

LX7007 D

V 2.0/2.01

Rear seat equipment for double seater



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1 System configuration

The unit isn't stand alone unit; it could operate only like repeater together with LX 7007 pro IGC. Data exchange LX 7007 D, LX 7007 pro IGC is realised via 485 system bus. Both units don't need any special configuration procedures working together. The 485 bus is used for data exchange and power supply of LX 7007 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 7007 pro IGC manual at first to learn about basic principles before using LX 7007 D the unit.

Note!

Obligatory enable LX 7007D in **Setup/Options** of LX 7007 main unit, without this repeater will not work correct.

The **LCD Vario** indicator is also 485 Bus participant and therefore all commands and settings should be done on master unit after using of LCD INDICATOR item.

Important!

LX 7007 D 2.0 is capable to be connected to LX 7007 2.0 or higher, connection to lower versions is permitted.

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 START/ON button short. It is not possible to switch the LX 7007 D on, without "master" powered on. 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 7007 D and LX 7007 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. This will make collaboration of pilot and co-pilot very useful.
- After LX 7007 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 7007 D to perform local calculation of data (vario, TAS, GPS data and altitude)

Note!

After a global change of settings in OBS. ZONES on master unit an update from master will be carried out.

It is **not possible** to load TP/TSK data base into LX 7007D after using of PC or SD card.

2.2.1 SD Card Interface

SD card interface serves for data exchange LX 7007 D SD card. The procedure is same as by LX 7007 main unit, some items are missing. It is not possible to transfer TP/TSK data, as this data are always sent from the main unit.

Note!

A message “**Cant find SD Card**” shows that a not correct initialized card has been inserted, or some contact problem occurred. As a first aid **reinsert SD card**.

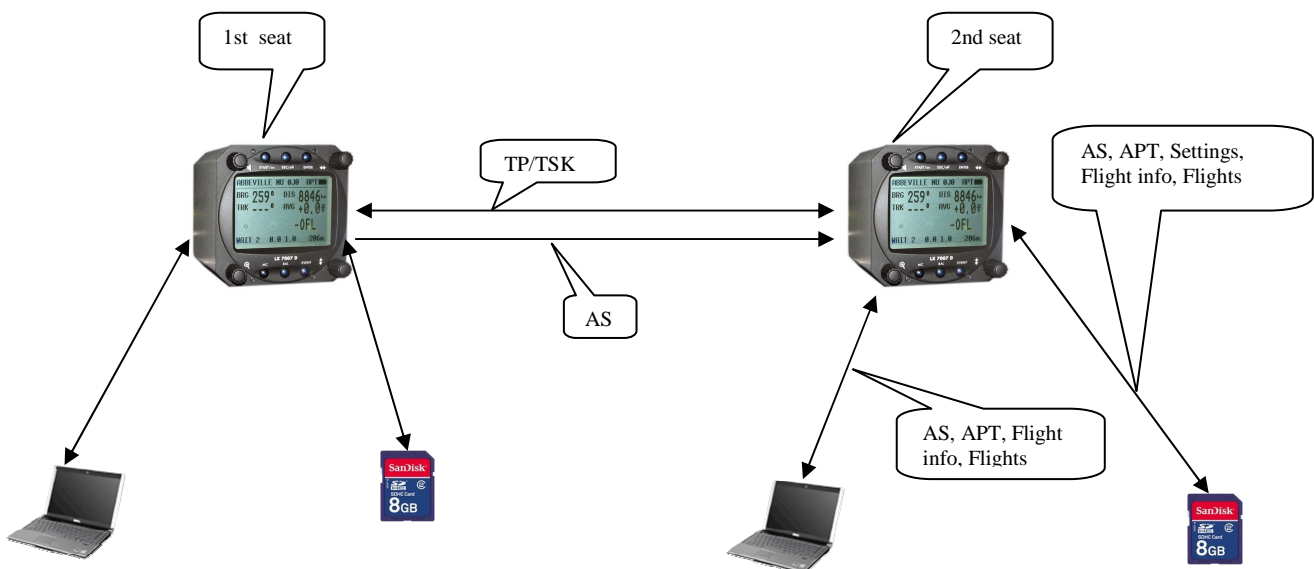
2.3 APT and AS data base

APT data should be loaded separately (no update from master) using of a PC or SD card. Generally both units may have different APT data base. The loading procedure, using Lxe is the same like by LX 7007 pro IGC. All settings regarding to airspace is completely the same as by LX 7007 pro IGC.

LX 7007 D V 2.0 has its own SD card reader and this makes possible to load **.LXA** APT files without using of PC.

LX 7007 pro IGC is able to store up to **six airspace** sections; the same capacity has also LX 7007 D. The airspace data update is possible after using of SD card and transfer of any **.cub** file. It is also possible to transfer any airspace section from the first seat to the second seat unit. After data transfer will finish the actual active section in LX 7007D will be overwritten. All commands for AS update should be executed on LX 7007 master unit. AS update is also possible after using of a PC and LXe.

2.4 Data exchange schematics



2.5 Manipulation

The unit has the same layout as LX 7007 main unit; this 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 the same. It is not possible to edit on both units at the same time. The setup of LX 7007 D is practically the same, some items are simple missing.

3 Fly LX7007 D

The unit is ready immediately after **UPDATE FROM MASTER** procedure is finished. During this procedure the complete TP/TSKT data base is copied into second seat unit including ZONE and MOVE information. During flight there are no limitations at all, pilot can use for instance TSK mode and co-pilot can 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.

Task start is synchronized, this means doesn't matter which pilot press Start button. After using of **MOVE** (AAT) function, the pilot who will push start button first will cause change over on both units simultaneously.

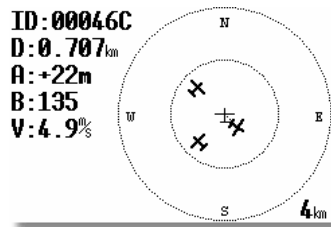
Function	Synchronized	Not synchronized	Comment
TP/TSK edit	●		
Zone	●		
Move	●		
TSK start	●		
Over TP*	●		Small sectors, no AAT
Over TP	●		Zone function and sectors bigger than 6 km
Over TP**	●		Move function used
TSK restat		●	

* Automatic change over

** Manual, doesn't matter which pilot will press Start button

3.1 Flarm Graphic Screen

If master unit is equipped with Flarm collision avoidance system, collision relevant data may be visualized after short press on Event button.



All about this function see LX 7007 manual.

Note!

Event marker will be activated after a long press on Event button.

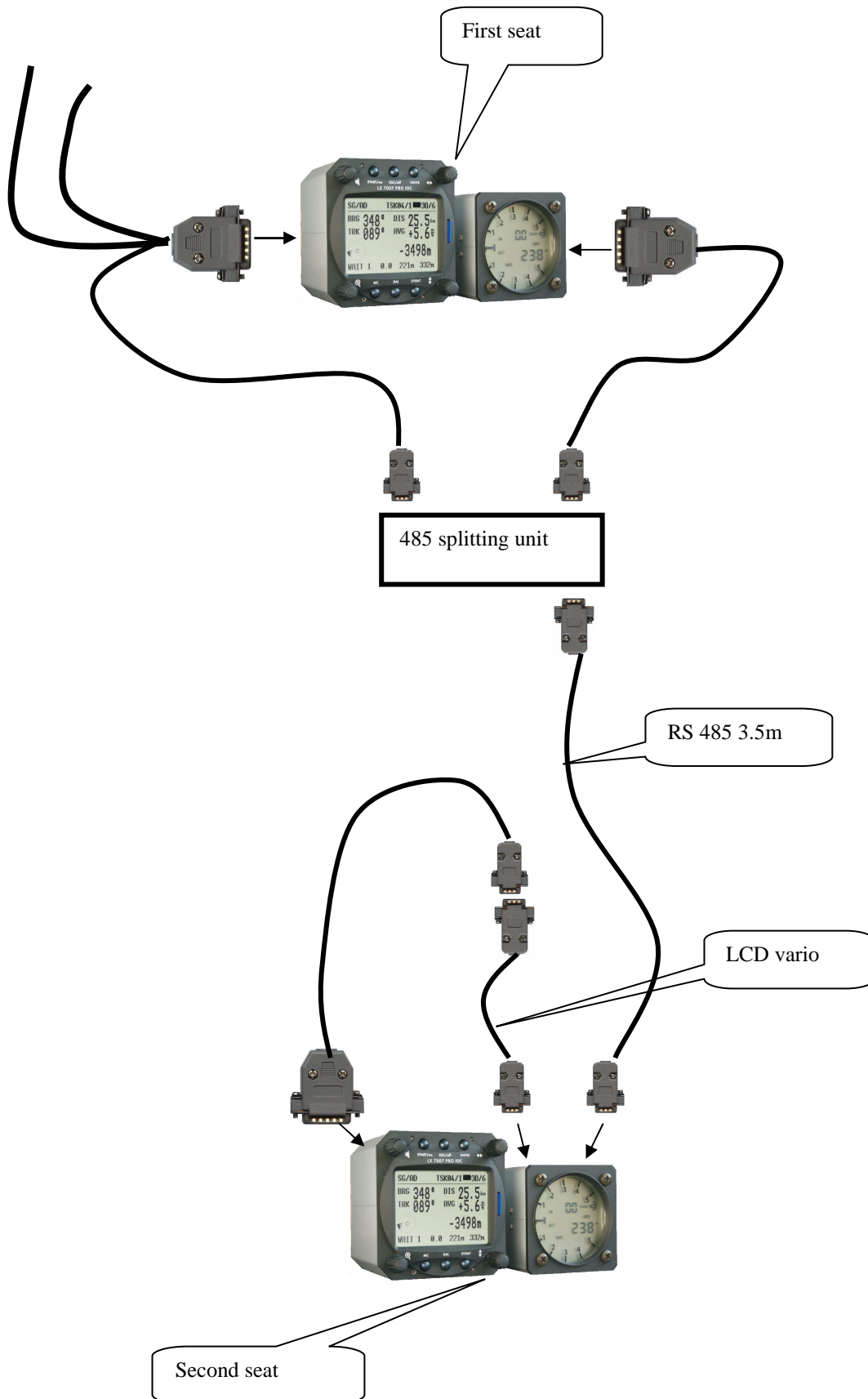
4 Flight recorder and flight evaluation

The unit is equipped with flight recorder which meets IGC recommendations, but is without IGC approval. To read out the flights, use LXe or **SD card**. The procedure is totally identical like by LX 7007 pro IGC.

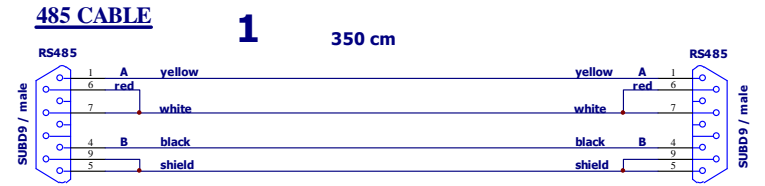
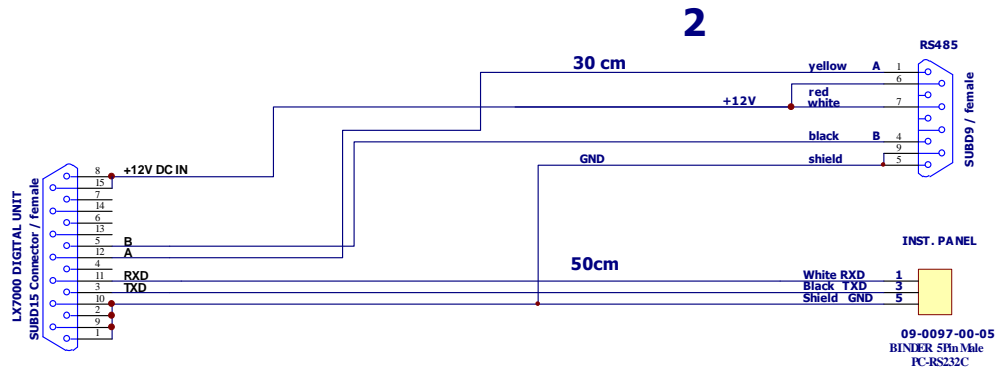
5 Installation

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. One LCD vario indicator for rear seat is always a part of deliver.

5.1 Connection schematics



LX7007 D wiring (rear seat):




5.2 Delivery


- LX7007 D 80mm unit with cables
- LCD vario indicator for rear seat
- 485 splitting unit


6 Info

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