

# **STELLA 393916 Digital Altimeter with Analog Display User Manual**

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MANUAL

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#### **Introduction and Features**

- 45 deg. offset scale for easy line-of-sight viewing, when mounted on the hand/wrist
- 20 steps adjustable electroluminescent backlight for night jumping
- · Playback of the last jump
- Smooth, non-erratic pointer movement... Step motor controlled
- · Automatic calibration to local elevation
- Scratch proof, an antiglare lens made from high-impact etched glass
- · Shockproof and water-resistant
- Long-lasting ½ AA battery
- · Operational at sub-zero temperatures

# **Description**

# 1. Right Button function

- Turn ON
- Turn OFF
- Enable / Disable Backlighting

#### 2. Left Button function

- Turn ON
- · Toggle backlight intensity
- Perform ACCESS
- · Adjust altitude, if DZ elevation differs from takeoff elevation

#### 3. ACCESS indicator

- 4. Low Battery indicator
- 5. Reset



#### Power ON / OFF

#### 3 - 1Power ON

STELLA must be turned ON prior to use:

- 1. Press and hold any button
- 2. When "ACCESS" lights up and the pointer moves, release the button
- 3. STELLA moves the pointer from "6" to "0", and runs a self-test

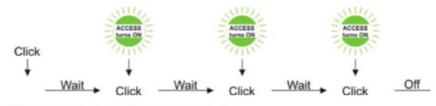
Note: STELLA has been powered OFF when shipping from the factory.

#### 3 - 2 Power OFF

STELLA automatically switches OFF 14 hours after the last jump or 14 hours after the last button was pressed, whichever comes last.

STELLA can also be turned OFF manually:

- 1. Press the Right button, and let go
- 2. When the ACCESS indicator lights up, immediately press and let go again
- 3. When the ACCESS indicator lights up, immediately press and let go again
- 4. When the ACCESS indicator lights up, immediately press and let go again
- 5. The pointer moves to "6" and STELLA is switched OFF



STELLA is not jumpable when in OFF mode.

# **Low Battery**

The Low Battery indicator flashes either once or twice every 10 seconds when STELLA detects low battery:

- 1 flash every 10 seconds:
  - Replace battery within 20 jumps
  - Do not use STELLA for night jumps
- 2 flashes every 10 seconds:
  - Replace the battery immediately

# Zeroing the STELLA

STELLA continuously adjusts itself to the local elevation while turned on, and the pointer remains at the zero "0" position. If the pointer is not within one width from "0" prior to jumping, the unit has not yet adjusted itself to the local elevation and must be manually zeroed.

To manually zero STELLA, turn STELLA OFF then ON, and allow it to perform the self-test.

#### **Jump Mode**

Shortly after takeoff (at approx. 1,000 ft. /300 m) STELLA switches to Jump Mode, and the pointer moves to the current altitude. STELLA exits Jump Mode automatically within one minute after it senses the takeoff elevation again after landing.

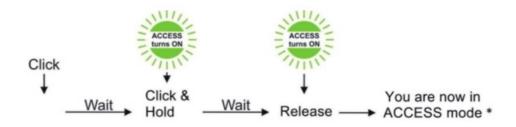
STELLA can manually enter and exit Jump Mode as described in "Altitude Offset".

#### **Altitude Offset**

To offset STELLA, perform ACCESS is required:

#### **Perform ACCESS:**

- 1. Press the Left button, and let go
- 2. When the ACCESS indicator lights up, immediately press and hold
- 3. ACCESS indicator turns off
- 4. When ACCESS indicator lights up again, immediately release



The altitude offset can now be changed, as long as the ACCESS indicator light is on:

Press the Right Button (+) to offset altitude: If takeoff elevation is HIGHER than DZ elevation

Press the Left Button (-) to offset altitude: If takeoff elevation is LOWER than DZ elevation Stella's offset is based on barometric pressure.

At sea level this increase is approximately 1,650 feet, however the available offset increases as pressure decreases.

For example, at 3,000 feet the available increase is 4,650 feet and at 6,000 feet the available increase is 7,650 feet.

The offset decrease is not limited.

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

STELLA exits ACCESS mode if no button is pressed within 5 seconds.

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

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

#### **Enable / Disable Backlighting**

- 8 1 Enable Backlighting
- 1. Press and hold down Right Button for 3 sec.
- 2. ACCESS light will flash 2 times
- 3. Backlighting is turned ON
- 8 2 Change intensity

The backlight has 20 levels of intensity, which can be changed when Backlighting is enabled:

Press and hold down Left Button: The backlight intensity will slowly change down, until level 1.

Release, press again, and hold down: The backlight intensity will slowly change up, until level 20.

The last selected backlight intensity level is saved for future use.

- 8 3 Disable Backlighting
- 1. Press and hold down the Right Button for 3 sec.
- 2. ACCESS light will flash 1 time
- 3. Backlighting is turned OFF

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

If the backlight is turned ON while the STELLA is in Jump Mode, the backlight will remain ON until the unit goes out of Jump Mode.

# Playback of the last jump

STELLA can playback the last jump on the analog face:

- 1. Press both the Right and Left buttons for 5 seconds
- 2. Wait for the pointer to move to EXIT point altitude, and stop
- 3. Press Left Button to start playback
- 4. Press Right Button any time to stop playback

Note: If no prior jump is logged, STELLA will playback a simulated jump based on the following:

Exit altitude: 13000 ft. (3960 m)

Deployment altitude: 4000 ft. (1220 m) Vertical free-fall speed: 180 ft./s (55 m/s) Vertical canopy decent: 20 ft./s (6 m/s)

For safety reasons, playback is disabled when in Jump Mode.

#### Replacing the battery

# LB STRONGLY RECOMMENDS REPLACING THE BATTERY ONCE A YEAR

Before removing the battery cover with an integrated air filter, it is necessary to loosen 4 Allen key screws. Always use a Torque screwdriver TX6 (accessory), or equivalent, to ensure correct tension when fastening the screws.



- 1. Loosen the 4 screws, and remove the battery cover (Take caution not to damage rubber seal)
- 2. Remove the old battery
- 3. Install a new battery. Use ONLY VRI SAFT LS 14250 from L&B
- 4. Place a paperclip into the tiny (RESET) hole to press the reset button, and release (Optional)
- 5. Put the battery cover back into place and fasten the 4 screws
- 6. Place a paperclip into the tiny (RESET) hole to press the reset button, and release
- 7. STELLA restarts

#### **RESET**

- 1. Place a paperclip into the tiny (RESET) hole to press the reset button, and release
- 2. STELLA restarts



DO NOT RESET IN FLIGHT. If accidentally reset in flight, perform Altitude Offset to set STELLA to current altitude.

# Battery cover / fi Iter

STELLA is water-resistant and the battery cover has an integrated air filter, preventing water from getting inside the unit. In case STELLA becomes wet, please check the air filter on the battery cover. If it is wet, remove the battery cover and dry it up using a hairdryer, or replace the battery cover.

- 1. Loosen the 4 screws, and remove the battery cover (Take caution not to damage rubber seal)
- 2. Put old or replacement battery cover back into place, and fasten the 4 screws
- 3. Place a paperclip into the tiny (Reset) hole to press the Reset button, and release
- 4. STELLA restarts



#### **Fault Mode**

When STELLA detects an error, it will enter Fault Mode. Fault Mode is indicated by both ACCESS indicator and Low Battery indicator flashing between 2-10 times every 60 seconds.

Perform RESET to exit the Fault Mode.

If the unit still does not function correctly even after performing a reset, the unit is still faulty,

Then please contact LARSEN & BRUSGAARD. **Note:** STELLA is not jumpable when in fault mode.

# **Specifications**

14 - 1 Mechanical

Dimensions: W: 59 mm / H: 23 mm / L: 76 mm

Weight: 70 grams 14 - 2 Tolerances

Altitude: +/- 1.2% 14 – 3 Jump Storage Storage: Last Jump

Minimum free fall required before storage: 6 seconds

Maximum logging time: 15 minutes

Sampling rate: 4 / second

Maximum logging altitude: 39,999 ft (12,191 m)

# 14 - 4 Other

Operating altitude:
Storing Temperature:
Altitude Adjustment Range:
Operating Temperature Range:
Operating Temperature Range:
-20 °C to +70 °C
Operating Temperature Range:
Function Period:
Battery type:
Battery type:
Battery Life Time (normal use):

O to 40,000 ft (0 to 40,000 ft (0 to 40,000 ft))

1,650 ft to -12,00

-20 °C to +70 °C

-30 °C to +60 °C

14 hours

VRI SAFT LS 14;
Approximately 2

L&B part no.: 393916

NATO Stock no. 667522-628-2019

#### **Contact information**

LARSEN & BRUSGAARD Ledreborg Alle 28

# Warranty

The following conditions apply to the STELLA warranty:

If within 12 months of the purchase of STELLA a defect or damage is identified by a faulty manufacturer, 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 the 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 STELLA indemnify the manufacturer and vendor from any liability for damage incurred before, during, and after skydiving with the instrument.



#### **Documents / Resources**



STELLA 393916 Digital Altimeter with Analog Display [pdf] User Manual 393916, Digital Altimeter with Analog Display, 393916 Digital Altimeter with Analog Display

Manuals+,