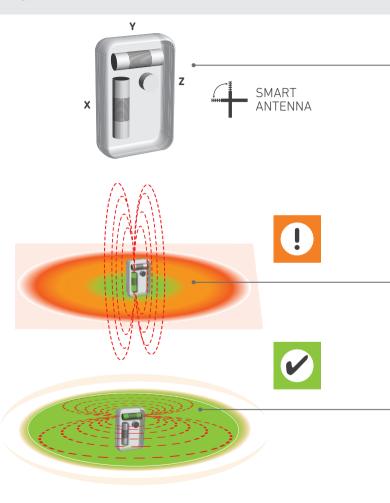
SARETE TROVATI PIÙ FACILMENTE!

Commutazione automatica alla migliore antenna trasmittente.

¡SE LOCALIZA MÁS FÁCILMENTE!

Conmutación automática a la antena emisora óptima.





THE ORTOVOX DEVICES HAVE THREE ANTENNAS (X, Y, AND Z)

All three antennas are used during **SEARCHES**. The x and y antennas are used to display the distance and the direction of movement. The z antenna is solely used for the fine search.

The ORTOVOX device **S1+**, **3+** and **Z00M+** are the only devices on the market that can analyze the position of the antennas using smart antenna technology and **TRANSMIT VIA BOTH THE X AND THE Y ANTENNA**

This vastly increases (**UP TO DOUBLES**) the victim's transmission range, making him or her far easier to find (**IMPROVED VISIBILITY**).

VERTICAL POSITION WITHOUT SMART-ANTENNA

= poor visibility

A vertically positioned transmitter antenna (x antenna) only emits a signal vertically and results in poor visibility due to minimum area coverage (range) in the search area. A vertical **TRANSMITTER WITHOUT** A SMART ANTENNA is therefore MORE DIFFICULT TO LOCATE.

VERTICAL POSITION WITH SMART-ANTENNA

= very good visibility

The PATENTED SMART-ANTENNA-TECHNOLOGY resolves this problem of poor visibility in the vertical position. The position sensor analyzes the device's position in the avalanche and AUTOMATICALLY SWITCHES TO THE Y-ANTENNA. As a result, the antenna once again transmits horizontally and expands the area coverage to almost the maximum range, making it easier to locate victims in less time.

DEUTSCH

GERRAUCHSANI FITUNG

Lawinen-Verschütteten-Suchgerät

5 - 25

ENGLISH

MANUAL

Avalanche Transceiver

26 - 47

FRANCAIS

MODE D'EMPLOI

48 - 69

DVA

ITALIANO

ISTRUZIONI PER I'USO

70 - 91

Localizzatore a.r.t.va.

ESPAÑOL

INSTRUCCIONES DE USO

92 - 113

Aparato de búsqueda de victimas de avalanchas

SERVICE

116 - 120

ZOOM+

ENGLISH

IT COULDN'T BE EASIER!

The **ZOOM**+ combines the **SIMPLEST** handling with the LATEST technology and the MOST ADVANCED design. Reduced to two functional buttons, the **ZOOM**+ concentrates on intuitive usability. The focus on the clearly designed LED display is on the on / off switches and the switch between transmitting and searching. Distances, directional arrows and information about multiple avalanche victims guide you in the **FASTEST** way to the refined search area, with the **INTUITIVE** search acoustics making victims easier to locate. Equipped with the patented SMART-ANTENNA-TECHNOLOGY™, avalanche victims are found much better with the **ZOOM**+. The device analyzes its position in the avalanche and automatically switches to the BEST TRANS-MISSION ANTENNA. The latest digital 3-antenna technology is utilized at ORTOVOX just as much as the automatic switchover in case of a follow-up avalanche

Valuable information on how to help companions, accident prevention and the latest safety products from ORTOVOX can be found at:

www.ortovox.com

You can reach us by e-mail at ortovox@ortovox.com

ORTOVOX hopes you have wonderful, safe trips!

RECCO[®]

RECCO REFLECTOR INSIDE!

So professional rescuers can quickly find avalanche victims! The backup technology is used by more than 700 ski areas and rescue teams around the world.



supplier





- 1 ON/OFF switch
- 2 Battery compartment
- 3 SEARCH GUIDANCE
 - Signal search
 - Coarse search
 - Fine search



- 4 Sliding switch "search mode"
- 5 Sliding switch "transmission mode"



- 5 Direction arrow
- 7 Distance indicator
- 8 Multiple signal indicator
- 9 Loudspeaker
- 10 Transmission monitoring light



EXTENDED WARRANTY

Register your **ZOOM**+ at:

www.ortovox.com/registration

In doing so, your warranty period will extend from two to five years from the date of purchase.

If you desire, we will regularly inform you about updates and the latest news in relation to our emergency equipment. This keeps you up to date at all times



Avalanche transceivers are designed to support the assistance offered by companions in the event of avalanche burial.

Your presence in areas where avalanche hazards exist is fraught with potential risk. The effective use of an avalanche transceiver requires appropriate training and constant practice.

ORTOVOX strongly recommends that you carefully read the operating instructions provided with the avalanche transceiver and take the appropriate avalanche education courses.

In addition, always take a shovel and a probe when you go off-piste in areas where avalanche hazards exist and never head out alone

Plan your off-piste activities using the current avalanche report at:

www.ortovox.com

Before you enter an area at risk of an avalanche, you should make sure that all avalanche transceivers are working properly and all batteries are in good condition.

The **ZOOM**+ fulfills the maximum safety requirements and is characterized by its simple operation!

HOW TO CARRY THE DEVICE

The **ZOOM**+ is carried close to your body in the comfort carrier bag (**11**) and should always be covered by at least one layer of clothing.

In warmer temperatures, the **Z00M**+ can also be carried in a zippered pant pocket (not in sewn-on pockets).





IMPORTANT NOTICE

People with pacemakers should wear the **Z00M**+ on the right side of their body. It is essential to observe the pacemaker manufacturer's instructions!

AVOIDING INTERFERENCE



In **TRANSMISSION MODE**, no electronic devices (wireless devices, mobile

phones, other avalanche transceivers) or other metal objects should be located in the immediate vicinity (within a few centimeters).

In **SEARCH MODE** other electronic devices should be switched off or carried at a distance of at least 50 cm away.

Interference can also be caused by approaching storms, lifts and power systems.

INITIAL USE

SWITCHING ON

Turn the ON/OFF switch (1) clockwise. The rotary switch clicks into the position "ON" and is now secured against being unintentionally switched off.



SWITCHING OFF

Press in the ON-OFF switch (1) to unlock it then turn it counter-clockwise to the "OFF" position.



SELF-TEST, TRANSMISSION MODE (device in transmission mode)

After switching on the **ZOOM**+, the 10-digit serial number appears.

The automatic self-test begins with the display check.

The transmitter, receiver, smart antenna, and sensors are then tested.

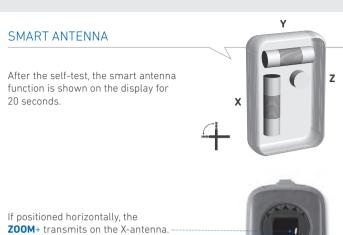
The remaining battery capacity is also displayed as a percentage (e.g. "99").



For further information about the battery, see p. 42

The installed software version then follows (e.g. "2.0")

INSTRUCTIONS ZOOM+



If positioned vertically, the **ZOOM**+ transmits on the Y-antenna.



TRANSMISSION

Once the self-test has successfully concluded, the **Z00M**+ will transmit and the transmission lights flash () on the screen.



FAULT

If a malfunction or fault is detected during the self-test, "**EE**" appears on the screen.

A warning can be triggered in the immediate vicinity of a transmitting avalanche transceiver, mobile phone, wireless appliance, large metal objects, or particularly strong magnetic fields.



If the malfunction warning is displayed during the self-test, repeat the test while outside in interference-free surroundings.

When doing so, it is essential to make sure that no other transmitters are nearby. **SWITCH OFF ALL SOURCES OF INTERFERENCE** (mobile phones, wireless devices etc.) or move them well away.

If the warning is displayed again, the device must be sent to the ORTOVOX service department.

For further information about the service, see p. 43.

PARTNER CHECK

During the partner check, the transmission signal of the other participants' avalanche transceivers is checked.

• Switch on the **ZOOM**+ by turning the ON/OFF switch (1) clockwise.



- Switch the ZOOM+ to locating.
 Push the two sliding switches (4) outward simultaneously.
- If the partner device is transmitting, the screen will display the distance (e.g. "6.5") from the transmitter.



Only one transmission signal can ever be tested at a time. The minimum distance during the partner check is 1 m; the distance to other transmitters must be at least 5 m.

5 m

1 m

 If there are no transmitters within the reception area of the ZOOM+, the dynamic "signal search" symbol ("S") appears on the screen.

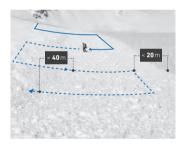


SEARCHING - LOCATING - RESCUING

Simultaneously press apart both **SLIDING SWITCHES** (4).

The TRANSMISSION SWITCH OVER BUTTON (5) springs up.

The search situation is automatically displayed on the screen.



VICTIM'S POINT OF DISAPPEARANCE KNOWN

If the point of disappearance is known or objects are visible, the search area is narrowed down to below this point in the avalanche flow direction.

This can save valuable time



SIGNAL SEARCH

Search the avalanche debris in the indicated manner during the signal search.

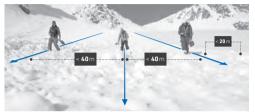
When using the **Z00M**+, a search strip width of **40** m (equates to 40-50 steps) must not be exceeded. The distance from the edge of the avalanche must remain less than **20** m.

At the same time, keep an eye out for objects or partially buried victims.



SEVERAL SEARCHERS

The searchers move across the search area in parallel. The distance between the searchers must remain less than **40** m.



COARSE SEARCH

Hold the **ZOOM**+ in a horizontal position during the coarse search!

From a distance of approx. 40 m to the avalanche victim, move the direction pointer (6) and distance indicator (7) along the field line to the target point.

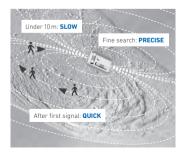
The distance indicator (7) goes down and confirms that you are getting closer.

INTUITIVE SEARCH ACOUSTICS

After the first signal, move quickly during your search. The intuitive search acoustics confirm your approach.

At 10 m you should move slower and get more precise in your search. An acoustic change will help you to do so.





The fine search starts automatically when you are 2.5 m away.

The direction arrow is switched off.

The closer you are to the victim, the lower the distance displayed (7) and the faster the intuitive search acoustic signal beeps (9).





During the fine search, determine the smallest distance.

Move the device forward and back once and left and right once in a cross shape.

Do not turn the **ZOOM+** during this process!

The smallest distance corresponds to the burial depth.

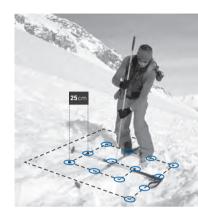
PINPOINTING (PROBING)

Mark the point with the smallest distance reading (using crossed poles or a shovel).

To now determine the precise location of the victim, probe in the displayed 25 cm grid.

Insert the probe quickly and deeply at a 90° angle to the snow. A clear decrease in the penetration depth indicates a hit.

The probe remains in the ground as a point of reference while you dig out the victim.



DIGGING OUT

Read the burial depth (1) on the probe. Move this distance down the slope and start shoveling in a V-shape.

If there are several rescuers, the person shoveling at the top should cut out blocks. Those behind should shovel and move the snow away. The air passages should be exposed as quickly as possible.





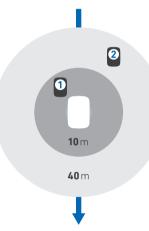
TIP Shovels with a **CLEARING FUNCTION** can save valuable time.

SEARCHING FOR MULTIPLE VICTIMS

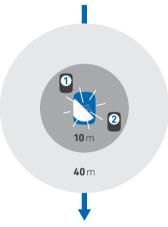
Once the first victim has been located and rescued, the remaining avalanche area is searched for additional victims. To this end, the **ZOOM+** offers the useful multiple signal indicator (8).

If multiple victims (1, 2) are located **WITHIN** the reception area (40 m), the multiple signal indicator **ILLUMINATES**.

Once multiple victims (1, 2) are located in **CLOSE PROXIMITY** (under 10 m), the multiple signal indicator starts to **FLASH**



The search is conducted in 40 m search strips (see figure on p. 36)



The close-range area is searched using the three-circle method or in micro search strips.

As soon as you get closer to the second victim, the search indicator switches to this signal. The switchover is indicated by **ALL THE DIRECTION ARROWS FLASHING** as well as acoustically.

The search for the second victim occurs.

SIGNAL OVERLAP

The transmission signals are measured and analyzed by the **ZOOM**+.

If several transmission signals are received that are transmitting at the same time then a signal overlap occurs.



The signals overlap and can no longer be technically distinguished. In the worst cases, this can last for several seconds

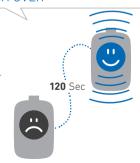
A signal overlap is illustrated without a direction arrow e.g. "40" and with the multiple signal indicator (8) illuminated.

You must wait until the signal overlap period has passed before you continue your search.

AUTOMATIC TRANSMISSION SWITCH OVER

In the event of a **SECONDARY AVALANCHE** to which you fall victim (with your device in search mode), the **ZOOM**+ automatically switches to transmission mode after 2 minutes of non-movement. This is indicated by a 10-second warning tone.

This makes it possible for you to also be found if buried in an avalanche while searching.



BATTERY

<code>ORTOVOX</code> recommends that you change the battery when its remaining capacity falls below 50%.

CHANGING THE BATTERY

(when the device is switched off)

Remove the screw from the battery compartment (2) and insert a new battery (1.5V, alkaline, AA, mignon, LR 6).

When changing the battery, make sure the polarity is correct. See the labeling in the battery compartment.

Remove the battery from the **ZOOM**+ during the summer months.

In the case of damage due to batteries that have run out, the ORTOVOX warranty lapses.





RECHARGEABLE BATTERIES

NEVER use rechargeable batteries (such as nickel-cadmium batteries, lithium-ion batteries etc.).

Rechargeable batteries have a significantly lower operating voltage, and thus a lower range and limited service life. In addition, defective rechargeable batteries cannot be detected immediately.

After recharging they initially show the full operating voltage, only to severely drop off again after a very short operating period (THIS CAN BE VERY DANGEROUS).

As the **ZOOM**+ is a rescue device, a life could depend on it functioning properly.

As electronic components can stop working, we recommend that you always send the device for factory inspection on the recommended date shown on the test seal.

The number (e.g. "2018") on the seal in the battery compartment reminds you that the device should be checked in 2018.

The number such as "1057" identifies the batch number of the **Z00M**+.

Please use our inspection service in the summer months so that your device will be ready for operation when winter begins.

For repairs or the factory check, please send the **ZOOM+ INCLUDING THE FILLED IN SERVICE CARD** directly to our service center. Service card see page 120.



On presentation of the dealer invoice, we grant the 2-year ORTOVOX warranty from the date of purchase.

If you register your **ZOOM**+ at: **www.ortovox.com/registration** we will extend the warranty by an additional three years.

Following online registration, the total warranty period is therefore five years.

As part of the ORTOVOX warranty, faulty parts are repaired free of charge or the avalanche transceiver is replaced by an appliance of the same design.

Damage caused by improper handling and natural wear is excluded.

Batteries are excluded from the warranty.

Any further liability for consequential damage is expressly excluded.

Enforced warranties do not extend the warranty obligation or start a new warranty period.

See page 116 for service center addresses.

NAME	ORTOVOX ZOOM +
FUNCTION	digital
CASING	ergonomic, waterproof, impact resistant
SIZE	118 x 80 x 24 mm
FREQUENCY	457 kHz
	The Z00M + receives transmission signals from every avalanche transceiver conforming to standards (EN 300 718) without restrictions.
BACK-UP	RECCO [®] Reflector inside
DIGITAL RECEPTION RANGE	40 m
SEARCH STRIP WIDTH	up to 40 m
TEMPERATURE RANGE	-20° C to +45° C
	If the transceiver gets wet, DO NOT USE DIRECT HEAT such as a hair dryer to dry it out! Heat applied in a direct manner may permanently damage thedevice beyond repair even after it has cooled down.
POWER SUPPLY	1 x alkaline AA 1.5 V LR 06 battery
OPERATING TIME	Transmitting: approx. 250 hours Receiving: approx. 15 hours
WEIGHT	Z00M + approx. 180 g incl. battery Comfort carrier bag approx. 98 g

C€0682

MANUFACTURER

ORTOVOX SPORTARTIKEL GMBH, Rotwandweg 5, 82024 Taufkirchen, Germany

DECLARES THAT THE PRODUCT

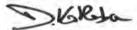
Type ORTOVOX

INTENDED PURPOSE

Avalanche victim search device

is in compliance with the essential requirements of the Council Directive 1999/5/EC (R&TTE), especially with the regulations

STANDARD



ETSI EN 300 718-1 V 1.2.1 (2001) ETSI EN 300 718-2 V 1.1.1 (2001) ETSI EN 300 718-3 V 1.2.1 (2004)

Dieter Kotlaba, Product Manager, Taufkirchen, 20.06.2013

USA FCC STATEMENT

FCC ID: KF50RT0V0XZ00M

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) the device may not cause harmful interference and
- (2) the device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for an intentional radiator pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

CHANGES OR MODIFICATIONS TO THIS DEVICE NOT APPROVED BY ORTOVOX CAN VOID THE USERS AUTHORITY TO OPERATE THE EQUIPMENT. **ZOOM**+ INDEX

P Pinpointing 39 Probing 39
Search 29, 36, 44 Search strip 36 Secondary avalanche 41 Self-test 32
Serial number 32 Service 27, 43 Shoveling 39
Signal overlap 41 Signal search 29 Smart antenna 26, 32, 33 Switching off 32 Switching on 32
T Technical data 44 Transmitting 34, 35, 41
W Warning 34, 41 Warranty 30, 42, 43
Warranty, extended 30

ON/OFF switch 29, 32, 34



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TAIWAN

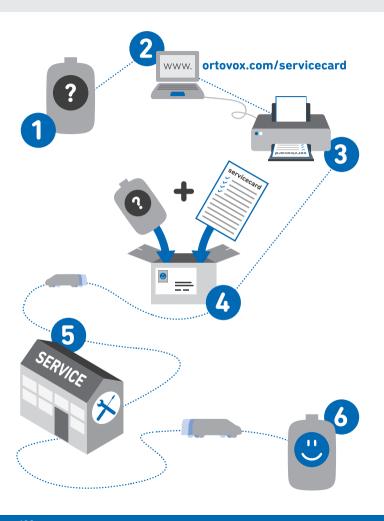
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© ORTOVOX 6/2013 Änderungen und Fehler vorbehalten.



ZOOM+

Made in Germany ortovox.com