LX navigation

Colibri X

User guide

Colibri X

User's manual
(version 1.0)

Refers to Colibri X FW version 1.0

For a new world experience.

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PART ONE – INTRODUCTION

1.1 Author's note

You are one of the first, who have received a Colibri X. We would like to congratulate you on being a part of this club and wish you many safe flights.

This document is a working title of the Colibri X manual. With each new version, new features will be unlocked and explained in a manual published on our webpage (http://www.lxnavigation.com/support/manuals/).

1.2 Preamble

Why LX Navigation?

LX Navigation is one of the oldest glider navigation brands. Its founders started experimenting with glider computers way back in the 70's and the Company has been working on improving your flight performance ever since.

Throughout the last 40 years or so it has been working on instruments that most pilots will have used at some time. In fact, our equipment can be found in almost any gliding club!

Our equipment has always been ground-breaking.

Our motto?

Be the first. Be the best. Be different.

Why Colibri X?

Because Colibri X represents the cutting edge of portable IGC loggers. The 3.5'' transflective LCD display will show you the way when flying tasks, cross-country flights, or just plain airfield soaring.

With the Wi-Fi/Bluetooth module inside, you are stepping into the age of connectivity.

The dedicated vario page will help you turn those tight lifts and improve your feel for the thermal with our thermal assistant. Always know your position and heading, with clearly visible lift or sink, thanks to our gradient digital needle.

The Colibri X is a miniature package that includes everything a glider pilot needs from his logger. From vario information, navigation, statistics, up to the very root of this device – IGC certified logger.

Devices

We offer a wide range of instruments suitable for both club and competition soaring.

Our systems combine two components:

First, a glider computer (LX Zeus) which is used for calculating and displaying all of the key information used by pilots. This glider computer is the brain of the operation.

The second part of the system is a variometer (Era, Helios, and Era). Its job is to gather the information which the Zeus uses. The vario has pressure connections as well as the GPS antenna connection which is required for IGC logs.

There is a wide variety of choice for varios and for LX Zeus display sizes.
All our varios are standalone devices which can be used without a glider computer for displaying flight parameters such as final glide information, Speed Command (SC) as well as basic navigation. Our varios also have an internal battery which means that your IGC logs do not depend on your glider`s batteries.

System extensions (second seat unit, remote control (LX Joy), NavBox, MOP, Flap sensor, AHRS ...) are also possible. Everything is connected using a CAN bus (single cable for power and data). All connections are plug and play, which means no specialist is required to install the system.

With the Colibri X we introduce something completely new that is a technology ahead of any other device in its class on the market.

1.3 Overview

The Colibri X is an IGC certified standalone logger with a bright, transflective technology display, which offers the pilot multiple navigation and vario pages. It is a flight recorder, final glide calculator and navigation system with an internal battery, audio warnings, vario beeps and voice messages.

The unit is capable of providing APT (airport), TP (turnpoint), and TSK (task) and NRST (nearest landable) navigation on four dedicated navigational pages. Navigation pages feature Navboxes, which can be personalised by the pilot to his requirements. Airspace, airports and turnpoint information is shown graphically.

The Colibri X is designed to sit comfortably in your hand or be mounted with one of our mounts into a space in your cockpit.

The Colibri has a dedicated pressure sensor for determining your altitude, providing a more accurate altitude reading in comparison with GPS-altitude based systems. A minimum sampling rate of 100 Hz is applied to all sensors.

As an integral part, it has a 3.5" sunshine readable transflective LCD display to show all user-defined data during flight.

For accessing all system options, innovative gestures are used, much like the ones you are used to from your current phone touchscreen devices. A voice module is also built-in for audio warnings.

We use a high-end capacitive-type touch panel for our device, allowing us the benefits of multi-touch and giving that high-quality feel of a modern touch-handheld device.

An integral IGC approved flight recorder with ENL level detector will record flights to internal solid-state memory (16GB). All flights can be copied to an external SD card after the flight.

Colibri X features are:

- 3.5″ 640x480 transflective technology sunlight readable display
- Capacitive touchscreen technology
- 50ch GPS receiver as an integral part of the system
- Completely new design using latest pressure transducers technology
- Fast vario data acquisition technology
- Internal memory space for flight recorder, enough for a lifetime of flights
- ENL (Environment Noise Level) sensor
- Internal speaker (for vario sounds, voice warnings & Flarm warnings)
- micro USB port with serial communication (19200 bauderate)
- Built-in Bluetooth interface
- Built-in WiFi interface
- Voice module as an integrated part of the system
- External SD Card interface, for firmware updates, flight downloads, and TP/TSK/APT/Airspace transfers
- The built-in rechargeable battery which provides 15 hours of autonomy
- Internal battery (can be charged from the instrument power supply)
- Pre-loaded polar database

Functions:

- Variometer
- World maps
- 4 independent navigational pages – TP (turnpoint), APT (airport), TSK (task) and NRST (nearest landable turnpoint or airfield)
- Final glide calculator based on GPS data (for TP, APT, TSK and NRST)
- Complete TP/APT/TSK/NRST navigation with airspace information and warnings
- Highest level IGC approved flight recorder
- Flarm radar screen
- Thermal assistant screen
- Logbook
- Flight information with Barograph
- Multi glider support (polar databases)
- Accurate wind calculation in straight flight and circling
- Voice alerts
- User warnings

The unit has the capability to be updated to any later FW version free of charge. (see: www.lxnavigation.com)

Please refer to Setup/Transfer/Update to learn how to update the system.

1.4 Technical specification

1.4.1 Hardware

- 3.5" 640 x 480 capacitive touchscreen transflective display
- LX One Chip
- 16 GB of internal solid state memory
- Built-in GPS receiver and antenna
- Built-in battery with charger (5V via USB)
- Pressure altitude sensor measuring up to 16000 metres
- USB interface (mass storage device)
- IGC flight recorder with Engine noise level sensor
- WiFi & Bluetooth
- micro USB port
- Built-in speaker

1.4.2 Physical specification

Dimensions: 102 x 71 x 14 [mm]

Mass: 145g

1.5 Basic use & gestures

Gestures

The Colibri X user interface consists of two input tools.

First is the physical button on the left side of the unit, which has the following functions:

- Short press (>1 second), when turned off, turns the unit on.
- Short press (>1 second), when turned on, offers the power off option.
- Short press (<1 second), when turned on, turns the backlight off, leaving the unit turned on. This saves the battery while allowing the device to log the flight.
- Long press (5 seconds), when the device is turned on, turns the device off on a hardware level ('hard reset'). Using this option should be avoided unless no other possibility is working.

The second input method is the unit's touchscreen.
Most gestures needed, in order to handle the device, are mimicked from gestures we use on our modern mobile phones:

- Swiping left slides to the left menu
- Swiping right slides to the right menu
- Swiping down, from the top edge, will bring us the 'Drop-down' menu.
- Pinching in will zoom in on maps
- Pinching out will zoom out on maps
- Double tapping will give us the maximum zoom available. Double tapping again will revert us to our previous zoom level.
- On navigation pages (TP, TSK, APT and NRST), swiping from the bottom edge upwards, opens additional options for the said page – pull up menu.

Numeric input

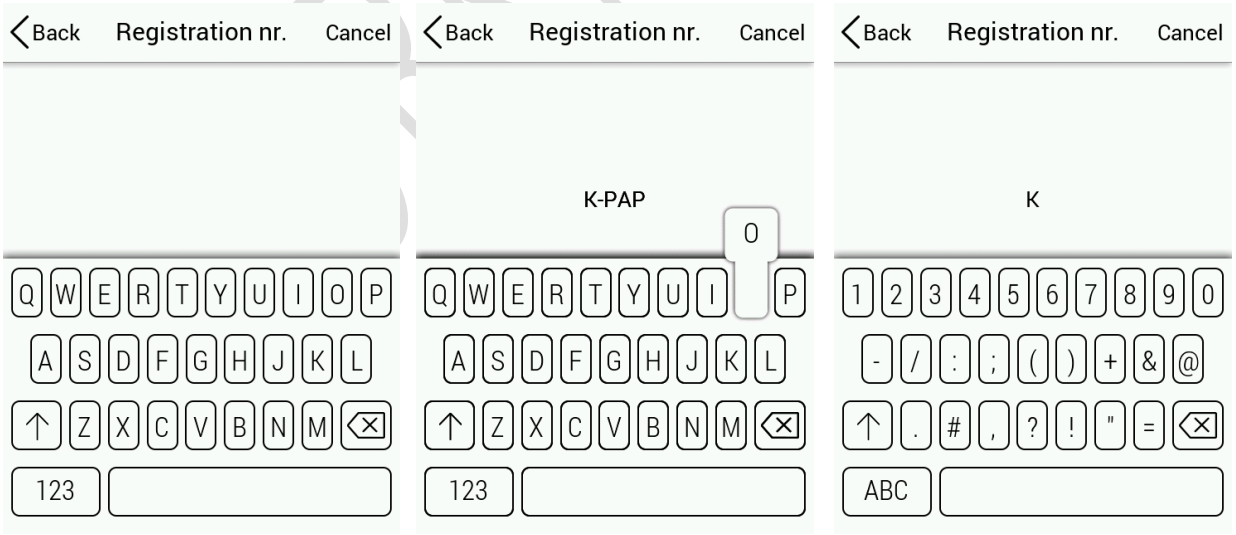
Press and hold anywhere on the roll bar and starting turning right (clockwise) for higher values or left (counter clockwise) for lower values.

Alphanumeric input

The keyboard is a standard QWERTY type keyboard with two layouts. The first one is an alphabetic keyboard and the second one is punctonumeric, consisting of punctuation marks and numbers.

To switch from alphabetic to punctonumeric, press the '123' button in the bottom left corner.

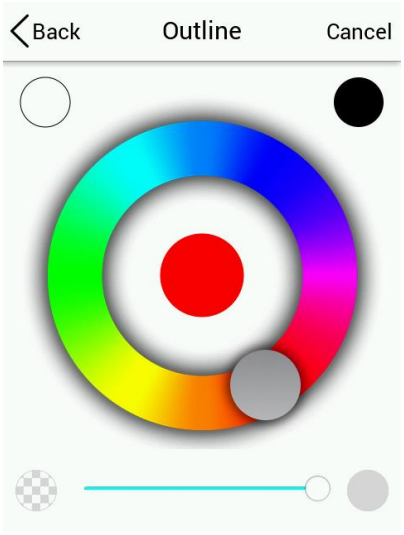
To switch from punctonumeric to alphabetic, press the 'ABC' button in the bottom left corner.



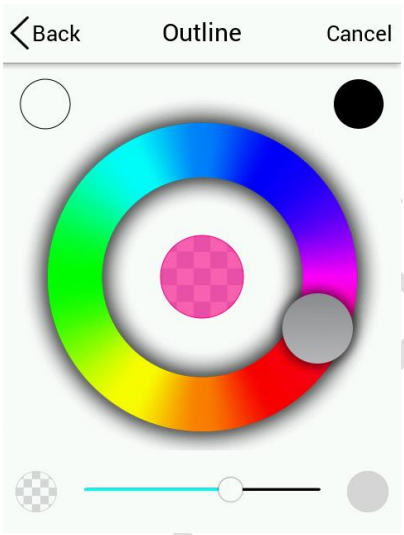
Colour input

In order to set the colour, press anywhere on the roll bar and choose your colour. White and black presets are ready in the left and right upper corner, respectively.

Use the slider in the bottom to set the transparency and use the colour indicator in the middle to check it.



Colour and transparency set to none



30% transparent

In general, when exiting a setup menu page, after making a change, selecting the '< Back' option in the upper left corner will save this setting, and selecting 'Cancel' will disregard the change you've made and keep the old setting.

Updating procedure

To start the updating procedure, gently eject the micro SD card on the left side of the device. Turn off the device. Connect the micro SD card via the provided adapter or with the card reader to a computer. Open the micro SD card folder. Copy and paste the file for update (x.xx.lxu) to the root of your micro SD card. Carefully and gently insert the micro SD card in the Colibri X and power up the device.
Go to Setup > Transfer > Software update and select the desired file. A password input dialog will appear. Type in the provided password (from info@lxnavigation.com).

Note: Until version 1.0, the password is '00000'.

PART TWO – INTERFACE

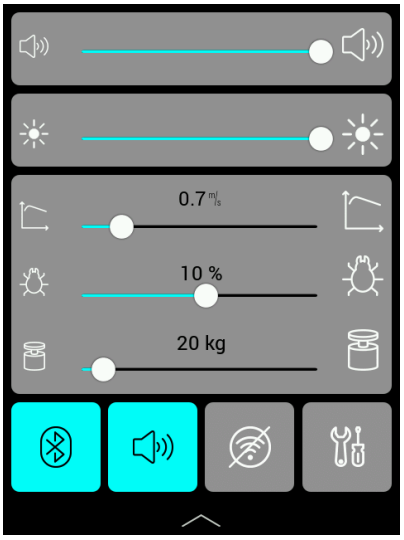
2 Main pages overview

The main pages represent a row of pages in the graphical user interface, which allow the user to access different information screens and flight parameters.

The user will go through the following pages, in their respective order, if he swipes to the right:

Vario > TP > APT > TSK > NRST > GPS > Statistics (if in flight) > Setup > Vario (continuing the cycle).

Drop down page



Another page, which can be accessed from any main page, is the Drop-down page.
On the main vario page access drop down menu by pressing and pulling down the header with LX navigation logo.

On this page you can quickly access and set with a sliding action the following parameters:

- Volume (Use slider to set the volume)
- Brightness (Use slider to set the brightness)
- MacCready (Use the slider to set m/s or kts MacCready)
- Bugs (Use the slider to set % of bugs)
- Ballast (Use the slider to set ballast)

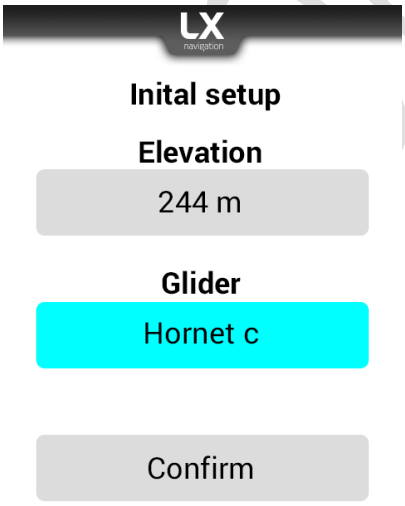
On the bottom of the page you can find icons for:

- Bluetooth (turn on/off by pressing - when off the icon is crossed)
- WiFi (turn on/off by pressing - when off the icon is crossed)
- Mute (turn on/off by pressing - when off the icon is crossed)
- Setup (quick access to setup page)

Icons are grey when disabled and blue when enabled.

To close the drop-down page press the arrow on the bottom of the page. The menu will disappear upwards.

Initial setup



Initial setup appears every time the device is powered on.
It consists of two essential pieces of information:

1. Elevation (QNH)
2. Glider

Always check the information before confirming the elevation and glider settings.

Press confirm button on the bottom of the page to access the vario page.

2.1 Vario page

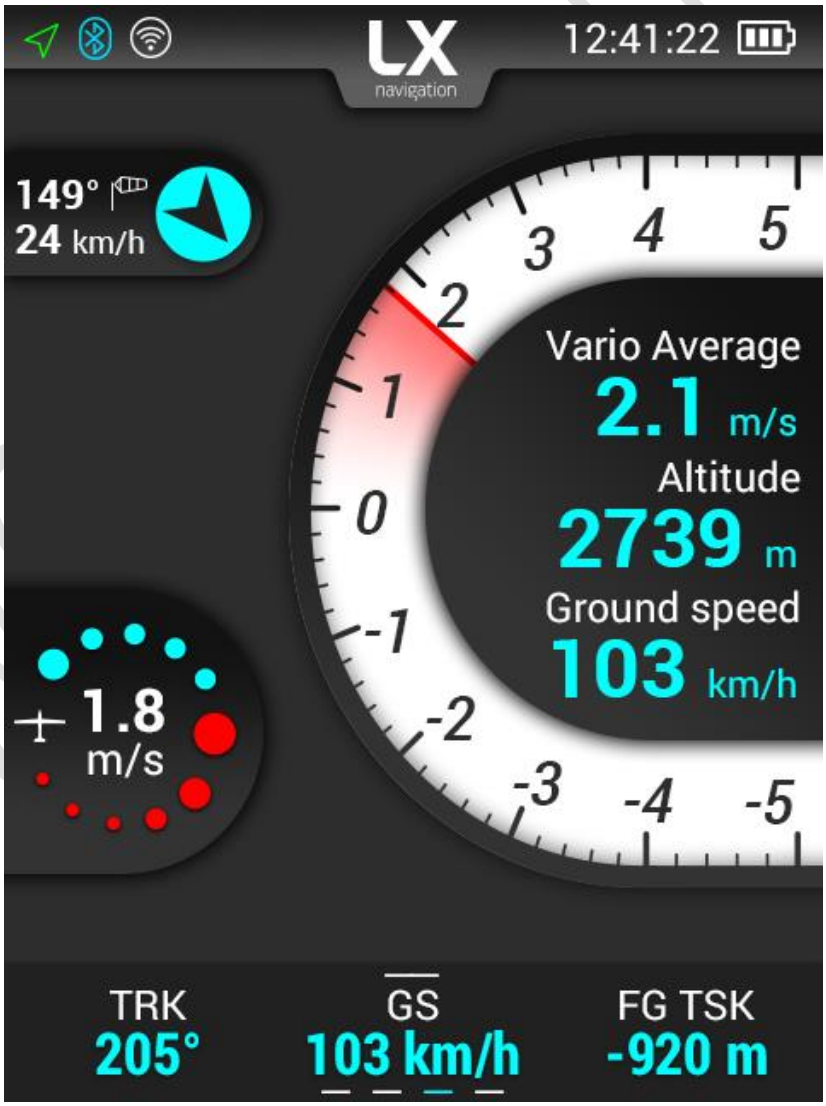
The vario page is the first page displayed, upon power on.
It consists of a header, wind icon, thermal assistant, vario with 3 fixed indicators and a navbox line, with different lines of 3 navbox indicators.

The header consists of Status icons, a clock and battery level indicator.

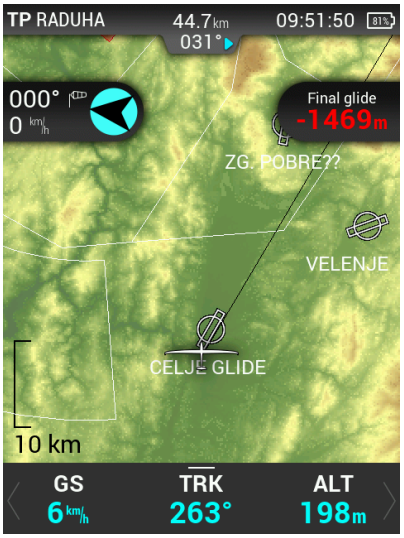
Wind icon consists out of two numerical values (wind speed and wind direction) and a graphic representation of the wind.

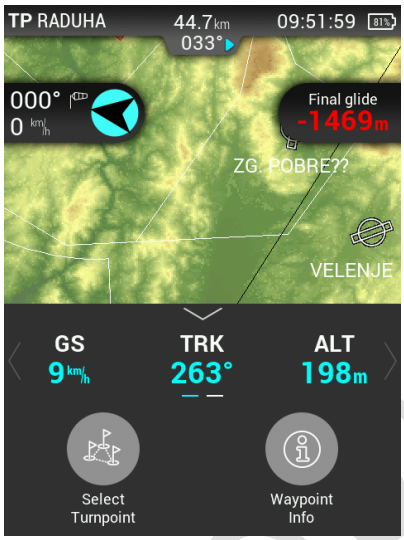
The vario scale features a gradient colour pallet, which, in a graphical way, represents the thermal strength. There are fixed indicators inside the vario scale (AVG – average thermal, ALT – QNH altitude and GS – Ground speed).

The bottom row navboxes can be configured by long-pressing and choosing from a list. It can also be changed for another row, by swiping it left or right, or by pressing the left/right arrows.



2.2 TP page





In order to use this page to its maximum extent, the user should first import turnpoint, and airfield files. For more information on this subject, please refer to Setup/Transfer/Load TP.
Navigation is always "track up".

Below the TP name, a steering symbol tells the pilot by how many degrees (°) he needs to correct his track in order to fly towards the selected turnpoint. In the upper right corner, time is displayed, as well as battery status.

In the left part of the screen, standard wind information can be read. The Arrow shows the wind relative to the glider with its direction relative to North in degrees and its speed being shown below.

On the right side, we have final glide information.

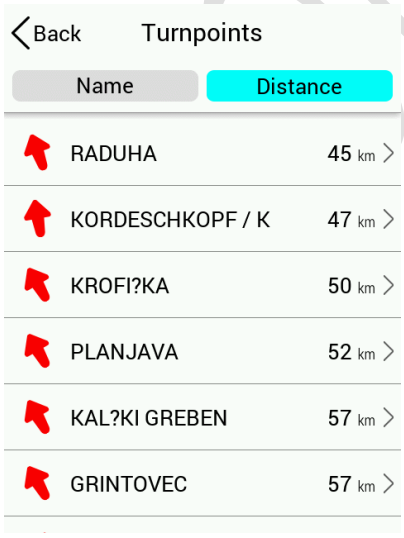
In the bottom of the screen, there is a configurable row of navboxes. In order to find out how they are configured, check '2.1 Vario page'.

By pressing on the bottom row of navboxes, or swiping them upwards, two additional options are presented to us.

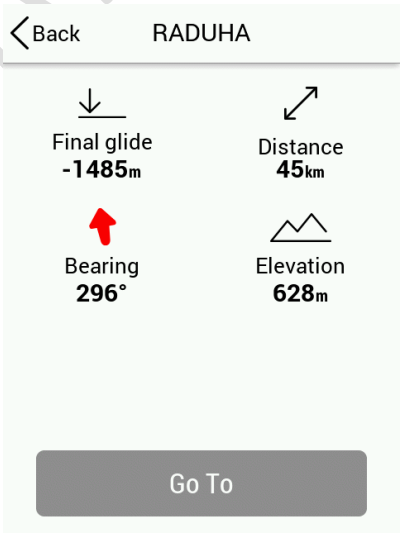
The first is 'Select Turnpoint' and the second one is 'Waypoint Info'.

By pressing 'Select Turnpoint', we are given a list of turnpoints, from our .cup file, a search field and two sorting parameters – Name and Distance.

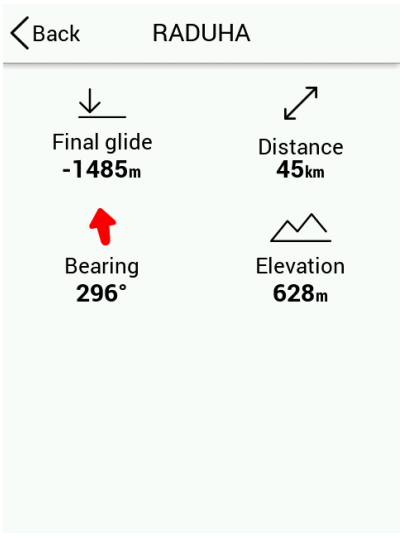
Selecting a turnpoint gives us additional info on this turnpoint. Pressing the bottom option starts the navigation towards this turnpoint.



Select Turnpoint subpage

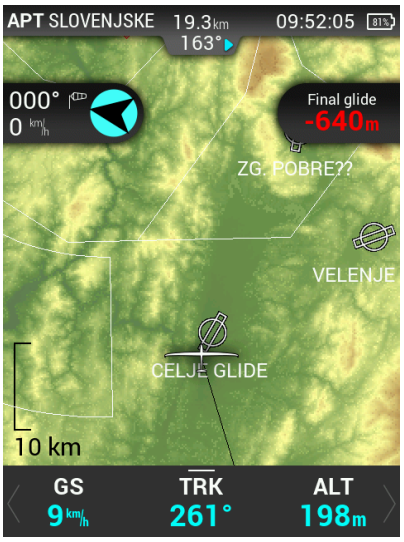


Go To



Waypoint info subpage

2.3 APT page



In order to use this page to its maximum extent, the user should first import turnpoint and airfield files. For more information on this subject, please refer to Setup/Transfer/Load TP.
Navigation is always "track up".

Below the APT name, a steering symbol will inform the pilot by how many degrees (°) he or she needs to correct track in order to fly towards the selected airport. In the upper right corner, time is displayed, as well as battery status.

In the left part of the screen, standard wind information can be read. The Arrow shows the course of the wind in regards to the glider, the degrees of its direction from the North and the speed is shown below.

On the right side, we have final glide information.

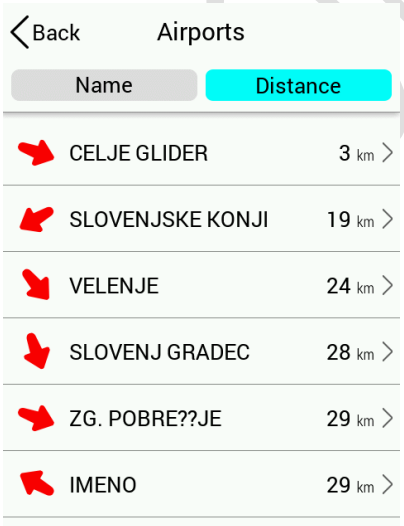
In the bottom of the screen, there is a configurable row of navboxes. In order to find out how they are configured, check '2.1 Vario page'.

By pressing on the bottom row of navboxes, or swiping them upwards, two additional options are presented to us.

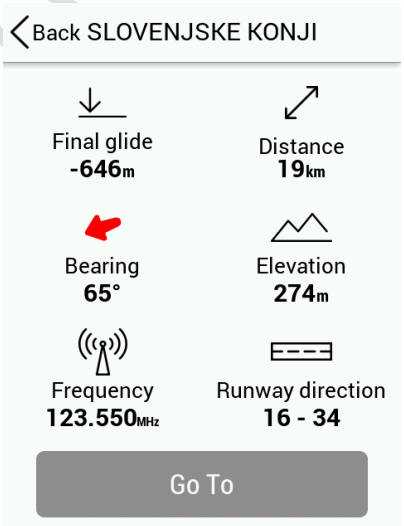
The first is 'Select Airport and the second one is 'Airport Info'.

By pressing 'Select Airport, we are given a list of airports, from our .af file, a search field, and two sorting parameters – Name and Distance.

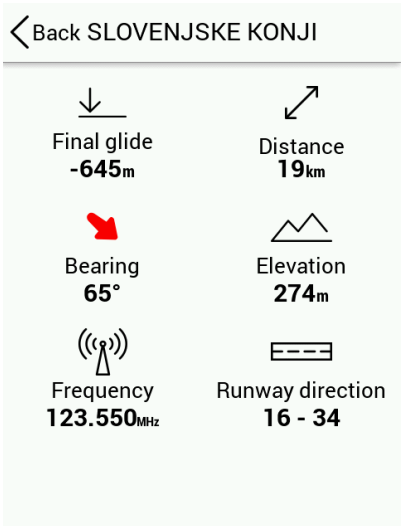
Selecting an airport gives us additional info on this airport. Pressing the bottom option starts the navigation towards this airport.



Select Airport subpage

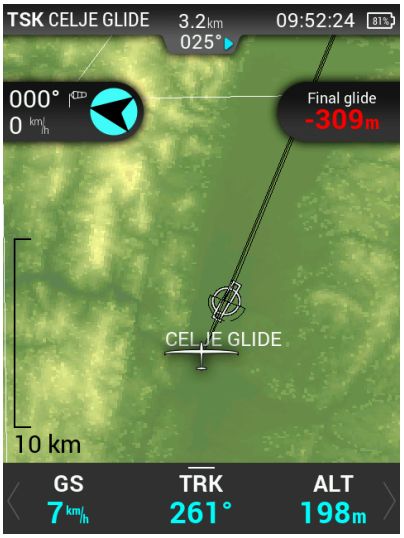


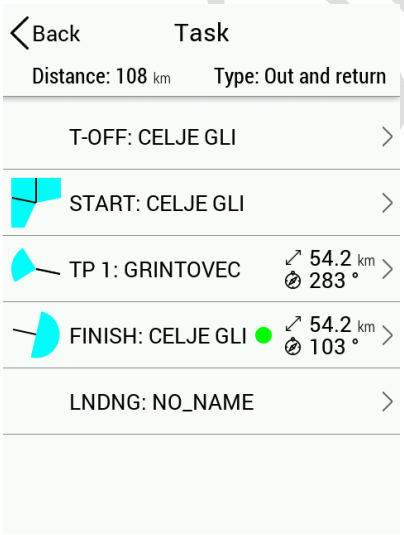
Go To



Waypoint info subpage

2.4 TSK page





In order to use this page to its maximum extent, the user should first import turnpoint, and airfield files. For more information on this subject, please refer to Setup/Transfer/Load TP.
Navigation is always "track up".

Below the name of the current TP we are navigating to, a steering symbol will inform the pilot by how many degrees (°) he or she needs to correct track in order to fly towards the selected turnpoint. In the upper right corner, time is displayed, as well as battery status.

In the left part of the screen, standard wind information can be read. The arrow shows the wind direction relative to the glider, its direction in degrees relative to North with wind speed being shown below.

On the right side, we have final glide information.

In the bottom of the screen, there is a configurable row of navboxes. In order to find out how they are configured, check '2.1 Vario page'.

By pressing on the bottom row of navboxes, or swiping them upwards, three additional options are presented to us.

The first is 'Previous waypoint' and the second one is 'Waypoint Info'.

By pressing 'Edit Task', TSK SETUP is activated where a task can be created or edited. Additional TP's can be added, removed, zones changed etc.

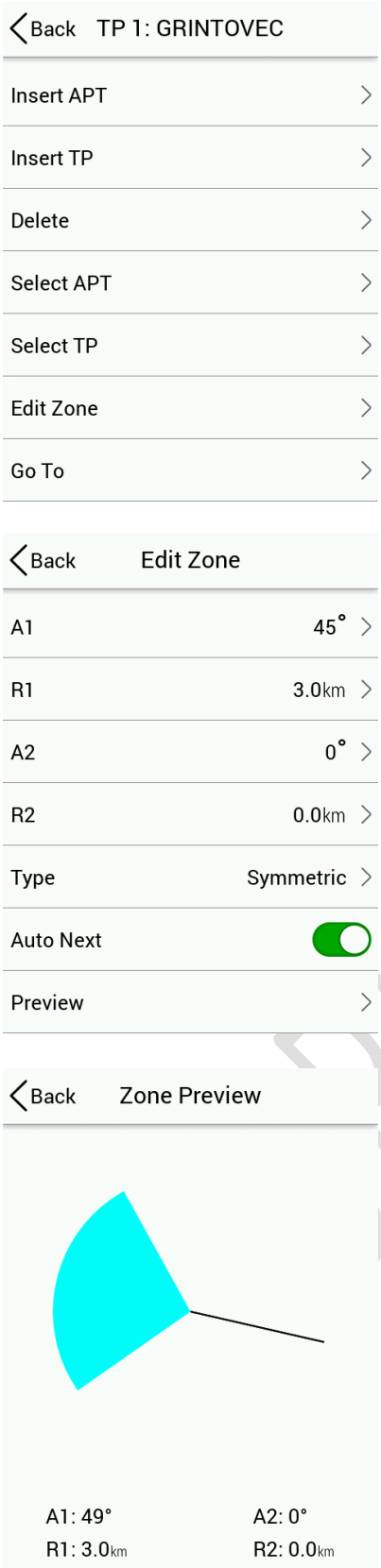
<u>Task setup</u>

In order to create a task, first open the Task setup page, by going to the Task navigation page, swiping the navboxes upwards, and pressing 'Edit task'.

Take off and Landing locations do not need to be filled in.

Choose your start point and start inserting additional points (which can be either from the .cup turnpoint database, or from the .af airfields database.
Choose the finish point.

Now, set the turnpoint zones and recheck everything.



Note!

When importing tasks (from a microSD card, via Bluetooth, or othewise), zone information is not imported. Be sure to check that the zones are correct.

When clicking on a turnpoint, a list of options will show, depicted on the right picture.

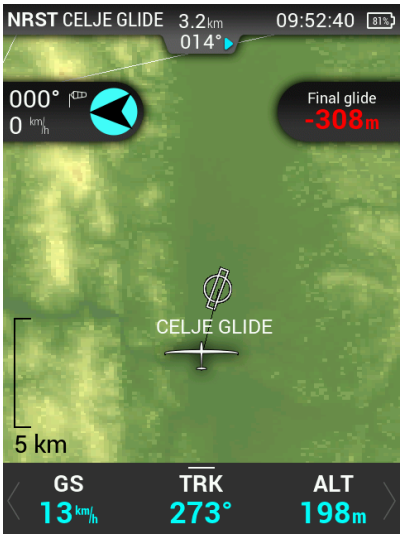
Tapping on 'Insert APT', 'Insert TP', 'Select APT' and 'Select TP' will offer you a list of turnpoints or airports to choose from.
Choosing 'Insert' will insert a new TP into the task, and choosing 'Select' will set the TP for the selected slot.

Delete option deletes the point from your task.

Edit zone will open a new dialog, which enables you to adjust the sector parameters.

Preview will show the Zone.

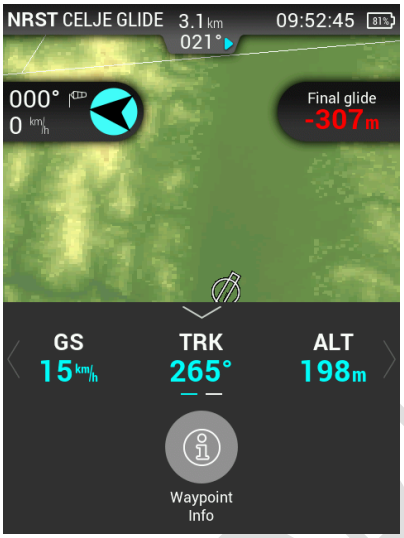
2.5 NRST page



In order to use this page to its maximum extent, the user should first import turnpoint, and airfield files. For more information on this subject, please refer to Setup/Transfer/Load TP.
Navigation is always "track up".

The NRST (nearest) page always navigates us to the nearest landable location, be it either an airfield or a turnpoint, designated as a landable in the .cup file.

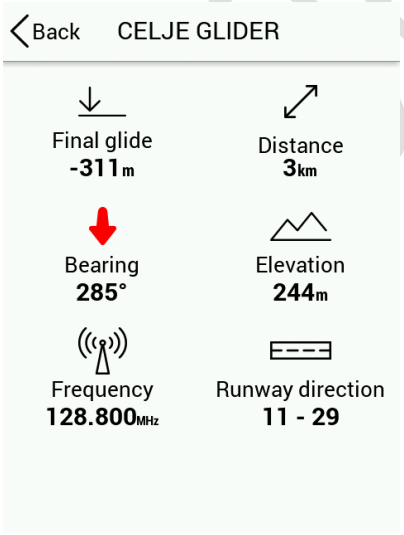
Below the TP/APT name, a steering symbol will inform the pilot by how many degrees (°) he needs to correct his track in order to fly towards the selected airport. In the upper right corner, time is displayed, as well as battery status.



In the left part of the screen, standard wind information can be read. The Arrow shows the course of the wind in regards to the glider, the degrees of its direction from the North and the speed is shown below.

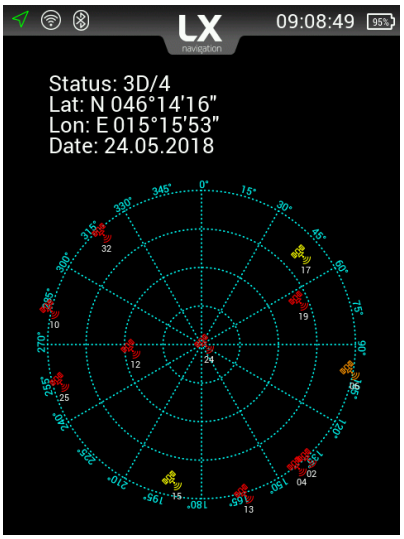
In the bottom of the screen, there is a configurable row of navboxes. In order to find out how they are configured, check '2.1 Vario page'.

By pressing on the bottom row of navboxes, or swiping them upwards, one additional option is presented to us – Waypoint info.



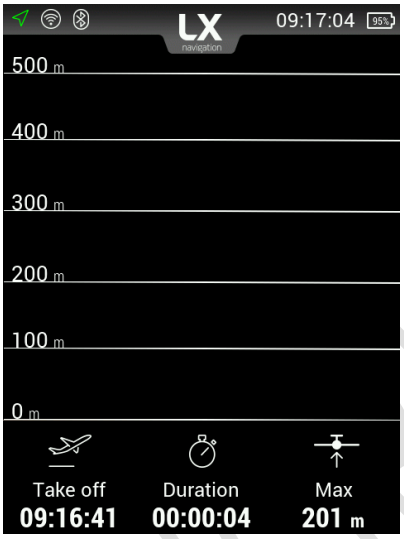
By pressing Waypoint info, we are shown additional info on this waypoint.

2.6 GPS page



GPS page shows us the current GPS status, date, latitude, longitude and a map of satellites above us.

2.7 Flight statistics page

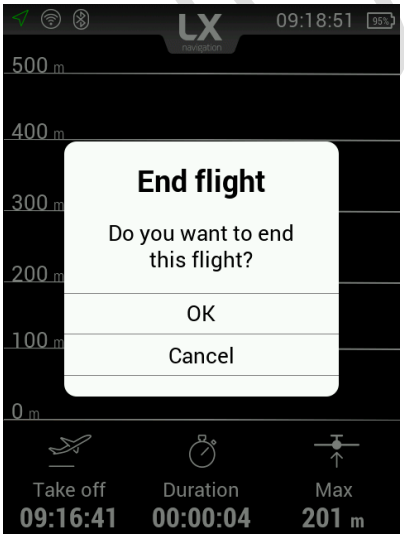


Appears only when in flight mode.

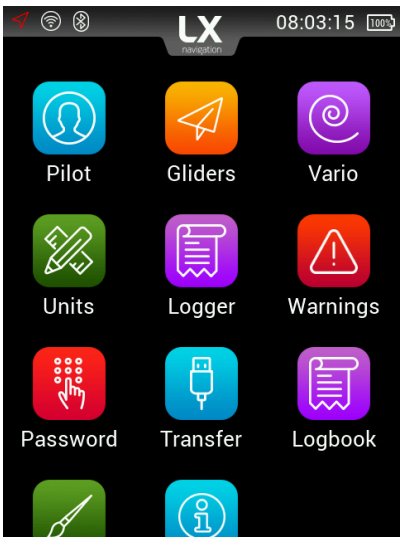
It shows us our barograph, with time on the x-axis and altitude on the y-axis.

Tapping anywhere on this screen during flight will give us an option to end the flight.

The flight should always be ended before turning the device off.



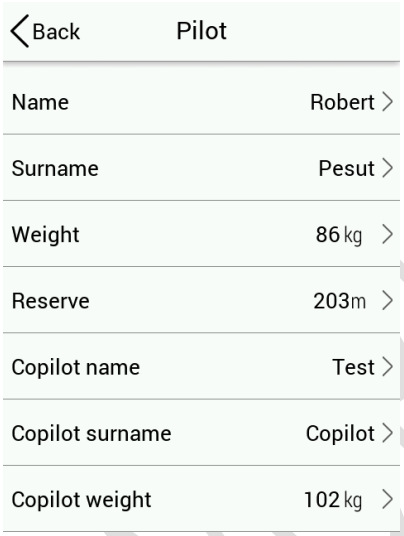
2.8 Setup page



By swiping left on main vario page you get to the setup page. Under setup, the pilot can set all parameters of the unit. The menus are following:

1. Pilot
2. Gliders
3. Vario
4. Units
5. Logger
6. Warnings
7. Password
8. Transfer
9. Logbook
10. Info

2.8.1 Pilot



All entered data (except for weight), will be written to the .igc log file as pilot declaration info. In order to have accurate information enter your name, surname, weight, reserve (altitude) and, in case you are flying with a two-seater, copilot name, surname, and weight.

- Pilot name: edit the name of the pilot.
- Pilot surname: edit the surname of the pilot.

Pilot's weight is added to the whole weight of the glider to calculate actual wing loading.

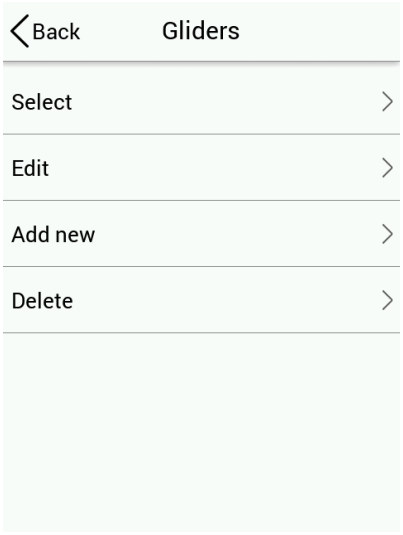
- Weight: edit the weight of the pilot.
- Co-pilot's data is visible in the flight declaration (IGC file).
- Copilot name: edit the name of the copilot.
- Copilot surname: edit the surname of the copilot.

Co-pilot's weight is added to the whole weight of the glider.
- Copilot weight: edit the weight of copilot.

Reserve is added to final glide calculation and is always added for safety.

The pilot should set the actual QNH and elevation of the take-off airport on the initial setup screen. Changing the QNH setting during flight will change the altitude calculation for final glide. Changing QNH while on the ground will not change the altitude calculation and it will remain the same as set during initial setup.
Reserve is the safety arrival altitude that is added to the required final glide altitude so that the glider arrives over the destination at the selected reserved altitude (AGL).

2.8.2 Gliders



In the glider`s menu you can select, edit, add new or delete a glider.

To make your custom glider go to Add new.

First, select the glider. You will find a list of gliders already defined. If you cannot find your glider on this list, please select the option user-defined, found at the top of the list.

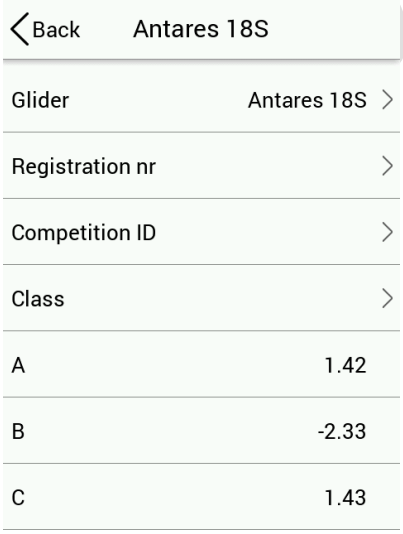
When user-defined has been selected you will have to manually insert A, B and C polar information, Empty mass, Reference mass and Maximum mass.

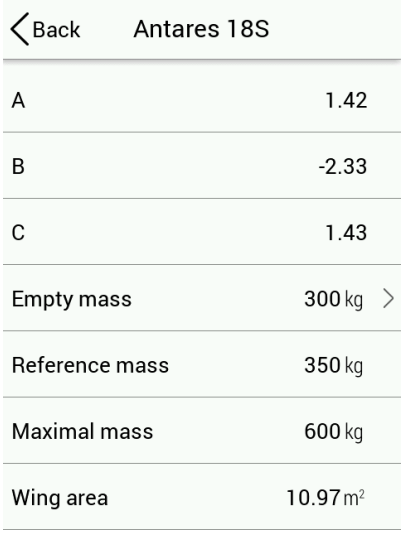
When you select a glider from the list, the polar information and mass information are automatically inserted. Enter your registration number and Competition ID (call sign).

Once you have entered all the needed information, you can leave the glider menu by pressing the back button. In the select menu, you can find your new glider. When selected, you will find the tick on the right side of the row.

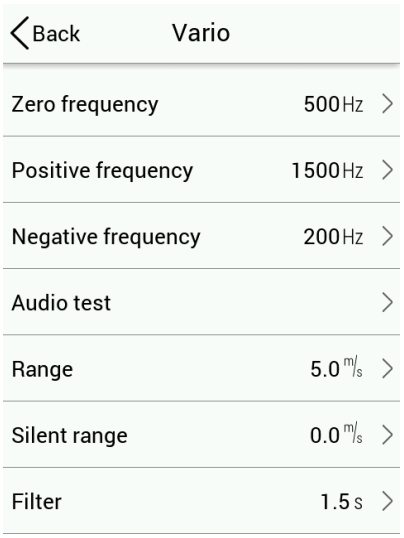
To edit a previously created glider go to edit and select the glider you want to edit.

To delete the glider you have created go to delete and select the glider you want to delete.





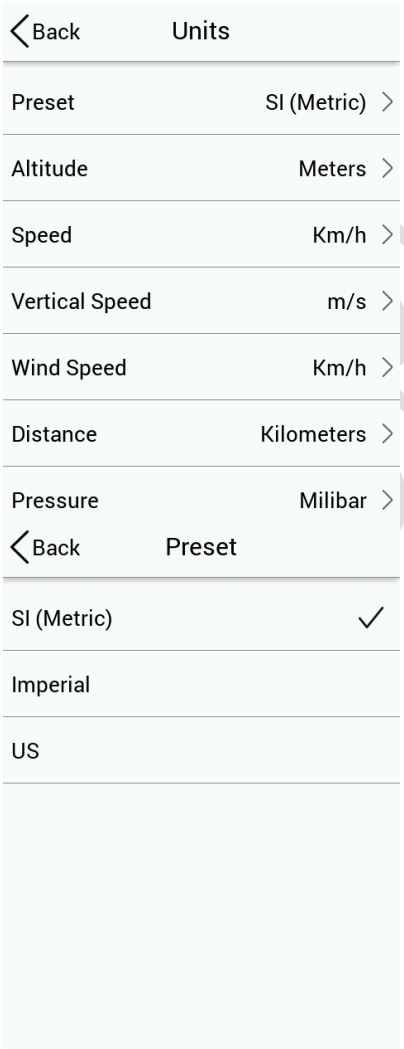
2.8.3 Vario



In this menu pilot can set vario settings:

- Zero frequency is a frequency generated at 0 m/s
- Positive frequency is the frequency at maximum climb shown on the scale (depends on range setting)
- Negative frequency is the frequency at maximum sink shown on the scale (depends on range setting)
- The audio test will generate vario movement from +5m/s to -5m/s so the user can check the audio setting in this range
- The range is the scale for vario. Three options are available – 2.5, 5 and 10 m/s (5, 10 and 20 kts, according to user selected units).
- The filter defines the dynamics of the vario needle and sound. The smaller the time the faster is the response and vice versa
- Integration time defines integration period for averaging the vario data in seconds

2.8.4 Units

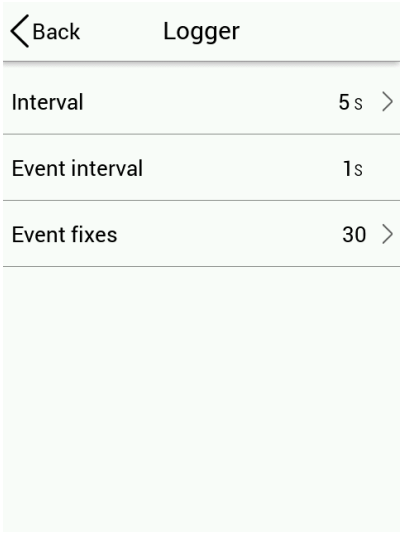


The units menu holds the units options for all flight parameters, shown as either an indicator, navbox, widget or digital needle. Pilot can set units for:

- Vario (m/s, kts)
- Altitude (m, ft)
- Distance (km, nm, mi)
- Speed (km/h, mph, kts)
- Wind (km/h, mph, kts, m/s)
- Pressure (mbar, inHg)
- Temperature (°C, °F)
- Weight (kg, lb)
- Area (m2, ft2)

You can chose and edit each parameter one by one or go to the preset menu and select between Metric, Imperial or US units. By selecting one of the presets all the units will be affected.

2.8.5 Logger

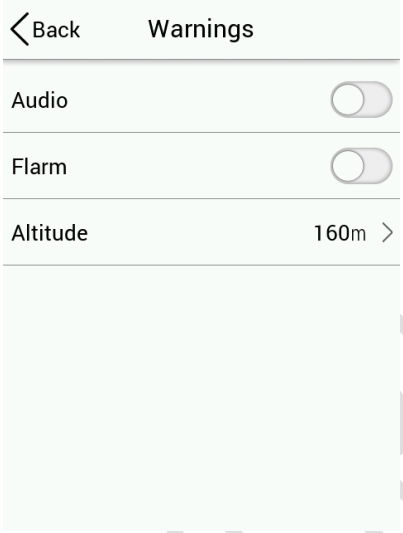


The pilot can set Interval, Event interval (fixed to 1s) and Event fixes. Input data is then seen as a declaration in every IGC flight file.

Set number of Event fixes and Event record interval.

An event can only be activated when in flight mode by going to setup menu – logger and selecting the event.

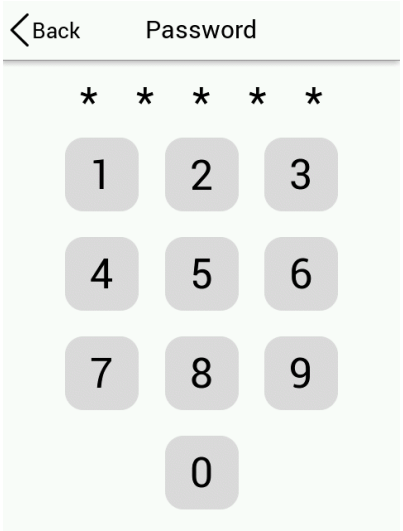
2.8.6 Warnings



Warnings are used to inform the pilot that some flight-related data is outside set margins. When a warning state is detected by Colibri X, the pilot will get a red warning message box with a description of what is outside margins.

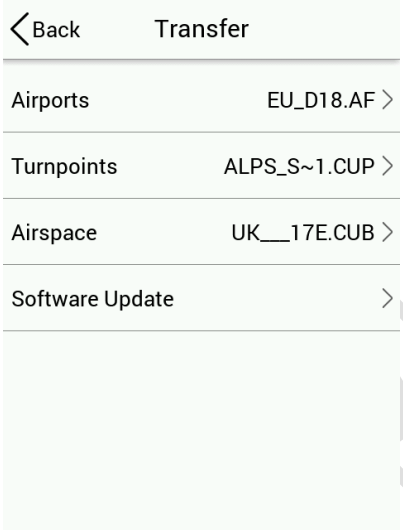
The pilot can enable (box is checked) audio warnings and Flarm warnings.
- Audio: if disabled, voice warning will not be generated – only visual warning message box
- Altitude warning: warning when flying over selected altitude

2.8.7 Passwords



To access some options, a password is required. Available passwords are:
- 46486: sets Colibri X to factory settings.
- 99999: clears all flights from flight recorder – logbook is emptied.
- 28346: audio player (will play any .wav file 8-bit 16kHz mono from the root of external SD card).
- 66666: clears actual task
- 55555: clears internal TP database

2.8.8 Transfer



The transfer page is used for transferring turnpoint and task files (.cup), airport files (.af), airspace files (.cub) and software updates (.lxu).
It is also used for selecting active files and deleting old files.

'Load' is used to upload a file from the microSD card to internal memory.

'Select' is used to select between multiple files from internal storage.

Turnpoints

After selecting "Turnpoints" option, multiple options are shown:
- Load is used for uploading files from microSD to device
- Delete is used for erasing files from the device
- Select is used for selecting and activating file
- Deselect is used for deselecting and deactivating the file

A list of .cup files (up to 20) found in the root of external microSD card will be listed under Load Turnpoint. Select a file from which you wish to import TPs and tasks to the internal database.

After importing, the process can take from 5 sec. up to 10 min (depends on the number of TPs and alphabetical sort inside CUP file). The number of TPs is not limited but we recommend that you use a CUP file with up to only 6000 points.

Name of every TP will be shortened to max 11 characters after import.

Load Task

After selecting "Load TSK" option, a list of all CUP files (up to 20) found on the external SD card in LX/TP folder will be listed here.
Select a file from which you wish to import TSK to internal memory.
After selecting the file from which you wish to import task, first 20 tasks found in the file will be listed. Select the task you wish to import and press enter.

Observation zones will be loaded as well if defined in the file, if not, then standard FAI zones will used.

Warning: Due to internal task limitations, only first 18 points of the selected task will be loaded from a file.

Wait until loading is finished.

Airports

After selecting "Airports" option, multiple options are shown:
- Load is used for uploading files from microSD to device
- Delete is used for erasing files from the device
- Select is used for selecting the active file
- Deselect is used for deselecting the file

A list of all .af files (up to 20) found in the root of external microSD card will be listed under Load Airports.
Select the file from which you wish to import APTs to the internal database.

.af file is commonly used file for transferring APTs.

Airspace

A list of all .cub files (up to 20) found in the root of external microSD card will be listed under Load Airspace.
Select the file from which you wish to import Airspace data to the internal database.

.cub file is commonly used file for transferring Airspace data.

Software update

To start the updating procedure, gently eject the micro SD card on the left side of the device. Turn off the device. Connect the micro SD card via the provided adapter or with the card reader to a computer. Open the micro SD card folder. Copy and paste the file for update (x.xx.lxu) to the root of your micro SD card. Carefully and gently insert the micro SD card in the Colibri X and power up the device.
Go to Setup > Transfer > Software update and select the desired file. A password input dialog will appear.
Type in the provided password (from info@lxnavigation.com).

Note: up to version 1.0, the password is '00000'.

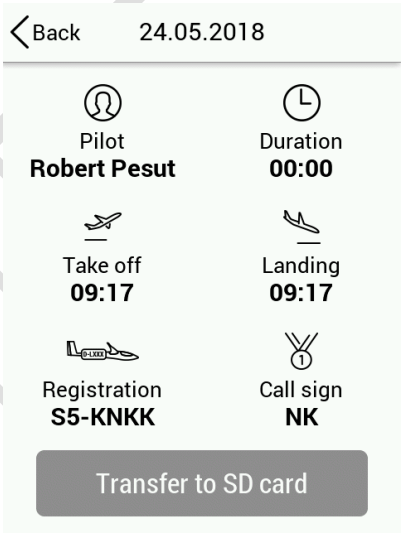
2.8.9 Logbook

The pilot can copy take-off/landing time to personal logbook and transfer flight to external SD card for OLC upload.

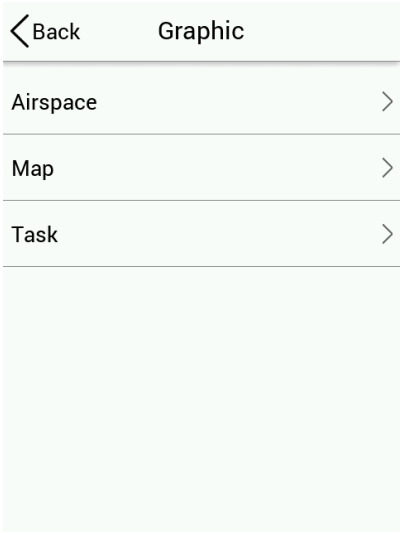
Last 50 flights are listed. Any older flights will be erased from logbook list.

Press enter on a selected flight to open flight info, where "Transfer to SD card" option is available to transfer flight to external SD card on the bottom of the page.

Flight is copied to external SD card into LX/FLIGHT folder.



2.8.10 Graphics

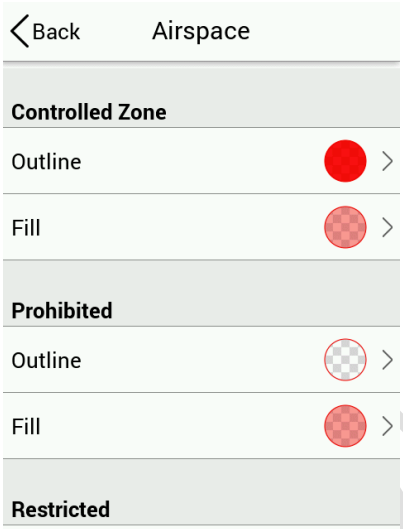


The Graphic setup is where you can set custom colours for Airspace, Map and Task, as well as set font sizes for map objects.

Airspace

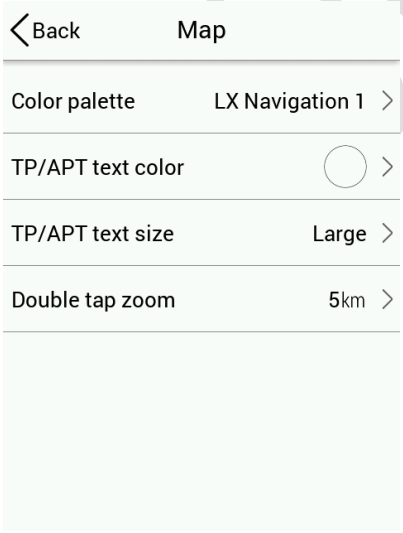
In the Airspace menu you following submenus to edit:

- Controlled Zone
- Prohibited
- Restricted
- Danger
- Terminal area
- Airway
- Glider
- Military
- Other
- Class A, B
- Class C
- Class D
- Class E
- Class F



Under each submenu you can find Outline and Fill row. Some have only Outline. By selecting each row you enter the menu with scroll bar for selecting the colour. As described in point 1.4 Basic use & gestures.

Once you have adjusted the colour you want to use, press back on the top left corner of display and the settings will be saved and you will return to submenu.
The same logic applies to set colour for Fill.



Map

With selecting the Map, you will find different settings. First is the color palette - Select between numerous different presets.

TP/APT text color allows you to add custom color to the text, which appears on the map.

TP/APT text size allows you to add custom size to the text, which appears on the map.

Double tap zoom sets the amount of zoom, which is applied when you double tap on the map.

We offer 12 different Map pallets, which can be seen below.

LX Navigation 1

LX Navigation 2

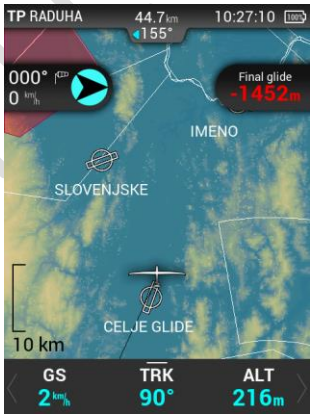
LX Navigation 3

LX Navigation 4

Imhof 1

Imhof 2

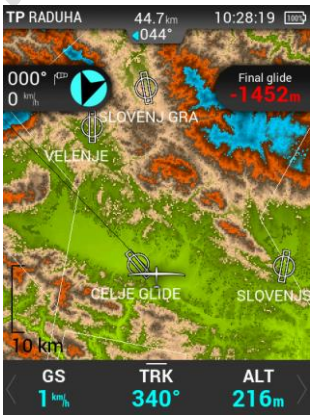
Imhof 3



Swiss Atlas

ICAO

Orange



UK

Black and white

2.8.11 Info

By choosing info page, you can view the following Colibri X information: Serial number, FW version, HW version, IGC serial and production date of the device.

PART THREE – FLYING WITH COLIBRI X

To get the best out of the Colibri X, it is important that some preparation is done prior to the flight – trying to configure the instrument or set up a task while flying the glider may spoil your whole day! Pre-flight preparation will ensure that the flight will be both successful and enjoyable.

Flight preparation on the ground

- Check if you have desired TP, APT and Airspace database uploaded.
- Prepare a task.
- Check pilot information (this information is written into the flight declaration)
- Check logger settings

Before take off

- Switch the unit ON at least 3 minutes before take-off (this will ensure sufficient GPS reception and will create a baseline of the baro trace).
- Select correct glider and elevation on initial setup.
- Check if the task is correct using the Task setup menu.
- During the take-off, the task will automatically be declared in the flight recorder.

During flight

The Colibri X hardware and software concept is so well optimized that the pilot doesn't have to spend too much time operating the unit during flight.

A helpful indication that the unit has changed to the flying mode is the appearance of statistics page.

Set QNH

The pilot should input actual QNH value for the airfield he or she is to take-off from. This action should be carried out on the ground, prior to take-off. It is very important to do it correctly and accurately.

Wind calculation

Colibri X measures wind using two different methods. Wind calculation results are shown on the main vario and navigation pages. Colibri X will switch between straight and circling mode automatically and wind history will be included in the new measurements.

Circling

Wind calculation is based on ground speed (GS) variations due to wind influence during circling. The method is exclusively active during climbs. The process starts automatically once circling is detected. The calculation is based on the fact that the ground speed is affected by wind. GS is at a maximum with a tailwind and minimum with a headwind. This GS difference is used to calculate the wind.

Straight flight

During the straight flight, the wind is calculated using an iterative method that is based on IAS, GS and TRK measurements.

Influence of wind in final glide

The actual wind data (speed and direction) influences the final glide calculation. In task mode, the final glide indication is based on the remaining distance over all TPs until finish (not over turn points already passed). Wind influence for individual legs is based on current wind data.

Event function

The user has the option to set one of the user inputs to Event. If Event switch is pressed during flight, it will enable faster record interval in flight recorder (recording in shorter intervals as default for a limited time). Event parameters can be set in Setup/Logger on LX Era unit. The action is accompanied by a clear message.

Task start

The task is started automatically when glider leaves start TP observation zone and navigation to the next point will start. If the pilot wishes to navigate back to the starting point, he must simply use pull up menu (pull up NavBox line in TSK page) and select the Previous waypoint. Please refer to Task page chapter.

After landing

It is recommended that you keep the instrument ON for a few minutes after landing. This will ensure a baseline of the baro trace.
The unit can be switched OFF or the flight can be downloaded anytime after landing.

Downloading flights

Make sure the micro SD card is properly inserted in Colibri X. In the setup page, select logbook and search for a flight that you wish to download. Select the flight. On the bottom of the page, you will find "Copy to SD card" icon. By selecting it, the transfer will begin. A progress window will inform pilot when the flight is copied to external SD card. The file format of flight is .IGC.

PART FOUR – CONNECTIVITY

4.1 SD card

Always copy data to the root of SD card. Always use the SD card provided with the new device.
All the data and flights are on the root of SD card. Always safely remove SD card when connected to a computer.

4.2 Bluetooth and WiFi

The Colibri X has internal Bluetooth and WiFi modules. You can switch them on and off at the bottom of the drop-down page each marked with its own icon. Turn both off to save the battery.

4.3 Micro USB

The micro USB port is used for power supply. Always use the cable and adapter provided with the device.

TIPS, TRICKS & TROUBLESHOOTING

Storing the device

Store the Colibri X in a dry environment, with a temperature below 25°C.
When you store the Colibri X for a long period, it is recommended that the battery charge be kept to at least 50%. Regularly check the battery status (every one to two weeks) and charge if needed.

Security - IGC seal

If the security seal is lost you will receive the message while powering on the device. To continue, you will have to confirm. The lost seal does not influence the functions of the device, but the flights will not be digitally signed for a valid IGC record.

For resealing the device always contact your local dealer or manufacturer.

Battery

To charge the battery, plug the Colibri X to the micro USB port and the wall plug with cable and wall plug provided with the new device. To charge the device faster, turn off the Bluetooth and WiFi in the drop down page.


LX
navigation