

S E C U R E H O U R F R E E D O M

Mode d'emploi
Instruction for use
Gebrauchsanweisung
Istruzioni d'uso
Modo de empleo

ARVA



Evolution+

Description of the unit A

■ Front:

- 1 On/Off harness buckle switch
- 2 Transmission / reception (SOS/Search) selector + SCAN switch
- 3 Arrows indicating the direction to follow
- 4 Speaker

■ LCD screen

- 5 Indicator showing simultaneous detection of multiple victims
- 6 Primary search indicator
- 7 Distance indicator / battery status
- 8 Battery status indicator

■ Back:

- 9 Battery compartment cover
- 10 Reminder: Startup - Switching to reception mode
- Simulation primary search, one or x rescuers

① - Secondary search ② - Final search (last cross) ③

primary search


B One rescuer

C Several rescuers

Exclusive features of the ARVA Evolution+:

- A powerful 457 kHz ± 20 Hz transmitter transmission level does not depend on battery status.
- The search band width is 40 m.
- A multi-victim indicator and an automatic locking on the closest victim.
- SCAN function
- A self-test of the locking onto the transmission frequency and power every 5 minutes.
- 16-bit processor with extremely rapid analysis speed

inserting the batteries




The ARVA EVOLUTION+ functions exclusively with 4 standard LR03 alkaline batteries. Open the battery compartment cover  with a screwdriver or coin. The 4 batteries must always be the same brand and replaced at the same time. Fit the batteries in carefully in the direction indicated inside the compartment.

Note: Do not store the device at a temperature below 0° C to avoid battery damage.

DO NOT USE rechargeable batteries.

Remove batteries when not using the device for an extended period of time.

switching the unit on

- **Buckle the On/Off harness switch** 
- **Device self-test:** directional diodes  will light up from left to right as well as the entire LCD screen display. 3 beeps for the test of the speaker will be heard when it is in good condition.
- **Check your batteries** with the battery capacity scale indicated in percentages 7 8. 11 levels (99, 90, 80, 70, 60, 50, 40, 30, 20, 10, 0).
- The device then turns off the LCD screen and **the central diode flashes**  to indicate that the device is in transmission mode.
- **Reception/transmission test to be conducted before each excursion.** The tester sets his avalanche transceiver for transmission and each member of the group verifies that his transceiver in reception mode detects him correctly. The operation to be conducted in reverse so that ALL transceivers in the group are checked in both transmission and reception modes.

Possible anomalies...

The ARVA EVOLUTION+ conducts a self-test every five minutes to check the status of the batteries, the locking onto the frequency, transmission power, etc.

If the device detects an anomaly, a long 5-second beep will be heard, 3 times separated by 5 minutes. Two cases are possible:

- The capacity of the batteries has dropped to 20% (the device can still transmit for 48 hours or search for 1/2 hour). After the long 5-second beeps, 20% will remain lit on the LCD display to remind you to change the batteries as quickly as possible.
- Technical transmission or program problems, after the long 5-second beeps, the LCD screen displays Er (= Error). **Do not leave with the device in this last case.**



Evolution+

using the arva

The ARVA EVOLUTION+ is a DIGITAL avalanche transceiver with right and left directional arrow utilization. The device will automatically lock onto the closest victim. The user follows the numbered indications and the direction indicated by the red diode that lights up. If the icon 5 appears, the device detects a case of multiple victims.

recommendations for use

Advance over the terrain SLOWLY to not head in a wrong direction in your haste. The entire surface of the avalanche site must be covered. During a search or a test, be sure to: stay away from any electrical device (high-voltage power line, radio, portable cellular phone) or establish a radio silence. This list is not exhaustive.

This applies to any avalanche transceiver-type transmission-reception device. The distance and direction display gives an indication of progress on a flux line and not of direct distance in meters.

information for your own safety

When you go off ski trails with their assurance of safety, you head for a world of risks where an avalanche, in particular, can happen. You therefore are enjoying your recreation in the mountains under your own responsibility:

- **Before leaving, get informed through** representative organizations and mountain professionals and get equipped. In particular, have an avalanche transceiver (an avalanche victim research device), a shovel and an avalanche probe. This equipment is not an avalanche detector, nor a total protection. Be careful – to be efficient, you have to be trained: train yourself therefore to use your ARVA!
- **Never go out alone, do not follow just any ski trails:** they are not an absolute guarantee of safety. In doubt as to the stability of a slope that you must absolutely take, increase the distance between you, or better, **only go one at a time**. And look out for each other.
- **Last, know when to stop...** Be vigilant: snow changes, the risk of an avalanche as well! Learn therefore to know more about avalanches (get informed through the pertaining organizations).

In the event of a single buried victim †

digital mode

■ **Primary search** (Approach phase) (see D1)

• Pull on **SEARCH**. The device is in digital mode entirely automatically; the LCD screen displays **SEARCH** continually as long as you have not detected a signal transmitted by the victim

• Advance by crisscrossing the avalanche according to diagram B if you are alone or C if you are several rescuers.

• Hold the transceiver horizontally, pointing it downward and sweeping slowly from left to right and right to left (you can make a 180° angle)

• Continue until the first clear and distinct signal (directional arrows lighting up AND the distance display).

Note: It may happen that you are directly in secondary search, the transceiver picking up a signal right from its being switched over to reception.

■ **Secondary search** (localization phase) (see D2).

This phase begins from the moment you receive a signal from the victim.

• The transceiver gives you distance information on the LCD screen (numbers) AND one of the directional arrows lights up.

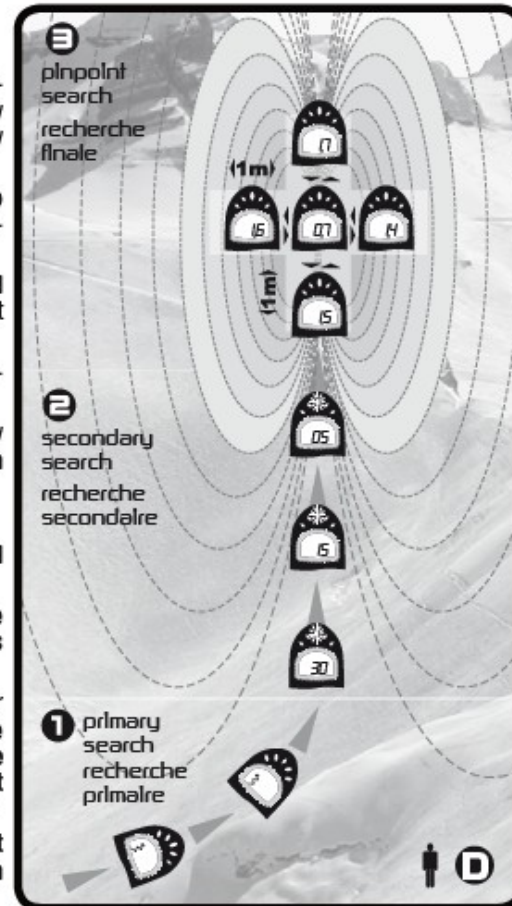
• As soon as a directional arrow lights up, orient your transceiver so that the central diode is lit and go in the direction it indicates. **If the numbers decrease, you are getting closer to the victim, continue in this correct direction. Otherwise, head in the opposite direction.**

• **Always try to have the central directional diode lit** to advance, carrying out a slight sweeping movement in the direction the lit arrows are indicating.

This will make it possible for you to cover the shortest distance possible for you to reach the victim. Continue to move forward until the distance display shows 3.0.

■ **Final search** (pinpointing phase) (see D3). Having reached this indication, the arrow lit, bring the transceiver down horizontally and in the same position to the level of the snow. The beeps will speed up, the distance indication will decrease further. Continue until you reach the smallest number. When it increases, come back to the smallest and locate the victim by the **"pinpoint over a cross" technique while continually keeping the transceiver in the same position.**

■ **"Pinpoint over a cross" technique:** the transceiver must absolutely be moved at the level of the snow, parallel to it and in a straight line. On this straight line, the place must be determined where the distance information is lowest (beeps very close to each other, or even continuous beeps). From there, move out at a perpendicular and do the same procedure again. The point where the sound reaches its maximum, determined in this way, is on a vertical with the transceiver. If necessary, do the procedure one or two more times to further pinpoint the location. It is not necessary however to reach an extremely precise localization with the help of the transceiver. It is indeed often faster to immediately begin to probe as soon as the probable area of localization is defined with a precision within an area of about 50 centimeters.



In the event of several buried victims †† ...

scan mode

Note: This is one of the methods possible for facing this situation.

Begin by your primary search if necessary...

- In the secondary search phase, if the device detects a multi-victim situation, the indicator will light up; this means that your device detects several transmissions around you.

- Then continue your search following the standard method for a single buried victim.

- The device will automatically lock on the device transmitting the strongest signal, which is theoretically the victim closest to you. When you have found the first victim (v1), locate them with your probe and indicate the position.

Take then one or two steps backwards in the direction you came in. Then switch over to SCAN MODE:

To switch over to SCAN mode, press several times on the button (transmission then reception position). As soon as you are in SCAN mode, the sound cuts and appears on the LCD screen and flashes for 6 seconds.

DO NOT MOVE YOUR DEVICE, it is scanning the terrain by a radius of 15 meters around you. After its SCAN (cf diagram E), several numerical and directional indications appear successively on the LCD screen. Concentrate on the given numbers and directions (the device will transmit no sound). Each detected victim is indicated by a distance and direction.

(The smallest number corresponds to the victim you have just found v1 and the other number corresponds to the distance from the victim v2)

The highest indication (and the direction) correspond to the number of steps you have to take to find victim V2

- Moving in terms of the highest indication, sweep SLOWLY. If you pick up a new signal, follow the standard search procedure for a single victim from the secondary search phase.

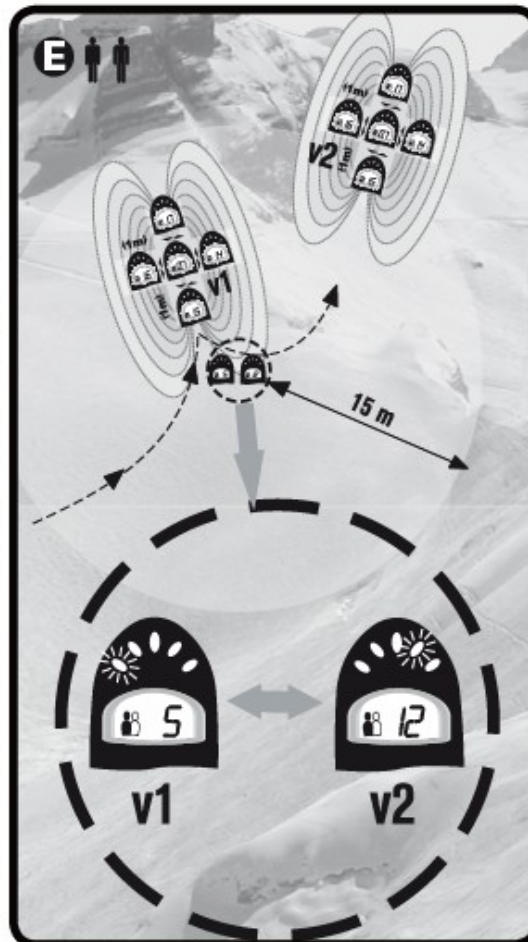
Note: After its SCAN, the device is going to successively repeat 5 times the directions and distance indications for the detected devices.

After these repeats, it will switch automatically to digital mode.

If while searching for V2, the device brings you back to V1, redo a scan to find the direction of V2 to begin the above procedure again.

WARNING: Even after having used the SCAN function, a victim can hide another, both having perfectly synchronized transmissions. SCAN again and check the entire avalanche site.

Note: Think to mark your first signal with a stick or a probe and explore the entire avalanche site... The device may not display the icon (multiple victims) because it does not detect them or you are not in the detection area; therefore, do not hesitate to redo a SCAN if any doubt remains and check the ENTIRE area of the avalanche site. Train yourself!



guarantee certificate

ASTEEL guarantees against all manufacturing defects.

Guarantee-by date is noted on the sticker inside the battery compartment. The absence of –or tampering to this sticker, as well as opening the beacon shell nullifies the guarantee.

For the period of this guarantee, all necessary repairs or replacement of beacon will be made free of charge (excluding freight).

This product is not subject to any other expressed or implicit guarantee. Distributor accepts no responsibility for loss, theft, or adapted use of this beacon.

In case of defect, beacon must be returned to place of purchase with description of problems.

Guarantee applies only to beacons used according to proper directions.



search mode



transmit position

Technical characteristics:

- ▲ Transceiver 457 kHz, international Frequency.
- ▲ Digital.
- ▲ Dual antenna.
- ▲ Fonction scan.
- ▲ 40 m search band width.
- ▲ Switch on by inserting end of strap into transceiver.
- ▲ Visual and auditory battery test.
- ▲ Autotests when switched on.
- ▲ Transmission level self-test.
- ▲ Automatic search with directional arrow and progress indicator.
- ▲ Weight : 220 g - Battery life 250 Hrs.
- ▲ Require 4 alkaline batteries AAA/LR03.
- ▲ Manufactured in accordance with European standard ETS 300718.

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