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firmware 66.0 (06/05/2011) release notes

VERY IMPORTANT :
How to reset your vario if it "freezes" :
- to reset the LeonardoPlus, LeonardoPro or LeonardoProBt press together the "power-on" key and the "down arrow" key for 3 seconds
- to reset the LeonardoLithium press for 2 seconds the small switch in the back of the vario
- to reset the old Leonardo remove the AA battery

Navigation:
- Leoplus now has the same full features navigation of the LeonardoPro (start pilon , 12 routes and 2 data base Wpt User , Wpt Competition)
- faster navigation and gps reaction
- every route now is a "stand alone" task : it includes all information needed for the competition, it no longer needs a waypoint data base, so for the competition you would need only 1 task (route).
- competition waypoints and user waypoints are now equivalent and have all the same new extended features.
- is no more necessary to deactivate a navigation before activating a new one, you can freely activate any navigation to a route or to a single wpt (goto) at any time
- the wpt altitude is calculated using the name with the format ABCnnn (nnn=tenth of meters) , if nnn is not present then the altitude field is used.
- the Chrono is resetted when start pilon time gate is opened

- New Route editor :
- from the route menu select the desired route pressing the "volume key" or the "page key"
- press the function key "EDIT" to open the drop down list of options :
1) insert wpc (to insert a wpt from the competition data base)
2) insert wpu (to insert a wpt from the user data base)
3) change wpc (replace a wpt from the competition data base)
4) change wpu (replace a wpt from the user data base)
5) edit (edit the current wpt)
6) delete (erase the current wpt)
For example , to insert a wpt comp :
- confirm "insert wpc" with the "YES" key, the comp wpt list opens , select the wpt with up/down arrows keys and confirm with "SAVE" or abort with "ESC"
To view wpt details press the "right arrow" key then press "ESC" to go back.
- now is possible to edit route/wpt even while the Cartesio/Leonardo is recording.

Nearest all wpt , Nearest Landings and Clear Nav :
- new functions "nearest wpt" , "nearest landings" and "clear nav" :
press "GOTO" key , a triple choise appears : "near" "clear" "land" :
near = it shows a list with nearest wpt (any kind of wpt from both comp wpt and user wpt) , press "GOTO" to activate nav
land = it shows a list with nearest landings wpt (only landings wpt from both comp wpt and user wpt), press "GOTO" to activate nav
clear = deactivates all existing navigation (if any)

Optimized Route :
- optimized route with indications to the shortest way

- new bearing BRG_0 directs you to the wpt centre

- the bearing BRG_1 directs you to the optimized point on the current wpt cylinder

- new DST_0 indicator (DIST.TO CYL) : it displays the shortest distance to the current wpt cylinder

- all info with reference 1 (dst1, eff1 , height1 , HSI etc etc) are always related to the optimized point of the current wpt

- the optimized point of the current wpt is displayed with a small crosshair in the plotter

Multiple wpt with the same coordinates in a route :
- new management of multiple wpt with same coordinates according to new 2011 competition rules

- to manage the validation when exiting from a wpt cylinder you have to setup the "REV" option in the desired wpt from the edit route menu.

Plotter page :
- circles are drawn with better shape

- displayed also the circle of the next wpt

- the full line points to the center of the current wpt

- the dashed line points to the optimized point of the current wpt

- new **Auto Zoom** function :
the plotter map scale is automatically switched to the thermal zoom level (default **0.120km** - 2m/pixel) or to the cruise zoom level (default map scale **4km** - 65m/pixel) using the gps tracking.
- new **AutoScale** function : when the plotter is switched to cruise mode the zoom level is automatically scaled to display the current waypoint in the screen
Both zoom levels can be also manually changed with zoom- and zoom+ key
- the map scale indicates the whole map size in km
- for a cleaner plotter view the track is displayed only when the map scale is 0.120km or 0.250km

Compass page:
New graphic compass with higher speed and 10 times higher resolution (2 degree changes instead of previous 22 degree)
Two new icons : a small full circle crossed by a line points to the optimized route , a triple circle points to the center of the current wpt.

Other:
- improved the wind Calculator (please set the new parameter **WSEN = 5** in advanced setup.

- new wind direction arrow indicator always visible in compass and plotter pages .

- faster vario reaction (please set **RVAR = 0** in main-setup)

- added a new parameter **CORD** = coordinate type in advanced setup

- Auto-Silence acoustic vario : can be configured with the new **AUTV** parameter and allow the acoustic vario to start automatically only after the takeoff is detected. (please set **AUTV = ON** in main-setup)

- Auto-Stop recorder function for better logger memory management.

- no more "dummy" 2d flights in Cartesio/Leonardo but only 3d flights for a better logger memory management.

- Cartesio/Leonardo has now the min/max ground speed record in the logbook min/max flight table

- number of help files extended to 14.

- removed the "REC LOCK" limitation , now is always possible to use all menu even if the recorder is activated

- 2 new indipendent totalizers recorded on the instrument :
total_flight_time : is the sum in minutes of all flights time (0-65535 minutes =1093h)
total_flights : total flights counter (0-65535)
These 2 counters can be set to display with the VltoolsConfigurator2011

- the bluetooth icon now is managed also in the menu "vltools".

Vltools2011 :
- New free software Digifly Vltools2011 : it includes also all functions of the old Vltools2009 for a complete management of route/waypoint too.

- it works with a completely new Digifly protocol with much faster PC to instrument communications.

- new flight list table from which it is possible to download and add the digital signature (G record) to any single flight

- new extended pilot information management (uploadable to your instrument).

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total_flight_time : is the sum in minutes of all flights time (0-65535 minutes =1093h)
total_flights : total flights counter (0-65535)
These 2 counters can be set to display with the VltoolsConfigurator2011

- display and edit the 2 counters stored on the vario :
total_flight_time : the sum in minutes of all flight times (0-65535 minutes =1093h).
total_flights : total flights counter (0-65535).

A very special thanks to Fabrizio Cavadini for this great software.

Communication :
- added new functions to the MLR 38400 FAST protocol to be used with GpsDump, CompeGps and MaxPunkte :
- competition waypoint and user waypoint upload / download
- point the cursor over "wpt comp" or "wpt user" menu to select which wpt data base to upload / download
- when the cursor is over "logbook" or over the single flight row it is possible to download the flight and to download the competition wpt (this is useful for the score keeper to download the pilot id)

Direct data transfer between two Leonardos :
- every Cartesio/Leonardo can directly send the "task" or the waypoint data base to another Cartesio/Leonardo in a few seconds with a simple twin wire cable :
1) connect the master Leonardo to the slave Leonardo with the cable
2) place both Leonardo in "vltools" menu
3) select on the master Leonardo which data base has to be sent with the related arrow : up=comp wpt, left=route1 , right=route2 , down=user wpt
P.S. to run a competition task you need only to send the task route to the slave Leonardo

LK8000 :
- new real time telemetry with direct interface to the free software LK8000 that runs on standard color PNA or cell phone.
- it includes also variometer , altimeter and air speed
- the LK8000 is connected to the LeonardoPlus/LeonardoPro trough serial cable or to the LeonardoProBt via bluetooth.
- it runs on a lot of low cost (around 80 euros) car navigator based on WindowsCE , i.e. Mio M400
- it' is an open source project
- available for free at this link http://www.lk8000.it
A very special thanks to Paolo Ventafridda for this great software.

Bug fixes :
bug fix : now is possible to download every single flight with digital signature IGC using Vltools2011
bug fix : corrected the right value of the min vario in the min/max flight table (logbook menu)
bug fix : improved indications to wpt2 and to goal
bug fix : now is possible to erase a single wpt
bug fix : corrected Fahrenheit indications

VLTOOLS 2011

Distance to destination
Destination wp name
Bearing difference to destination
Track heading line
Local time
Bearing line
Compass showing current map orientation
Current average efficiency
MacCready
Vario
Requested Efficiency to destination
Ground speed
Arrival Altitude to destination
Map Scale
BottomBar mode
Analog variometer
Aircraft icon, menu popup
Glide Bar Indicator
Wind indicator
BottomBar or Navboxes

LK8000 MAP OVERLAYS
Release 1.20, March 2010