CONTENTS

FOREWORD

Congratulations on the purchase of your new ABS® Wireless Activation.

This manual explains how radio-controlled remote activation works, and how to use it in conjunction with the ABS® Avalanche Airbag System. ABS® Wireless Activation increases the likelihood that the ABS® system will activate when you are skiing in a group. In an emergency, each member of the activation alliance is able to activate the ABS® airbags of the other members (factory setting). With ABS® Wireless Activation enabled, you will still always be able to activate your own ABS® Avalanche Airbag System.

ABS® Wireless Activation is compatible with all ABS® dual airbag systems. Please read these instructions carefully before you use this equipment. Pay particular attention to the "Precautions" section, and strictly adhere to the information it contains. We suggest that you keep this user manual in a convenient location so it is easy to consult. Make sure you include it if you choose to pass this equipment on.

Please also refer to the operating instructions for the ABS® Avalanche Airbag System.

You should always try to activate your ABS® system yourself by pulling the activation handle. ABS® Wireless Activation simply provides the additional option of radio-controlled remote activation of your ABS® airbag system by other group members. The terrain and other factors may impair the operation of remote activation.

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1. PRECAUTIONS

1.1 Using ABS® Wireless Activation

ABS® Wireless Activation consists of a handle, a connecting cable and the E-box. Take care when handling all components.

Make sure the connecting cable is not damaged by the sharp edges of winter sports equipment. If you notice red spots on the connecting cable, this means that the protective cover has been damaged and the unit must be repaired (see "Service and repair"). Store the ABS® Wireless Activation system in a dry place that is protected from extreme cold and heat, and from direct sunlight. Keep the Wireless Sctivation out of childrens reach. You are strongly recommended to have the system inspected regularly to ensure it is working correctly (see "Regular checks").

Do not dock the activation handle to the ABS® system unless you have attached a full cartridge first.

1.2 Interference

Note that the locking strap contains a magnet, which must not be placed close to other electronic devices (avalanche transceiver, compass).
Certain avalanche transceivers use magnetic switches that could be disrupted or disabled by magnets, for example:
• ARVA: Generation 9000 to A.dvanced
• Pieps DSP
• Barryvox Opto 3000
If you are using an avalanche transceiver with a magnetic switch, you are recommended to wear it on the side opposite to the remote activation handle and to secure it to the body a sufficient distance away.

Avoid keeping electronic devices (e.g. mobile phones, radios, head torches) or metal items (penknives, magnetic buttons) close to the handle while it is switched on. **You must not wear any clothing with magnetic buttons!**

2. DESCRIPTION OF THE UNIT

Please unfold picture page.

1	**Handle plate**	8	Indicators (green, blue, red)
2	Hose clip		
3	Coupler	9	Button
4	Locking strap	10	Connecting cable
5	Solenoid	11	**E-box pocket**
6	Pin	12	**E-box**
7	**Remote activation handle**	13	E-box battery cover

3. USING FOR THE FIRST TIME

The competence of individual users is crucial to the correct use of ABS® Wireless Activation. The unit is not difficult to use, but it is very important to carefully work through the steps outlined below.

3.1 Converting the handle plate

Introduction: You have received a special handle plate for ABS® Wireless Activation. In order to fit it, you will need to remove the standard handle plate. You will need to use the supplied screwdriver to convert the handle plate.

Removing:
1. Open the Velcro fastener on the handle plate, unthread the webbing and remove the handle plate from the shoulder strap (see figure). **2.** Undo the two screws on the rear of the handle plate (see figure). **3.** Detach the hose from the handle plate. **4.** Keep the black hose clip with the screws and washers – you will need them later.
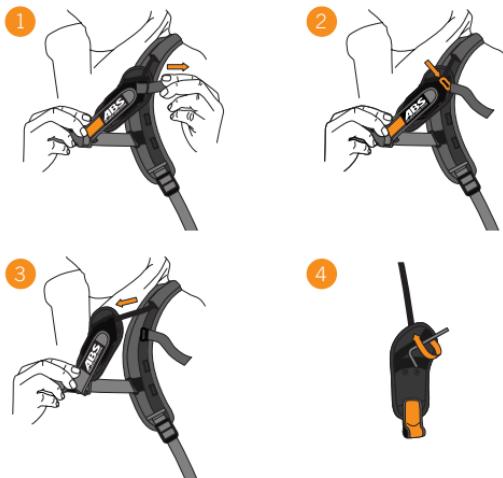
Attaching:

1. To attach the remote activation handle plate, take the screws you removed earlier and place them, with washers, from the rear into the predrilled holes on the handle plate (see figure).

2. Place the hose clip, with the large opening facing forwards, onto the hose above the coupler and tighten both screws.

3. Attach the handle plate to the correct size of plastic eyelet, and thread the webbing as shown in the figure.

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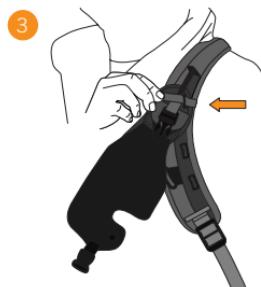
3.2 Inserting/changing batteries

To insert the batteries, open the cover of the E-box and arrange the three lithium batteries (supplied). You must always use three new batteries of the same type. Make sure that the cover clicks securely into place when you close it.

Only use lithium batteries of type LR91/AA. Never use rechargeable batteries and always change all batteries at the same time.
Please make sure you keep the unit and the batteries dry. Check the battery compartment regularly, cleaning/drying it if necessary – any moisture in the battery compartment can cause corrosion. Do not touch the contacts.

3.3 Attaching ABS® Wireless Activation to the ABS® backpack

Follow these steps before you put on the ABS® backpack.

3.3.1 Attaching the E-box

The E-box is secured with its pocket to the side of the hip strap. Please ensure that the body covers as little of the E-box as possible. Use the two Velcro fasteners to secure the pocket to the hip belt (see figure).

Next, insert the E-box with the battery compartment facing away from the body and close it by pushing in the plastic strap.

If you are tall or have a large waist measurement, the E-box can also be worn on the shoulder strap. This is the best position in terms of radio technology. To do this, thread the shoulder strap through the two holes in the plastic eyelet on the E-box pocket (see figure) and move the pocket to a position that is comfortable for you, close to the hip strap (figure xy).

3.3.2 Securing the connecting cable

The connecting cable has two Velcro fasteners. Secure the lower fastener to the shoulder strap close to the hip strap (see figure). Run the connecting cable up along the shoulder strap and thread the upper fastener between the adjusting buckle and the shoulder strap (see detail figure). Secure the connecting cable to the backpack strap so that the position of the handle is convenient for you, and the cable runs close against the body. Take time to carefully double-check the position of the Wireless Activation after docking the remote activation handle.

4. SWITCHING ON THE UNIT/DOCKING AND UNDOCKING

The system does not have a separate on/off switch. The main switch is integrated in the docking/undocking mechanism, and is activated when you attach/remove the ABS® Wireless Activation handle to/from the ABS® Avalanche Airbag System.

To dock the handle, open the locking strap and and use the Velcro fastener to fix it to the rear of the handle plate.

To dock the activation handle, align the pin with the coupler and push the handle in. The coupler will engage automatically.

Always make sure that the connector engages correctly in the docking mechanism – this will prevent the handle detaching unintentionally and will ensure that the unit operates properly. The metal cover of the connector must slide down in order to close the connector and correctly dock the handle. Never pull the docked handle down to check that it has engaged properly, as you may activate the airbag by accident! If the docking mechanism fails to engage correctly, please read the instructions in "Maintenance".

OK
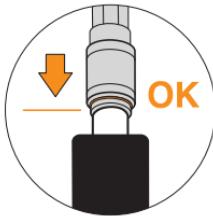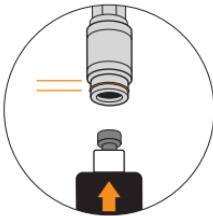
The unit switches on, confirmed by a high-pitch sound follow-ed by a low-pitch sound. During startup, the handle automati-cally performs a self test and battery test. The microprocessor system, electronics and the sensors are checked. If the battery power is very low, the unit cannot carry out the self test. **You can tell that the self test has finished successfully when the green indicator flashes and you hear three beeps. You can also see the percentage of remaining battery power. If the self test fails, the red indicator flashes and an audible warning sounds (see section 5).**

You will be able to activate your own ABS® system with a Wireless Activation handle even if the batteries are dis-charged or there is a fault in the electronics. Once the handle is docked, you can switch it on quickly and easily by closing and opening the locking strap (see also section 7.4). Check your ABS® Wireless Activation handle at home before you leave for your trip. Switch the unit on by docking it, and observing the results of the self test and battery test. This means you can check that the unit is working properly before you need it, for example you can change low batteries if necessary.

5. BATTERY STATUS INDICATOR

The battery capacity is displayed when you dock the ABS®
Wireless Activation handle to your ABS® system. The following
table shows guideline values for the battery status indicator.

Green indicator flashes:

5 x: > 95 %
4 x: > 80 %
3 x: > 60 %
2 x: > 40 %

100 %:
At least 200 hours in activation standby mode and one remote
activation

Red indicator flashes:
1 x: < 20 %: The batteries must be changed as quickly as
possible.

Emergency backup at 20 %:
No more than 12 hours in activation standby mode and one
remote activation

**You will be able to activate your own ABS® system with a
ABS® Wireless Activation handle even if the batteries are
discharged.**

The battery capacity can only be displayed correctly if the unit
is operated with batteries as described in "Inserting/changing
batteries". Low temperatures, the age and brand of batteries
can shorten battery service life and reduce the accuracy of
the battery status indicator.

6. GROUP PROGRAMMING MODE

Before a tour or before you go onto the slope the ABS® Wireless Activation handles of all members of the group must join the activation alliance. To create the activation alliance, all members dock their handles and wait for the battery and self test to finish. The handles are now switched on. To switch to group programming mode, undock your handle again. The blue indicator flashes once per second and the ABS® Wireless Activation handle is now ready to join an activation alliance (group programming mode set to receive).
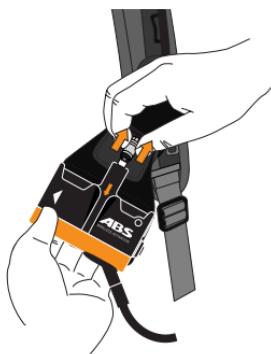
6.1 Creating the activation alliance

When a group is created, a group leader is designated. If you are the group leader, press the button on the side of the handle until you hear a beep. Then release the button until the indicator on the handle flashes quickly in green (group programming mode set to transmit). Next, add all members of the activation alliance by aligning the indicator on your handle with the indicators on the handles of every other member. To do this, hold the handles next to each other until a beep confirms that group programming has been successful. The blue indicator of members who have been successfully added to the activation alliance is now constantly lit. This means you can immediately see which members have been successfully added to the activation alliance, and which members are still waiting.
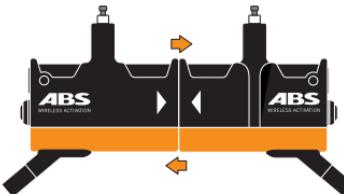
It is essential for group programming to be carried out by a single individual, following the procedure described!

If you are not sure which members have been correctly added to the activation alliance, you can use the "Group test" function at any time to check. You are recommended to do this every time anyway, to double-check. Follow the instructions in "Group test".

If you press the side button for longer than 2 seconds, you can switch group programming mode back from transmit to receive.

Membership of an activation alliance remains unchanged even if the activation handle is docked or undocked.

6.2 Leaving the activation alliance

If you change from one activation alliance to another, i.e. you are added to an alliance as described in "Creating the activation alliance" or you create an alliance yourself, it is not necessary to leave the original activation alliance.

If you do not intend to join another activation alliance, you must leave your existing alliance. To do this, dock your handle and wait for the battery and self test to finish. The handle is now switched on, and if you undock it it changes to group programming mode. The blue indicator flashes once per second. Press the button on the side of the handle until you hear a long beep – the blue warning light stays on constantly for a few seconds. This means you have successfully left the activation alliance and you are back in group programming mode.

7. ACTIVATION STANDBY MODE

After you have created the activation alliance, carefully dock the handle back into the ABS® system. You are now in activation standby mode, which is the normal mode for open terrain. When the handle is in activation standby mode, the green indicator flashes twice in rapid succession, every 20 seconds. This means that the handle is now operational, in other words remote activation is enabled.

If an error occurs in activation standby mode or if the remaining battery capacity falls below 20 %, the red indicator starts flashing and there is an audible alarm. **The remote activation function is only enabled if the handle is in the standby position and is not covered by the locking strap.**

7.1 Remote activation

The ABS® Wireless Activation handle enables the remote activation of ABS® systems belonging to the same activation alliance. In the basic configuration of the handle (Master) – which is the factory setting – pulling the ABS® Wireless

Activation handle activates your own airbag and also remotely activates the airbags in the activation alliance.

7.2 Active Activation

As soon as you notice that an avalanche has been triggered, affecting you or a member of the activation alliance, you should pull the ABS® Wireless Activation handle IMMEDIATELY. Your airbag opens in 2–3 seconds and for 30 seconds automatically transmits the radio signal for activation to the other members of the activation alliance, causing their airbags to open.
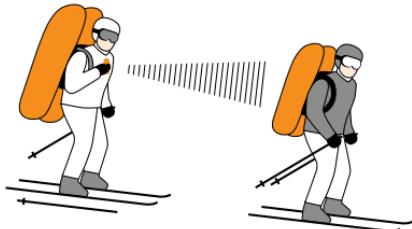
You should also pull the handle even if people are still attempting to flee the avalanche, if it is small in scale or someone is no longer visible in the flowing avalanche. Do not pull the handle once the avalanche has come to a standstill.

7.3 Refill

When the handle has been activated – whether by yourself or remotely – it switches itself off and can only be replaced by your ABS® dealer. Please always remove the batteries when you return your Wireless Activation for refilling.

Activation units used in an avalanche are replaced free of charge. To request the replacement, you will need to send us an incident report.

Use the form entitled "Report form for avalanche incidents involving ABS", which you download from the ABS® system section at **www.abs-airbag.com** or at **www.slf.ch/lawineninfo/rueckmeldungen/index_EN.**

The information you provide will be handled anonymously and will be used for statistical purposes by the Institute for Snow and Avalanche Research (Davos, Switzerland). The resulting incident database is controlled by the Institute for Snow and Avalanche Research and provides valuable information for use in training (prevention) and the development of rescue systems. We encourage you to pass on details of your incident to the database.

7.4 Disabling the ABS® Wireless Activation handle

If you are at or near a location where unwanted activation would be dangerous or you would like to disable ABS® Wireless Activation, you can close the locking strap. The locking strap contains a magnet which disables remote activation when the strap is closed. Securing the locking strap also prevents manual activation. If you disable remote activation in activation standby mode by closing the locking strap, you will hear a series of ascending beeps.

You must close the locking strap or undock the handle when using or approaching lifts (e.g. gondolas or chairlifts), or in buildings or helicopters!

Do not forget to open the locking strap (point 4) or dock the handle as soon as you are in open terrain again. A self test takes place when remote activation is enabled again. The composition of the activation alliance remains the same.

At the end of your tour, you should close the locking strap (or undock the handle) to disable ABS® Wireless Activation. If the unit will be unused for a while (over summer), the remote activation handle should be undocked and the batteries removed.

7.5 Group test

The group test function is a straightforward way of checking the composition of an activation alliance while the handle is in activation standby mode. One member of the activation alliance enables the group test by pressing the side button twice in quick succession. The handle initiating the group test emits a short beep and lights the blue indicator for 20 seconds to confirm that the radio command to display group membership has been transmitted.

To confirm membership, there is a beep and the blue indicator lights for 20 seconds on the units of everyone in the activation alliance within range of the system.

7.6 Range

The radio transmission range can reach many hundred of metres in ideal conditions. However, your own body, your equipment and the terrain can all cause shadowing of radio transmission, severely limiting the range. The basic assumption is that a direct line of sight is required for successful transmission between sender and receiver. To achieve the maximum possible range for the group as a whole, each ABS® Wireless Activation handle in an activation alliance works as a repeater, in other words it retransmits a received radio command.

The group test function is a straightforward way of checking the range when you are out in open terrain.

8. OTHER FUNCTIONS

8.1 Single slope setting

The single slope setting can be used if one person at a time skis all or part of a slope. The function allows the remote activation of the person who is skiing the slope alone, without triggering the ABS® systems of the other people in the activation alliance. It is very important that you only use this function when just one person is in the danger zone.

Before you go onto the slope, press and hold the side button until you hear a beep and the red indicator flashes rapidly. The indicators of the other members of the activation alliance start flashing quickly in green. Rapid beeps indicate to everyone else in the activation alliance that the single activation function has been enabled. Now ski the danger zone alone.

Before the next group member skis the slope, he or she enables single activation by pressing the side button until the unit beeps and the red indicator starts flashing rapidly. The indicators of everyone else in the group, including the person waiting at the bottom of the slope, start flashing quickly in green.

When the last person reaches safety, he or she stops the single activation function by pressing the side button until the unit beeps. Rapid beeps indicate to everyone else in the activation alliance that the single activation function has been disabled.

Now, the handles of all group members are in normal activation standby mode again.

8.2 Master and guest profile

By selecting a profile, the handle can be adjusted to match a user's needs and skill level. Group programming can be used to add each handle to the activation alliance as a guest or master. The master profile means that all functions are available to the user, as with the factory setting. This means that all handles in the activation alliance will be included in remote activation.

In the guest profile, certain functions are restricted or not available. In particular, this may be a good idea for members of a guided group who cannot be familiarised with Wireless Activation.
Restrictions in the guest profile:

No remote activation of other members
The main restriction in the guest profile is that a group member with this profile cannot initiate a remote activation. This means that pulling the activation handle opens the person's own air bag, but no-one else's in the activation alliance. However, if a group member with the master profile pulls the handle, the radio signal is also sent to group members with the guest profile, opening their airbags.

Group programming mode not enabled
Handles with the guest profile are unable to create activation alliances (group programming mode set to transmit). However, they can be included in any activation alliance (group programming status set to receive) and actively leave the alliance. Doing this returns the handle to the factory setting as master.

Group test function not enabled
Guest handles cannot initiate the group test function. However, membership of an activation alliance is displayed if a master handle initiates the group test function.

Single activation cannot be enabled
Guest handles cannot initiate the single activation function. However, guest handles can remotely activate master handles in the same activation alliance, provided the master handles have enabled single activation. This is a typical scenario in

guided groups – the guide is often the first to ski the slope and wants to use the remote single activation function to increase the likelihood of activation.

8.2.1 Programming guest handles

During group programming you can switch between programming the master profile and the guest profile. Follow the instructions in the "Group programming mode" section to change to transmit mode. If the indicator on your handle flashes green you are in transmit mode.

The green colour means that you are adding master members to the activation alliance. If you press the side button twice in quick succession, the colour of the indicators changes intermittently between green and red. You can now add guest members to the activation alliance. Press the side button twice in quick succession to toggle between master and guest programming.

To make it easy to identify a handle with the guest profile, the green indicator flashes just once every 20 seconds in activation standby mode. This differs from the master profile in which the indicator flashes twice every 20 seconds.

8.3 Resetting the handle

When a handle leaves the activation alliance it is reset to the factory state, and it returns to the master profile. Follow the instructions in "Leaving the activation alliance".

9. ADDITIONAL INFORMATION

9.1 ABS® Wireless Activation frequency

ABS® Wireless Activation is based on radio transmission.
Different countries have different frequency regulations. The
attached map of the world shows the geographical frequency
regions covering individual countries. Please note that some
countries prohibit the use of certain frequencies. The unit is
set to the frequency of the country where you purchased it.

Frequency regions:

Light grey = Region A
Dark grey = Region B
Black   = ABS® Wireless Activation not permitted –
              use the standard activation handle instead
White   = unknown

9.2 Maintenance

If it becomes difficult to dock and undock the activation handle, you must get the coupler working properly again to ensure that the docking mechanism engages safely. To do this, use the ABS® oil supplied with every ABS® backpack. Follow the instructions for the ABS® Avalanche Airbag System.

1. Place a drop of the ABS® oil on the pin of the handle and inside the coupler.
2. Push the coupler up.
3. Dock and undock the handle several times until it engages easily and the coupler slides forward.

If necessary repeat steps 1–3. If this does not work, the system will have to be checked by the manufacturer (see "Service and repair").

9.3 Service and repair

If your ABS® Wireless Activation does not work properly even though the batteries are full and they have been inserted correctly (negative self test, no signal during the group test, mechanical defect), your ABS® dealer will need to send it off to be checked. The disposal of the ABS® Wireless Activation has to be conducted by the manufacturer.

9.4 Regular checks

The pressurized capsule in the handle is operational for a limited time only. We therefore do not recommend using unactivated, charged cartridges for more than three winter seasons. The metal pin on the side opening of the handle indicates the maximum service life.

Please observe the following expiry dates:
Gold-colour metal pin – expiry date 2013.

9.5 Local block on remote activation

Are you a ski lift operator or do you run a heliski service? If so, you can use special ABS® Wireless Activation transmitters to prevent remote activation in defined zones of any size you choose. Please contact the manufacturer for more details.

9.6 Warranty

The ABS® Wireless Activation system (not including batteries, cartridges and carrying system) is covered by a two-year warranty, starting from the date of purchase as shown on the proof of purchase. If you make a claim under the warranty, any parts shown to have material or manufacturing defects will be replaced free of charge. The warranty does not cover damage caused by incorrect handling or normal wear and tear. The warranty is voided if the unit has been opened by the purchaser or an un-authorised third party, or if it has not been used with original or recommended replacement parts and accessories. If a returned unit is found not to have any defects, we will make a charge for the function test. Successful warranty claims do not extend the warranty obligation or the warranty period for the unit. A six-

month warranty is provided for replaced items. Warranty claims are only considered if the unit is returned together with proof of purchase. Postage and packing are payable by the owner. Any additional warranty is expressly ruled out, as is any liability, in particular for direct, indirect and consequential loss or damage.

9.7 Technical data

Transmission frequency:	Region A: 868.45 MHz
	Region B: 903.913 MHz
	(The frequency regions
	are explained in the
	section "ABS® Wireless
	Activation frequency"
Power supply:	3 x IEC-LR91 1.5 V
	Lithium (AA)
Original batteries:	Energizer LR91
Battery life in activation standby mode:	At least 200 hours
Operating temperature range:	– 20° to +45° C
Weight:	390 g
	(including batteries)

9.8 Certification and conformity
(see also "Declarations of conformity")

Manufacturer: ABS Peter Aschauer GmbH / Type: ABS®
Wireless Activation/Country of manufacture: Germany/
Designation: $C\!\!\in$-0589/Certification: BAM-P1-0003

Canada/USA/IC: 8702B-ABSWA001/FCC ID: XVQABSWA001
This unit complies with FCC Part 15 requirements and Industry
Canada RSS-210.

When operating this unit, note the following:
1. The unit does not cause any (harmful) interference, and
2. The unit necessarily accepts any received interference,
including interference that may cause unwanted operations
in the unit.

We accept no liability for any information contained. October
2009. Note that the technical data and product specifications
may be different in future models.

Declarations of conformity

Hereby,

Name of manufacturer:	ABS Peter Aschauer GmbH
Address:	An der Dornwiese 3
City:	DE 82166 Gräfelfing
Country:	Germany
	declares that this equipment,
Product description:	ABS® Wireless Activation for
	ABS® Avalanche Airbag System
Type designation(s):	ABS® Wireless Activation
Trademark:	ABS® Avalanche Airbag System
	is in compliance with the essential
	requirements and other relacan
	provisions of Directive 1999/5/EC

Date: 30. August 2009
City: DE 82166 Gräfelfing

Name: Peter Aschauer   Ludwig Hallschmid

FCC compliance statement

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

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

IC compliance statement

"Operation is subject to the following two conditions:

(1) This device may not cause interference, and

(2) this device must accept any interference, including inter-ference that may cause undesired operation of the device."

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.