

# **PRO-DYTTER®**



## **INSTRUCTION**

# INDEX

Introduction.....	5
To operate the PRO-DYTTER.....	6
Setting the warning altitudes.....	8
Power modes.....	10
Function and sound sequence .....	12
Manual Zeroing .....	14
Low Battery.....	15
Battery replacement .....	16
Specifications.....	17
Mounting the Clip.....	19
Fixing the PRO-DYTTER in the Clip.....	20
Accessory.....	21
Goggle Mount .....	21
Warranty .....	22

## **!!! WARNING !!!**

Do not put the PRO-DYTTER directly next to the ear when testing the alarm sounds on the ground.

The PRO-DYTTER alarm volume is very loud. It may cause pain or even damage to the ear.

Due to outside wind noise in freefall the alarm sounds will not be as loud as when testing the PRO-DYTTER on the ground.

If the PRO-DYTTER is not mounted correctly you may not hear the alarm sounds in freefall. Make sure the PRO-DYTTER is mounted correctly before you jump.

The PRO-DYTTER must be switched on prior to entering the airplane. Use the PRO-DYTTER at your own risk.

PRO-DYTTER is a trademark of Larsen & Brusgaard, Denmark.

© 1998. Larsen & Brusgaard ApS. All rights reserved.

Larsen & Brusgaard operates a policy of continuous development. Therefore, we reserve the right to make changes and improvements to any of the products described in this guide without prior notice.

US Patent Number: Des. 392,572



## **Introduction**

Congratulations on your new PRO-DYTTER!

The PRO-DYTTER is designed to use the latest findings in microcomputer technology and freefall parameters.

The PRO-DYTTER is the first audible altimeter which offers the user the choice of selecting one, two or three warning altitudes.

The PRO-DYTTER 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 curved design ensures a perfect and comfortable fit to your ear when put within a fraphat or hard helmet.

A Clip is included for mounting the PRO-DYTTER on the outside of any type of helmet.

The PRO-DYTTER is the ideal instrument for Relative Work, Skysurfing, Freeflying, Student, Tandem, AFF, etc.

We hope you will enjoy jumping with the PRO-DYTTER.




LARSEN & BRUSGAARD

## TO OPERATE THE PRO-DYTTER, PERFORM ACCESS

### Description

When performing **ACCESS**, "READY" will light two times. The first time when you must press and hold  and the second time when you must release .

### Function

1. Press  (short beep sound) and release quickly
2. When "READY" indicator lights, immediately press  again (short beep sound) and keep it pressed.
3. When "READY" lights for the second time, release .

The PRO-DYTTER now displays the preset warning altitudes for 5 sec.

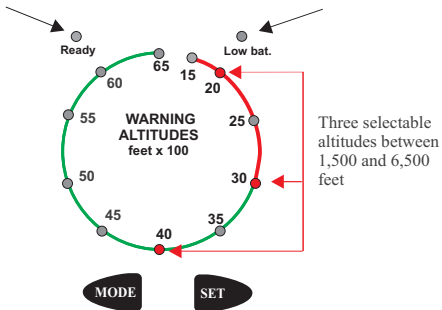
NOTE: The PRO-DYTTER goes out of ACCESS if no button has been pressed within 5 sec. And then "READY" may flash while the unit sounds 2 beeps, indicating that the PRO-DYTTER is in "Economize" Power Mode (see page 10).

## READY LIGHT

Multifunction indicator

## LOW BATTERY LIGHT.







Indicates when batteries must be replaced



## SETTING THE WARNING ALTITUDES

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

### Three warning alarms:

1. Perform **ACCESS**
2. Press and release . Then  to change first warning altitude
3. Press and release . Then  to change second warning altitude
4. Press and release . Then  to change third warning altitude

### Two warning alarms:

Same as above, but choose same altitude for two of the warning alarms. (The unit will sound the 2nd and 3rd warning alarms).

### One warning alarm:

Same as above, but choose same altitude for all three warning alarms. Maximum altitude setting: 6,000 ft. (The unit will sound the 3rd warning alarm).

## Checking preset alarm sounds

1. Perform **ACCESS**
2. Press and hold  until the PRO-DYTTER starts to sound the preset alarm sequence.


## POWER MODES

### Automatic, Economize and Switch-off

#### Description



The PRO-DYTTER can be operated in three power modes; Automatic, Economize and Switch-off.

In Automatic the unit is active all the time and continually records the ambient air pressure and temperature and adjusts the electronic circuitry to the local elevation.

Economize is a battery saving mode and the PRO-DYTTER switches off 14 hours after the last jump or 14 hours after the last pressing of , whichever comes first.

#### Caution:

When in Economize mode the PRO-DYTTER must be switched on prior to the first jump of the day.

Press  or  to switch-on the PRO-DYTTER.

The PRO-DYTTER can also be manually switched off to further extend the battery life time when not in use.

When switched off the PRO-DYTTER cannot be used for jumping.

#### GENERAL NOTE:

The already preset warning altitudes are kept in memory after the PRO-DYTTER switches off after 14 hours in Economize mode or when switched off manually.

## Switching to Automatic and Economize


To change power mode setting preset all three warning alarms to 6,500 ft. The PRO-DYTTER goes out of ACCESS and indicates whether it is in Economize or Automatic mode:

Economize mode: "READY" light flashes and the unit sounds 2 beeps.

Automatic mode: No flashes and no beeps.

The PRO-DYTTER alternates between switching to Automatic and Economize each time all three warning alarms are set to 6,500 feet.

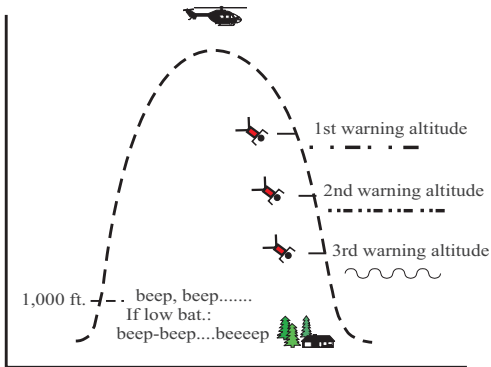
## Switching off the PRO-DYTTER

Perform **ACCESS** and press and hold .

After 6 seconds the warning light starts counting down from 6,500 ft. to 1,500 ft.

When the 1,500 ft. light shows, release .

## FUNCTION AND SOUND SEQUENCE



## Jump Mode

Shortly after take-off the "READY" light starts to flash once every 7 sec., indicating that the unit has switched to Jump Mode.

### 1,000 Feet Test

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

1. The beeps indicate that the PRO-DYTTER has calibrated itself to the local ground elevation and is ready to jump.
2. The sequence indicates the altitude at which the highest warning alarm is set; ex.: if set to 5,500 feet the signal will sound: beep-beep-beep-beep-beep- (pause)-beep.

In case of "Low bat." the sequence is followed by a long beep.

## MANUAL ZEROING

When arriving at the Drop Zone the PRO-DYTTER may be in Jump Mode ("READY" light flashes once every 7 sec). In this case it is necessary to manually zero the unit before jumping, as follows:

Switch off the PRO-DYTTER and turn it on again (see page 11).

If the Drop Zone elevation differs from that of the airport:

1. Perform Manual Zeroing in the airplane at Drop Zone elevation

or,

2. compensate by adjusting the warning altitudes accordingly.

## LOW BATTERY

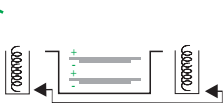
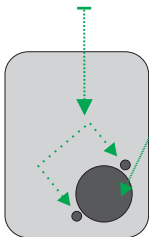
A "Low bat." condition is indicated as follows:

- After performing ACCESS, the "Low bat." lights and the unit sounds an alarm.
- A continuous alarm tone sounds for 5 sec. when climbing through 1,000 feet.
- The "Low bat." flashes once every 7 sec. when the PRO-DYTTER is in Jump Mode.

Replace batteries when "Low bat." shows,

## BATTERY REPLACEMENT

1. Remove screws
2. Remove battery cover



Be careful that tiny goldplated springs do not fall out

- *Note polarity*
- *Use only CR 2330 or equivalent*

Note: After removal wait 120 sec. before installing new batteries. Upon installing new batteries press **MODE** or **SET** and wait for self test to finish (light and sounds).

## SPECIFICATIONS

Dimensions:	58 x 43 x 11 mm (2-1/4 x 1-3/4 x 1/2 inches)
Weight:	30 grams (1.3 oz.)
Battery type:	2 x CR 2330 or equivalent
Battery Life Time : (at normal use)	Automatic: 1.5 years or 300 jumps Economize: Extended battery life time, depending on jumping frequency
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: 1,500 to 6,500 feet

Altitude selection interval: 500 feet

Operating altitude: 0 to 40,000 feet

Accuracy:  $\pm 100$  feet

Operating Temperature:  $-20^{\circ}$  C to  $+50^{\circ}$  C  
Range: ( $-4^{\circ}$  F to  $+122^{\circ}$  F)

Meets or exceeds EEC/89/336  
L&B part no.: 197473  
NATO Stock no.: 6605-22-124-5932

## MOUNTING THE CLIP ON A HELMET

Loop 2,5 mm cable ties or threads through the four mounting holes and fasten on helmet.



Mounting holes

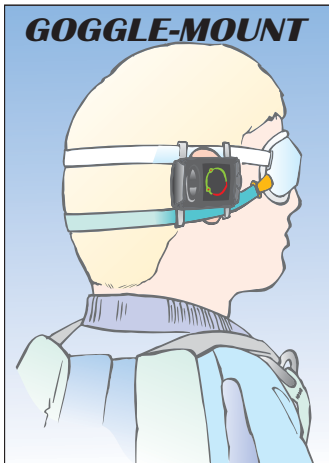
## FIXING THE PRO-DYTTER IN THE CLIP



## ACCESSORY

### GOGGLE-MOUNT

The PRO-DYTTER must be mounted inside or outside the helmet or on the Goggle Mount and next to the ear. Make sure that there is no material between the loudspeaker hole and the ear.



## WARRANTY

The following conditions apply to the PRO-DYTTER warranty:

Damage or defects in the unit within 12 months after delivery that are proven to be caused by faulty manufacture will be repaired at no cost to the end user.

Repairs performed under this warranty will not extend the warranty period.

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 ourselves or our national agents.

All further claims, especially for defects after skydiving accidents, are excluded. The manufacturer has no obligation to honour any extension of warranty granted by his national agent.

### Waiver of liability

The buyer and user of the PRO-DYTTER indemnifies the manufacturer and vendor from any liability for damage incurred before, when and after skydiving with the instrument.

**Manufactured by:**

Larsen & Brusgaard ApS  
Mosevej 3 - Box 25  
4070 Kirke Hyllinge  
Denmark

Phone:+45 46 48 24 80

Fax:+45 46 48 24 90

E-mail: [L-and-B@L-and-B.dk](mailto:L-and-B@L-and-B.dk)

[www.L-and-B.dk](http://www.L-and-B.dk)

