



Preliminary Argus installation guide

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1.0 The Argus

The Argus is a 3rd generation electronic and pyrotechnic safety device with superior electromagnetic interference shielding. The unit also works as a data logger, as it memorizes most jump parameters.

The Argus includes four jump modes – Standard, Tandem, Novice, & Swoop - which support a wide variety of user requirements.

1.1 Installation in general

The Argus has been designed to be backward compatible with most sport rigs on the market today. It will easily fit in any currently available AAD pouch which is located in the bottom of the reserve container, on the wall separating the main & reserve containers. If necessary, an Argus installation-setup kit can be supplied.

The Argus cutter must be positioned as specified by the container manufacturers' instructions.

The Argus is a rugged safety device. However, be careful when handling the Argus cables. Do not pull at the cables and take care with the remote control window. Please comply with any country-specific regulations concerning the installation of the Argus AAD.

In case of doubt about the exact installation of the Argus, the rig manufacturers' instructions will override this manual.

1.2 Technical Information

The Argus works by measuring air pressure and the rate of change of air pressure, together with other parameters. Air pressure is, of course, the basis of altitude measurement. When the Argus is switched on, it calibrates itself to the ambient air pressure and then memorizes this as its zero or ground level. It re-calibrates regularly, to check for any pressure changes caused by weather, and updates its memory accordingly. Thus, it always knows the latest actual air pressure and its memory is always set to the most accurate zero or ground level. The microprocessor recognizes takeoff in the aircraft when it registers a signature rapid pressure change. Then, it changes to a fast calculation mode in which it evaluates a series of firing criteria at short time intervals. All of these criteria must be positive before the unit will fire. Once the unit passes 500m (1600ft) AGL, it arms itself and becomes fully operational.

NOTE: the Argus will not work if the aircraft is exited before reaching 500m (1600ft) AGL.

Once the aircraft has climbed through this altitude, and the Argus has become fully operational, it will work for any exit altitude. During a descent in the aircraft, in freefall, or under canopy, the Argus will monitor all parameters, all the way to landing. In swoop mode, however, this process is put on standby after an opening is detected. Advanced technology and superior programming are used to eliminate the influence of air vortices. Such vortices can cause erroneous altitude readings varying by more than 100 meters (300 ft) from the actual altitude. You can observe these pressure differences when looking at your altimeter in freefall and turning from a belly down to a belly up position (or vice versa).



The needle will shake and change to a higher (or a lower) altitude. A digital altimeter may indicate a 100 meter (300 ft) difference, just by turning your hand. A precision AAD

must be capable of instantly compensating for a wide range of fluctuations in dynamic pressure. The Argus is programmed to recognize the extremes of vertical velocity and acceleration to which every skydiver can be subjected and uses this information, together with constantly updated pressure measurements. It performs comprehensive mathematical routines, using computational power equivalent to a normal personal computer. Even when Argus is switched off, it is not completely at rest, because it will be checking to see whether or not the push button on the control unit has been pressed.

During the design process, the first priority was to render the release unit as safe and reliable as possible. Nobel Energetics designed the Metron cutter to the Argus specifications. The propellant charge in the cutter is only required to propel the circular blade a distance of 6mm. It does so with enough force to cut through a loop of 185-200 Kg Dyneema or Spectra. You would hardly expect such enormous power inside such a small device! The closing loop is cut instantly, resulting in an immediate reserve opening regardless of the condition of the pin(s). Apart from the push button on the control unit, the cutting blade is the only moving part of Argus.

1.3 Jump Modes

The jump modes describe the conditions required for the Argus activation. All modes except Swoop will monitor the jump until the landing. In Swoop mode, as soon as a parachute opening is detected, the Argus will go to stand-by until the next jump.

Jump modes are:

Jump Mode	Trigger Altitude	Trigger Speed
STANDARD	~250 m-820 ft	35 m/s-115 ft/s
SWOOP	~250 m-820 ft	35 m/s-115 ft/s
NOVICE	~300 m-1,000 ft	20 m/s-66 ft/s
TANDEM	~660 m-2,200 ft	35 m/s-115 ft/s

For any particular jump mode, when the altitude and vertical speed conditions are met, the reserve parachute will be activated.

2. Installation of the Argus into your Container

Disclaimer

This manual contains information and instructions on installing Argus in various harness container systems. Where the manufacturer of the harness container system has also issued written instructions for installation, these must be followed. Please, do NOT experiment with installation methods. We shall answer all questions immediately and give advice and assistance wherever possible.

**Please: Never ever install an Argus by trial and error.
This could cause someone's death!**

We would welcome any constructive comments based on riggers' experience in installing the Argus.

General remarks

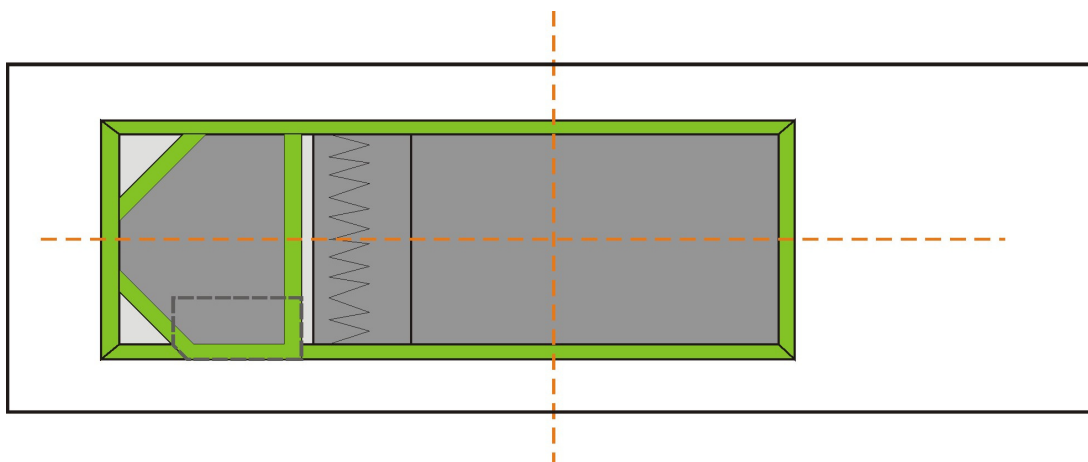
All Argus installations must be done by licensed riggers (US FAA Senior Rigger / Master Rigger or foreign equivalent) using this manual and any written instructions issued by the rig manufacturer.

When installing the Argus it is vital to ensure that:

- installation is carried out in accordance with the instructions in this manual and any written instructions issued by the rig manufacturer,
- the manual opening system for the reserve (i.e. pins, pack flaps etc.) is not obstructed in any way,
- the structural integrity of the harness is not affected (e.g. by inserting / removing stitching, etc.),
- The grommets are not damaged**
- the processing unit is positioned correctly inside the pre-equipped pouch

2.1 Pouch for Processing Unit

The pocket for the processing unit must be fixed inside the reserve container by sewing it to the partition wall. Sew as close as possible to the outer of the two rows of stitches on the binding tape surrounding the pocket. Sew all the way round the pocket. If the pocket is only tacked on or if the sewing is not at the outer edge of the binding tape, there is a danger of the reserve suspension lines becoming trapped.





To provide maximum protection for the processing unit (against physical damage and extremes in outside air temperature), the pocket must be positioned so that the processing unit sits centrally on the reserve container partition wall.

2.2 Cutter-holder

We recommend the use of a “heavy duty” single needle or a double-needle sewing machine to install the cutter holder to the designated flap of the reserve container. These flaps are almost always constructed with stiffeners, and it is important to test the ability of the sewing machine to sew through the required layers before using it on the actual container.



When a reserve is packed the closing flaps are always under tension and are pulling outwards from the closing loop. The closing loop will therefore always be pulled up against the inside edge of each closing flap grommet. This will always be the edge nearest to the free or tapered end of the closing flap. By aligning the edge of the binding tape with the centerline of the grommet as shown, the cutter will align with the normal loop location when tension is applied to the flaps.

2.3 Control unit holder

Installation of the (remote) control unit: just slip the Argus control unit in the clear window, provided by the rig manufacturer.

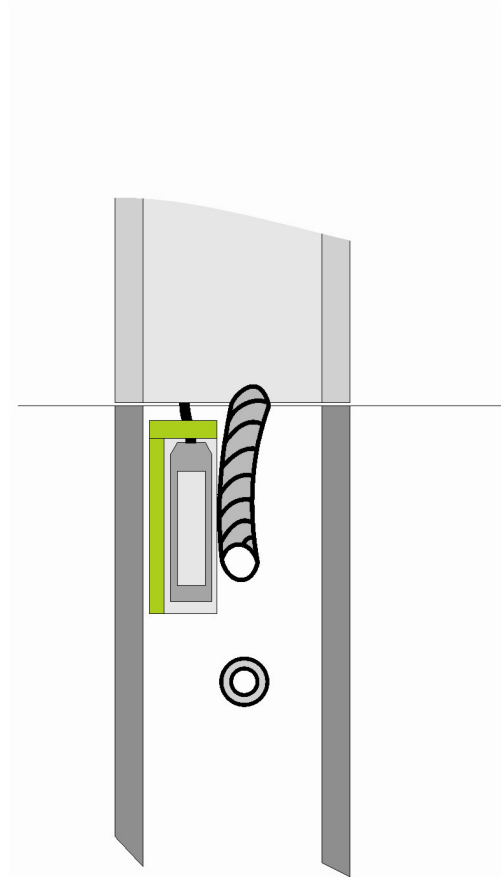
2.3.1 Using the transparent pocket

If the rig manufacturer hasn't incorporated a clear window for the control unit, please use the transparent pocket available from Aviacom.



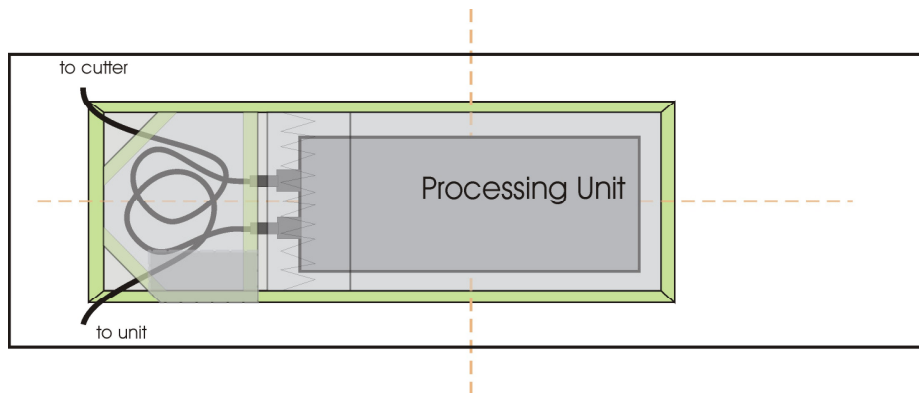
Install the pocket under the upper right section of the container's closing flap, roughly in the same position as shown on the pictures. Slide the control unit into position from the right side and close the Velcro fastening.

It may be necessary to make small adjustments to the recommended pocket location to insure metal housings and clamps do not come in contact with the face of the control unit under normal use.



On pop-top containers it could be necessary to mount the transparent pocket under the pin-cover flap in the back of the container

2.4 Cable placement



Ensure there are no kinks and coil as loosely as possible while still fitting the processing unit in the pocket. Coils must not be smaller than the diameter of a 25 cent coin. Then, route the cables through the appropriate opening to the control and release units.



3.0 Installation into common containers

As a general rule, modern parachute containers come equipped with a setup for a modern AAD such as the Argus. Please follow our installation guide to install the Argus AAD. If there is a compatible AAD cutter holder, control unit pouch, or processing unit pouch already installed at the same place as this guideline recommends, it is not necessary to change the parts.

If you could not find your harness container-system in this guide, please do not hesitate to contact Aviacom to get updated installation information.

Check the whole Argus installation for condition and serviceability at each reserve repack. If any damage is discovered, the unit must be returned to an authorized service center. During the warranty period, the repair will be free of charge. In any case, the unit will be returned to the owner promptly after receipt at the service center.

IMPORTANT NOTE:

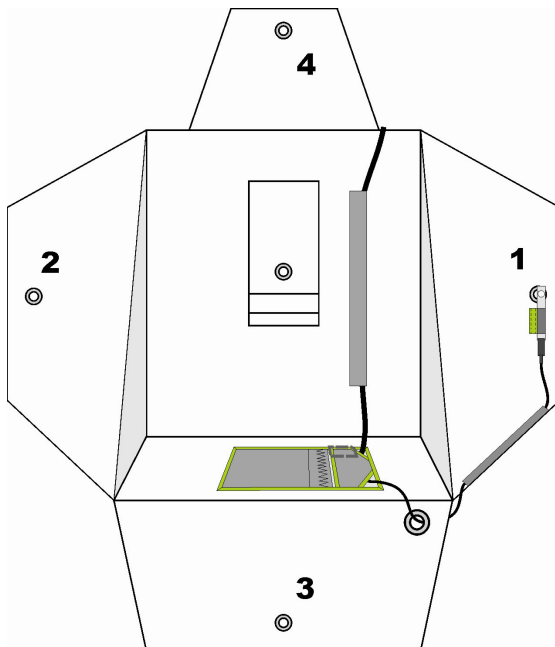
Rapid and careless removal of the pull up cord can cause friction damage to the loop. To avoid damage, remove the pull up cord by pulling it slowly against the underside of the ripcord pin. If, during packing, you need to pass the pull up cord through the loop hole in the release unit you must use the special Argus Dyneema pull up cord supplied, or equivalent Dyneema pull up cord from another manufacturer. This will reduce the possibility of damage to the cutter.

3.1 One-pin containers with internally mounted reserve pilot chute

3.1 Rigging Innovations Inc.

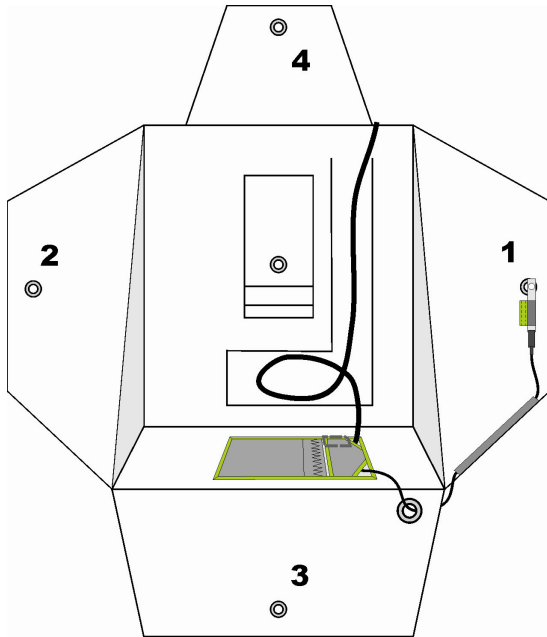
Rigging Innovations Inc.
Po Box 86
Eloy, AZ 85231
USA
Phone +1 - 520-466-2655

Talon 2



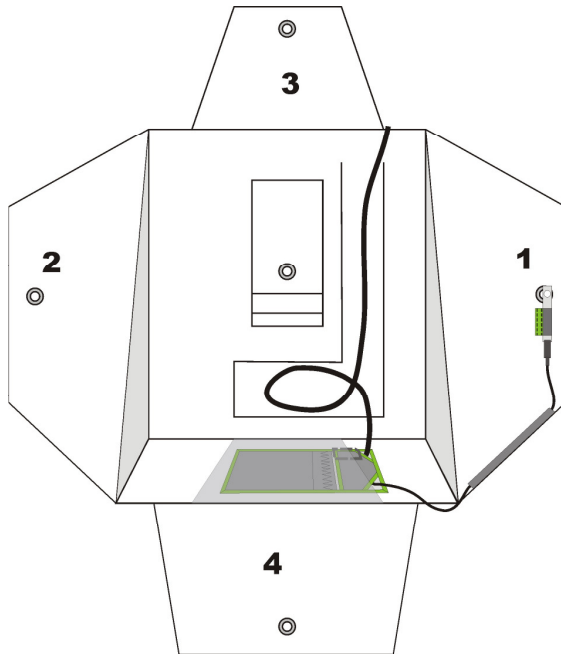
On the Talon 2 container, the cutter is mounted on flap # 1, directly over the reserve pilot chute. Thread the cutter cable through the grommet in flap # 3. Inspect this area of the cable for any damage from the metal surfaces of the grommet.

Talon FS & Voodoo



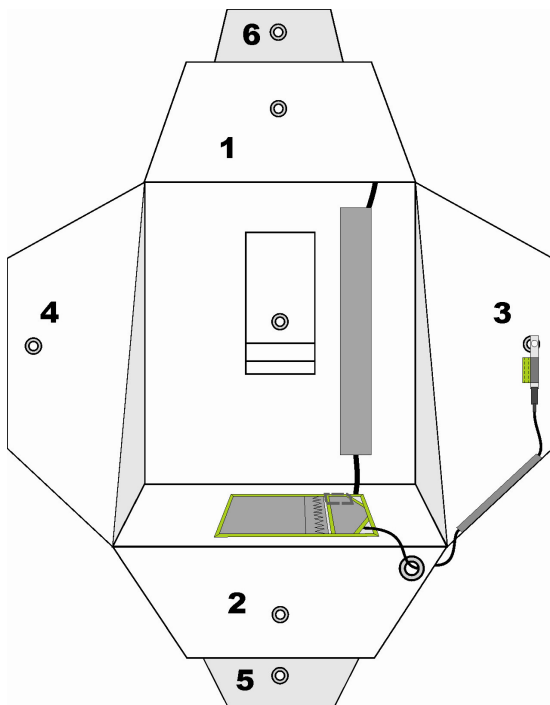
On the Talon FS and the Voodoo container, the cutter is mounted on flap # 1, directly over the reserve pilot chute. Thread the cutter cable through the grommet in flap # 3. Inspect this area of the cable for any damage from the metal surfaces of the grommet.

Talon FX



On the Talon FX container, the cutter is mounted on flap # 1, directly over the reserve pilot chute. Thread the cutter cable through the grommet in flap # 3. Inspect this area of the cable for any damage from the metal surfaces of the grommet.

Talon 1 & Telesis 1

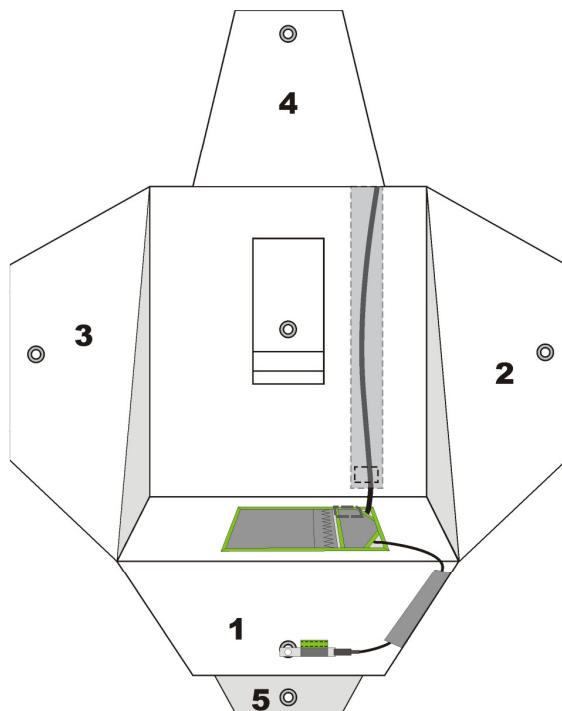


On the Talon 1 & the Telesis 1 container, the cutter is mounted on flap # 3, directly over the reserve pilot chute. Thread the cutter cable through the grommet in flap # 2. Inspect this area of the cable for any damage from the metal surfaces of the grommet.

3.2 Aerodyne Research LLC

Aerodyne Research LLC
12649 Race Track Road
Tampa, Florida 33626
USA
Phone +1 - 813-891-6300

Icon & Icon Student

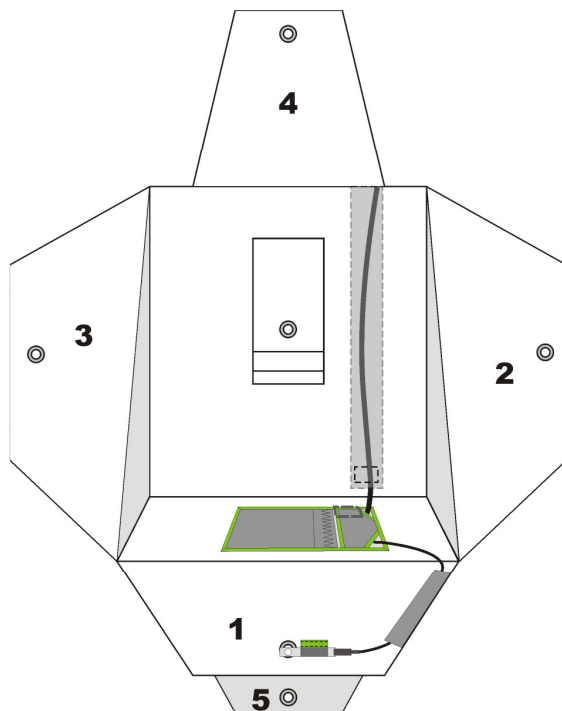


On the Icon and the Icon student container, the cutter is mounted on flap #1, directly over the free bag of the reserve canopy.

3.3 Velocity Sports

Velocity Sports Equipment
27611 146th Ave.E.
Graham, WA 98338
USA
Phone: +1 - 360-893-6111

Infinity

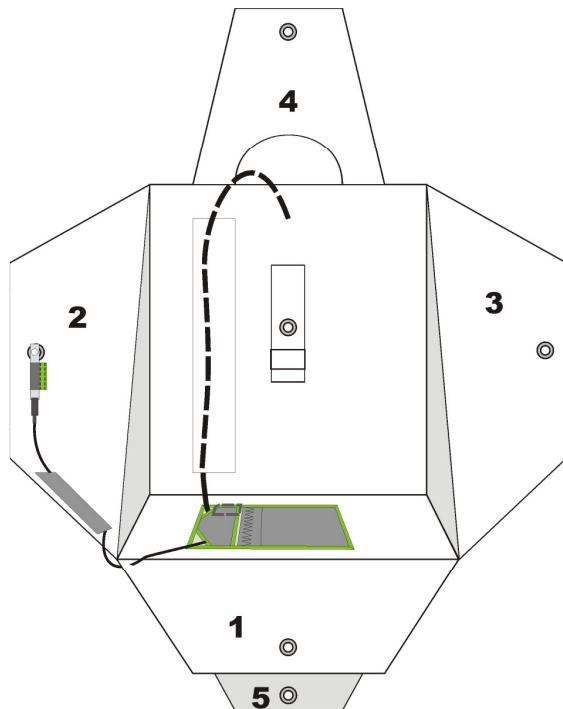


On the Infinity container, the cutter is mounted on flap #1, directly over the free bag of the reserve canopy.

3.4 Parachutes de France

Parachutes des France
2 rue Denis Papin
Jouy-le-Moutier
F-95031 Cergy Pontoise
France

Atom



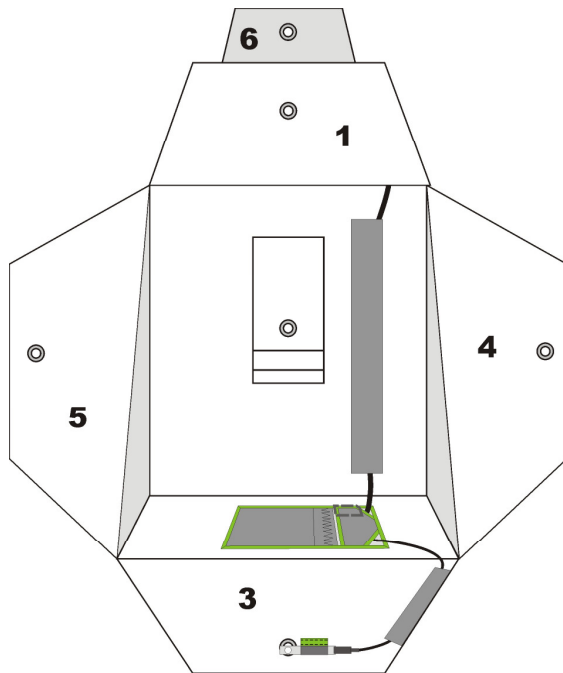
On the Atom container, the cutter is mounted on flap #2, directly over the reserve pilot chute of the reserve canopy.

NOTICE:
Some older models (before 1993) do have a 6 flap reserve container. The cutter on all Atom containers is always mounted to the first flap over the reserve pilot chute.

3.5 Mirage Systems

Mirage Systems, Inc.
1501A Lexington Ave.
Deland, Florida 32724
USA
Phone +1 - 904-740-922

Mirage RTS / G3 / G4



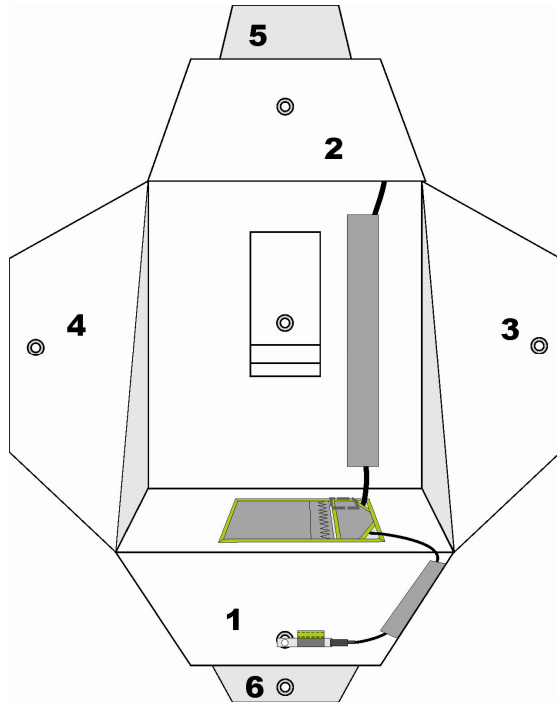
On the RTS / G3 / G4 Container, the cutter is mounted on flap #3, directly over the reserve pilot chute.

The reserve pilot chute cap is marked with # "2" - like a flap.

Relative Workshop / United Parachute Technologies

United Parachute Technologies (formerly Relative Workshop)
1645 Lexington Ave.
Deland, FL 32724
USA
Phone +1 - 386-736-7589

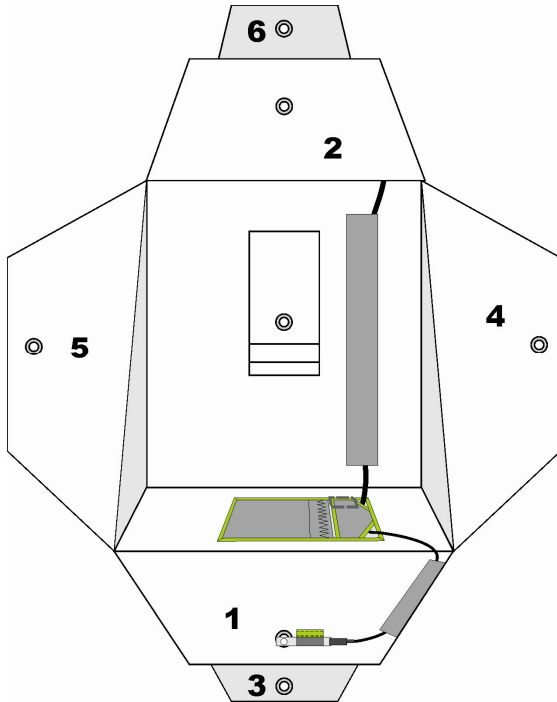
Vector II



On the Vector II container, the cutter is mounted on flap #1, directly over the free bag.

Notice: Some very old models may have the cutter on flap #3 directly over the reserve pilot chute. You could leave it or change the cutter holder to flap #1.

Vector III / Micron

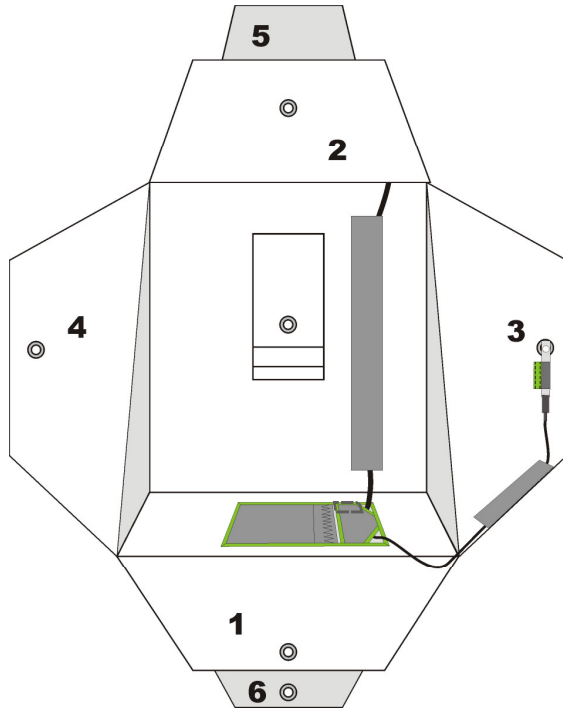


On the Vector III/Micron container, the cutter is mounted on flap #1, directly over the free bag of the reserve.

3.7 Paratec

Paratec GmbH
Flugplatz Saarlouis-Düren
66798 Wallerfangen
Germany
Phone +49- 6837 - 7375

Ultra II & Next

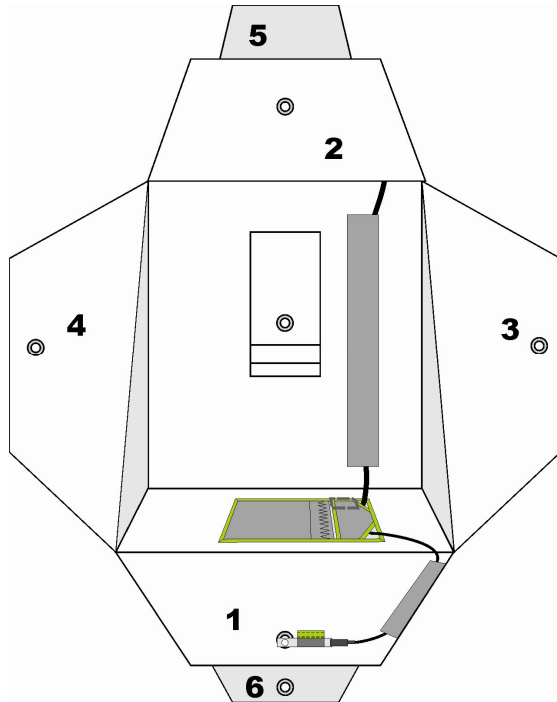


On the Ultra II and the Next container, the cutter is mounted on flap #3, directly over the reserve pilot chute.

Firebird / Performance Variable

Firebird GmbH & Co KG (formerly PerformanceVariable)
Am Tower 16
54634 Bitburg,
Germany
Phone +49-6561-949680

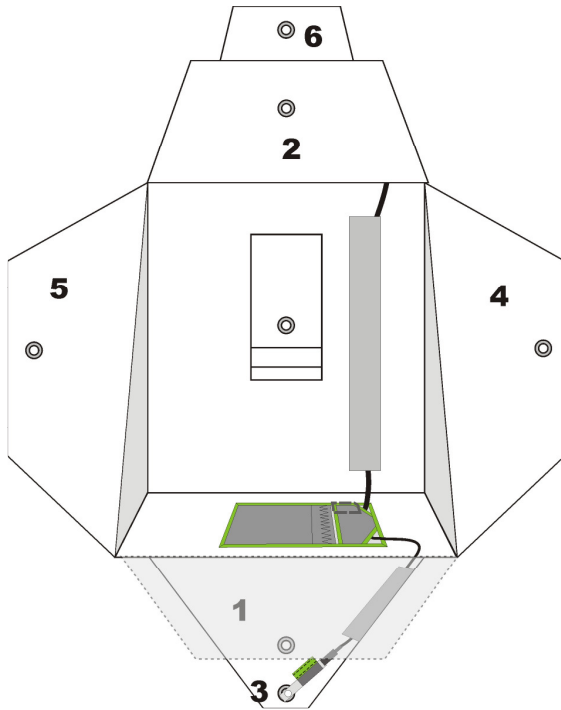
PV Tandem



On the Performance Variable Tandem container, the cutter is mounted on flap #1, directly over the free bag.

Omega Sport & Omega Tandem

on flap #3, directly over the reserve pilot chute.



On the Firebird and the Performance Variable Omega Sport container and Omega Tandem, the cutter is mounted