

# SOLO

## Instruction MANUAL & ROAD MAP



LBALTIMETERS.COM

### WARNING!

The SOLO is intended to be a backup device and must not be relied upon as your primary means of maintaining altitude awareness. Use the SOLO at your own risk.

Do not put the SOLO directly next to your ear when testing the alarm sounds on the ground, as the SOLO alarm volume is very loud. It may cause pain or damage to the ear.

Due to outside wind noise in freefall, the alarm sounds will not be perceived to be as loud as when testing the SOLO on the ground.

If the SOLO is not mounted correctly, you may not hear the alarm sounds in freefall. Make sure the SOLO is mounted correctly before you jump.

The SOLO must be active (powered on) prior to entering the airplane.

### INTRODUCTION

Congratulations on purchasing your new SOLO!

The SOLO design is based upon the latest findings in microcomputer technology and freefall parameters.

The SOLO is fully automatic. It continually records the ambient air pressure and temperature and adjusts the electronic circuitry to the local elevation.

The thin and ergonomic design ensures a perfect and comfortable fit to your ear when placed in your fraphat or hard helmet.

The SOLO can be mounted on the outside of any type of helmet by means of the enclosed ties.

The SOLO is ideally suited for Relative Work, Skysurfing, Freeflying, Student, Tandem, AFF, etc.

We hope you will enjoy jumping with your new SOLO.

Please read ALL of the instructions prior to actual skydiving use. It is a very good idea to practice ACCESSing the SOLO and setting the warning values on the ground prior to your first jump with the SOLO.

If you have any questions please call, fax or e-mail us.

LARSEN & BRUSGAARD

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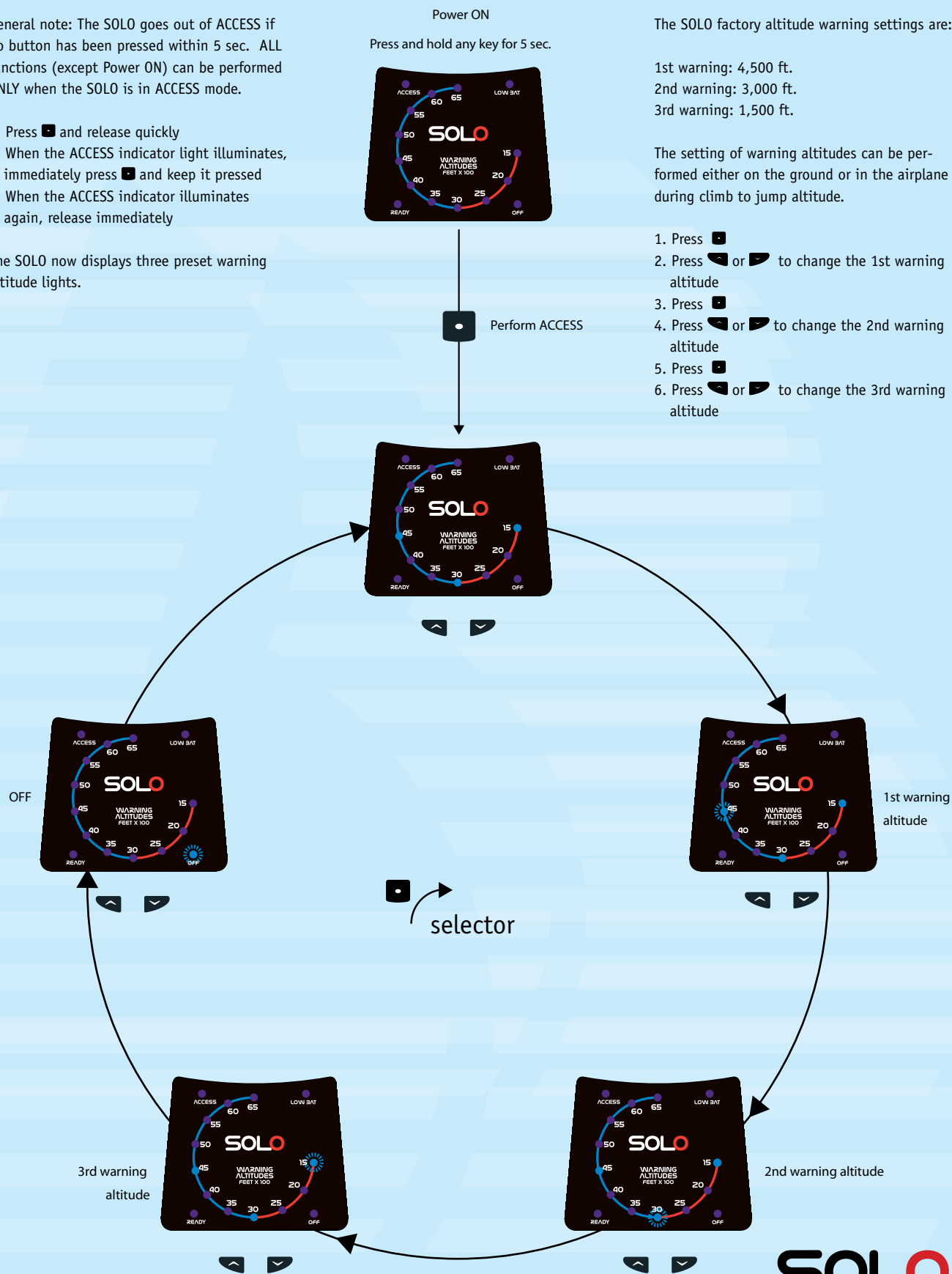
E-mail: L-and-B@L-and-B.dk

### Perform ACCESS

General note: The SOLO goes out of ACCESS if no button has been pressed within 5 sec. ALL functions (except Power ON) can be performed ONLY when the SOLO is in ACCESS mode.

1. Press and release quickly
2. When the ACCESS indicator light illuminates, immediately press and keep it pressed
3. When the ACCESS indicator illuminates again, release immediately

The SOLO now displays three preset warning altitude lights.



### Setting three Warning Altitudes

The SOLO factory altitude warning settings are:

- 1st warning: 4,500 ft.
- 2nd warning: 3,000 ft.
- 3rd warning: 1,500 ft.

The setting of warning altitudes can be performed either on the ground or in the airplane during climb to jump altitude.

1. Press
2. Press or to change the 1st warning altitude
3. Press
4. Press or to change the 2nd warning altitude
5. Press
6. Press or to change the 3rd warning altitude



## INSTRUCTIONS

### Power ON

The SOLO has been powered off prior to shipping from our factory. To turn the power on, press and hold any key until the unit beeps, then release the button. SOLO runs a self-test and sounds three beeps.

### Perform ACCESS

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### Setting the Warning Altitudes

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- 3rd warning: 1,500 ft.

The setting of warning altitudes can be performed either on the ground or in the airplane during climb to jump altitude.

### Three warning alarms

1. Press 
2. Press  or  to change the 1st warning altitude
3. Press 
4. Press  or  to change the 2nd warning altitude
5. Press 
6. Press  or  to change the 3rd warning altitude

### Sequence of warning alarm lights

You may note that when setting the warning altitudes, it is possible to set the 1st warning alarm indicator lower than the second or even the 3rd warning altitude indicator. The 2nd warning altitude indicator could be set to a higher value than the 1st warning alarm indicator or a lower value than the 3rd warning altitude indicator, and so on. This is not a problem – when the SOLO exits ACCESS mode, it will automatically sort and store the warning alarms such that the highest warning altitude become the 1st warning alarm, the next highest warning altitude becomes

the 2nd warning alarm, and the lowest warning altitude becomes the 3rd warning alarm.


### Two warning alarms

If you choose, you may have only two warning alarms. The procedure is the same as above, but choose same altitude for the two highest warning alarms (the SOLO then sounds only the 2nd and 3rd warning alarms).

### One warning alarm




If you wish only one warning alarm, choose same altitude for all three warning alarms using the above procedure. (The unit sounds only the 3rd warning alarm).

### Testing the alarm sounds

Press and hold 

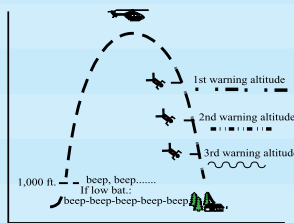
### Power OFF

The SOLO can be manually powered OFF to further extend the battery life time when not in use. When powered OFF, SOLO cannot be used for jumping.

Press  repeatedly until the OFF indicator light illuminates. Press and hold  and  until the altitude warning light display starts to count down (from 65, 60, 55, etc.), then release.

The preset warning altitudes are stored in non-volatile memory when the SOLO is powered OFF.

### 1,000 Feet Test



At 1,000 feet +/-100 feet, the SOLO sounds a sequence of beeps. These beeps have two functions:

1. The beeps indicate that SOLO has calibrated itself to the local ground elevation and is ready to jump.
2. The number of beeps indicates the altitude at which the highest warning alarm is set; for example: If set to 5,500 feet, the signal will sound: beep-beep-beep-beep-beep-(pause)-beep. The number of rapid-sequence of beeps indicates the highest warning altitude in thousands of

feet. The beep after a pause (if any), signifies a 500-foot altitude increment. Should the battery voltage of the SOLO be low, the 1,000-foot test sequence is followed by 5 short beeps. This indicates that the batteries should be replaced.

### Prior to Jumping

The SOLO normally continuously adjusts itself to the local elevation. However, if the “READY” indicator light flashes, the unit has not adjusted itself to the local elevation and it must be powered OFF and ON prior to jumping.

### Setting a Drop Zone (DZ) Offset

If the DZ elevation is higher or lower than that of the take-off airport, take this into account when setting your alarm altitudes – don’t forget to reset the warning altitudes when you return to your normal DZ environment.

### Low Battery

When “low bat” indicator illuminates, replace the batteries. If the battery voltage is low, the SOLO sounds 5 short beeps when climbing through 1,000 feet.

### Battery replacement



Carefully slide out battery holder and remove batteries. Install new batteries using the correct polarity. Use only CR-2325 or equivalent.

*Note: Reset the SOLO after replacing batteries.*

### Reset



Press a paperclip into the tiny hole on the side of the unit and release. The unit restarts.

*Note: Reset the unit after battery replacement and when trouble shooting.*

### Mounting the SOLO on the outside of the helmet or on a Goggle Mount

Loop the waxed tack cords through the four mounting holes and fasten with knobs to the helmet/Goggle Mount

*Note: Make sure that there is no material between the SOLO loudspeaker hole and your ear.*


### Trouble-shooting

When the SOLO detects an internal fault, the warning altitude “65” LED flashes 2 to 4 times. At the same time the unit beeps every minute.

The “65” LED flashing codes are as follows:

Two, three or four flashes = unit is not functioning properly Remedy: perform reset

If the unit does not function correctly, even after replacing the batteries and pressing reset, perform following:

Press  and hold while resetting. The SOLO resets to factory altitude warning settings.

If the unit is still faulty, please contact your local dealer or LARSEN & BRUSGAARD.

## SPECIFICATIONS

Dimensions: 55 x 40 x 11 mm  
(2.16 x 1.57 x 0.43 inches)

Weight: 24 grams (0.8 oz.)

Battery type: 2 x CR 2325 or equivalent

Battery Life Time: 2.5 years or 500 jumps

Freefall alarm sounds:

1st warning: One 3 second pulsating alarm if vertical airspeed exceeds 13 m/sec at preset altitude.  
Sound sequence: Pulsating, low repetition

2nd warning: One 4 second pulsating alarm if vertical airspeed exceeds 13 m/sec at preset altitude.  
Sound sequence: Pulsating, high repetition

3rd warning:  
Siren alarm as long as vertical airspeed exceeds 29 m/sec at or below the preset altitude. Sound sequence: High pitch continuous siren

Alarm output volume: 120 dB

Calibration Range: 0 to 6,500 feet

Altitude selection interval: 500 feet

Operating altitude: 0 to 40,000 feet

Accuracy: ± 100 feet

Operating Temperature Range: -20° C to +50° C  
(-4° F to +122° F)

Meets or exceeds EEC/89/336  
L&B part no.: 205110  
NATO Stock no.: 6605-22-609-1692

## WARRANTY

The following conditions apply to the SOLO warranty:

Within 12 months after delivery, damage or defects in the unit that are proven to be caused by faulty manufacture will be repaired by LARSEN & BRUSGAARD 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 honour any extension of warranty granted by any national agent.

### Waiver of liability:

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