LX7000 D

V 2.0

Rear seat equipment for tandem gliders

Draft

1 System configuration

The unit isn't stand alone unit, it could operate only like repeater together with LX 7000 pro IGC. Data exchange LX 7000 D, LX 7000 pro IGC is realised via 485 system bus. Both units doesn't need any special configuration procedures working together. The 485 bus is used for data exchange and power supply of LX 7000 D, therefore the unit doesn't need any external power supply and that makes installation very simple. The rear seat LCD vario indicator is bus connected too, All LCD vario settings should be done using the unit in the front seat.
The basic idea, developing the unit was, to make a rear seat unit which is practically independent from the "master" .
It is recommended to study LX 7000 pro IGC manual at first to learn about basic principles before using the unit.

2 System design

2.1 Power supply

The unit doesn't need external power, it is powered via 485 system bus, to switch the unit on press ON button short. It is not possible to switch the LX 7000 D on, without power on, on " master". After master will be switched off, the rear seat unit will be off automatically.

2.2 Data exchange

The 485 system bus is a bidirectional bus and following data are exchanged between LX 7000 D and LX pro IGC:

- Both units have always the same TP&TSK data base. After a change has happened (unit doesn't matter) an automatic update will follow (not visible for the pilot). It is very important to know that all sectors including AAT sectors will be always the same, doesn't matter on which unit the modification has happened. It will make collaboration of pilot and co-pilot very useful.
- After LX 7000 D has been powered on a very typically message **UPDATE FROM MASTER** will inform that the rear seat is coping TP&TSK data base from master. Under special conditions mentioned message could be active during the flight (TEMPLATES or RESTORE ALL function on master).
- Following data are sent from" master" to LX 7000 D to perform local calculation of data (vario, TAS, GPS data and altitude)

2.3 APT and AS data base

Both APT and AS data are loaded separately (no update from master), generally both units could have different APT and AS data base. The loading procedure, using Lxe is the same like by LX 7000 pro IGC. The LX 7000 D accepts **.CUB** AS files only. All necessary setting is completely the same like by LX 7000 pro IGC.

3 Manipulation

The unit has the same layout that means four rotary switches and six push buttons. Functions are completely the same like on the main unit. Both pilots manipulate their units completely independent under condition that the TP &TSK data base will be all the time the same. It is not possible to edit on both units at the same time. The setup of LX 7000 D is practically the same, some items are simple missing.

4 Fly LX7000 D

The unit is ready immediately after UPDATE FROM MASTER procedure is finished. There are no limitations at all, pilot could use for instance TSK mode and co-pilot could use TP mode. All settings like MC,BAL, bugs, wind calculation method, safety altitude, ETA and Logger are completely independent and the same is with the final glide calculation.
To start the task both pilots should do it separately, pushing start button. Only exception is after using of **MOVE** function. The pilot who will push start button first will cause change over on both units simultaneously.

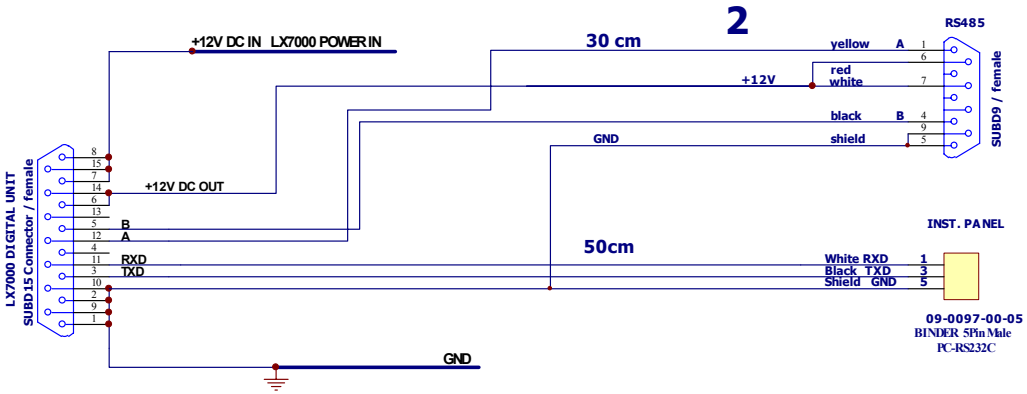
5 Flight recorder and flight evaluation

The unit is equipped with flight recorder which meets IGC recommendations, without approval. To read out the flights, use LXe. The procedure is totally identical like by LX 7000 pro IGC. Loading of TP&TSK data base is not allowed.

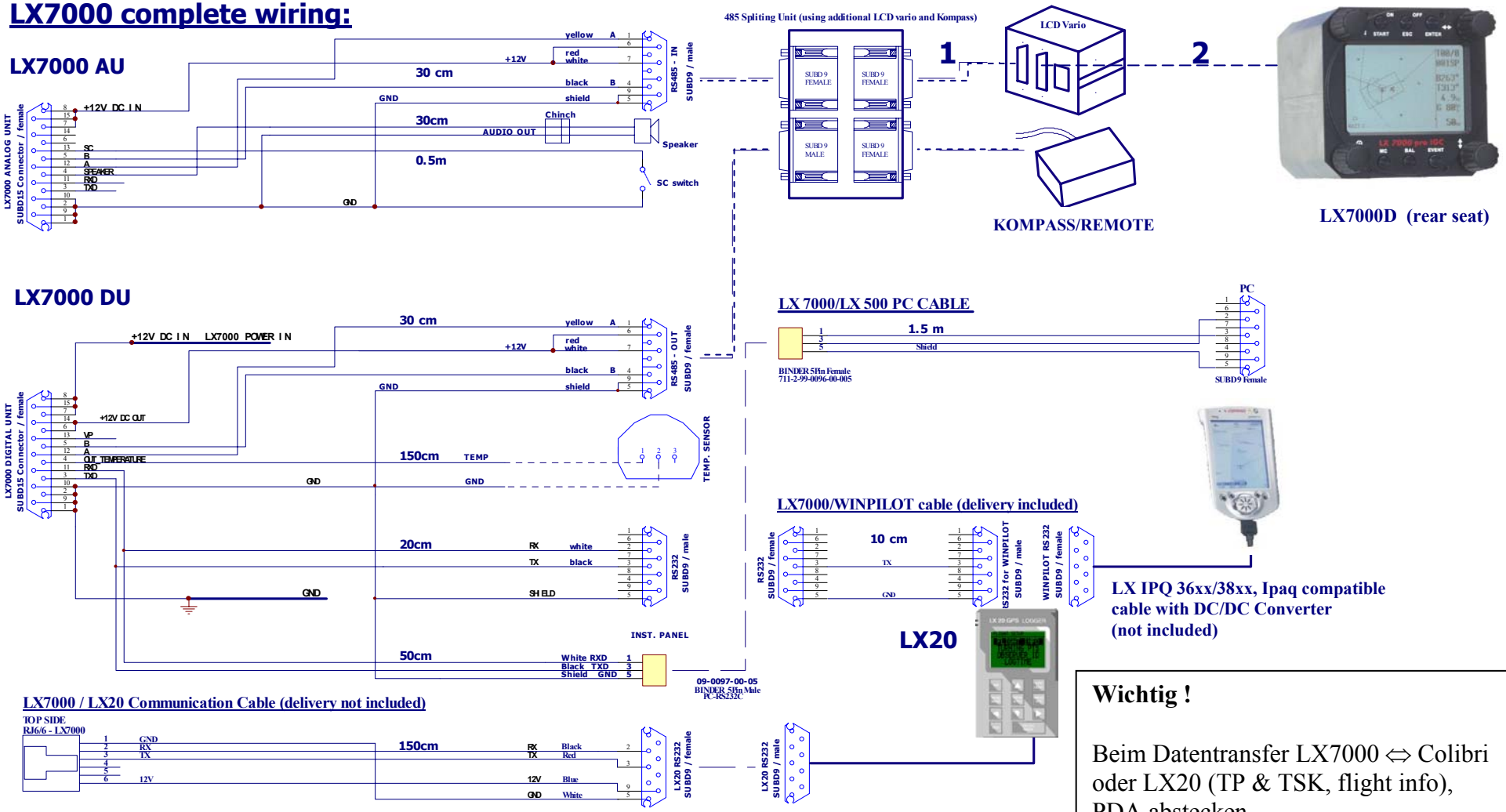
6 Installation

All necessary cables and connectors are delivered with the unit. The same is with the 485 splitting unit which makes connection possible. All connections are plug and play, no soldering at all. LCD vario indicator for rear seat.

LX7000 D wiring (rear seat):



LX7000 complete wiring:



Wichtig !

Beim Datentransfer LX7000 ⇔ Colibri oder LX20 (TP & TSK, flight info), PDA abstecken.

Bei PC-Kommunikation mit dem LX7000 PDA und LX20 oder Colibri unbedingt abstecken.

6.1 Delivery

- LX7000 D 80mm unit with cables
- LCd vario indicator for rear seat
- 485 splitting unit

7 Info

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