V5

Installation manual

Version 2.0

LXNAV d.o.o. • Kidričeva 24a, 3000 Celje, Slovenia • tel +386 592 33 400 fax +386 599 33 522
info@lxnav.com • www.lxnav.com

1 Important Notices 3
1.1 Limited Warranty 3
2 Packing Lists 4
3 Installation 6
3.1 Installing the LXNAV V5 7
3.2 Connecting LXNAV V5 7
3.3 Cutout of V5 7
3.4 Ports and Wiring 8
3.4.1 LXNAV V5 ports 9
3.4.1.1 Main port 9
3.4.1.2 Audio port 9
3.4.2 V5 vario unit wiring 10
3.5 Updating firmware of V5 10

1 Important Notices

The LXNAV V5 system is designed for VFR use only as an aid to prudent navigation. All information is presented for reference only. Terrain, airports and airspace data are provided only as an aid to situation awareness.

Information in this document is subject to change without notice. LXNAV reserves the right to change or improve their products and to make changes in the content of this material without obligation to notify any person or organisation of such changes or improvements.

A Yellow triangle is shown for parts of the manual which should be read carefully and are important for operating the LXNAV V5 system.

Notes with a red triangle describe procedures that are critical and may result in loss of data or any other critical situation.

A bulb icon is shown when a useful hint is provided to the reader.

1.1 Limited Warranty

This LXNAV V5 product is warranted to be free from defects in materials or workmanship for two years from the date of purchase. Within this period, LXNAV will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts and labour, the customer shall be responsible for any transportation cost. This warranty does not cover failures due to abuse, misuse, accident, or unauthorised alterations or repairs.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE.

IN NO EVENT SHALL LXNAV BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE, OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations may not apply to you. LXNAV retains the exclusive right to repair or replace the unit or software, or to offer a full refund of the purchase price, at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.

To obtain warranty service, contact your local LXNAV dealer or contact LXNAV directly.

March 2012 © 2012 LXNAV. All rights reserved.

2 Packing Lists

- LXNAV V5 (in Metric or Imperial units as specified)
- V5 cable
- 3mm Phono Jack to RCA adapter

3 Size and weight

- 65mm x 65mm x 85mm
- Approx. 200g

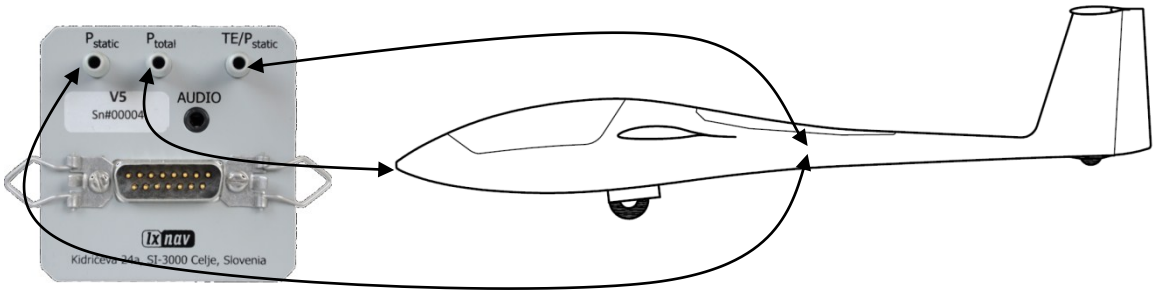
4 Installation

The V5 vario unit and any additional vario indicators each require a standard 57 mm cut-out. Three pressure connectors are fitted to the back of the V5 vario unit. A label shows their functions.

- P_{static} means static pressure connector.
- P_{total} means pitot or total pressure connector.
- TE means total energy TE connector.

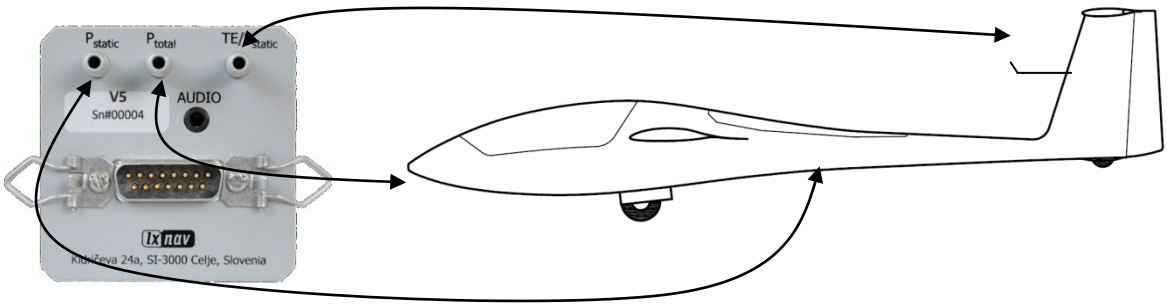
If the unit is to be configured for electronic TE compensation the connections are as follows:

- P_{static} Static
- P_{total} Pitot or Total pressure
- TE/P_{static} Static



If the unit is to be configured for pneumatic TE compensation using a TE tube, then the connections are:

- TE/P_{static} TE tube
- P_{static} Static
- P_{total} Pitot or Total pressure



If the P_{total} and Static are connected the wrong way around there will be no integrator reading (average climb) during the flight.

The LX9000/8000/8080 digital unit is connected to 12 Volt power via the 15-pin SUB-D connector. The LX9000/8000/8080 digital unit and the V5 unit (57 mm units) are connected via the RS485 bus (9 pin DB connectors).
Please ensure that both units are connected correctly before the first power on. The power wires (red and blue) should be connected to the main LX9000/8000/8080 digital unit.

Even though there is an automatic fuse in the instrument it is VERY IMPORTANT to use an external fuse (max. 3A). Power supply cables should use a minimum of 0.5 mm² wires. To prevent damage to the LX9000/8000/8080 digital unit after a short circuit on the RS485 bus there is an automatic fuse.

If a short circuit occurs then the 57 mm unit will appear not to work anymore. The reason is not the defect of 57 mm unit – it is due to the hot automatic fuse. Turn off the LX9000/8000/8080 system and wait for the automatic fuse to cool down.

4.1 Installing the LXNAV V5

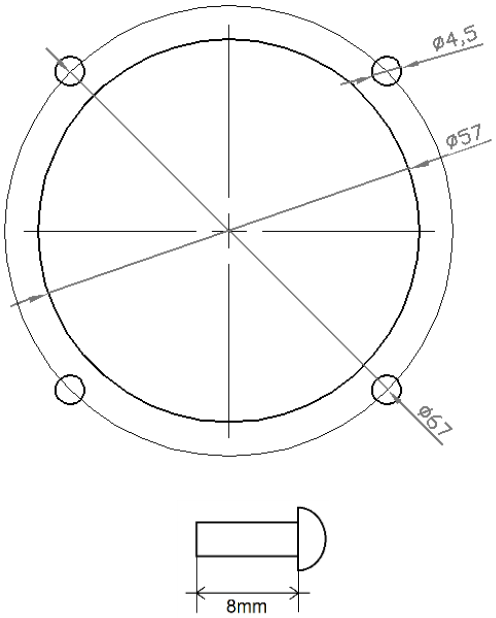
The LXNAV V5 vario should be mounted in a standard 57 mm hole.
Remove four screws. Install V5 into the panel, screw back all screws and.

Be sure that LXNAV V5 is placed far enough from compass. Inside is stepper motor which generates magnetic field interferences.

4.2 Connecting LXNAV V5

LXNAV V57 is connected to main unit through RS485 bus. SC cable is used for external switch, for switching between climb and cruise mode. In case that SC is connected to flaps switch, VP (vario priority) is connected to switch on stick. Inputs IN1..4 are used to connect to gear switch, air brake , etc...

4.3 Cutout of V5



Length of screw is limited to max 6mm!

4.4 Ports and Wiring

4.4.1 LXNAV V5 ports

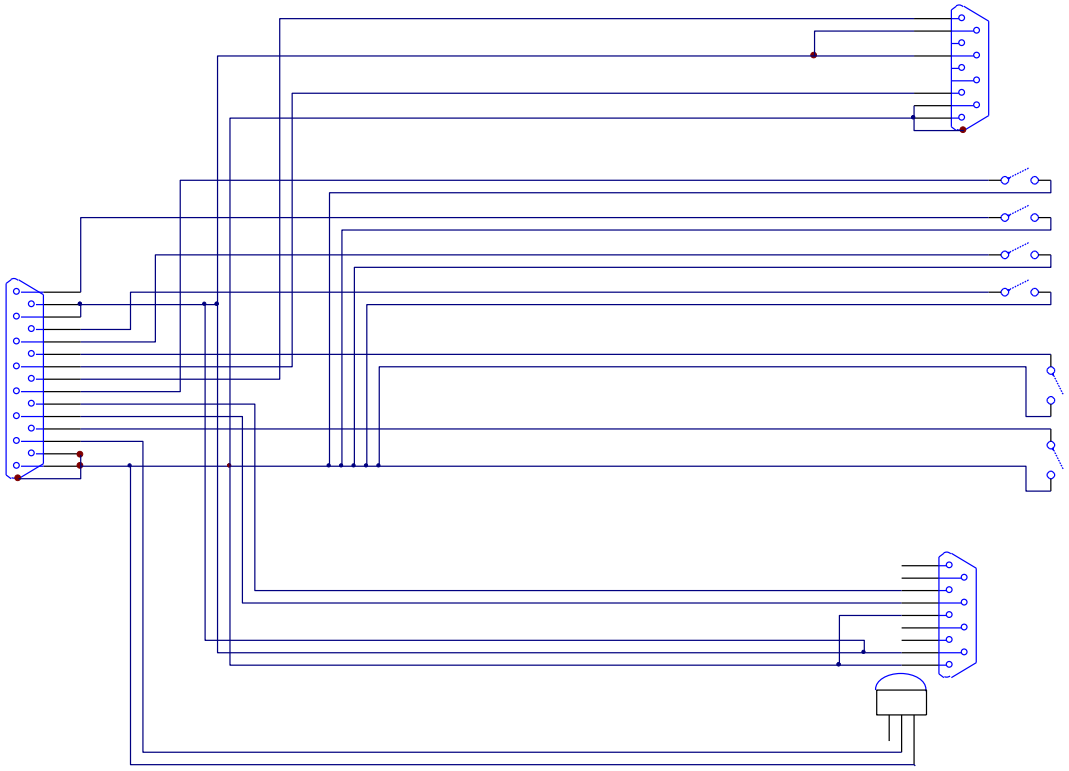
4.4.1.1 Main port

On main port is connected V5 wiring.

4.4.1.2 Audio port

Here is connected speaker with standard 3mm phono jack.

4.4.2 V5 vario unit wiring

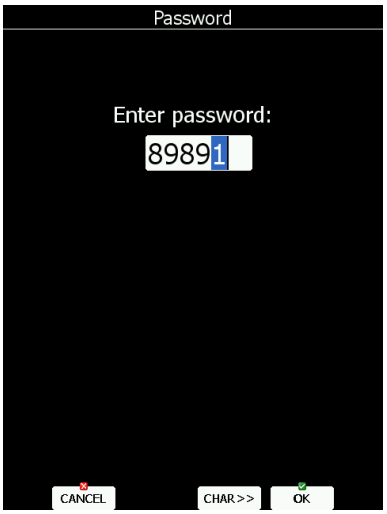


V5 has four additional inputs comparing to the old vario systems. Those inputs can be connected to Eg. Gear, Airbrake switches, which can be set in setup-hardware-variometer.

There is also CAN bus connector, which is prepared for future.

DO NOT CONNECT IT ANYWHERE

4.5 Updating firmware of V5



Start the LX9000 and go to the Setup->Password menu option.

Enter password **89891** and press **ENTER**.
The LX9000 will automatically search for an update file. If more than one update file is found a selection dialogue will appear.
Select appropriate update file and wait until update will finish.
V5 update consist ot two firmwares (SBOX and VIND).
SBOX updates sensoric part of V5, VIND updates display part of V5