



# PIEPS TECHNOLOGY Jetforce Pro Backpack Instructions

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**PIEPS TECHNOLOGY Jetforce Pro Backpack**



## INSTRUCTION

**WARNING:** For use during activities that may expose the user to risk of snow avalanche. Avalanches are deadly. Understand and accept the risks involved before participating in activities that may expose you to avalanche danger. You are responsible for your own actions and assume the risks of your decisions. This pack may increase your chances for survival, but it does not guarantee safety in the event of an avalanche. This pack should be used along with other avalanche safety gear including an avalanche beacon, shovel and probe. Avalanche education is essential before heading into avalanche terrain. Learn how to avoid avalanches and what to do in case you are caught by one. In addition to deploying your airbag, swim and fight to stay on top, and attempt to create an air pocket as the slide begins to slow. Before using this product, read and understand all instructions and warnings that accompany it, familiarize yourself with its capabilities and limitations and obtain proper training in the use of the equipment. Practice periodically. Contact Black Diamond if you are uncertain about how to use this product. Do not modify this product in any way. Avalanche control workers using explosives are advised that this pack contains electronic equipment which has not been tested for all conditions and which may expose the user to risks that are not yet known. Be aware of the potential risks of using electronic equipment including, but not limited to, risks related to overheating, flammability, explosion, electrical interference and static electricity. Check the manufacturer's website for updated instructions and firmware. Failure to read and follow the warnings and instructions can result in severe injury or death!

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance.

Cleaning and user maintenance shall not be made by children without supervision.

**WARNING** Only charge the battery using the provided JetForce PRO Airbag charger (type: GlobTek, Inc. GTM91120-3024-T2).

## **JetForce PRO Backpack**

### **INSTRUCTIONS FOR USE: KEEP INSTRUCTIONS FOR FUTURE REFERENCE JETFORCE PRO BACKPACK INTRODUCTION**

The JetForce PRO Backpack is designed for use in and around areas with the chance of snow avalanches. This backpack incorporates the JetForce Avalanche Airbag System, which is designed to improve the chances of surviving an avalanche. By increasing the total volume of the person caught in the slide the airbag helps keep the victim on the surface, decreasing the chances of a complete burial and allowing for a faster rescue.

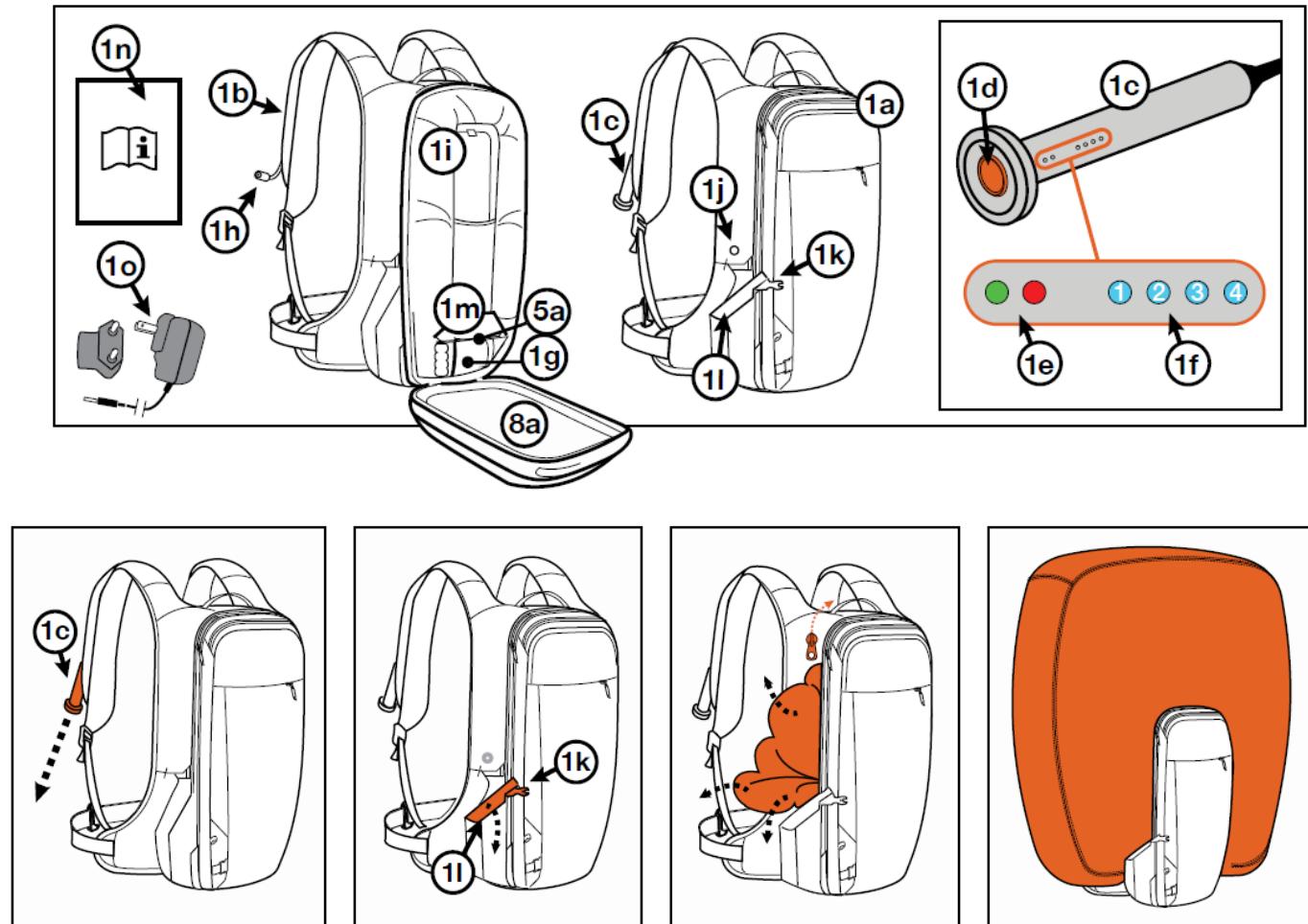
### **JETFORCE PRO SYSTEM COMPONENTS**

- **1a:** Main Cargo Compartment
- **1b:** Deployment Handle Pocket
- **1c:** Deployment Handle
- **1d:** Power Button
- **1e:** System Status Lights
- **1f:** Charge Status Lights
- **1g:** Lithium-Ion Battery
- **1h:** Charging Plug
- **1i:** Airbag Pocket
- **1j:** Airbag Release Post
- **1k:** Release Clip
- **1l:** Release Flap
- **1m:** Electronics Access Flap 1n: JetForce PRO Backpack Instructions
  - **1o:** Charging Power Supply
  - See also: Figure 1
- **3a:** Left Side Buckle
- **3b:** Right Side Buckle
- **3c:** Leg Strap
- **3d:** Leg Strap Storage Pocket
- **3e:** Leg Strap Clip
- **3f:** Leg Strap Loop
- **3g:** Sternum Strap
- **5a:** Fan Housing
- **5b:** Air Release Button
- **5c:** Deflate Access Port
- **5d:** Airbag Pocket Zipper Pull
- **5e:** Zipper Warning Label
- **8a:** Zip-On Booster Pack
- **8b:** JetForce PRO Base Unit
- **8c:** Booster Pack Zipper Pulls

- 8d: Booster Pack Zipper Ends

## SYSTEM FUNCTION

When the airbag is deployed by pulling the Deployment Handle (1c), the Release Clip (1k) is forced open, allowing the Release Flap (1l) to open, and then the inflating airbag opens the airbag zipper. The airbag can then fully inflate (Figure 2).



## SELF-DIAGNOSIS

To ensure that your JetForce PRO Avalanche Airbag will function properly, the JetForce PRO electronic system performs a comprehensive self-diagnosis on every system startup. The system checks the battery charge level, motor and fan operation and all critical electronics such as status lights, trigger electronics and the battery electronics. The system also performs frequent diagnosis while armed. A properly working system indicates a pulsing green System Status Light (1e), located on the Deployment Handle (1c). Warnings/mal-functions are indicated with a red System Status Light (1e), in conjunction with the blue Charge Status Lights (1f). Refer to Troubleshooting section of this manual for details.

## BATTERY CHARGING

Always make sure the system has a full charge before heading out into avalanche terrain.

**WARNING:** Charge Lithium batteries only under supervision! The airbag may deploy if the Deployment Handle is pulled anytime the lights are illuminated, even during charging.

1. Locate the Charging Power Supply (1o) and install the correct international plug.
2. Locate the charging connector inside the Deployment Handle Pocket (1b).
3. Unzip and expose the Charging Plug (1h).
4. Plug the Charging Power Supply (1o) cable into the Charging Plug (1h).

5. Plug the Charging Power Supply (1o) into an electrical outlet.
6. The Deployment Handle (1c) will illuminate a solid green light within the System Status Lights (1e). The charge level is shown by the solid blue Charge Status Lights (1f) with one blue light blinking to indicate charging state.
7. Charge until the Deployment Handle (1c) shows full charge with 4 solid blue lights.
  1. **a.** First time charging can be as long as 12 hours.
  2. **b.** Typical charging time is less than 6 hours.
8. Charge the Lithium-Ion Battery (1g) at room temperature. Do not charge at temperatures outside of range (5°C to 40°C / 41°F to 104°F). At these extremes, the system will indicate a charge temperature warning (refer to Troubleshooting section of this manual) until the battery temperature is inside charge range again – then charging starts automatically. It can take up to one hour until the battery temperature reaches the required level.
9. Discontinue charging and refer to the Troubleshooting section of this manual when you see a solid red System Status Light (1e).

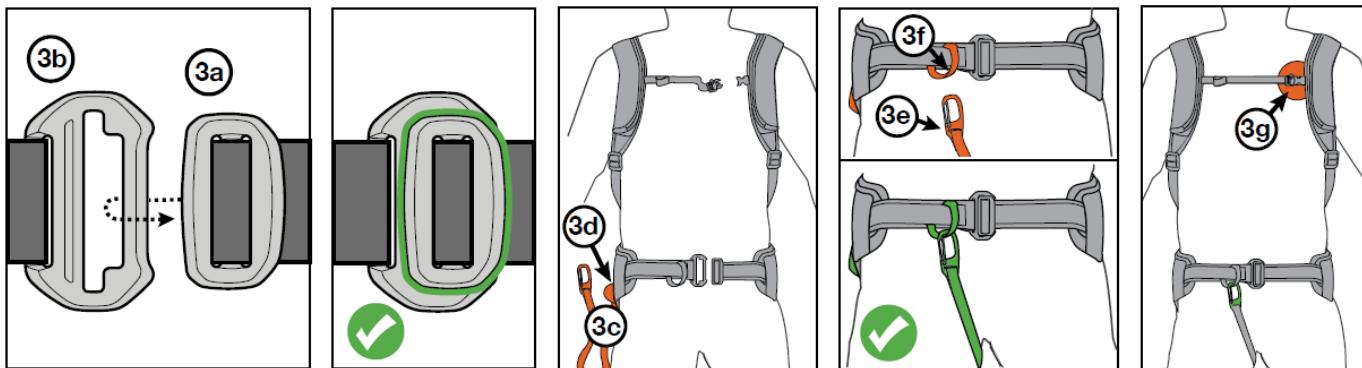
## CHECKING THE BATTERY STATUS AND WHEN TO RECHARGE

1. Tap the red Power Button (1d) briefly at any time to illuminate the Charge Status Lights (1f and Figure 6).
  - **a.** 4 blue lights: full charge (maximum number of deployments available).
  - **b.** 3 or 2 blue lights: partial charge (multiple deployments available).
  - **c.** 1 blue light: at least 1 deployment remaining at -30°C (-22°F).

**WARNING:** After checking the battery status, wait until the Charge Status Lights (1f) have turned off before arming the system.
2. A blinking red System Status Light (1d) with a single blinking blue light indicates the battery is not sufficiently charged for a deployment. Do not enter avalanche terrain.
3. Check the battery status the night before you intend to use your JetForce PRO backpack, and charge the battery if there is less than a full charge. Best practice is for the battery to be fully charged before heading out.

## WEARING THE PACK (FIGURE 3)

Proper fit and secure attachment to your body is critical.



1. Put the backpack on your back with both arms through the shoulder straps.
2. Insert the Left Side Buckle (3a) through the Right-Side Buckle (3b), then tighten the straps for a secure fit.
3. Locate the Leg Strap (3c) stored inside the Leg Strap Storage Pocket (3d). Wrap the Leg Strap back around the back of your right leg, then between your legs. Clip the Leg Strap Clip (3e) through the Leg Strap Loop (3f).
4. If the leg strap is too tight or too loose adjust it at the metal adjustment buckle at the base of the right shoulder strap. Ensure the strap is doubled back through the buckle.

5. Buckle and tighten the Sternum Strap (3g).
6. Adjust the shoulder straps to distribute the load between the shoulders and waist.

#### ARMING THE SYSTEM (FIGURE 4)

**WARNING:** It is critical that the system be armed before entering avalanche terrain.

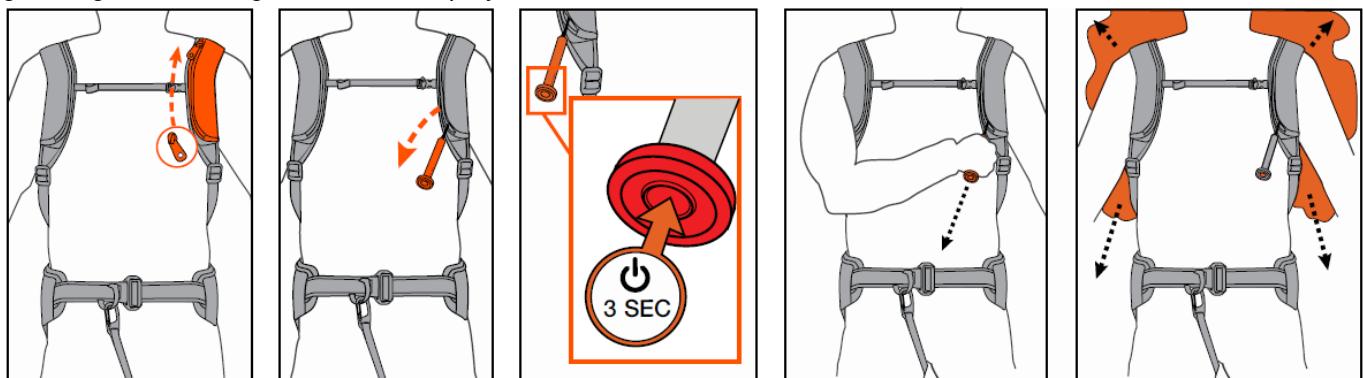
1. Unzip the Deployment Handle Pocket (1b) in the shoulder strap and expose the Deployment Handle (1c).
2. To arm the system, press and hold (~3 seconds) the red Power Button (1d) on the bottom of the Deployment Handle (1c) until the fan briefly runs. Release the button upon hearing the fan run.
3. Be sure to disarm the JetForce PRO system when not in use.

#### SYSTEM STATUS LIGHTS

1. After arming, the system should show a pulsing green System Status Light (1e) indicating the system is armed and ready for deployment. Also see Figure 7.
2. In any system state (armed, charging, calibration), the JetForce PRO system provides comprehensive self-diagnosis. Warnings or errors are indicated with the red System Status Light (1e). For error indications, refer to the Troubleshooting section of this manual.

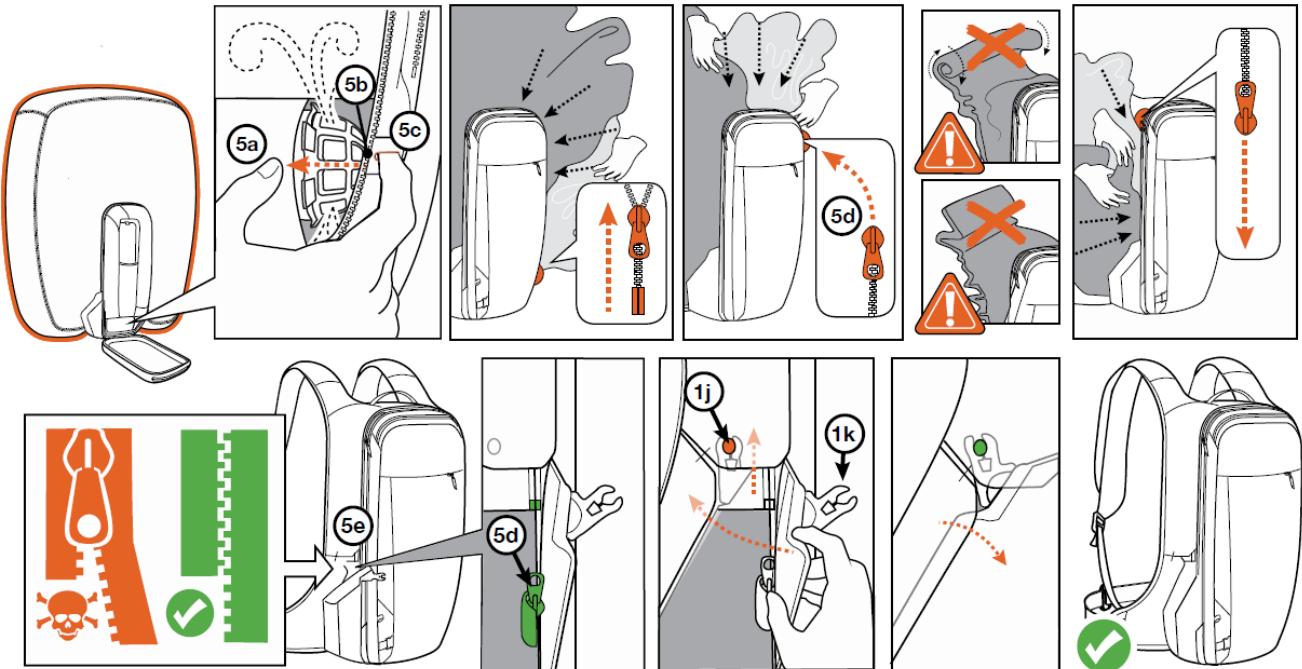
#### DEPLOYING THE AIRBAG (FIGURE 4)

With the backpack on and all straps securely fastened and the system successfully armed and showing a pulsing green light, the airbag can now be deployed.



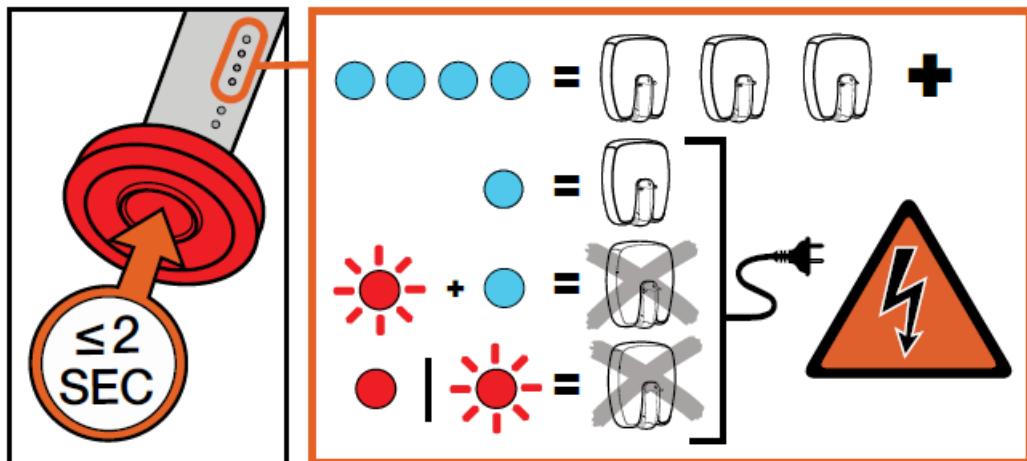
1. Grasp the Deployment Handle (1c) and firmly pull downward to turn the fan on.
2. The airbag will begin to deploy immediately. The fan will run at full power for 9 seconds, followed by lower speed operation and short refilling bursts for 3 minutes.
3. The airbag will deflate after 3 minutes and then automatically switch back to armed mode.
4. To interrupt the inflation/deflation process after the initial 9 second deployment period and return to armed mode, press and hold the red Power Button (1d) for ~3 seconds.

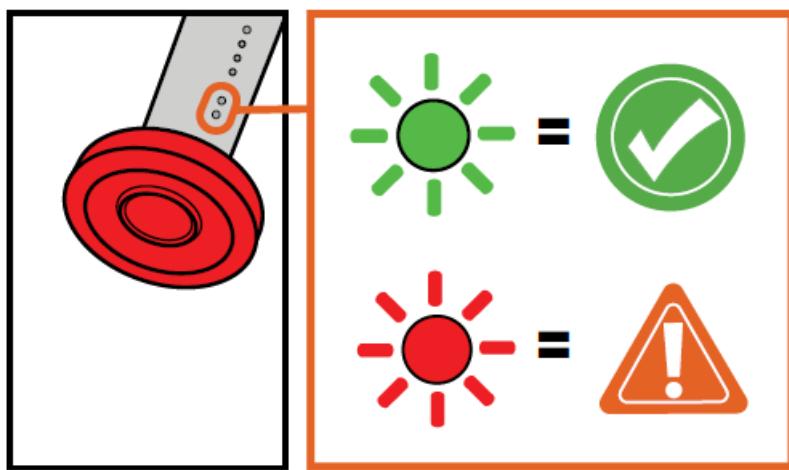
#### REPACKING (FIGURE 5)



1. Prior to repacking, the airbag must be fully deflated.
2. To manually deflate the airbag:
  - a. Locate the Deflate Access Port (5c) near the Fan Housing (5a) near the mesh on the lower right side of the pack.
  - b. Locate the round finger-sized Air Release Button (5b) on the end of the Fan Housing (5a).
  - c. Press the Air Release Button (5b) to open the valve, then compress the airbag to squeeze out the remaining air.
3. Locate the Airbag Pocket – Zipper Pull (5d) underneath the Release Flap (1l) and move it to the opposite side of the pack.
4. Connect the zipper ends together and zip closed while stuffing the airbag into the Airbag Pocket. Pack as much as possible towards right-hand side to minimize unintended opening of release flap. Do not roll or fold the airbag while stuffing it.
5. Close the zipper all the way to the bottom of the left side of the pack.

**WARNING:** It is imperative that the zipper pull (5d) go past the end of the short side of the zipper, otherwise the airbag will not deploy. The zipper pull must be disengaged from the short side of the zipper (see label 5e).





6. Snap the Release Clip (1k) located on the Release Flap (1l) onto the Airbag Release Post (1j) and tuck the perimeter of the Release Flap under the surrounding weather shield.

## DISARMING THE SYSTEM

There are two stages of manual disarmament:

- Short Term Storage (Sleep) – Less than 7 days without use
- Long Term Storage (Storage) – More than 7 days without use

1. To disarm the system (short term storage) hold the red Power Button (1d) until the red light begins blinking (~3 seconds), then release the button. No light indication after the button has been released indicates that the system has properly powered down.
2. To put the pack in Storage (long term storage), arm the pack per the “ARMING THE SYSTEM” section of this manual. With system armed, hold the red Power Button (1d) until you see a red blinking light and then a red solid light (~10 seconds), then release the button. No light indication indicates that the system has been properly powered down.

**NOTE:** There will be a 4-second wake-up delay after the system has been in storage mode.

3. Store the Deployment Handle (1c) inside the shoulder strap Deployment Handle Pocket (1b) and zip the pocket closed.

The JetForce PRO system also provides automatic disarmament for battery protection reasons:

- **Auto-Sleep:** Automatic switch from armed state to sleep mode after 12 hours without movement. The 12 hours timeout can be changed or disabled (=> Pieps app => settings).
- **Auto-Storage:** Automatic switch from sleep mode to storage mode after 7 days or if the battery reaches a critical charge level.
- **INTERFERENCE WARNINGS**

All avalanche beacons are very sensitive to electrical and magnetic influence. This JetForce avalanche airbag backpack is designed to minimize interference, but it is the user's responsibility to follow some basic best practices:

- Avoid carrying unnecessary electronics.
- Maximize distance between the beacon and any other sources of electronic, magnetic, and metallic interference (such as phones, smart watches, radios, heated garments, and electronic airbags).
- A minimum distance of 20 cm for a beacon in SEND mode and 50 cm in SEARCH mode is recommended.
- When in SEND mode, carry the beacon on the front side of your body to maximize the distance between

the beacon and the Jetforce pack inflation unit.

- When searching, maximize distance from the Jetforce pack by holding the beacon in a partially outstretched arm in front of your body.
- Advanced planning should be considered to ensure that smart watches, heated gloves, and similar items that are likely to remain very close to a searching beacon are kept at least 50 cm away.
- All device firmware should be kept current.
- Refer to your specific beacon manual for interference best practices.

## SPECIFIC WARNINGS

- Disarm the system and stow the Deployment Handle (1c) before riding a ski lift, tram, airplane, helicopter, snowcat or vehicle and before entering small, confined spaces.
- Do not strap anything across the airbag pocket zipper.
- Do not overtighten the helmet carry.
- When the JetForce PRO's fan is running, the system may interfere with avalanche beacons.
- Do not store any items in the Airbag Pocket (1i). Small items might damage or stop the fan.
- Modifying the design in anyway, using the design for unintended purposes, or failing to read and follow any of the instructions may result in serious injury or death.
- Disarm the JetForce PRO and stow the Deployment Handle (1c) before shipping or storing the device.
- The Leg Strap (3c) prevents the backpack from being ripped off your body during an avalanche. We strongly recommend its use.
- Always check the Deployment Handle (1c) for a pulsing green light when approaching avalanche terrain.
- As with all protective equipment, it is important to practice its use to ensure that you are capable of using it properly when necessary.
- We strongly discourage acquiring second hand equipment. In order to fully trust your gear, you must know its history of use.
- Only charge the battery using the provided JetForce PRO Airbag Charging Power Supply (type: GlobTek, Inc. GTM91120-3024-T2)
- Do not submerge the system in water.
- Do not crush, puncture or subject the Lithium-Ion Battery (1g) to excessive mechanical shock or vibration. Do not insert any item into the battery terminals or deliberately short the contacts.
- Do not subject the JetForce PRO Backpack to temperatures higher than 55° C [130°F].
- Do not attempt to disassemble the Lithium-Ion Battery (1g) or the Airbag Control Module.
- Only the battery can be removed. Do not attempt to remove any other component of the JetForce PRO Backpack.
- Physical damage to the JetForce PRO system or battery may result in non- function or excessive heat or fire.
- Use caution when removing/installing the battery or storing it outside of the pack.
- The JetForce PRO Backpack will not increase survivability outside of the intended application and design.
- Do not allow this device or any other protective equipment to change your perception about the dangers of avalanches.

## BLUETOOTH® CONNECTION

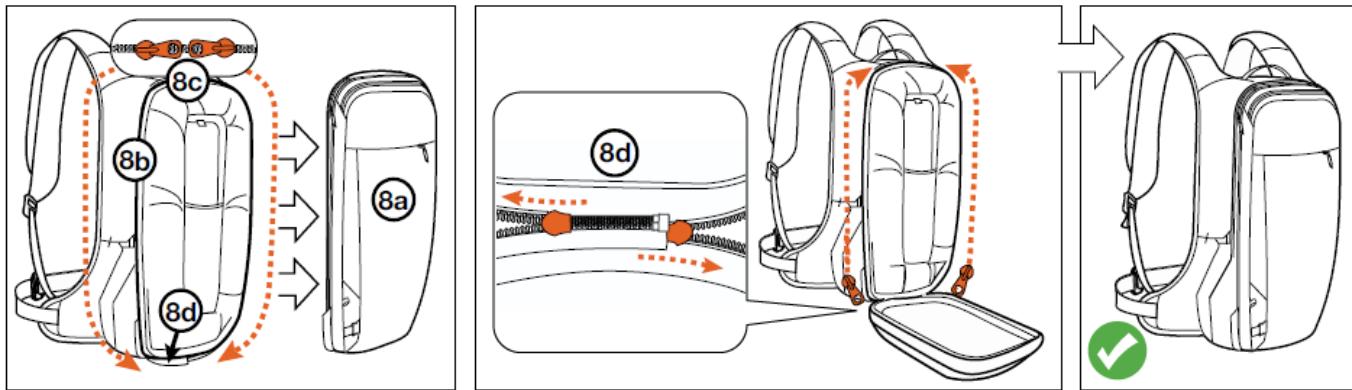
The JetForce PRO system can be wirelessly connected to the Pieps app, which is available for both Android and iOS devices with Bluetooth 4.0 or higher. The app provides system information and allows you to install updated firmware, adjust system parameters, and troubleshoot the system. The system can be connected to your Bluetooth device using the following procedure:

1. With the system disarmed, press the red Power Button (1d) 5 times within 3 seconds to enter Bluetooth mode.
2. When the system is in Bluetooth mode and is searching for a connection, the first and second blue Charge Status Lights (1f) will alternate.
3. When the system has successfully connected to your device, the first and second blue Charge Status Lights (1f) will still alternate, while the third and fourth Charge Status Lights (1f) will go solid.
4. Follow the instructions in the Pieps app to make the required system checks and updates.
5. To exit Bluetooth mode, disconnect the system using the app and wait 30 seconds. The system will return to a disarmed state. Alternatively, you can use the normal disarm process.

**NOTICE:** The user is responsible for keeping their Jetforce pack firmware up to date. We recommend checking for updates at the beginning of every season, and checking monthly when equipment is in regular use.

#### **REPLACING ZIP-ON BOOSTER PACK (FIGURE 8)**

The JetForce PRO allows for Zip-On Booster Packs (8a) to be interchanged on your JetForce PRO Base Unit (8b) based on your cargo requirements. To replace the modular portion of the backpack, use the following procedure:

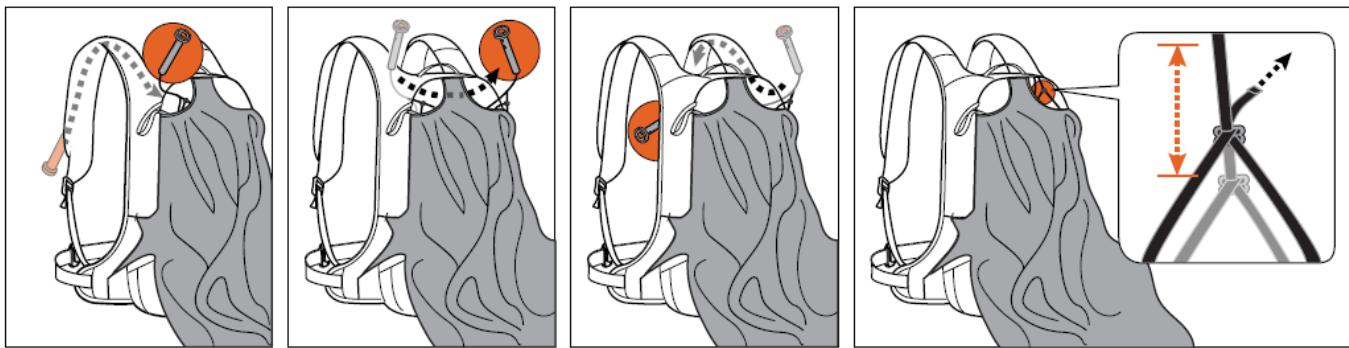


1. Locate both Booster Pack Zipper Pulls (8c) on the main cargo compartment of the pack.
2. Open the zippers all the way around the pack until they come off of Booster Pack Zipper Ends (8d) at the bottom of the pack.
3. Remove the Zip-On Booster Pack (8a) from the JetForce PRO Base Unit (8c).
4. Align the replacement Zip-On Booster Pack (8a) with the zippers on JetForce PRO Base Unit (8b) and engage both Booster Pack Zipper Pulls (8c) with the corresponding Booster Pack Zipper Ends (8d).
5. Pull the Booster Pack Zipper Pulls (8c) around the pack to the desired position for use as the main access zipper to the cargo compartment of the pack. Keep zippers opposite from the release flap to minimize pull on the release clip.

**WARNING:** Do not use JetForce PRO without a Booster Pack attached.

#### **ADJUSTING THE DEPLOYMENT HANDLE (FIGURE 9)**

It is possible to swap the handle from the user's left side to right side.



1. Disarm the system.
2. Open deployment handle pocket and unzip the balloon compartment.
3. Feed the handle from the shoulder strap pocket into the balloon compartment.
4. Feed handle under the two diagonal ski carry straps and under the balloon.
5. Feed the handle into the new shoulder side.
6. Slide the length adjuster along its support strap and readjust as needed.
7. Test pack for proper deployment.

## TROUBLESHOOTING

In any system state (armed, charging, calibration), the JetForce PRO system provides comprehensive self-diagnosis. Warnings or errors are indicated with the red System Status Light (1e), in conjunction with the blue Charge Status Lights (1f) for differentiation (Figures 6-7):

1. Permanent solid red: Malfunction, initial deployment is not guaranteed – do not enter avalanche terrain!
2. Permanent blinking red: Warning, battery charge insufficient – do not enter avalanche terrain! Deployment is possible, but may cause damage to the battery.
3. Temporary blinking red for 3 seconds after arming then system proceeds as usual: self-test error with deployment-unrelated malfunction, – do not enter avalanche terrain!

To troubleshoot the system, follow these steps in order. Check for normal operation after each step:

1. Turn the system off and turn it back on.
2. Connect the Charging Plug (1h) to the Charging Power Supply (1o) and leave system connected until you see 4 solid blue Charge Status Lights (1f). Afterwards disconnect and arm the system.
3. Confirm that the battery attachment screws are tight. Tighten if battery is loose.
4. Use “System Check” in the Pieps app for detailed troubleshooting. The app also provides a detailed explanation of status light indications. Follow the instructions and advice in the app. To connect the system to a device with Bluetooth technology, refer to “BLUETOOTH CONNECTION” section of this manual.
5. Contact your pack manufacturer’s service center for assistance.

## WARNING/ERROR INDICATIONS

WARNING/ERROR INDICATIONS:		
Type	Indication	Required Action
Battery charge warning	Blinking RED No GREEN Blinking BLUE #1 (RED & BLUE alternating)	Recharge battery
Battery charge temperature warning	Blinking RED No GREEN Blinking all 4 BLUE (2x blink, 2x pause) (RED & BLUE synchronous)	Make sure that the system is charged at room temperature. Leave the system connected to power supply until the battery temperature is inside the allowed charge temperature range and charging starts automatically.
Calibration result error / battery health not acceptable	Solid RED No GREEN Solid BLUE #1	Battery needs to be replaced
Bluetooth activation error	Solid RED No GREEN Blinking Blue #1, 2 alternating	Stop the indication by using the disarming process and activate Bluetooth again. If you continue to see this error, contact your pack manufacturer's service center for assistance.

## CARE AND MAINTENANCE

- The JetForce PRO Backpack must not come into contact with corrosive materials such as battery acid, battery fumes, solvents, chlorine bleach, antifreeze, isopropyl alcohol or gasoline.
- If you need to clean your pack, use a damp cloth and mild detergent to spot clean the specific area. Take care to not get the pack overly wet. When finished cleaning, open any affected pockets, hang the pack, and allow to air dry prior to use.
- Do not crush, puncture or subject the battery to excessive mechanical shock or vibration.
- Inspect the Lithium-Ion Battery (1g) regularly for cracking, swelling or other physical damage and replace damaged units immediately.
- The JetForce PRO battery has been engineered to perform optimally at very cold temperatures and has an internal charging circuit that maintains the health of the battery; however, all Lithium-ion batteries, no matter how well they are controlled, are subject to deterioration over time and with use. Storing the battery for a long period of time at full charge and/or at high temperatures are the easiest ways to permanently decrease the capacity and health of the battery. Additionally, do not allow your battery to deep discharge. Running the system when the battery is showing no blue lights may damage the battery.
- Battery health can be greatly extended by doing the following:
  - Disarm the system whenever not in avalanche terrain.
  - Charge the battery frequently during normal, regular use. As with all Lithium-ion batteries, it is ideal to maintain a charge of 100% (4 blue lights) when being used regularly. Avoid full discharge
  - Store the JetForce PRO pack in a cool (< 23°C/73°F), dry environment at 75%-90% (3 blue lights) battery charge when not being used regularly.
  - While the overall system will function up to 45° C [113°F], battery deterioration is accelerated at

temperatures higher than 23°C [73°F].

**System Check:** The Pieps app can be used at any time to verify that your JetForce PRO system is functioning properly.

**Battery Calibration:** It is recommended to perform a battery calibration once a year, after the skiing season. Battery calibration allows you to evaluate battery health and helps to provide the most accurate charge level indication.

- Start calibration with a low battery charge level (1 blue light) as the system needs to empty the battery before recharging.
- Connect the Charging Plug (1h) to the Charging Power Supply (1o) and wait for system to begin charging.
- Press and hold (~3 seconds) the red Power Button (1d) until you hear the motor running with low power. The lights indicate Calibration => no red, blink-ing green, cycling blue outside/inside.
- The calibration routine ends with a result indication:
  - **Very good:** no red, blinking green, solid blue #1-4
  - **Good:** no red, blinking green, solid blue #1-3
  - **Acceptable:** no red, blinking green, solid blue #1-2  
(recommendation for battery replacement)

## STORAGE & TRANSPORT

### Storage

- Always store the JetForce PRO Backpack and all components (battery, charger) in a cool (< 23°C/73°F), dry location, out of direct sunlight, and away from heat sources.
- Prevent damage from sharp objects, animals, corrosive materials and mildew.
- When storing the pack for 1 day to 5 weeks, the pack should be disarmed with a 100% battery (4 blue lights).
- When storing the pack for 5 weeks and longer, the pack should be disarmed and put into Storage mode (see Disarming the system) with 75% – 90% battery (3 blue lights).

### Transport

- Ensure the system is disarmed and the Deployment Handle (1c) is stowed before riding a ski lift, tram, airplane, helicopter, snowcat or any vehicle and before entering small, confined spaces.
- Protect the JetForce PRO Backpack from sharp objects, abrasion and crushing forces during transportation.
- The JetForce PRO Backpack uses a Lithium-Ion battery similar to most laptop computers. For commercial airline travel, always check current travel regulations before your trip.
- [www.phmsa.dot.gov/safe-travel/batteries](http://www.phmsa.dot.gov/safe-travel/batteries)
- [www.iata.org/en/programs/cargo/dgr/lithium-batteries/](http://www.iata.org/en/programs/cargo/dgr/lithium-batteries/)
- Transporting a damaged Lithium-Ion Battery (1g) may be prohibited and is not recommended. Always inspect the battery according to the guidelines outlined in these instructions and be sure to heed the specific warnings.

## INSPECTION, RETIREMENT AND LIFESPAN

### Inspection

Inspect your gear for signs of damage and wear before and after each use. If you deploy your airbag in an

avalanche, perform a thorough inspection before using the system again.

1. Inspect the airbag for punctures or tears.
2. Inspect the Fan Housing (5a) for cracks.
3. Inspect the Deployment Handle (1c) for dents, cracks or exposed wires.
4. Inspect the Lithium-Ion Battery (1g) for dents, cracks or signs of swelling.
5. Inspect the wiring for exposed conductors or weakened connections with the other components.
6. Inspect the backpack for punctures or tears.
7. Inspect the backpack shoulder straps, leg strap, and waist belt for tears or damaged stitching.
8. After repacking the airbag, arm the system to confirm proper operation.

If inspection reveals signs of damage or if you have any doubts about the dependability of your JetForce PRO Backpack, contact your pack manufacturer's customer service center.

## Retirement

Damaged gear must be repaired prior to use or retired and destroyed to prevent future use. Contact your pack manufacturer's customer service center if:

- The JetForce PRO Backpack's electronic system does not arm properly or does not deploy the airbag properly. Perform the procedures in the Troubleshooting section of this manual before contacting your pack manufacturer's customer service center.
- Battery becomes too hot to touch (48°C (118°F) or above)
- Airbag is damaged and will not hold air.
- Structural webbing or bar tacks are torn, abraded, cut, melted or burnt.
- If you have any doubts about the dependability of your gear, retire it.
- Lithium-Ion batteries are subject to local disposal and recycling regulations. Always follow local requirements when disposing of any battery. Do not dispose of any battery in fire.
- Never use a damaged battery.

## Lifespan

The JetForce PRO System is certified for 50 full deployments. With normal use and proper care the typical lifespan of a JetForce PRO Backpack is five years. The actual lifespan can be longer or shorter depending on how frequently you use it and on the conditions of its use. The maximum lifespan of a JetForce PRO Backpack is up to 10 years from the date of manufacture, even if unused and properly stored.

Upon reaching the rated number of deployments or maximum lifespan, the pack must be retired and destroyed to prevent future use.

Factors that will reduce the lifespan of a JetForce PRO Backpack: Falls, abrasion, wear, prolonged exposure to sunlight, salt water/air, corrosive chemicals, harsh environments or misuse of the battery.

The typical estimated lifespan of your replaceable Lithium-Ion battery is three to five years. All Lithium-Ion batteries deteriorate with age.

## SPECIFICATIONS

- **Allowable operating temperature:** -30°C to 50°C (-22°F to 122°F)
- **Optimal storage temperature of the battery:** 0°C to 23°C (32°F to 73°F)
- **Allowable storage temperature:** -35°C to 55°C (-31°F to 130°F)
- **Allowable charging temperature:** 5°C to 40°C (41°F to 104°F)
- **Charging power supply:**

- GlobTek, Inc. Model#GTM91120-3024-T2
- **Input:** 110/220 V AC, 50-60 Hz.
- **Output:** 24 V DC, 1.25 Amps
- Battery specification:
  - Nominal charging voltage: 24 V DC
  - **Internal:** 28.8 V DC, 2.0 Ah/57.6 Wh
- Operating elevation: 0m to 6000m (19,700 ft)
- JetForce PRO Lithium-Ion Battery, Part # 12643
- JetForce PRO Airbag Control Module, Part # 12644
- Bluetooth® transmission frequency: 2.402 – 2.480GHz
- BlueTooth® transmit power: 0 dBm

## MARKINGS (WHEN PRESENT)

- **Black Diamond:** Black Diamond brand name and name of the manufacturer.
- Black Diamond's logo. PIEPS: PIEPS brand name
- PIEPS logo.
- JetForce PRO 25: Example of a model name.
- The CE mark of conformity and indicates fulfillment of the requirements of the Personal Protective Equipment Regulation (EU) 2016/425 and Radio Equipment Directive 2014/53/EU. Notified body performing the EU type examination: TÜV SÜD Product Service GmbH, Daimlerstraße 11, D-85748 Garching, Germany, NB No 0123.
- The UKCA mark of conformity indicates fulfillment of the requirements of the PPE Regulation 2016/425 as amended to apply in GB and Radio Equipment Regulations 2017. Approved body performing the UKCA Type examination: TUV SUD BABT Unlimited, Octagon House, Concorde Way, Segenworth NorthFareham, Hampshire, PO15 5RL, United Kingdom. AB No 0168 2022-
- Manufacturing Date, in this example May 2022. XXXXXXXXXXXX: 12-digit serial number unique to each pack.
- Instruction pictogram advising users to read the instructions and warnings. EN 16716:2017: The JetForce PRO Backpack conforms to EN 16716:2017, Mountaineering equipment – Avalanche airbag systems – Safety requirements and test methods.
- Class 3 appliance designed to be charged using a safety extra-low voltage power supply.
- IEC symbol indicating that a specific separate supply unit is required for connecting electrical equipment to the supply mains.
- FCC symbol indicating that the device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
- Illustration showing the polarity of the charge plug for the JetForce PRO Airbag charger.
- Wheelie bin symbol advising users to dispose of waste electrical and electronic equipment separately from unsorted municipal waste.

IP65: International Protection Marking, indicating that the JetForce PRO Li-Ion Battery and Airbag Control Module are dust tight and will withstand a water jet without harmful effects per IEC 60529.

- The universal recycling symbol.

The Declarations of Conformity for this product may be viewed at

[www.blackdiamondequipment.com/DOC](http://www.blackdiamondequipment.com/DOC)

Black Diamond is an ISO 9001 certified company.

## FCC NOTICE

Contains FCC ID:VPYLBZY

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.

This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residual installation. This equipment generates, uses and can radiate 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 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 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 not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR).

## IC NOTICE:

Contains IC: 772C-LBZY

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR).

## LIMITED WARRANTY

For the following period after the purchase date, unless otherwise indicated by law, we will warrant to the original retail buyer only that our products are free from defects in material and workmanship as originally sold. Back Pack and Components: 3 years; Lithium-Ion Battery: 1 year. If you receive a defective product, return it to us and we will replace it subject to the following conditions: We do not warrant products which show normal wear and tear or that have been used or maintained improperly, modified or altered, or damaged in any manner.

### North America:

Black Diamond Equipment, Ltd. 2084 East 3900 South, Salt Lake City, UT 84124

### Europe:

Black Diamond Europe Hans-Maier-Straße 9, 6020, Innsbruck, Austria

**Patented Technology:** This product is covered by the following US Patents: #9,004,116; #9,289,633; #8,851,948; #8,851,949; #8,777,684; #9,492,711.

The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Black Diamond is under license. Other trademarks and trade names are those of their respective owners.

## Documents / Resources

	<p><a href="#"><b>PIEPS TECHNOLOGY Jetforce Pro Backpack</b></a> [pdf] Instructions Jetforce Pro Backpack, Jetforce Pro, Jetforce Backpack, Jetforce, Backpack</p>
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## References

- [\*\*◆ Black Diamond® Equipment | Climbing, Skiing & Trail Running Gear\*\*](#)
- [\*\*◆ Declarations of Conformity\*\*](#)
- [\*\*◆ Declarations of Conformity\*\*](#)
- [\*\*✖ IATA - Lithium Batteries\*\*](#)
- [\*\*✖ IATA - Lithium Batteries\*\*](#)

[Manuals+](#)