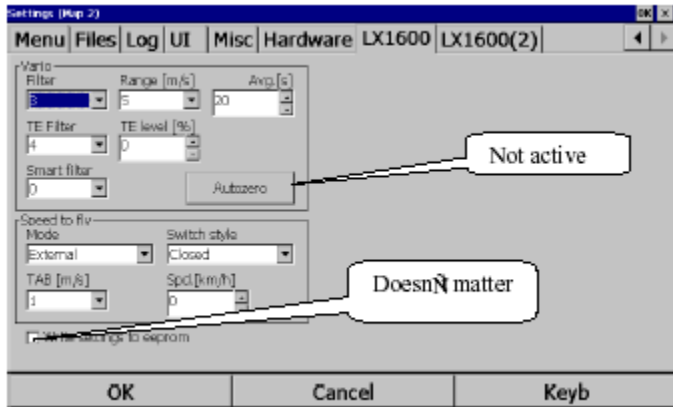


Setting LX 1600 (1)

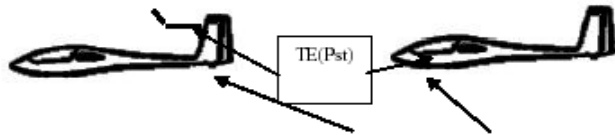
This is a very important setting which defines global vario operation parameters.



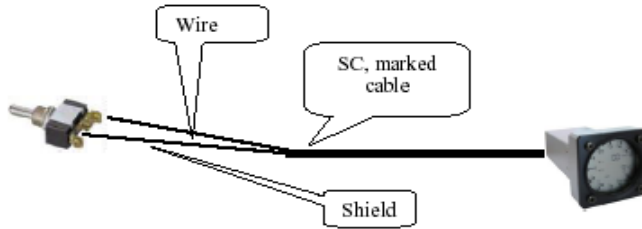
- Vario **needle filter** in steps from 1 to 10. Sets a time constant for the vario (**start with 1.5**)
- Vario **range** 2.5, 5 or 10 m/s or adequate in knots.
- Averager **integration** time. **20 Seconds**
- **TE filter**, filter of SC indicator in SC mode, no function by TE level 0% setting.
- **TE level** 0% means vario compensation via TE probe and, every setting higher than 0% means electrical TE compensation, default setting is 100%. During a test flight in calm atmosphere adjust the value. In general compensation to low, increase the value and vice versa.

TE level set 0 for use with TE Probe

- **Smart filter** is additional filter which could be added after selection of more than 0. It gives us four levels of dynamic damping or the vario signal.
- **Mode** defines manner of change over to SC, external means switch connected to SC wire coming out of Vario unit 15 P connector.
Taster variant is also possible in that case a change will happen after each press.
- **Switch style** defines open or closed switch status to get SC.
- TAB, defines **death area of audio** by SC, around zero.
- **Speed** defines change over speed for SC after Auto speed was selected in Mode.



Connection of TE /Pst inlet by tube and by electronic TE compensation

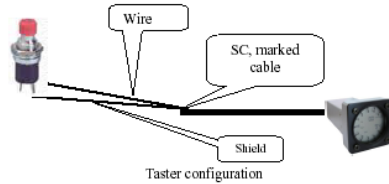


External switch configuration (closed or open active)

LX Navigation d.o.o

LX Mini Map V 1.0

22-avg-10



Taster configuration

Taster configuration

Smart vario:

The LX system incorporates two configurable electronic filters in the circuitry. The first filter adjusts the time constant and is adjustable between 0.5 and 5 seconds. The 0.5 setting is the fastest while the 5 setting provides maximum damping.

The second filter, called the Smart Vario, is a dynamic filter and controls the rate at which the vario indication moves. When set to OFF, there is no restriction on the rate of movement of the vario indication other than the setting of the time constant filter. When set to 1, the vario indication will not move faster than 1 m/s (2 kts) per second, while when set to 4, the vario indication will not move faster than 4 m/s (8kts) per second. It should be noted that when set to 4, the vario indication will move four times faster than when set to 1.

Summary:

- The Smart Vario should not be used in isolation but in conjunction with the setting of the time constant filter. When the Smart Vario is activated, the time constant filter may need further adjustment to provide optimum indications.



Electronic TE compensation:

The TE compensation can be fine tuned during flight with the following procedure. It is essential that this is only done in smooth air; it is not possible to tune the TE accurately when it is thermic.

- Select 100 % and default TEF
- Accelerate up to approximately 160 km/h (75 kts) and keep the speed stable for a few seconds
- Rapidly reduce the speed to 80 km/h (45 kts)

Observe the vario indicator needle during the maneuver. At 160 km/h the vario will indicate about -2 m/s (-4kts). During the speed reduction the vario should move towards zero and should never exceed zero (slightly positive indications are acceptable). If the vario shows a climb, then the compensation is too low, increase the TE%; and vice versa.

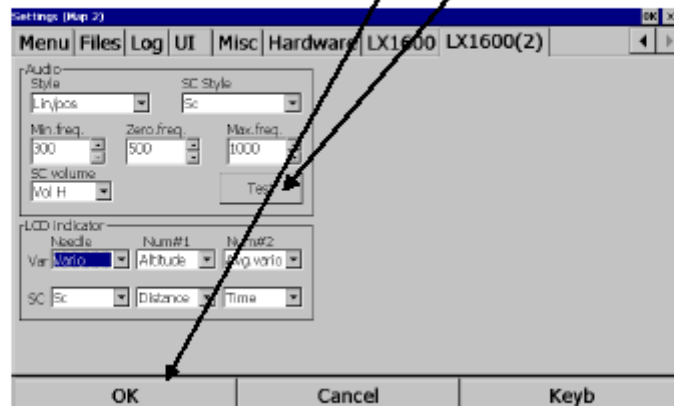
The **TEF** (TE filter) is the compensation delay. Larger numbers will increase the delay and vice versa. During the first test is recommended to use TEF 4.

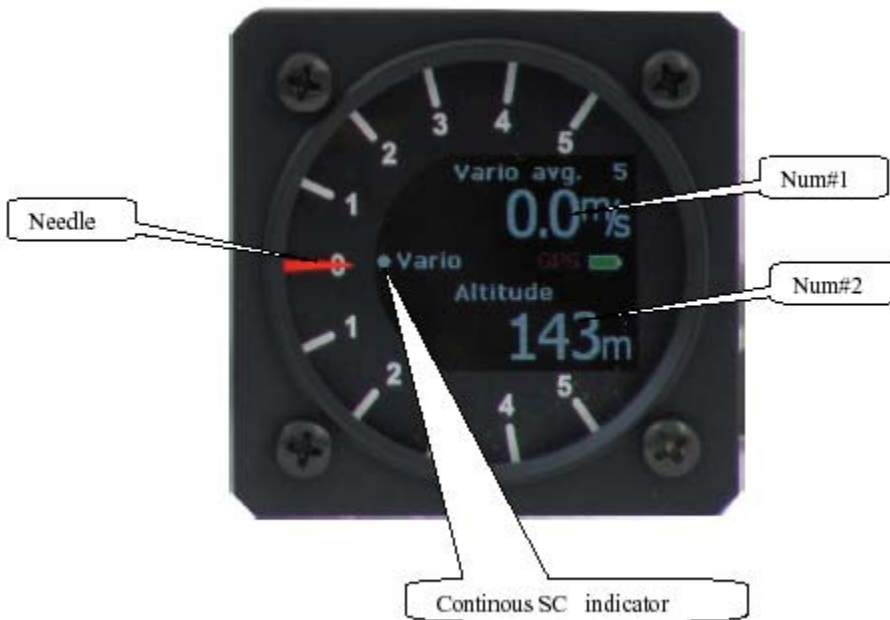
Electronic TE is only effective when the pitot and static sources are co-located and the pneumatic lines to the instrument are approximately the same length. The best sensor to use is the combined pitot/static Prandtl tube. If problems are experienced with the electronic TE compensation, then the most likely cause is the glider's static source. The static source can be checked by plumbing the pneumatic tubes for electronic compensation and then setting the **TE**: to 0%. In still air, accelerate to approximately 160 km/h and slowly reduce the speed. Observe the vario indicator. If the static source is good, then the vario should immediately start to move to show a climb. If the needle firstly shows increased sink and then moves to a climb, the static source of the glider is unsuitable and there is no way to provide successful TE compensation electronically. The use of a dedicated and accurate fin mounted pitot/static source such as a Prandtl tube might help.

3.2.3 Setting LX 1600 (2)

There are two sections; one speaks about audio settings and another about LCD Vario indicator settings. There are different audio styles offered and also frequency ranges of audio signal, separately for vario and SC function. After intention not to use default settings it is recommended to run **Test** function and new audio variant will be demonstrated by loudspeaker. SC Volume setting defines audio volume in SC, H means louder by SC. Needle

Note!
Adjust new settings, confirm with **OK**, enter setup again and run **Test**. Don't forget to run Save settings command after final decision.





LCD indicator setting defines functions of mechanical needle and upper and lower numerical indicators. One set is valid for **vario** function and another for **SC**.

Note!

After final adjustment, close procedure with OK and run **Save settings**.

The **dot positioned** on the left side of the display show continuously SC. Correct speed means dot positioned around zero, plus deflection means speed to high and vice versa.