2019

Manual SKYLEXX NAV

SKKYLEXX Manual REV 2.3 2019

Skylexx engeniring

11.3.2019

Contents

Introduction 4
WARNING! 4
Description 5
Features 5
Package content 5
Preparing to work 5
Layout of buttons and connectors 6
Hot buttons 7
Battery indicator 7
Ground screen and status bar icons 8
Visual altimeter screen, canopy fly mode 8
Visual altimeter screen, freefall mode 8
Climbing screen 9
Navigation mode screen 9
Compass screen 9
Settings 10
Alarms settings **10**
Alarms menu 10
Edit alarms 11
Select freefall alarms 12
Select canopy alarms 12
Alarms 13
Wingsuit mode 14
Canopy and freefall auto mode 14
Enable loud sound 14
Test sound signal 15
DZ settings **15**
DZ settings menu 15
Select DZ 15
Select Aircraft 16
Zero DZ offset 16
Reset offset 17
Im on a climbing 17
Im on GND 17
DZ editor 18
Point editor 19
AC editor 19

Task number 20
Log book **21**
Log book 21
Go to jump 21
Delete last jump 22
View jump summary 23
Display settings **24**
Display settings menu 24
Flip display 24
Display contrast 24
Backlight 25
Display refresh rate 25
Language 25
Time format change 25
Date format change 26
Display altitude format 26
Display speed format 26
Temperature format 26
Date and time settings **27**
Date & time settings menu 27
Set time 27
Set Date 28
Set alarm clock 29
Set sleep timeout 30
Manual altimeter mode **31**
Manual altimeter menu 31
Manual altimeter enabled 31
Set current altitude 32
General Settings **32**
General settings menu 32
Odometer 33
Set next jump 33
Freefall time setting 34
Canopy time setting 35
Clear log book 35
Enable or disable logging 36
Reset to default settings 36
System information 37

Calibrate compass.....37
Enable jump track logging.....38
Memory info.....38
Navigation settings.....**39**
GPS settings menu.....39
Navigation ON.....39
Navigation alarms.....40
Minimum and maximum value.....40
Set control mode.....41
Horizontal speed control.....41
Vertical speed control.....42
Glide ratio control.....42
Direction control.....43
Set landing course.....43
Auto position.....44
Dynamic model.....44
NO sleep.....44
Auto show navigation screen.....45
Automatically find DZ.....45
Navigation module sleep mode.....45
Specifications.....46

Introduction

SKYLEXX NAV is an altimeter designed for controlling altitude and other parameters when performing parachute jumps. **SKYLEXX NAV** is equipped with a built-in GPS-GLONASS navigation system, and an electronic compass which lets you determine your location in conditions of poor visibility. The altimeter can be used for visual and sonic controlling of altitude, speed, quality, and direction of flight. **SKYLEXX NAV** records automatically accomplished jumps and saves all data in internal memory of the device. You can configure groups of beeps to control altitude during free fall and under the dome. The altimeter menu is available in several languages. You can choose the data display in the units systems used in your country.

This manual has been modified and is relevant for the latest version of the altimeter firmware. You can see the firmware version in "**SYSTEM INFORMATION**" placed in "**SETTINGS**". You can update the device firmware using the **Skylexx setup** program.

WARNING!

WARNING: **Skydiving**, **parachuting**, and flying are exciting and challenging activities. However, THE RISK OF SERIOUS INJURY OR DEATH IS REAL and should not be overlooked or underestimated.

Parachute jumping is a dangerous sport. It can lead to injury, and even death.

Altimeter is an electronic device which is not protected from malfunction, even with proper use and storage. Do not rely entirely on the altimeter. Your altimeter serves as an assistant in altitude control. Control the altitude visually all the time and with the help of altimeter.

Description

SKYLEXX NAV electronic altimeter is equipped with a large graphic display. The altimeter can be used in a visual or sound altitude indicator. **SKYLEXX NAV** has a built-in GPS-GLONASS navigation module, and an electronic compass.

SKYLEXX has a USB connector, which is used to charge the device, update the firmware, and connect to a PC.

Features

Display

- Viewing area: 38mm x 26mm
- Backlight
- Flip LCD
- US and International data format
- Temperature: Celsius or Fahrenheit
- Altitude: feet or meters
- speed: mph or kmh

Alarms

- 12 groups
- Freefall and canopy fly alarm
- Wingsuit mode

Logbook

- Internal memory size: 2Gb
- Jump number
- Date
- Time
- Exit altitude
- Canopy open altitude
- Freefall time
- Canopy fly time
- Average speed

Battery

- до 50 дней на одной зарядке
- до 12 часов с включенным модулем навигации
- время заряда батареи 30 минут

Package content

- Skylexx altimeter
- Hand mount
- Wrist mount
- USB cable
- Battery charger

Preparing to work

Before using altimeter, you have to charge it. Full charge time is from 20 to 40 minutes. You can charge the altimeter with micro USB cable or using the charger, or from a computer. The charger functions with the voltage of 110 - 250V AC. You may need an adapter for the outlets installed in your country. While the battery is charging, the battery charge icon will be shown on the battery status indicator, and the red indicator will light. When the charge is complete, the full battery icon will be shown, the indicator will turn off. After a full charge, the altimeter will go into sleep mode.

Layout of buttons and connectors

1. LCD display
2. Top button
3. Middle button
4. Bottom button
5. Light indicator (red)
6. GPS light indicator (blue)

7. Reset switch
8. Micro USB socket

Use buttons **"Up"** and **"Down"** to move through the menu. **"Select"** is used to choose.

To exit to the previous screen, press the middle **“Select”** button and hold it until the screen changes. If you hold the **"Up"** or **"Down"** buttons, these buttons are cycled.

The device is reset by pressing the button, hidden in the lower part of the device, with a paper clip.

You can restore the device’s factory settings by pressing and holding the **"Down"** button and simultaneously pressing the "Reset" button with a paper clip, or from the "General Settings" menu

Hot buttons

Hot buttons are available when the screen is in "On the ground" mode.

When the button **"Up"** is pressed

- If the navigational module is on, the altimeter changes on navigation screen
- If the module is off, the altimeter changes on electronic compass screen

When the button **"Down"** is pressed, the altimeter switches to the altitude display screen

When the button **"Up"** is pressed and held for 2 seconds the navigational module is on or off.

When the button **"Select"** is pressed and held for 2 seconds the display backlight is on or off.

Battery indicator

The battery indicator shows the current battery status

Full capacity

75% capacity

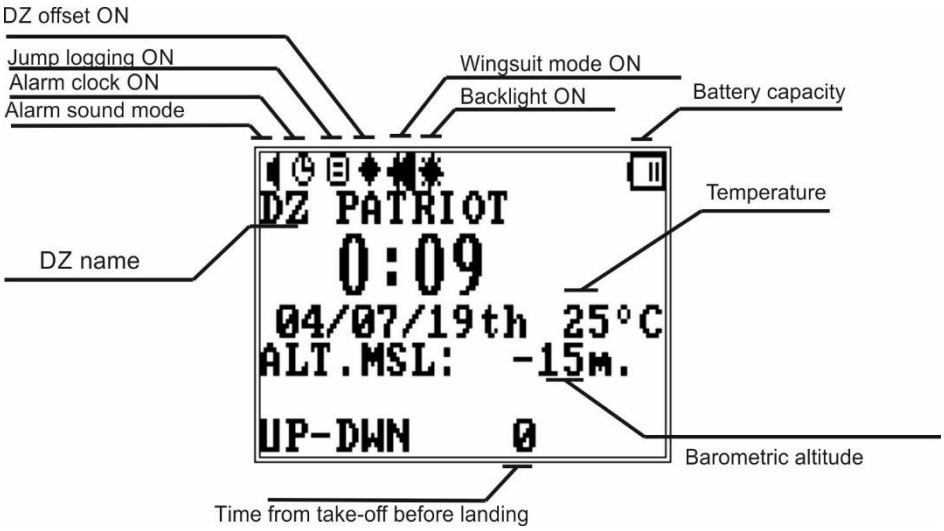
50% capacity

25% capacity

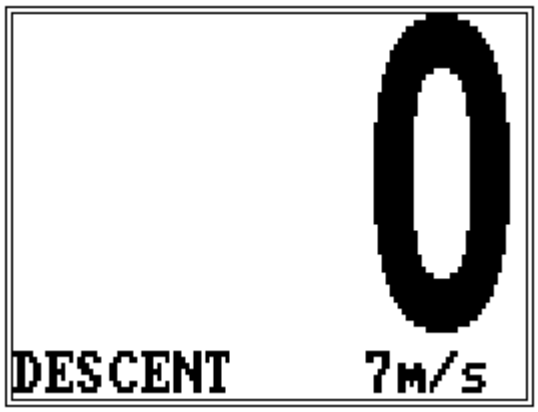
Empty (the Red indicator blinks)

Charging

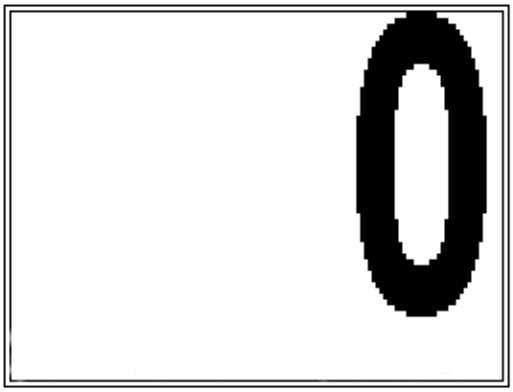
Ground screen and status bar icons



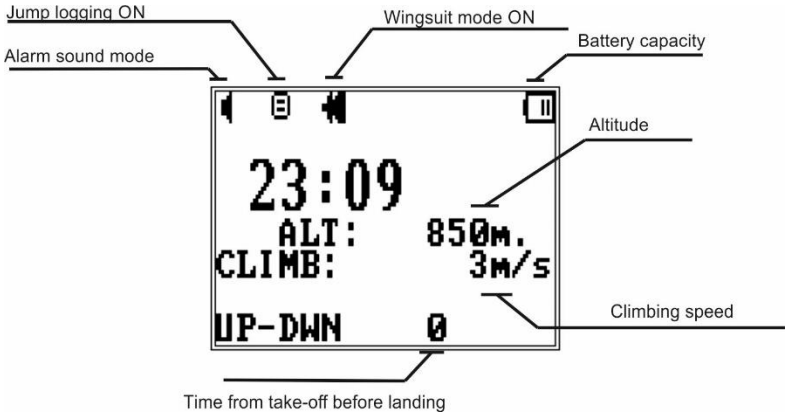
Visual altimeter screen, canopy fly mode



Visual altimeter screen, freefall mode

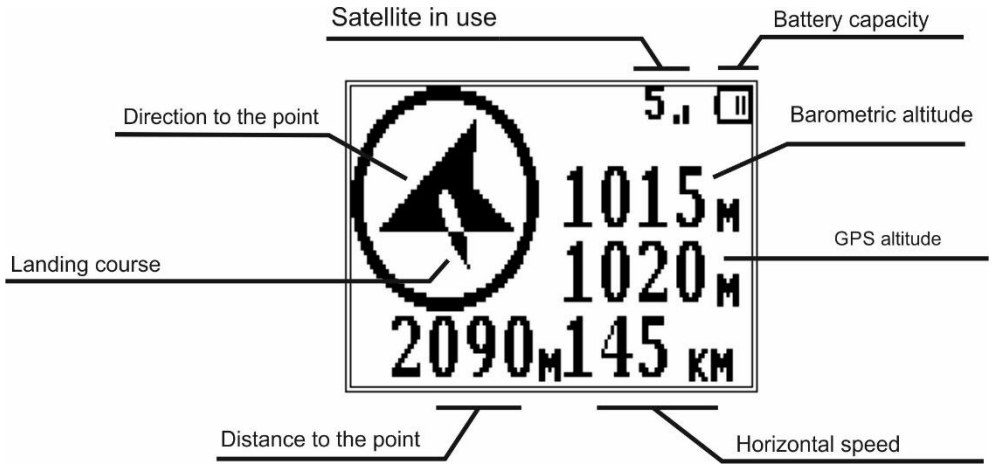


Climbing screen

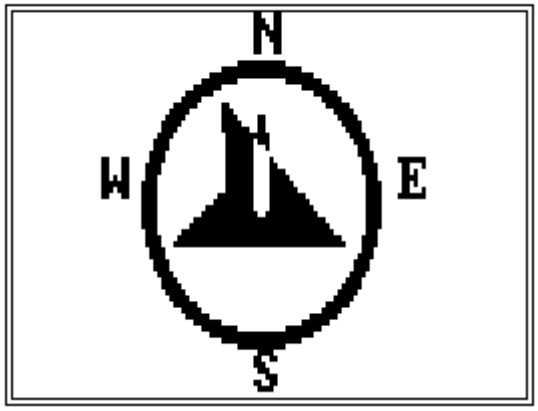


The altimeter automatically switches to the altitude gain mode. When the altitude is 300 meters, the device beeps and the indicator flashes (5) which means switching to the altitude gain mode. In case of very slow dialing, the device may not automatically switch to the dialing mode, in this case it can be transferred to the “In flight” mode in the manual mode, from the “Setup” menu. If the jump did not take place, the altimeter independently switches to the “On the ground” mode.

Navigation mode screen



Compass screen



Settings

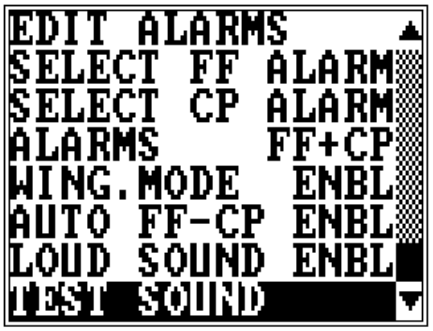
Alarms settings

Skylexx has 12 groups of programmable alarms, each with three individually selectable alarm altitudes.
There are two types of alarms from which to choose: freefall and canopy. You may have one freefall alarm group and one canopy alarm group enabled at the same time.

Alarms menu

Scroll to and select **ALTITUDE ALARMS,** press the middle button to enter menu.

To go back to the previous screen, press the middle button and hold it until the screen changes



For signals of the freefall alarms, the following rules:

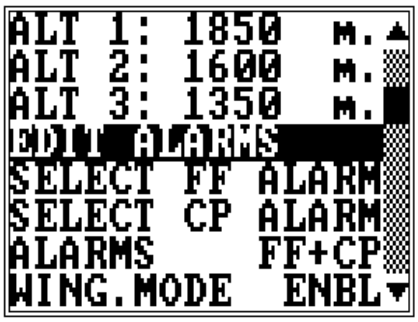
Step of altitude of 30 meters
The step of altitude between signals no closer than 150 meters
The minimum altitude of the 1st signal, not be set lower than 600 meters
The minimum altitude of the 2st signal, not be set lower than 450 meters
The minimum altitude of the 3st signal, not be set lower than 300 meters

For signals of the canopy alarms, the following rules:

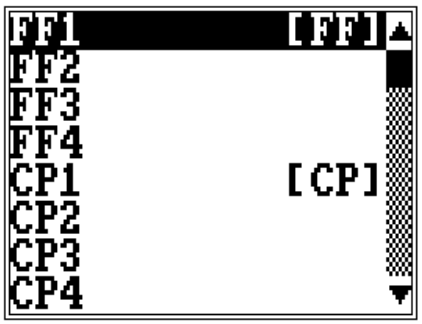
Step of altitude of 5 meters
The step of altitude between signals no closer than 30 meters
The minimum altitude of the 1st signal, not be set lower than 90 meters
The minimum altitude of the 2st signal, not be set lower than 60 meters
The minimum altitude of the 3st signal, not be set lower than 30 meters

Edit alarms

When you enter the Alarms menu, the currently active **Freefall** and **Canopy** alarm groups and the alarm altitudes will appear. Scroll to and select **Edit Alarms**



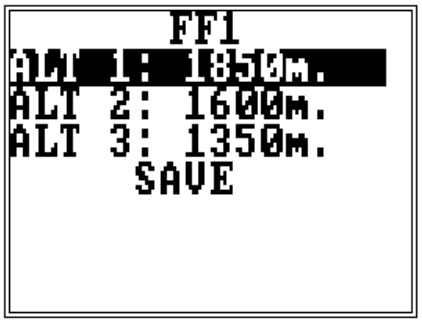
To change the altitudes of a group, select it from the list. Skylexx comes with the alarm group names set to **FF1**, **FF2**, **FF3**, **FF4, CP1, CP2, CP3, CP4, SWOOP1, SWOOP2, SWOOP3, SWOOP4**



ALT 1: - first sound signal

ALT 2: - second sound signal

ALT 3: - third sound signal

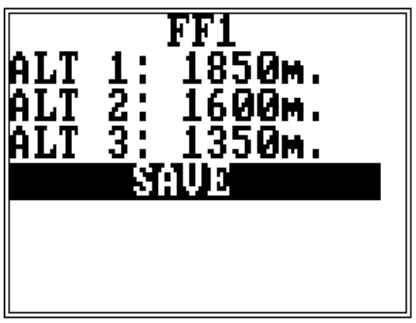


Scroll to and select the altitude you want to change. Press the middle button to start the process of changing the altitude.

Use the top and bottom buttons to change the alarm altitude. Once you have the correct altitude, press the middle button.

Repeat the process for the other Alarm Altitudes and once all values are set, scroll to and select **Save**.

To go back to the previous screen, press the middle button and hold it until the screen changes

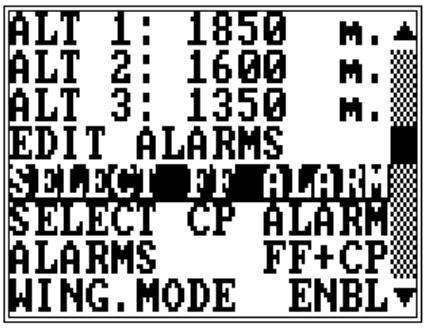


*** settings can be changed the program Skylexx Setup**

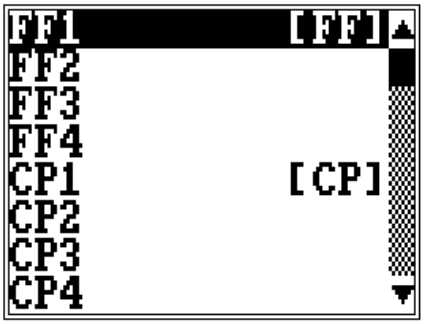
Select freefall alarms

Scroll to and select **FF Alarm.**

Use the top and bottom buttons to select alarms group.



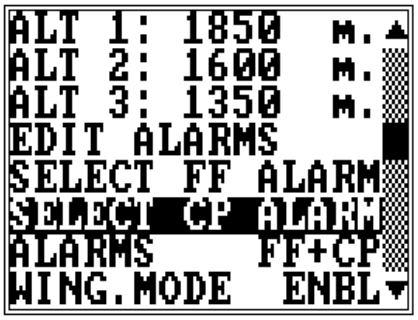
The selected group will be marked **[FF]**



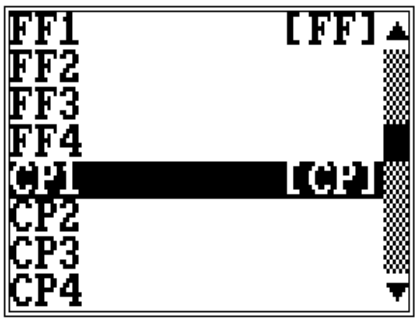
Select canopy alarms

Scroll to and select **CP Alarm.**

Use the top and bottom buttons to select alarms group.



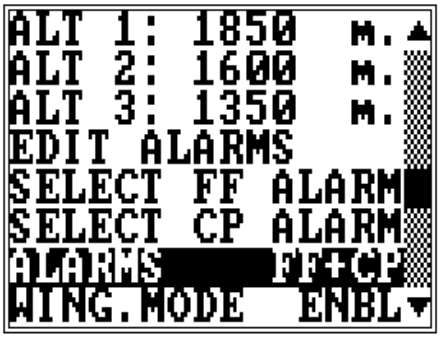
The selected group will be marked **[CP]**



Alarms

There are two types of alarms from which to choose: freefall and canopy. You may have one freefall alarm group and one canopy alarm group enabled at the same time.

Scroll to and select **Alarms,** press the middle button to change it.



FF+CP – Freefall and Canopy Alarms On.

On the status bar, the underlined alarm icon indicates that freefall and canopy alarms are activated.

FF – Only Freefall Alarms On.

On the status bar, the underlined alarm icon indicates that freefall alarms are activated.

CP – Only Canopy Alarms On.

On the status bar, the underlined alarm icon indicates that canopy alarms are activated.

OFF – Freefall and Canopy Alarms Off .

You should disable alarms if you are using your Skylexx as a visual altimeter.

On the status bar, the underlined alarm icon indicates that freefall and canopy alarms are disable.

On the status bar there is a symbol indicating what kinds of alarms are enabled.

Freefall and Canopy Alarms On

FF – Only Freefall Alarms On

CP – Only Canopy Alarms On

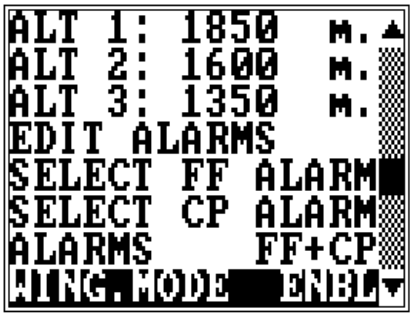
Freefall and Canopy Alarms Off

Wingsuit mode

The **Wingsuit** mode allows to avoid erratic transition to the canopy flying, when flying in a wingsuit.

Scroll to and select **WING.MODE.** Press the middle button to change it. **ENBL** or **DSBL.**

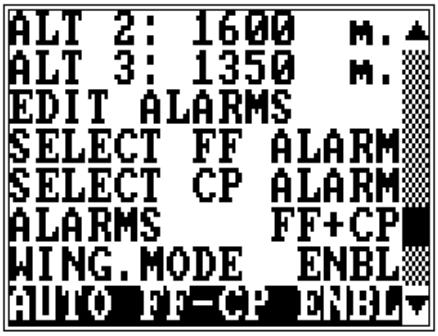
On the status bar, the underlined **WINGMODE** icon indicates that **WINGMODE** are enabled.



Canopy and freefall auto mode

Automatic transition to the mode freefall or canopy flying mode.

Scroll to and select **AUTO FF-CP.** Press the middle button to change it. **ENBL** or **DSBL.**

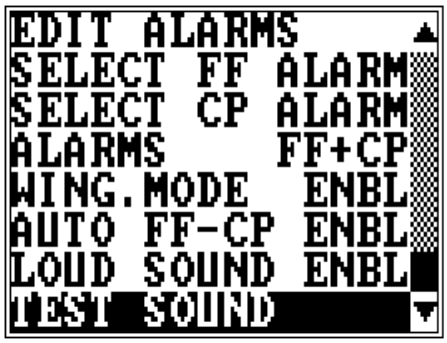


Enable loud sound

Scroll to and select **Loud sound,** press the middle button to change it.

Test sound signal

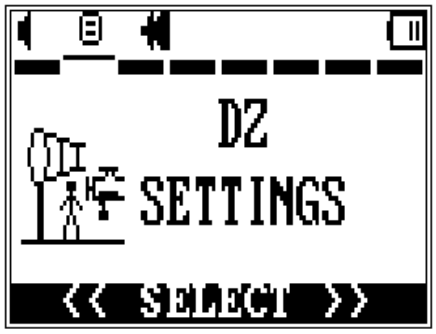
Scroll to and select **Test sound,** press the middle button to change it.



DZ settings

DZ settings menu

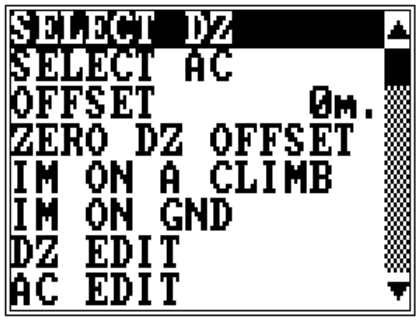
Scroll to and select **DZ settings,** press the middle button to enter menu.



To go back to the previous screen, press the middle button and hold it until the screen changes.

Select DZ

Scroll to and select **Select DZ,** press the middle button to enter menu.

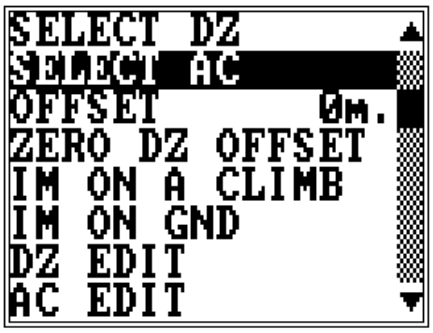


Scroll to and select **DZ** from the list.

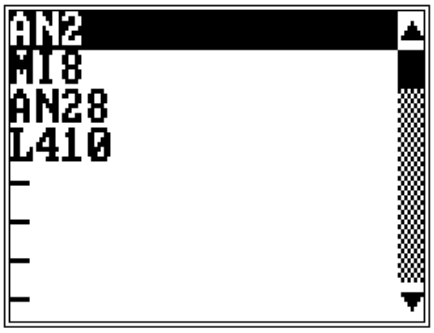
To go back to the previous screen, press the middle button and hold it until the screen changes.

Select Aircraft

Scroll to and select **Select AC,** press the middle button to enter menu.



Scroll to and select **AC** from the list.

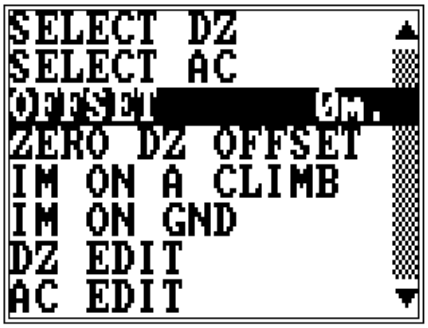


To go back to the previous screen, press the middle button and hold it until the screen changes.

Zero DZ offset

If you take off from one place but jump into another place at a different elevation, you can use the **DZ Offset** function so that your device shows the correct altitude during you skydive.

On the Menu screen, scroll to and select **Offset.** Offset can be the positive and the negative.



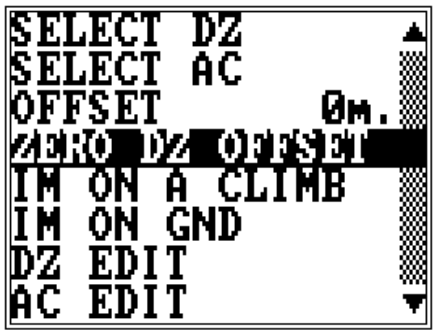
Use the top and bottom buttons to change the altitude. Once you have the correct altitude, press the middle button.

On the status bar, the underlined **DZ offset** icon indicates offset are activated.

To go back to the previous screen, press the middle button and hold it until the screen changes.

Reset offset

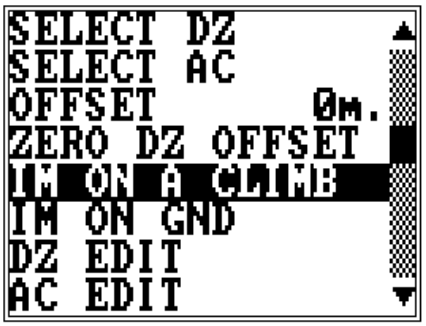
For reset of offset press the middle button



Im on a climbing

Use the **Im on a Climb** function to keep your device in its regular skydive sequence. For example, if you climb very slowly to a low altitude, then hold for several minutes to wait for weather, your device may think you are not in a skydiving aircraft, and reset to Ground Mode.

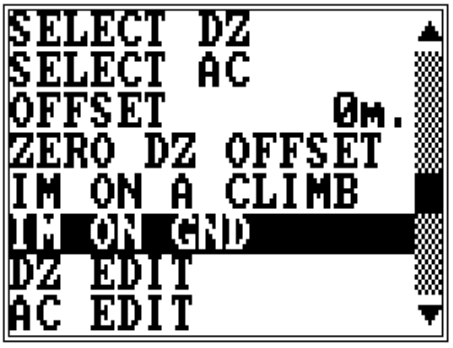
Scroll to and select **Im on a Climb,** press the middle button.



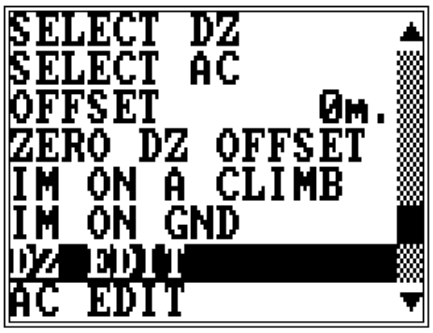
Im on GND

If your Skylexx reports climbing when you are in fact on the ground, follow the steps below. Telling your device that you are on the ground is useful if, for example, you drive up a hill and then get in the aircraft a short time later. The unit may not have updated the DZ altitude since climbing the hill. Selecting **Im on Gnd** causes the unit to fix the DZ at the current altitude. It will then continue to update as normal.

Scroll to and select **IM ON GND,** press the middle button.



DZ editor



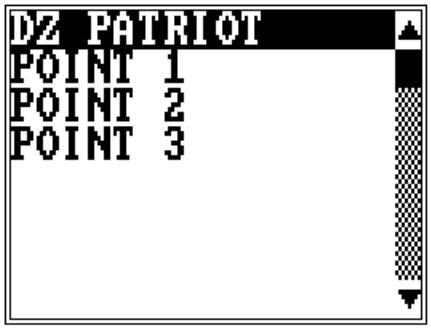
On the Menu screen, scroll to and select **DZ edit.**

Scroll to and select **DZ** or empty line.

Use the top and bottom buttons to change the character, press the middle button to change next character.

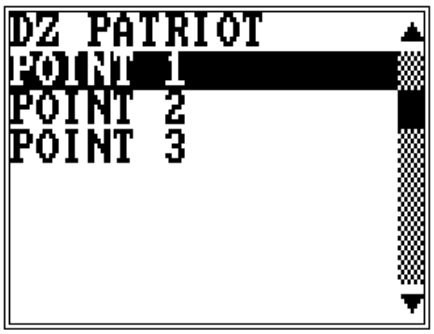
*** settings can be changed the program Skylexx Setup**

To go back to the previous screen, press the middle button and hold it until the screen changes.



Point editor

Scroll to and select **POINT1,2,3,** press the middle button to enter menu.



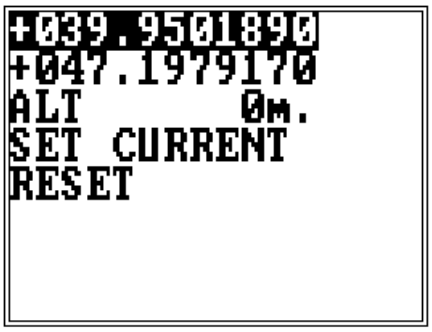
Scroll to and select **Latitude** or **Longitude,** press the middle button to change date.

Scroll to and select **ALT,** press the middle button to change altitude DZ.

SET CURREN – set current GPS data

RESET – reset current point data

*** settings can be changed the program Skylexx Setup**



To go back to the previous screen, press the middle button and hold it until the screen changes.

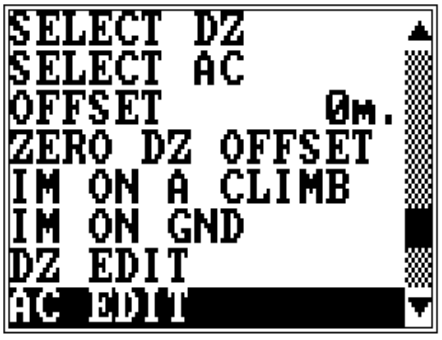
AC editor

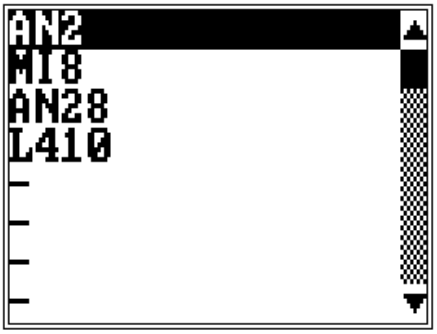
On the Menu screen, scroll to and select **AC edit.**

Scroll to and select **AC** or empty line.

Use the top and bottom buttons to change the character, press the middle button to change next character.

*** settings can be changed the program Skylexx Setup**



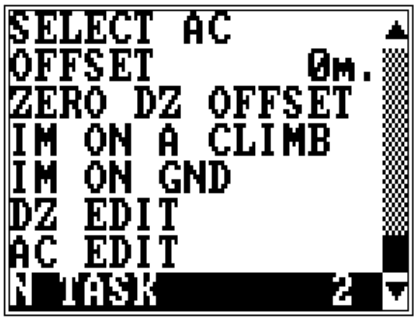


To go back to the previous screen, press the middle button and hold it until the screen changes.

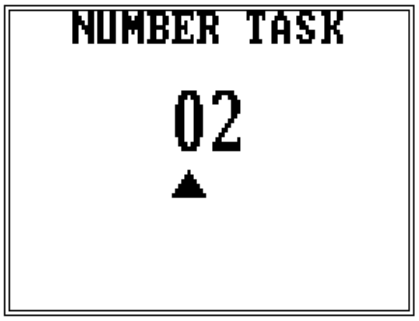
Task number

Displays the task of the log book

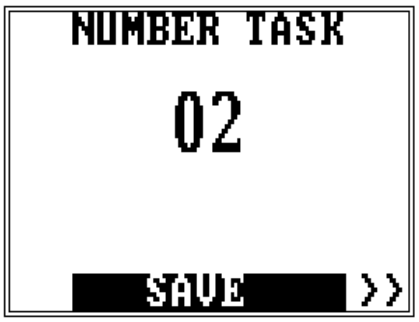
On the Menu screen, scroll to and select **N Task.**



To change a value, use the top and bottom buttons.



Press the middle button and select SAVE, press bottom buttons, to save the new task setting.



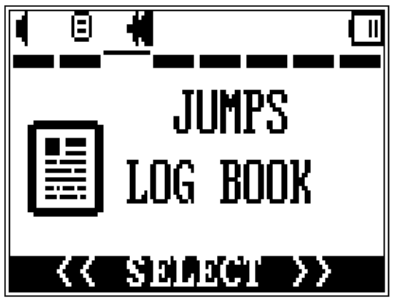
To go back to the previous screen, press the middle button and hold it until the screen changes

Log book

Every time your Skylexx logs a jump, it increments the Odometer and Total jump counts, and records a Summary of the jump that you can review right on the screen, as well as a Profile. You can download the Summaries and Profiles to a computer. Up to 4000 Summaries can be stored. Each Summary shows the date and time of the jump, the total freefall and canopy times, exit and deployment altitudes, the average speed, the speeds at four altitudes, and more.

Log book

Scroll to and select **Log book,** press the middle button to enter menu.

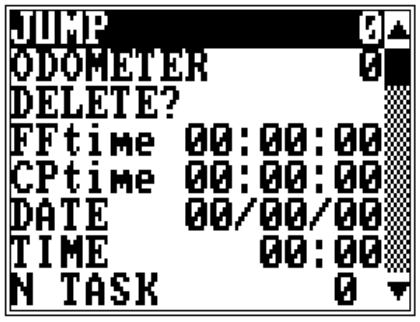


To go back to the previous screen, press the middle button and hold it until the screen changes

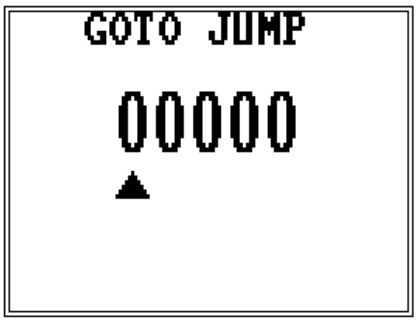
Go to jump

Scroll to and select **GOTO Jump**.

To change a number jump, use the top and bottom buttons.

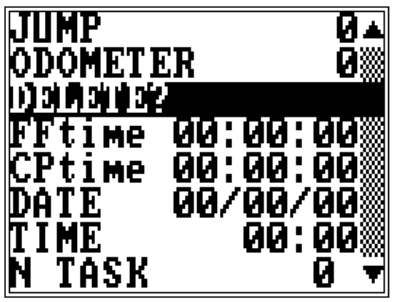


Press the middle button and select SAVE, press bottom buttons, to go to this jump.



To go back to the previous screen, press the middle button and hold it until the screen changes

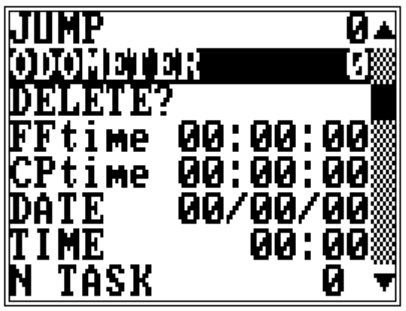
Delete last jump

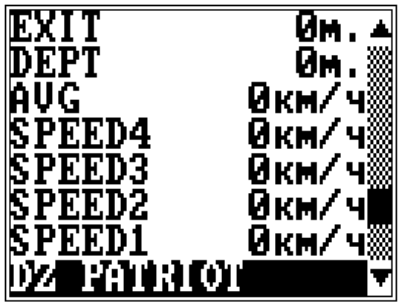


Scroll to and select **Delete?**

For delete last jump, press the middle button and confirm delete.

View jump summary





Odometer - Odometer

FFtime - Freefall time

CPtime - Canopy time

Date - Date

Time – Time

N Task – Task number

Exit – Exit altitude

Dept – Deployment altitude

Avg – Average speed

Speed4 – Speed value 4000-3000 m.

Speed3 – Speed value 3000-2000 m.

Speed2 – Speed value 2000-1000 m.

Speed1 – Speed value 1000-0 m.

DZ – DZ name

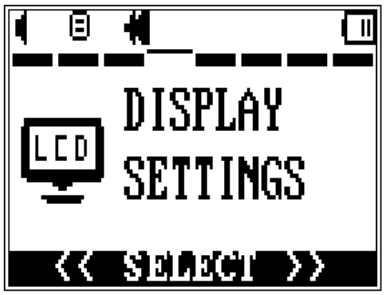
AC – Aircraft

To go back to the previous screen, press the middle button and hold it until the screen changes

Display settings

Display settings menu

Scroll to and select **Log book,** press the middle button to enter menu.

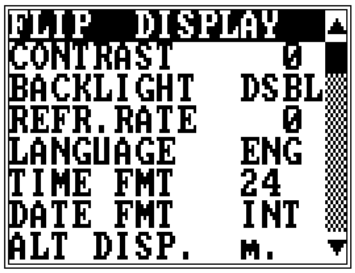


To go back to the previous screen, press the middle button and hold it until the screen changes

Flip display

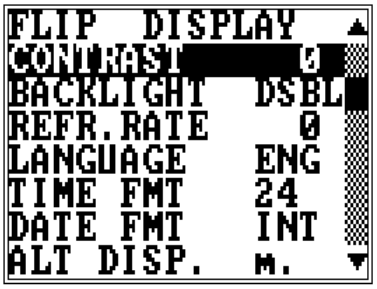
If you want to wear your Atlas on your opposite hand, flip the display so that the menu and buttons appear as desired.

Scroll to and select **Flip display**.



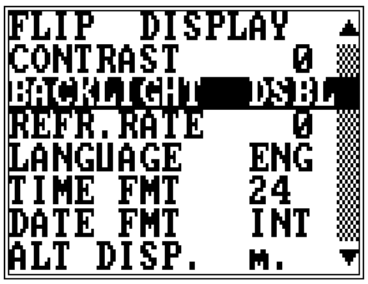
Display contrast

Scroll to and select **Contrast**. Use middle button for change contrast.



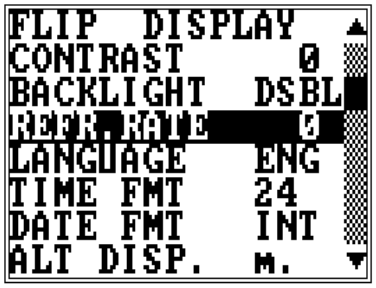
Backlight

Scroll to and select **Backlight**. Use middle button for enable or disable backlight.



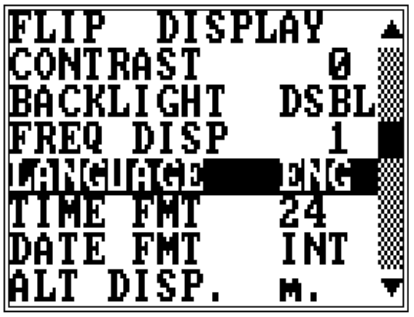
Display refresh rate

Scroll to and select **Refr.Rate**. Use middle button to change LCD refresh rate from 1-5 Hz.



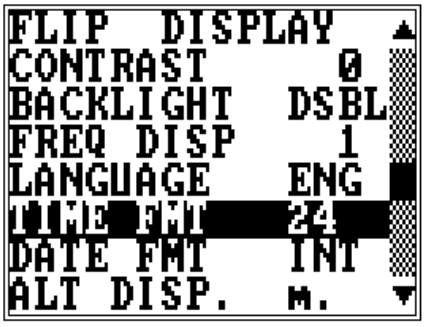
Language

Scroll to and select **Language**. Use middle button to change language.



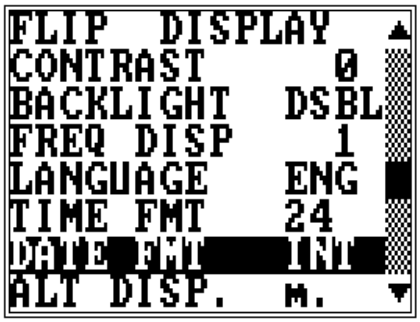
Time format change

Scroll to and select **Time Fmt,** Press the middle button to change it. **12hr** or **24hr**



Date format change

Scroll to and select **Date Fmt,** Press the middle button to change it. **USA** or **Int. Date Fmt.**

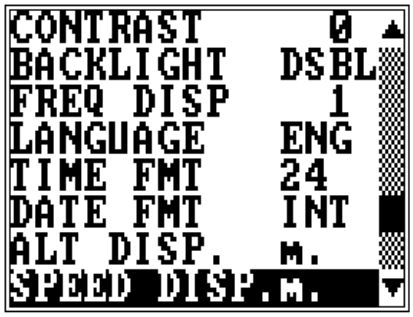


Display altitude format

Scroll to and select **Alt Disp.** Press the middle button to change it. **Feet** or **Meters.**

Display speed format

Scroll to and select **Speed Disp.** Press the middle button to change it. **km/h** or **mph.**



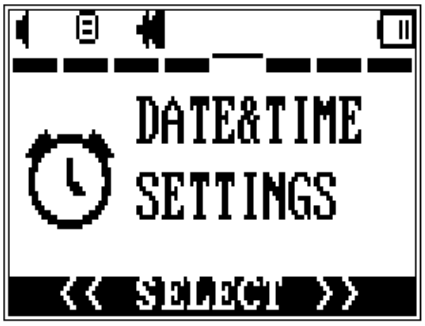
Temperature format

Scroll to and select **TMP Disp.** Press the middle button to change it. **Celsius** or **Fahrenheit** degrees.

Date and time settings

Date & time settings menu

Scroll to and select **DATE&TIME,** press the middle button to enter menu.



To go back to the previous screen, press the middle button and hold it until the screen changes.

Set time

Scroll to and select **Set Time.**

Press the middle button to select the hours or minutes.

To change a value, use the top and bottom buttons.

Press the middle button and select SAVE, press bottom buttons, to save the new time setting.

To go back to the previous screen, press the middle button and hold it until the screen changes.

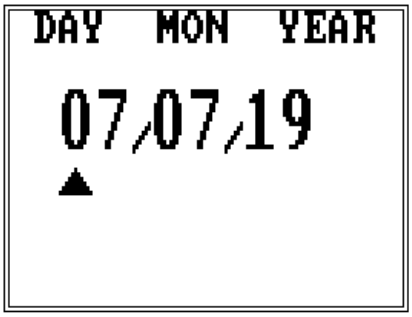
Set Date

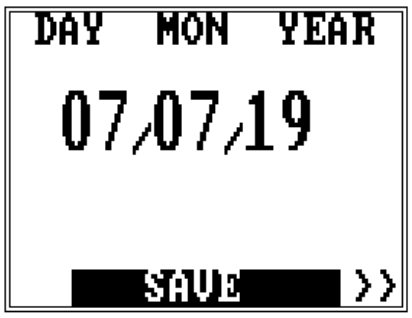
Scroll to and select **Set Date**.

Press the middle button to select the day, month and year.

To change a value, use the top and bottom buttons.

Press the middle button and select SAVE, press bottom buttons, to save the new time setting.





To go back to the previous screen, press the middle button and hold it until the screen changes.

Set alarm clock

Scroll to and select **Alarm clock.**

Press the middle button to select the hours or minutes.

To change a value, use the top and bottom buttons.

Press the middle button and select SAVE, press bottom buttons, to save the new time setting.

On the status bar, the underlined alarm clock icon indicates alarm are activated.

To go back to the previous screen, press the middle button and hold it until the screen changes.

Set sleep timeout

Scroll to and select **Sleep timeout**.

Press the middle button to select the hours or minutes.

To change a value, use the top and bottom buttons.

Press the middle button and select SAVE, press bottom buttons, to save the new time setting.

To go back to the previous screen, press the middle button and hold it until the screen changes.

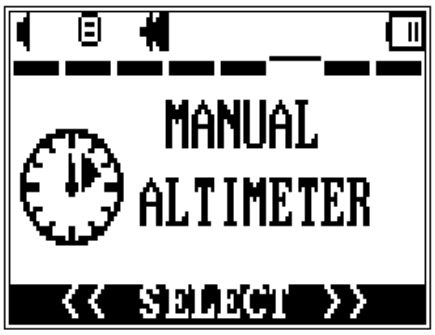
Manual altimeter mode

In Manual mode your **Skylexx** performs as a simple manual altimeter. Jumps will not be logged. Alarms will not sound.

When you start Manual altimeter mode you are asked to enter the current altitude.

Manual altimeter menu

Scroll to and select **MANUAL ALTIMETER,** press the middle button to enter menu.



To go back to the previous screen, press the middle button and hold it until the screen changes.

Manual altimeter enabled

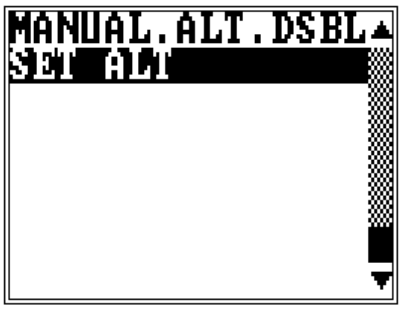
Scroll to and select **MANUAL.ALT.** Press the middle button to change it. **ENBL** or **DSBL.**

On the status bar, the underlined Manual altimeter icon **MAN.** indicates are enable Manual altimeter.

Set current altitude

Scroll to and select **SET ALT.**

Use the top and bottom buttons to change the altitude. Once you have the correct altitude, press the middle button.

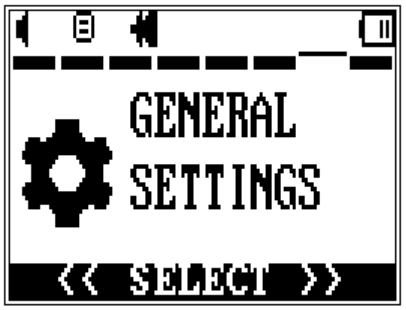


General Settings

General settings menu

Scroll to and select **GENERAL SETTINGS,** press the middle button to enter menu.

To go back to the previous screen, press the middle button and hold it until the screen changes.

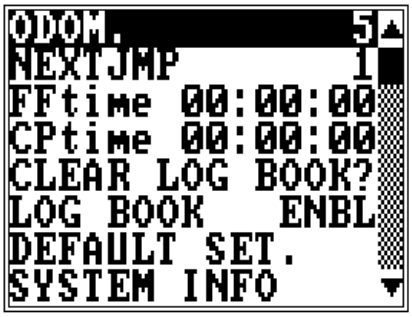


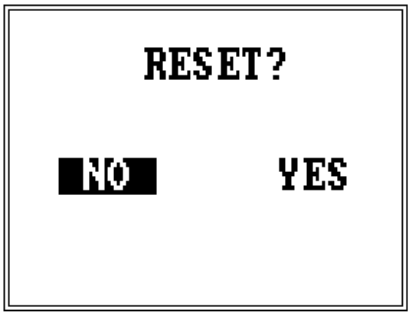
Odometer

Every time you log a jump, the Odometer increments.

Scroll to and select **ODOM**.

To reset the Odometer to zero, use the top and bottom buttons select **YES**.



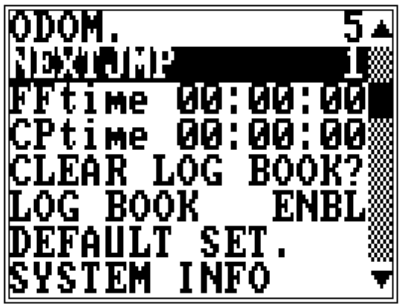


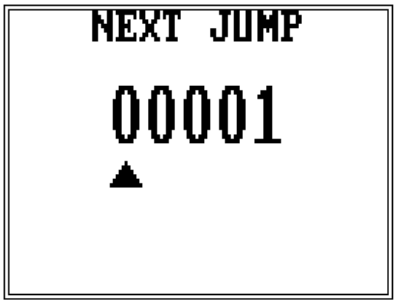
Set next jump

Scroll to and select **NEXTJMP**

To change a value, use the top and bottom buttons, Press the middle button to select the place value you wish to change.

Press the middle button and select SAVE, press bottom buttons, to save the new Next Jump setting.





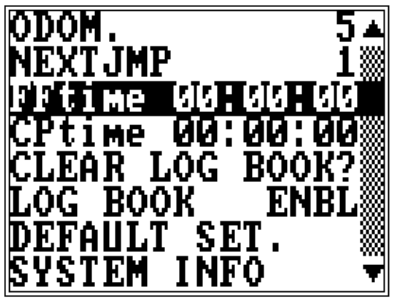
Freefall time setting

Skylexx calculates and displays your accumulated freefall time. If you need to adjust this figure, use the steps below.

Scroll to and select **FFTime**.

To change a value, use the top and bottom buttons, Press the middle button to select the place value you wish to change.

Press the middle button and select SAVE, press bottom buttons, to save the new **FFtime** setting.

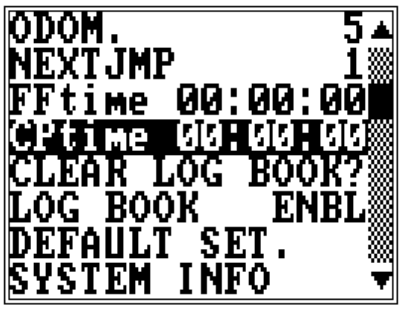


Canopy time setting

Scroll to and select **CPTime**.

To change a value, use the top and bottom buttons, Press the middle button to select the place value you wish to change.

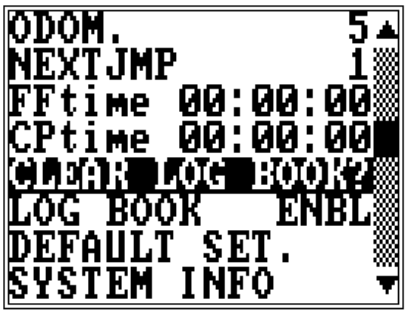
Press the middle button and select SAVE, press bottom buttons, to save the new **CPtime** setting.

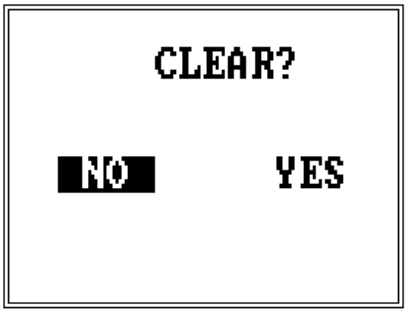


Clear log book

Scroll to and select **CLEAR LOG BOOK?**.

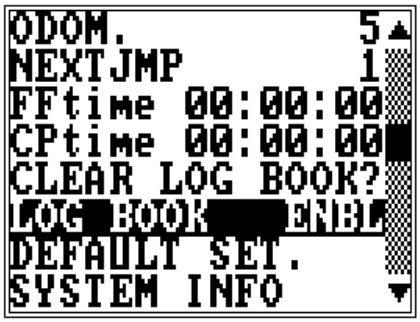
To clear log book, use the top and bottom buttons and select **YES**.





Enable or disable logging

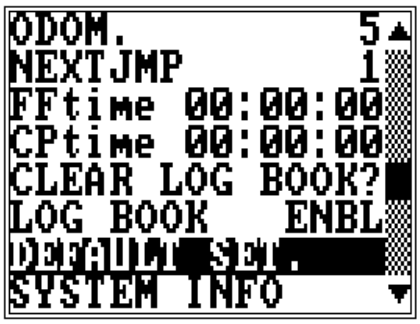
Scroll to and select **LOG BOOK.** Press the middle button to change it. **ENBL** or **DSBL.**



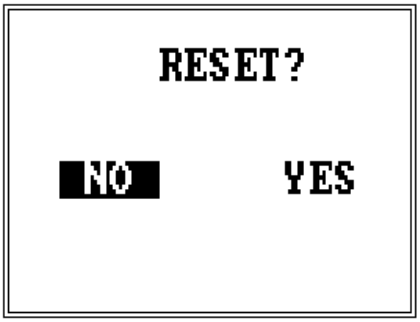
On the status bar, the underlined log book icon indicates alarm are enable logging.

Reset to default settings

Scroll to and select **DEFAULT SET.**

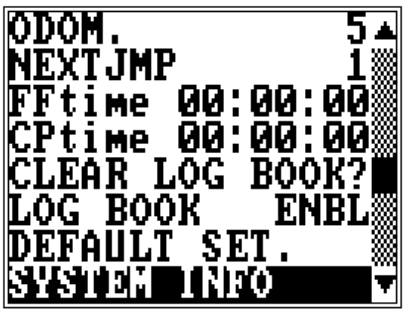


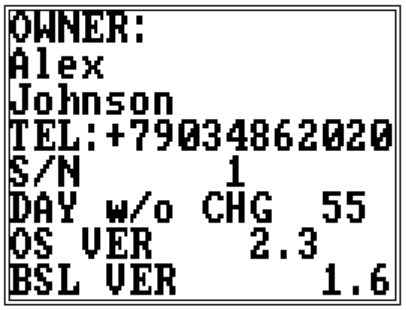
To default settings, use the top and bottom buttons and select YES.



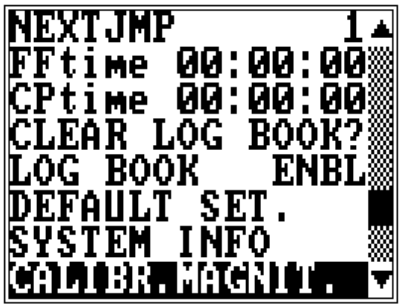
System information

Scroll to and select **SYSTEM INFO.**





Calibrate compass



Scroll to and select **CALIBR.COMPASS**

Hold the Skylexx horizontally and rotate 360 degrees.

Hold the Skylexx vertically and rotate 360 degrees.

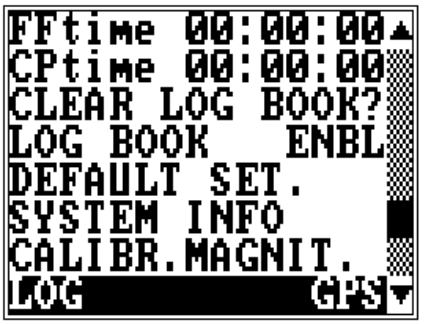
Then rotate it 360 degrees around the centre axis.

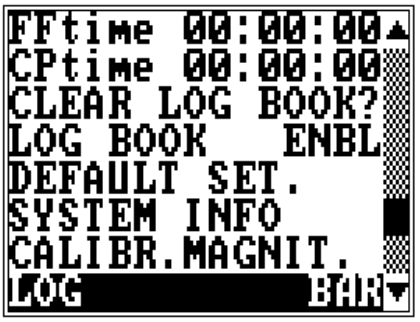
Enable jump track logging

Scroll to and select **LOG,** Press the middle button to change it. **GPS** or **BAR** logging

GPS – save GPS data log

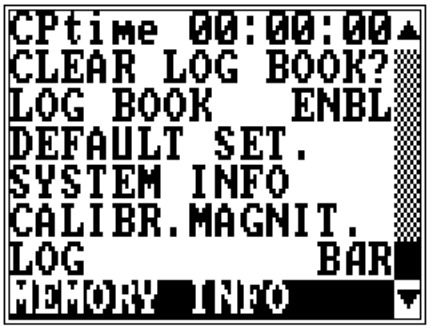
BAR – save 20 Hz barometric data log

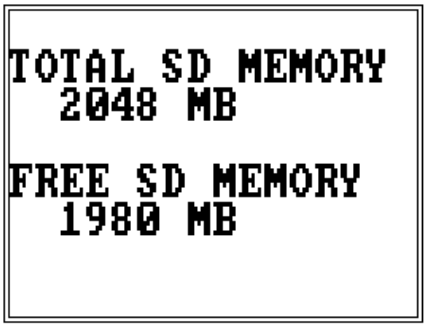




Memory info

Scroll to and select **MEMORY INFO.**



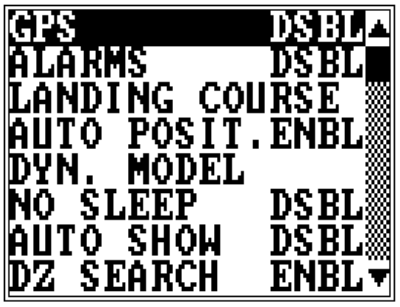


Navigation settings

GPS settings menu

Scroll to and select **GPS SETTINGS** press the middle button to enter menu.

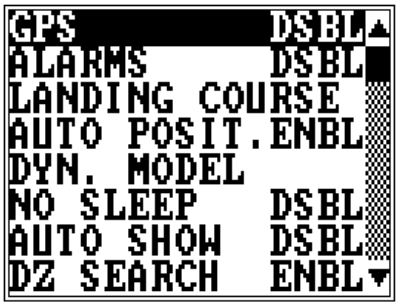
To go back to the previous screen, press the middle button and hold it until the screen changes.



Navigation ON

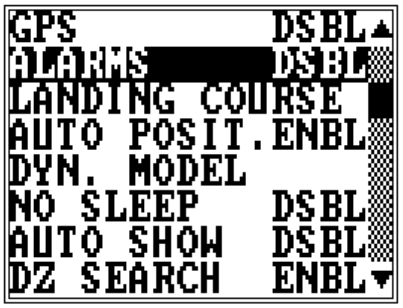
Scroll to and select **GPS**. Use middle button for enable or disable GPS module.

On the status bar, the underlined GPS on icon indicates GSP module on and icon 5 use sat



Navigation alarms

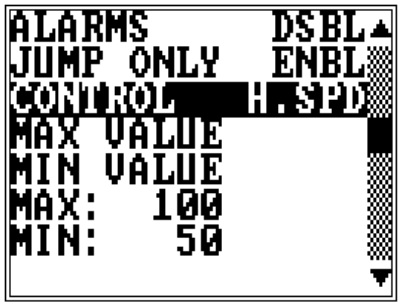
Scroll to and select **ALARMS.** Press the middle button to enter menu.



Scroll to and select **ALARMS.** Press the middle button to change it. **ENBL** or **DSBL.**

JUMP ONLY enable - Alarms sound only freefall and canopy fly mode.

JUMP ONLY disable – Alarms sound in all mode **Skylexx**



CONTROL - **Skylexx** can indicate your horizontal or vertical speed, glide ratio, or the direction.

Minimum and maximum value

The **minimum** and **maximum** value determine the range of values corresponding with the lowest tone rate and the highest tone rate, respectively.

Set control mode

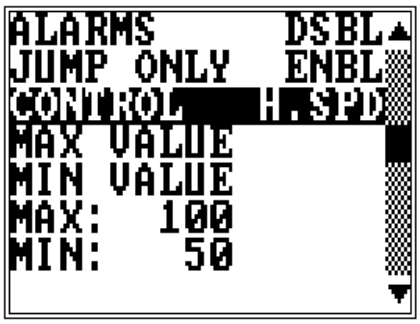
Skylexx can indicate your horizontal or vertical speed, glide ratio, or the direction.

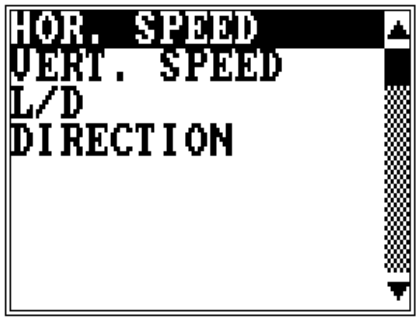
Horizontal speed control

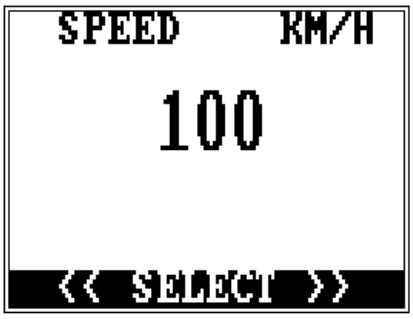
Scroll to and select **HOR. SPEED.**

Scroll to and select **MAX VALUE** or **MIN_VALUE.**

To change a value, use the top and bottom buttons.





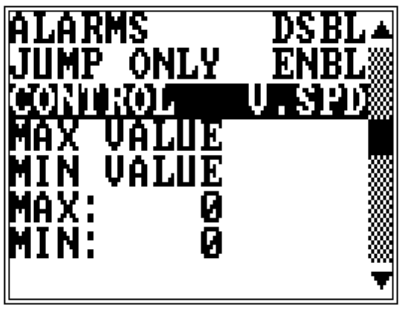


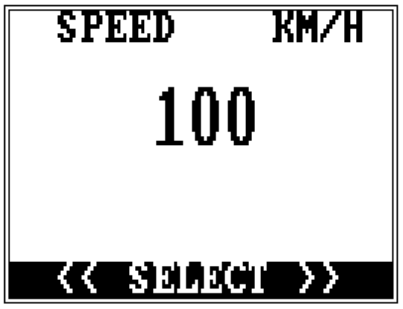
Vertical speed control

Scroll to and select **V. SPEED.**

Scroll to and select **MAX VALUE** or **MIN_VALUE.**

To change a value, use the top and bottom buttons.



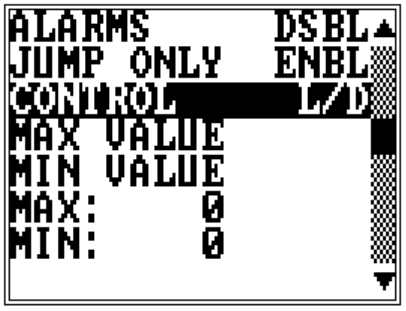


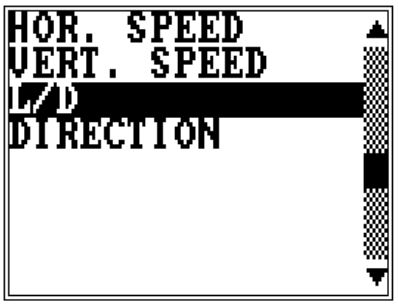
Glide ratio control

Scroll to and select **L/D.**

Scroll to and select **MAX VALUE** or **MIN_VALUE.**

To change a value, use the top and bottom buttons.

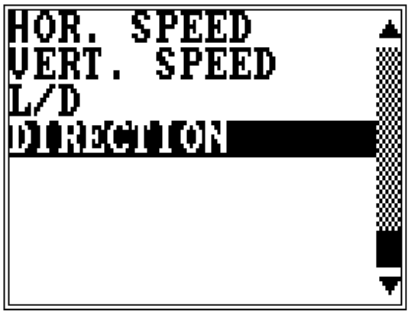




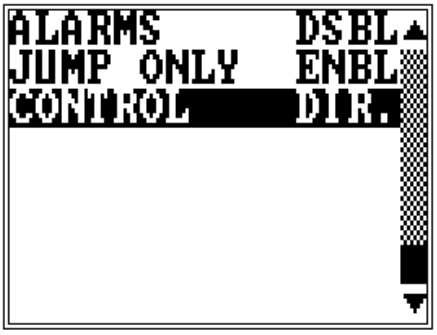
Direction control

Scroll to and select **DIRECTION.**

To set a direction, use **LANDING COURSE** menu.

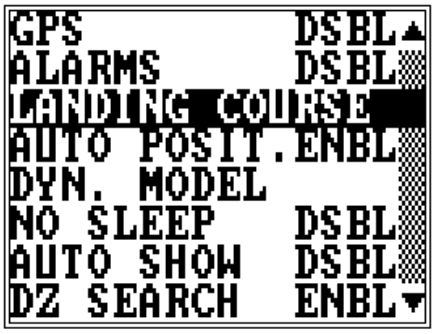


.

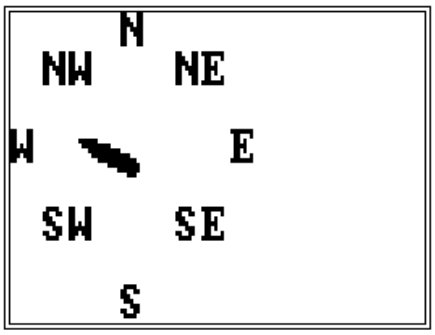


Set landing course

To change a course, use the top and bottom buttons, Press the middle button to select the place value you wish to change.



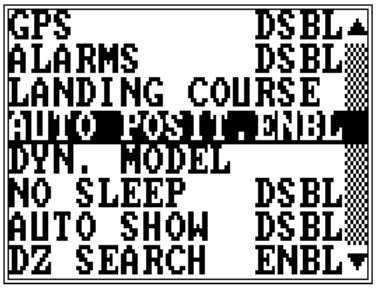
To go back to the previous screen, press the middle button and hold it until the screen changes.



Auto position

Automatically finds short-range landing point from the list **DZ**

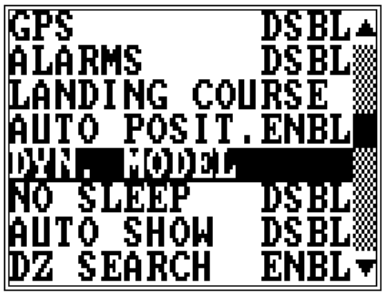
Scroll to and select **AUTO POSIT.** Press the middle button to change it. **ENBL** or **DSBL.**

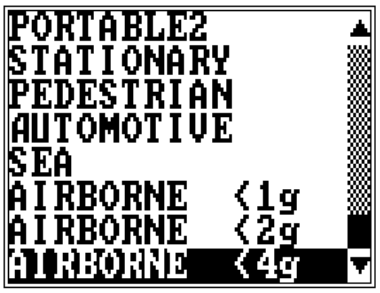


Dynamic model

The settings improve the receiver's interpretation of the measurements and thus provide a more accurate position output. Setting the receiver to an unsuitable platform model for the given application environment results in a loss of receiver performance and position accuracy.

Because of this, it's important to pick the right dynamic model. For general skydiving, the "Airborne with < 1 G acceleration" model will be best. If you're likely to experience higher accelerations—for example if you're flaring a wingsuit or using a high performance landing—then you may want to use the **Airborne <2G** or **Airborne <2G** dynamic models.

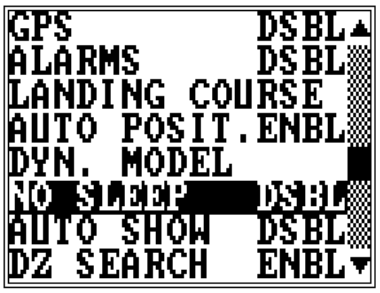




NO sleep

Enable or disable enter **Skylexx** the sleep mode.

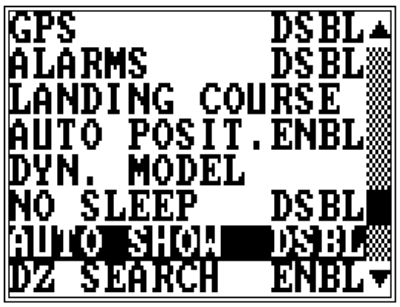
Scroll to and select **NO SLEEP.** Press the middle button to change it. **ENBL** or **DSBL.**



Auto show navigation screen

Enable or disable show navigation screen after canopy open.

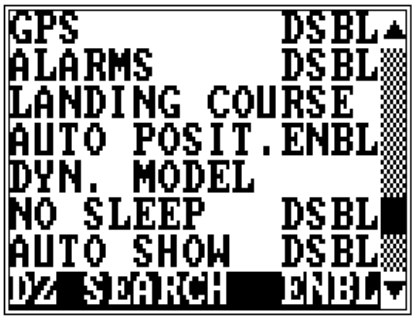
Scroll to and select **AUTO SHOW.** Press the middle button to change it. **ENBL** or **DSBL.**



Automatically find DZ

Automatically finds **DZ** from the list **DZ.**

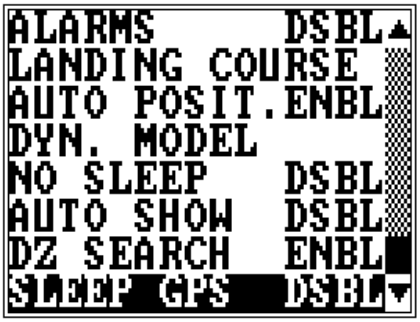
Scroll to and select **AUTO POSIT.** Press the middle button to change it. **ENBL** or **DSBL.**



Navigation module sleep mode

Enable or disable enter navigation module in sleep mode.

Scroll to and select **SLEEP GPS.** Press the middle button to change it. **ENBL** or **DSBL.**



Specifications

- Dimensions: 58x42x12mm
- Weight: 33g
- Casing: plastic
- Operating Temperature Range: -20° C to +70° C
- Operating altitude: -6 000 m to 10 000 m, accuracy 0.2 m
- Capacity Flash memory: 2 Gb
- LCD viewing area: 38mm x 26mm
- Backlight
- GPS/Glonass module: UBLOX 8
- GPS Accuracy: Position 2.5 m, velocity 0.1 m/s
- Compass
- Battery type: rechargeable LI-Pol battery 300 mA
- Battery operation time: The main battery allows approximately 60 days without enabled GPS module, approximately 12 hours with enabled GPS module.

https://skylexx.ru