

LX Mini Map pro

GPS Vario navigation system

Preliminary



- **Integrated** into the instrument panel
- Simple operation via 6 **push buttons** and **four rotary** switches
- Each rotary switch has **additionally** a push button
- Excellent **sunshine readable display** (400x800 1000 cd) *with touch screen*
- Outline: **135x82x55 mm** (cutting template provided with each delivery)
- Connectable to **LX Navigation vario** unit
- **Two COM** ports
- **Auxiliary power** input
- **Connection to Colibri II** without any need for a power adapter
- **4x LX system bus** connectors for simple system extensions
- Worldwide **maps and airspace** files available free from LX navigation web site
- **Portrait** and also **landscape** orientation possible
- **SD card** interface for easy data exchange (navigation program is also preloaded on the card)
- Traditional LX installation philosophy, **4x M6 bolts** with holes for knob axles
- A system which offers outstanding **value for money**

1 General description

The unit consists of a sunshine readable display, **Windows CE 5** CPU module and an interface which makes it possible to connect a **GPS source**, **vario** and other bus participants, for instance **LX remote control stick**. Mentioned interfaces are connected to LX Navigation controlled microcontroller. Suggested navigation SW is LX version of LK 8000 (derivate of XCsoar). LX Navigation has upgraded the original LK SW to be able to communicate with LX Navigation vario unit, remote control, **double seater** unit and secondary vario units. Another important feature of LX version is operation via push buttons and rotary knobs and therefore the pilot is able to avoid using of touch screen during his flight. But the touch functionality remains unchanged and can be used at any time. SeeYou Mobile can be also used as a navigation SW solution. Connection of **CAI 302** as a vario unit is also possible.

2 Connection of GPS and vario units

The unit construction highlights are high comfort for the pilot and **plug and play** connection of many interface units.



Second seat unit

2.1 Using of LX Mouse

LX Mouse is a combination of GPS antenna and GPS receiver. This super miniature device is capable to be connected to any COM port of LX Mini Map pro. It is available as an Option

2.2 Use of Colibri II

As the Colibri II dimensions are no larger than a traditional GPS antenna, it may be positioned where the GPS antenna would previously have been located. It is important to point out that that a special plug/cable assembly, which is provided exclusively for Colibri II connection, also supplies Colibri II with Power. This arrangement ensures that the Colibri II internal battery is always full and ready for operation in case of main power failure.

2.3 Connection of Flarm units

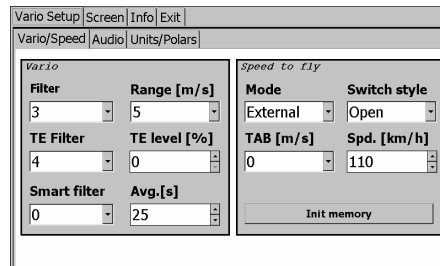
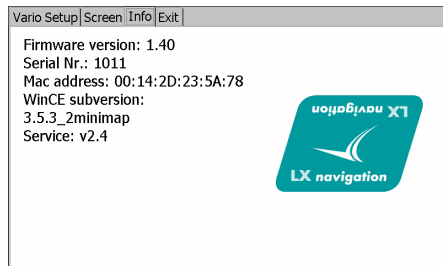
Flarm units can be connected directly to COM 1 or COM 2. There is also 12V at these Flarm ports, so that a Flarm unit can be powered by LX Mini Map pro. If Flarm is connected to COM 1 or COM 2 **two Flarm displays** can be easily added to every COM port. Flarm data is also provided to the navigation program and therefore Flarm objects are shown on the display. No Flarm splitters are needed any more.

2.4 Connection of units having IGC standard connector

Any unit having IGC standard connector can be easily connected to LX Mini Map pro plug and play. A so called 1:1 cable (no cross over) should be used.

3 Interaction LX Mini Map pro- LX Vario unit

A **microcontroller** built into LX Mini Map pro serves as an interface between the navigation program and Vario unit, which is the standard LX Navigation product. A special program called **LX Service** has been developed to make vario initialization simple and effective. The program should be run from desktop of LX MM pro.



Using this program makes it possible for each pilot using the system to adjust the vario unit functions for his personal requirements. Inputs done on vario units are automatically transferred to the LX MM and vice versa. See table for details.

| Item | Vario | MM pro | Remarks |
|----------|---------------|---------------|---------|
| MC | synchronized* | synchronized | |
| Ballast | synchronized | synchronized | |
| Bugs | synchronized | synchronized | |
| Filter | local | NA | |
| Altitude | slave | sent to vario | |

*means any change will affect both units, doesn't matter on which element of the system the setting is made.


4 The Data Base


Terrain and topology data are free and every unit is preloaded with **worldwide terrain** and **topology** data. LX Navigation also offers **airspace data** in .txt format which is acceptable for the navigation program. The airspace data is derived from LX Navigation airspace data, and updated in regular cycles.

Turn point data is acceptable in .cup format and also in Cambridge format.

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