



# MILITARY ALTITRACK BASIC™



## Instruction Manual

Rev. 1





### 3 - Power ON

Press Right or Left Front Button until "ACCESS" and "LOW BAT" flashes. Then release the button. The MAB runs a self-test.

The MAB can be used for jumping, if:

- The pointer moves from "6" to "0".
- No low bat flashing

The MAB **must not be used** for jumping if:

- The unit sounds a beep every minute.
- Battery capacity is insufficient (see paragraph 7)

**Note: The MAB must be switched ON prior to entering the airplane**

**2.1 Before night jumping:** Verify that the backlight is functioning (see paragraph 6)

### 4 - Jump Mode

- **Entering Jump Mode:** Shortly after take-off (at approx. 1,000 feet/300 meters) the MAB switches to Jump Mode and the pointer moves to the present altitude.

- **Exiting Jump Mode:** The MAB exits Jump Mode automatically within one minute after it senses ground level again. If the MAB has been preset to a different altitude it exits Jump Mode as described in paragraph 5-2.

### 5 - Power OFF



Fig. 3

1. Press and let go of Right Front Button
  2. When "ACCESS" lights, press immediately and let go again
  3. When "ACCESS" lights, press immediately and let go again
  4. When "ACCESS" lights, press immediately and let go again
- The pointer moves to "6" and unit switches OFF



**Note:** If the MAB is not manually switched OFF, it will automatically switch OFF 14 hours after the last jump or 14 hours after the last pressing of any button (28 hours in case adjustment of altitude or QFE has been performed without jumping with the MAB).

**Note:** In case of landing in water, rinse the instrument in fresh water and let it dry. In case of landing in salt water, replace the air filter (see manual).

## 6 Altitude Offset

### 6.1 Zeroing the MAB

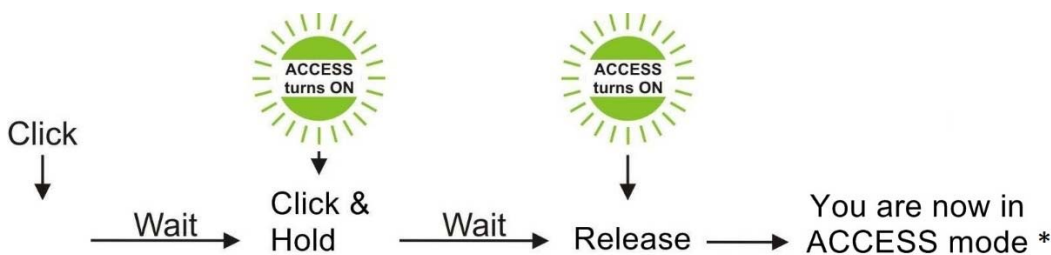
The MAB continuously adjusts to the local elevation and the pointer is at the zero "0" position. If the pointer is not at "0" prior to jumping, the unit has not adjusted itself to the local elevation and it must be zeroed. To zero: Turn the unit OFF and then ON.

Alternatively, it may also be zeroed by performing ACCESS and manually move the pointer to "0". However, in this case the unit enters Jump Mode and will not continuously adjust to the local elevation.

### 6.2 Altitude Offset

If the elevation at the DZ is different from that of the airport of take-off, then adjust the MAB by activating the "Altitude Offset" mode:

1. Perform ACCESS



2. Press the Right Button (+) if DZ Elevation is LOWER than take-off elevation
3. Press the Left Button (-) if DZ Elevation is HIGHER than take-off elevation.

When adjusting to a negative altitude on the ground, use the inner negative scale indication. If adjusting more than -3000 ft. / -1000 m the inner negative scale resolution is still used.

MAB exits "Altitude Offset" mode if no button is pressed within 5 seconds.

**Note:** When performing a manual adjustment of altitude, MAB enters "Jump Mode" and the current local elevation is stored in the memory for 14 hours if no jump is made.

MAB will stay in Jump Mode for 14 hours and will not continuously adjust itself to the local elevation. After 14 hours MAB will exit "Jump Mode" and set pointer at the zero "0" position.

## ON THE GROUND

**If the DZ altitude at the new DZ is known before entering the airplane:**

1. Press Left Front Button and release quickly
2. When "ACCESS" lights, press the button immediately and keep it pressed
3. When "ACCESS" lights again, release the button immediately  
Press the Right Front Button (+) or the Left Front Button (-) to move the pointer to the selected altitude.

When adjusting to a negative altitude on the ground, use the inner negative scale indication

***Note:*** *When performing a manual adjustment of altitude, the MAB enters “Jump Mode” and the altitude is stored in the memory for 14 hours if no jump is made. After 14 hours the MAB calibrates to the new elevation and displays “0” The MAB switches OFF automatically 14 hours after the recalibration. The altitude offset is not retained when the MAB is switched OFF.*

## **IN THE AIRPLANE**

**If the DZ elevation changes during the flight:**

Perform “ACCESS”, point 1-3 as described in paragraph 1 and then by means of the Right Front Button (+) or the Left Front Button (-), set the correct altitude

The MAB exits “Altitude Offset” mode if no button is pressed within 5 seconds.

## **7 - Backlight**

**Enable:** Press and hold Right Front Button for 5 seconds and confirm visually that the backlight has turned on.

**Disable:** Press and hold Right Front Button for 7 seconds and confirm visually that the backlight has turned off

**Adjusting the backlight intensity:** Click on the Right Front Button again to adjust the backlight intensity, 1 to 10 (1 = Low, 10 = High).

**Note:** The backlight is automatically disabled when manually switching OFF the MAB.

**Note:** **If the backlight is turned ON while the MAB is not in Jump Mode, then the backlight will automatically turn OFF after 2 hours.**

**If the backlight is turned ON while the MAB is in Jump Mode, the backlight will remain ON until the unit exits Jump Mode.**

## **8 - Battery Status**

If low bat flashes please change the battery

## **9 - Loosen and Fasten Allen Socket Screws**

### **General**

Before replacing the Velcro Wrist Mount, resetting the MAB and replacing the battery cover with integrated Air Filter, it is necessary to loosen several Allen socket screws.

Do not use an Allen Key to remove or fasten screws. Use LARSEN & BRUSGAARD “WERA” 140 cNm fixed Torque screw driver (accessory) or equivalent.



Fig. 4 - Torque screwdriver

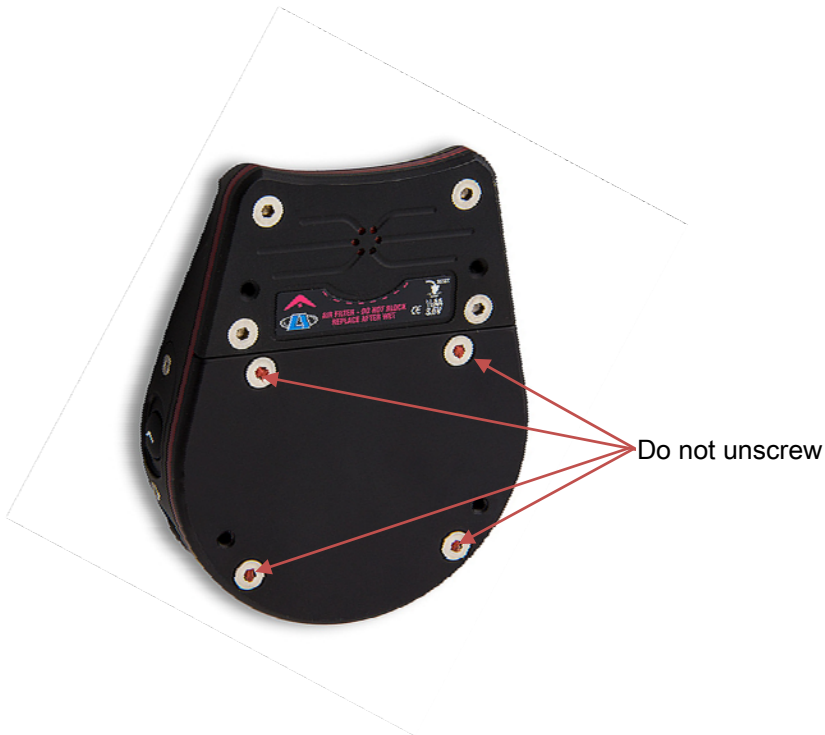


Fig. 5 - Note: Four sealed screws must not be removed.

## 10 - Removing/Replacing the Velcro Wrist Mount



Fig. 6 - Wrist Mount

The Velcro wrist mount assembly is fastened to the MAB with 4 Allen socket screws.

## 11 - Replacing the Battery



Fig. 7 - Replacing the battery

1. Loosen the 4 Wrist Mount screws and remove assembly. See Fig. 8
2. Loosen the 4 battery cover screws and remove cover. See Fig. 9
3. Remove old battery
4. Install new battery noting polarity. Use SAFT LS 14250 (3.6V) or equivalent
5. Press a paperclip into the tiny (Reset) hole next to the battery and release  
The unit restarts
6. Put battery cover back into place and fasten the 4 screws. Pay attention that the surfaces underneath and on the black rubber sealing are clean.
7. Put Wrist Mount assembly back into place and fasten 4 screws

After battery replacement, the battery system requires 2 minutes to calibrate itself before showing the correct status. While calibrating, the battery icon toggles between full and low.

*Note: Customer settings are not lost when removing battery. However, the built-in clock may need to be reset to the current time.*



## 12 - Resetting the MAB

The reset button is located inside the battery compartment.

To gain access to the reset button, remove the wrist mount and the battery cover.

Follow step 1 to 5:



Fig. 8

Step 1. Loosen the 4 wrist mount screws and remove assembly.



Fig. 9

Step 2. Loosen the 4 battery Cover screws and remove cover



Fig. 10

Step 3. Press a paperclip into the tiny (Reset) hole next to the battery and release. The unit restarts.

Step 4. Put battery cover back into place and fasten the 4 screws. Pay attention that the surfaces underneath and on the black rubber sealing are clean.

Step 5. Put Wrist Mount assembly back into place and fasten 4 screws.

After resetting, the battery system requires 2 minutes to calibrate itself before displaying the correct status. While calibrating, the battery icon toggles between full and low.

*Note: Reset the unit after battery replacement, when troubleshooting and when verifying software version number.*

## 13 - Air Filter

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### **PRIOR TO A WATER JUMP:**

Make sure the battery screws are tightened to 1,4 Nm and no foreign objects hinder the working of the cover

The Military ALTITRAC is water resistant down to 5 ft for 24 hours. After jumping into salt water the Air Filter may be contaminated with particles salt and dirt and must be rinsed in fresh water or replaced.

Check the unit in a vacuum chamber after rinsing or replacing the air filter to ensure the functionality is intact

## 14 - Replacing the Air Filter

General: After jumping into (salt) water, the small holes in the Air Filter may have become contaminated with particles (salt and dirt) which could prevent the sensors inside the instrument from reading the air pressure correctly on the next jump.

If no particles can be seen after rinsing the instrument in fresh water then replacement of the Air Filter should normally not be necessary and the unit can be put aside to dry. However, for safety reasons, LARSEN & BRUSGAARD recommends that the Air Filter is replaced after each water jump.

After rinsing the MAB thoroughly in fresh water, replace the battery cover which has the Air Filter integrated.



Note: Wrist Mount assembly must be removed before rinsing



1. Loosen the 4 battery cover screws and remove cover.
2. Place new battery cover with integrated Air Filter into place and fasten the 4 screws.  
Pay attention that the surfaces underneath and on the black rubber sealing are clean.
3. Put Wrist Mount assembly back into place and fasten 4 screws

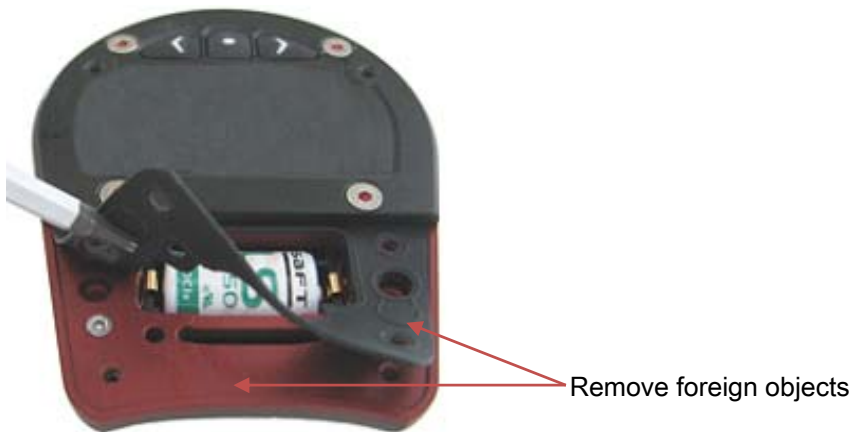


Fig. 12 - Pay attention that the surfaces underneath and on the black rubber sealing are clean.

## 15 - Specifications, MAB

### Mechanical

Dimensions: 85 x 69 x 25 mm

Weight: 238 g

### Other

Present altitude: +/- 10 ft

Operating altitude: 0 to 40,000 ft (0 to 12,191 m)

Storing Temperature: -20C to +70C

Operating Temperature Range: -35C to +80C continuous operation. Will operate at -50C for 10 minutes

Storing Pressure: 200 to 1075 mBar

Maximum allowable humidity: Up to 99,9% rel humidity

Waterproof: 5 feet for 24 hours

Altitude Adjustment Range: -1,650 ft. to 13,780 ft. (approx. -500 m to 4,200 m).

Function Period: 14 hours

Maintenance: 4 and 8 years from date of manufacture

Battery type: SAFT Lithium LS 14250 (3.6V) or equivalent

Battery Life Time (at normal use): approximately 2 years

L&B part no.: 338250

NATO Stock no. 6675-22-627-8792

## **16 - Warranty**

The following conditions apply to the MAB

If within 24 months of the purchase of the MAB a defect or damage is identified by faulty manufacture, LARSEN & BRUSGAARD will repair the unit at no cost to the end user.

To make a claim under this warranty, send the unit to an authorized dealer or directly to LARSEN & BRUSGAARD together with the dated purchase invoice or receipt.

The warranty becomes void if damage is caused by external circumstances or if the unit has been serviced or repaired by third parties unauthorized by our national agents or LARSEN & BRUSGAARD.

All further claims, especially for defects after skydiving accidents, are excluded.

LARSEN & BRUSGAARD has no obligation to honor any extension of warranty granted by any national agent.

### Waiver of Liability

The buyer and user of the MAB indemnify the manufacturer and vendor from any liability for damage incurred before, during and after skydiving with the instrument.

## **17 – Contact information**

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