

LX8000

Version 2.1 new features

(changes compared to version 2.0)



1 Introduction

New firmware version 2.1 is a result of continuous development of LX8000 software. Among some bug fixes and speed ups, there has been a lot of new functionality added for leisure pilots as well as for top competition pilots:

- User interface is now available also in French and Czech language
- Position report on information page
- Satellite sky view on information page
- Improvement of task navigation to finish
- Moving task point with two different methods
- Temperatures are written with decimal point
- Enhanced user interface
- All warnings can be closed with CLOSE button

2 Detailed information

2.1 Language

LX8000 can run in different languages. Go to setup menu and select Language item.



Select desired language. LX8000 will reload and restart in new language. If your language is not listed and you feel to become a translator for LX8000, please do not hesitate to contact us. We would like to say thanks to our friends who did translations. Thanks to Giorgio for Italian translation, Maurits for Dutch translation, Hannu Korhonen for Finnish translation, Michael for German translation, Jaroslav Vach for Czech translation and Yves Jeanmote for French translation.

2.2 Information mode

Information mode consists of three pages, gps status page, position report page and satellite sky view page. Use bottom right knob or up/down arrow to toggle pages.

2.2.1 Gps status page

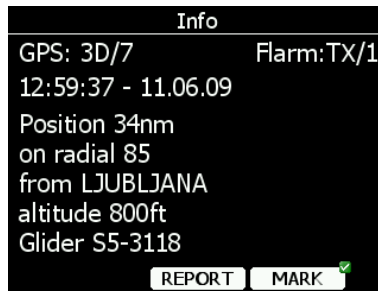
GPS status, altitude, flight level and height are shown on this page. Sunrise and sunset are calculated for current position. In upper-right corner current FLARM status is shown. TX means FLARM is transmitting data to others and number indicates how many other FLARM devices are visible.



If you press MARK button, new waypoint will be created with current latitude, longitude and elevation based on terrain database. Waypoint name is generated from current date and time preceding with underscore character.

2.2.2 Position report

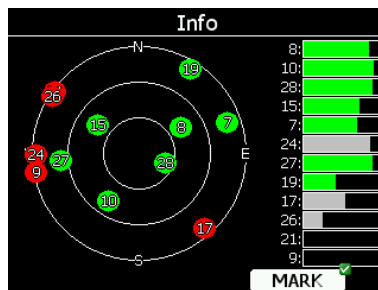
This page shows your position report to arbitrary selectable point. Using this page, when you are talking to ATC.



Press REPORT button to select report point. Radials will always be magnetic and distance will always be in nautical miles regardless unit setup. If you press MARK button, new waypoint will be created.

2.2.3 Satellite sky view

Information about tracked satellite is given on this page. If no satellite info is available a message "No satellite info is displayed".



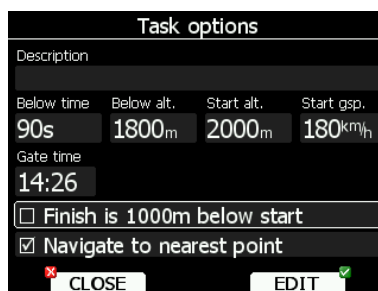
Green satellites are satellites currently being used for position solution. Three co centric circles represents satellite elevation (0,30,60 degrees above horizon). If satellite is in center of circles, it is directly above us.

When you are having bad satellite reception, check this page. If satellites are always red in particular place, you may consider moving gps antenna to other position. If you press MARK button, new waypoint will be created.

2.3 Task changes

2.3.1 Task options

Press OPTIONS button. Options dialog will be opened.



Enter task description. This is very useful on competitions, where you get more then one task per day. Some hints for name are DAY1-B, Triangle1000km etc.

Check "Finish is 1000m below start", when you are making a badge or record flight. If this option is checked, LX8000 will not navigate you to finish point elevation, but to altitude, which is going to be 1000m below start altitude.

Check Navigate to nearest point and LX8000 will navigate you to the nearest point on start zone or start line and finish zone.



Navigate to nearest point option is very useful and actually a must, if as finish a finish cylinder is used with notable large radius. Enabling this option will calculate final glide to edge of cylinder rather than to center of cylinder.

There are also several options in this menu which will help competition pilot to have start less stressful.

2.3.1.1 Gate time

Gate time is time when start gate is going to open. If this value is entered, instrument will not give you any message about starting task, before gate time is opened. A notification will be given, when gate is opened.

2.3.1.2 Below altitude start procedure

On some competitions there is a rule that a pilot must be certain amount of time below defined altitude. Enter **Below alt.** and **Below time** to use this option. An indication will be given on final glider symbol. Character "B" will be displayed before MacCready value, which indicates final glider is in below altitude mode.



Lower number shows difference to set altitude. Negative values mean altitudes below set altitude. Upper yellow number indicates amount of seconds left to be below set altitude. Chevrons indicate meters below or above required altitude. Each line represents 10m. A message "You were XX seconds below YYYm!" is displayed once you fulfill conditions.

2.3.1.3 Maximum start speed and/or maximum start altitude

A lot of competitions are limiting start altitude and/or start groundspeed. LX8000 helps pilots to cross start line at correct altitude with correct groundspeed. Enter **Start alt.** and/or **Start gsp.** to use this option. Indication will be shown on final glider symbol. Character "A" will be displayed before MacCready value, if start altitude was entered and/or character "G" will be displayed if start speed was input.



Lower number indicates at what altitude you will reach start altitude. Negative value indicates you are going to get there below required start altitude.



Arrival altitude to start is not based on MacCready, glider and wind settings. It is calculated based on energy difference during flying straight. This will give you very precise estimate at what altitude you will arrive to start. Speeding up will result in greater energy lose and arrival altitude will decrease, slowing down to best glider ratio will decrease energy lose and arrival altitude will increase.

Upper yellow number shows current ground speed and chevrons indicate, if you have to slow down or you may speed up.

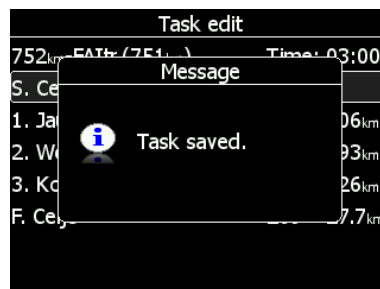
On picture above, we are 43meters above glide to start altitude, our speed is 121km/h and chevrons show, we can speed up.



Start speed and start altitude mode is available only if Navigate to nearest point is checked.

2.3.2 Saving task

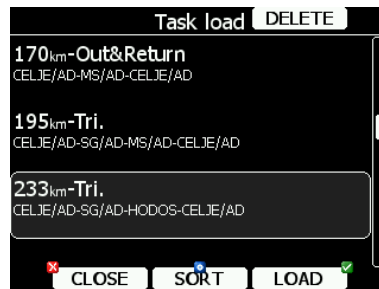
Once task is completed, it could be saved to active waypoint file. Press SAVE and message "Task saved" will appear on screen.



If task already exists in active waypoint file, message "Task is already saved!" is shown.

2.3.3 Loading task

It is possible to load task from stored tasks active waypoint file. Select LOAD action in task mode. A dialog with list of all stored tasks will be shown.



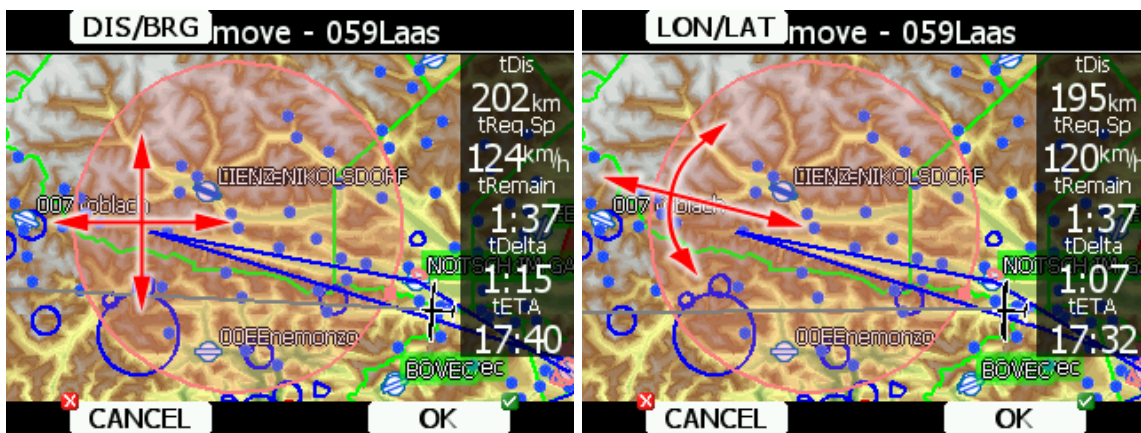
Total task distance, task description and task points are shown for each task stored. Select desired task rotating bottom-right knob and press LOAD. Task will be loaded into active task and task edit dialog will be opened.

It is also possible to DELETE tasks from active waypoint file. Press DELETE button to delete selected task.

Tasks can be sorted by start point, task distance and task description. Press SORT button to toggle sort style.

2.4 Moving task point

If at least one observation zone is defined as an assigned area, it is possible to move point within this area. Moving point will increase or decrease total task length. Select MOVE action in task mode. A dialog with current assigned area will be shown.



In upper right corner remaining task distance is shown, required task speed, remaining task time, delta time and estimated time of arrival.

Delta time is difference between remaining time and time of arrival. If it is negative, you will arrive back to home too soon and if it is positive, you will arrive too late.

Keep in mind time of arrival can be calculated using different methods, which are found in QNH, RES setup.

Point is moved using bottom two knobs.

Press DIS/BRG or LON/LAT button to toggle between two different methods of moving point. When button DIS/BRG is shown, point is moved in x,y direction. Use bottom-right knob to move point in north/south direction or rotate bottom-left knob to move point in east/west direction.

If button LON/LAT is shown, point is moved in radial and azimuth direction. Rotate bottom - right knob (page selector) to move point in radial direction from area center.

Use bottom-left knob (zoom) to move point in axial direction.

If more than one assigned area is set for task, NEXT>> button is shown in bottom line. Press this button, if you would like to move point in other assigned area.