Flytec 6030 / Bräuniger IQ Compeo+

Firmware release notes

V 5.04j (2024-04-17)

- Fix bug where varios with a Furuno GPS module give a wrong flight date. This fix will also work for all the other modules once their respective GPS date rollover occurs.

V 5.04i (2023-03-07)

- Limit configuration import from SD card to user configuration, ignore device-specific configuration values
- Stall alarm only when in flight
- TEC vario correction only when in flight, to suppress false vario readings right after launch
- MacCready acoustics only when in flight

V 5.04h (2022-02-24)

- Corrects bug where in some cases, the signature of the 1-second IGC file was incorrect (introduced with 5.04a)

V 5.04g (2021-09-08)

- Prevents the vario from completely "freezing" during operation and no longer reacting to any user input (introduced with 5.04a).
- Improved GPS module initialisation, new warning screen if initialisation fails.
- Correct display of Alt 2 and Alt 3 in flight analysis.
- Internal: LCD calibration when screen display is rotated by keyboard.

V 5.04b (2021-06-25)

- Fix a bug where in some cases the display of the pilot name in the menu and in the IGC files was overwritten (introduced with 5.04a).

V 5.04a (2021-06-20)

- Fix GPS reception loss after 1-3 hours, caused by a bug in the GPS module software (IT430 and SE880).
- Reduce storage to a maximum of 10 routes (was 20) and 20 turnpoints per route (was 30).

V 5.03b (2020-03-12)

- Show actual and required glides greater than 50.
- Recognize Telit Jupiter SE880 GPS module.s
- Improved recovery from GPS reception loss.
- Improved protection from installing software for another device from the same family.
- Fixed bug where wrong file names could show up in SD card file lists.

V 5.03a (2019-06-07)

- Fix a bug in flight recording that could lead to the IGC file missing entries when GPS reception was bad or absent.
- Improved battery charge curves, for more accurate battery charge indication.
- New battery option: Eneloop Pro 2500 mAh rechargeable batteries.

V 5.02c (2019-03-29)

- Fix a bug in GPS date rollover handling that could lead to date being moved to 2038.
- When showing waypoints and airspace files on SD card, suppress new OS X system files.

V 5.02b (2019-03-18)

- In rare cases, the screen appears rotated by 90° after an update, and with very low contrast. Now the screen can be correctly aligned again with the key combination "Arrow right" and "Arrow down" directly after switching on, during the language confirmation.

V 5.02a (2019-03-03)

- Corrects effects of GPS date rollover, vario gives correct dates until at least 2038

V 5.01c (2019-01-15)

This update will delete all waypoints and routes from the vario. Make sure you save them to the SD card or your computer before updating.

- Vario default responsiveness was too slow, is now 3
- IGC date no longer wrong for flights where launch is between 0:00 and 0:05 UTC
- Allow routes and waypoints to be called "A" again
- Software options 02 (300 airspaces) and 05 (FAI triangle assistant) are now released for all varios
- IGC file: update date field name to correspond with 2016 IGC file specification
- Improve WGS84 distance calculation, use more precise algorithm
- Exit start cylinder stays active after start time until actual crossing has occurred

V 5.00b (2018-05-31)

- New software option 06: WGS84 distance calculation
- When software option 06 is unlocked: distance calculation switchable between FAI sphere and WGS84 ellipsoid
- NMEA GGA now includes the local difference between geoid and ellipsoid height

V 4.04e (2018-03-29)

- Data field FL: align right
- Remove Umlaut characters from German menus
- Correct optimized route distance calculation when goal is cylinder
- Fix bug where turnpoint radius was divided by 10 after vario restart
- Correct distance shown while editing race route

V 4.04d (2018-02-15)

- Fix a bug where in some cases the display became illegible after the update

V 4.04b (2018-02-02)

- Renamed "Vario settings" menu point to "Device settings"

V 4.04a (2018-01-23)

This update will delete all waypoints and routes from the vario. Make sure you save them to the SD card or your computer before updating.

- All varios start as "Flytec 6030"

- Cleaner start-up and shut-down screens
- Updated, unified texts for menus and settings throughout whole 6000 vario family
- The link the an FAF airspace file on the SD card is removed whenever airspaces are uploaded from the computer, or when airspaces are deleted through the menu
- All numeric values (e.g. cylinder radius) can be increased / decreased rapidly with the right / left arrow keys, and slower, for finer settings, with the up / down arrow keys
- Distances in routes are shown with one decimal
- Show optimized distance when entering or editing the optimized competition route
- Pressure sensor correction moved back to vario settings
- Range of vane wheel correction: 50 % to 150 %
- Range of pitot correction: 50 to 150 %
- In the IGC file, the "takeoff" and "landing" C-records are now set according to the specification

V 4.01b (2017-08-09)
- FLARM version indication: Fixed error in communication with FLARM module
- Data fields: corrected some field names
- Data field "FL (ft)" renamed to "Alt FL", now to 3 digits, in hecto-feet according to standard

V 3.38m from 10/08/2015
- Race route: Keep type (ENTER/EXIT) when turning start cylinder into regular turnpoint
- **Bug fix**: Radius of some race route turnpoints may change when vario is turned off and later turned on again
- **Known error**: When importing a configuration file from another vario, in some cases the radius of some turnpoints in an existing race route may change

V 3.38j from 30/07/2015
- Race route: When defining start cylinder, type (ENTER / EXIT) from waypoint is used
- Removed correction settings for pressure sensor from settings (Requirement for competitions)

V 3.38h from 26/7/2015
- Added boot-up test for flight memory. If the test detects problems that would lead to a program crash: Automatic export of all flights to SD card, then automatic re-initialization of flight memory.
- Entry of waypoint radius in competition routes from 0.1 to 200.0 km in steps of 0.1 km
- Waypoints in competition routes are always initialized as "ENTER"
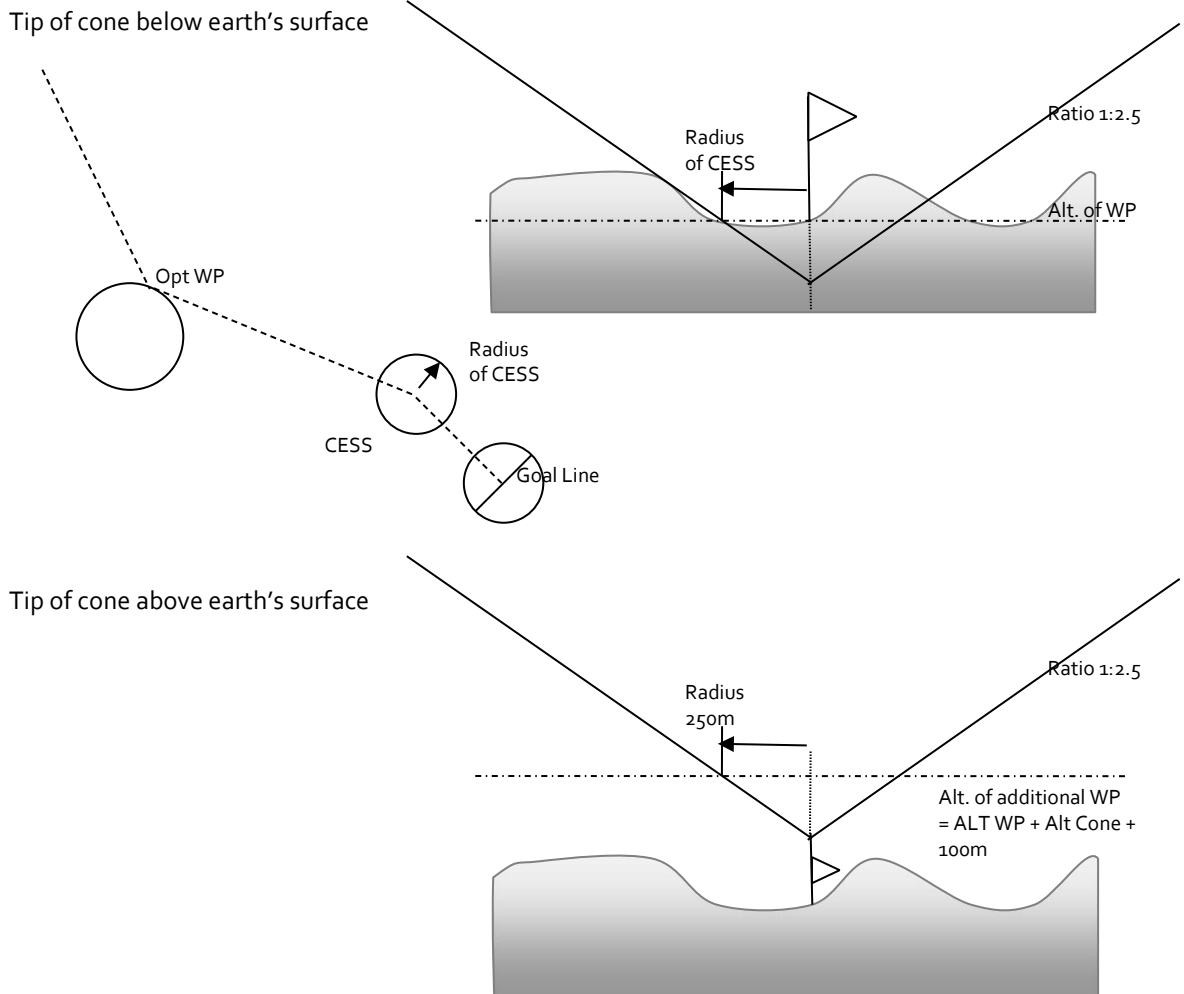
V 3.38f from 16/10/2014
- Bug Fix in start cylinder in competition route.
- **Note**: The competition route will be deleted with this firmware update.

V 3.38c from 18/09/2014
- Bug Fix in competition route. As default value always ENTER after deleting waypoints
- Bug Fix in reading back the settings from SD Card. This fixes some strange behavior in Italian texts.
- Bug Fix IGC header corrected for version number
- When recording rate is set to 1s, only the 1s IGC file is automatically saved on the SD Card. If you want to save the internal 5s recording interval, you have to do this manually in -> Main Setup Menu -> Flight Memory and Tracks -> F1 Copy to SD
- Time for the info / CTR display can now be set between 3-30s in Menu -> Main Setup Menu -> Settings -> Info / CTR Display Time.

V 3.38a from 16/01/2014

- Conical end of speed section CESS. Additional information on how to set the CESS

Tip of cone below earth's surface

Ratio 1:2.5

Radius
of CESS

Alt. of WP

Opt WP

Radius
of CESS

CESS

Goal Line

Tip of cone above earth's surface

Ratio 1:2.5

Radius
250m

Alt. of additional WP
= ALT WP + Alt Cone +
100m

- Bugfix with setting thresholds in fpm*100. The bug was that the instrument always flattened the number to the next fpm number below. This was true for near thermal tone and sinktone threshold.
- In Bluetooth Option the visible altitude A1 is now transmitted in simulation mode (instead of the A1 from the sensor like before).

V 3.37y from 20/12/2013

- New function conical End of Speed Section:
  The second last waypoint in a route can be set as Cone. The Cone is described by the radius on the altitude of the waypoint (plane surface on the altitude of the waypoint) and the ratio. (Standard 1:2.5). That means on 2.5km horizontally it rises 1000m.
  An additional User Field "Alt cone" shows the clear height above the current position up to the Cone.
  The normal route, including all L/D and distances, is calculated over the center.
  The optimized route calculates normal way points with the Opt waypoint at the radius. The Cone is calculated to the center and at the last waypoint regardless of the type (Enter or Line), also to the center.

V 3.37v from 05/12/2013

- Bugfix with the recognition oft he GPS Module IT430. Version 3.37r had a problem with GPS IT321 Modules which are soldered directly to the PCB. Problems could be that they never had GPS reception, or that they showed a fixed GPS speed or a wrong time and date or an unstable vario.

V 3.37r from 23/09/2013

- The new GPS Module IT430 will be recognized now correctly and appears in the IGF file header and also on the start screen.

V 3.37p from 18/09/2013

- With this version, we strongly recommend that the instrument should only be operated with SD Card.
- Improved plausibility check of the pointer to the next flash address. A small risk for bad tracklogs remains but it is substantially reduced. Correction or automatic clearing of the flight memory is logged onto SD card.
- The letter in the SW version is now available globally. It is written in the Start Record and appears in the IGC file.
- Introduction of a log file in the SD Card rootDirectory: Logging focuses on start and shut down of the system. Automatic corrections, error detected, memory-intensive user operations and entering the factory settings are logged with time stamp.
- Changes in the Mode menu to set the recording rate. At 1 s sampling rate auto recording on SD card is selected and the internal recording rate is set to 5 seconds (= 24 hours).
- Adjustable zoom factor for auto zoom: 0.1-1.6km, taking into account the selected units. The switch distance to the radius is adjusted according to the zoom level.
- Correction in the representation of distances in the Mode menu in the route menu: Consideration of selected units. (FAI-radius remains in m)

V 3.37i from 28/06/2013

- Additional 1 seconds recording to SD card. Adjustable under -> Main Setup Menu -> Settings -> Recording -> Additional Storage -> Yes.
- **Note**: If this option is enabled, you shouldn't remove the SD card during recording in any case, otherwise, a loss of data will occur.
- The conversion takes a long time. You have to count with about 85 seconds calculation time per hour flighttime.
- Battery monitoring in the conversion 1s with safe shutdown
- Automatic conversion after power up, if a previous calculation was not successfull
- Bluetooth reception of $ PBRTL track list and sending of the desired track
- Typos corrected FAI Triangle
- Additional plausibility check if the start date is missing and the end record determines the date.

V 3.37c from 6/05/2013

- Flight recording completely revised. This should fix the following problems:
  - "Memory Error" with wrong flights in memory (Like 18:12:00) - Wrong Date
  - Wrong flights when the battery voltage fails during the recording
- Bug fix in the waypoint recognition in a competition route, if the GPS has no valid 3D recognition

- Track and circles of the competition route highlighted (2 points wide) •   Transfer of the IGC files via Bluetooth if the Bluetooth option is installed.
- Troubleshooting when writing the IGC file to the SD card. The line ends now with <CR> <LF> and is now read properly by all programs.
- FAI Triangle Assistant as trial version in the additional software package menu. The unlock code will be provided by Flytec on request

V 3.35t from 23/11/2012

- The FLARM Radio ID will be displayed in menu -> *Main Setup menu -> Instrument Setup -> Flarm*
- The FLARM module shuts off now to safe current from the battery with the command-> *Main Setup menu -> Instrument Setup -> Flarm -> No*
- Bugfix Countdowntimer > oder < 1h
- The countdowntimer is displayed now forever. Minus before start, + after starttime
- The countdowntimer on the second last line changes now between Countdowntimer/WpName in the interval of 4sec./1sec.
- Bugfix with changing the configuration with Flychart or SD Card. Der display contrast will be adjusted to the set value just after changing.
- -> *Main Setup menu -> SD-Card -> Save Settings* allows to save the configuration data to the SD Card. The file is saved tot he directory CFG\0XXXX.cfg. The file name is the serial number of the instrument.
- With -> *Main Setup menu -> SD-Card -> Restore Settings* allows to read back the settings if the serial number matches. An error message appears when
  - the file extension is wrong
  - the instrument type 6030 doesn't match.
- The command -> *Main Setup menu -> SD-Card -> Restore Settings* allows to restore configurations from other instruments (6030 or Compeo+): If the serial number doesn't match the following data will not be overwritten:
  Pilotname, Glidertype, Glider Id, LCD-Contrast and GpsModule:
  SN, SW-Version, SW-Packages, Company (Flytec oder Br), Calibration data (absolute pressure, differential pressure and LCD-voltages and temperature correction)
- **Warning**: The following bug could not be found until now: After the command -> *Main Setup menu -> Clear/Initilize memory-> Initialize EEPROM* and the subsequent restoring of teh configuration data from the SD –Card it can happen, that the second flight recorded has a wrong date. With the following workaround this problem can be prevented: After the command
  Initialize EEPROM and restoring the configuration from the SD card or Flychart it is recommended to execute the command *Delete all flights* .

V 3.35o from 28/9/2012

- Countdown timer in the Competition route as before in hh:mm:ss on the bottom of the display, alternating with the waypoint in a 3s/2s interval. 5 minutes after the start time only the WP name remains on this line. This will be changed in the next version, so that the starttimer remains visible after start.
- Bugfix with battery type. After an Init EEPROM the wrong type of battery was stored in the EEPROM (Normally 0-> Alcaline). The default value for the Battery Type is now 2 (Golden Power).
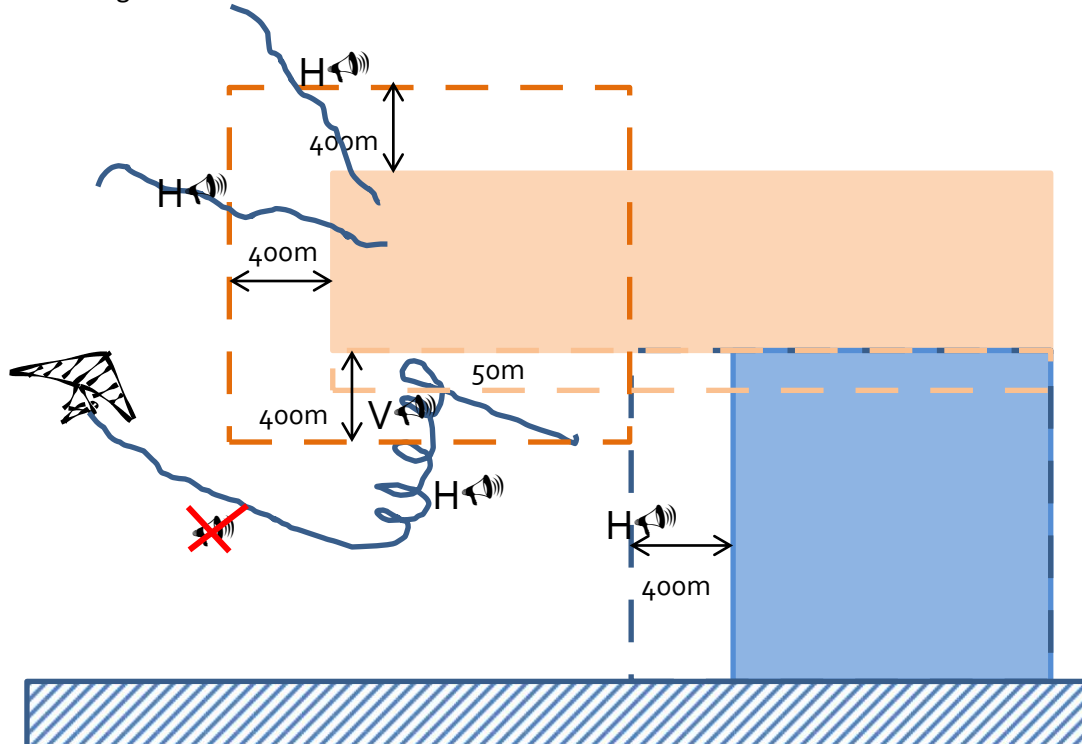
- Bugfix in the battery monitor. The battery voltage is now checked in important places outside the main loop, eg in the flight analysis page after the flight.
- Bugfix in reading the A / D converter. Now the problem should be solved with the vario peaks after the start recognition.
- The units set in the instrument settings are now also the units in the CTR info page, e.g. feet or meters for the lower or upper margin
- Expansion of the CTR-list from 3 to 5 with a different prioritization. Airspaces or obstacles that lie close together should be recognized now faster than before.
- Bug fix for flights with an incorrect date. Now the current date of the RTC is used as the time of flight detection.
- After the end of the flight and the calculation of the signature, the completed flight is stored as IGC file on the SD card.

V 3.35k from 24/7/2012

- Bugfix in time setting. From Version 3.35g on, the problem with wrong data in the IGC occurred more often.
- Bugfix with EEPROM initializing. After the firmware update it is mandatory to choose the Airspace file.

V 3.35i from 12/7/2012

- Change in 3D airspace warning: There is no acoustic warning even if you enter he area of an airspace if you are below the Lowerlevel minus the warning distance or above the UpperLevel plus the warning distance

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- Polygons must be closed now (Included in the *.faf file) by repeating the first corner point at the end. This allows to distinguish between polygons and line segments like cable cars, ropes or power lines.
- Start time of a competition route is added again at the lower information line like in older versions.

- Status On/Off in airspaces is active now (Only in *.faf files)

V 3.35g from 15/6/2012

- For details, see "SD Card and airspace V3 35 English.doc"
- 3D airspace warnings. If the audible alarm is activated, a new audible alarm sounds and a new CTR Info Page comes up. This happens when you have reached the warning distance or has approached to 50 m below the value of the low level of faf File distance.
- After firmware Update the CTR wearning is active "1" and all airspace types are activated with "Yes"
- On the Info Page CTR, a total of five CTRs can be disabled separately using the soft key F1. They disappear from the list, and are shown in dashed lines on the map for a clear identification. On the CTR Info Page, the sum of the disabled airspaces is displayed. With Softkey F2 react CTR all together can be reactivated again.
- Airspace type selection for *. faf files with extra tags. See manual
- New CTR - file selection
  In -> *Main Setup Menu -> SD card -> select CTR file* it is possible to select an *.faf airspace file stored on the SD card in the directory CTR \ FAF and to activate this airspaces. It is important to ensure that no long file names are used, the 8.3 DOS convention is mandatory.
- Display of additional information for the airspace data from Flyland Switzerland
  Choose the desired air space in the CTR Info Page and select with Ok the additional information.
- After the *.faf file can be changed in the instrument we recommend to keep the original files in an additional backup directory. e.g. CTR \ SAVE \ where all the faf files could be backed up as eg. *.SAV files.

- Semi-automatic GPS altitude adjustment A1. After switch on, the altitude A1 flashes and changes with the current GPS altitude, until A1 is set with F1 -> 1013 hPa, F2 -> GPS altitude or the arrow keys. The altitude is always set with flight recognition. Caution at the beginning the GPS altitude may differ up to 100m from the actual height. This variation depends mainly on the visibility and the position of the satellites.

V 3.34 from 14/2/2012

- Unlimited number of airspaces from the SD card. See document „CTR from SD card V334". The instrument loads autoamatically the nearest 100 airspaces from the SD card. To prepare the airspaces for the SD card, the small Windows program OpenAir2faf is needed.
- Semi automatic start recognition with the possibility to set up the thresholds. This is useful for soaring.

V 3.33g from 15/12/2011

- Near Thermal Tone: tone ratio now from 10% up to 100% (Steady tone)
- Bugfix in userfield top right. After switching off an on, it was always set to Spd. St. Zyl.
- Bugfix with keyboard initiated SMS.

V 3.33c from 5/10/2011

- Bugfix in Crosstrack error. The track for calculating the crosstrack error is always the line from center to center of the waypoints, independent if a normal competition route or an optimized competition route is active.
- Bugfix in the userfields in the map mode. After a firmware update, the default fields vario, alti1 and speed are displayed.

V 3.33 from 21/9/2011

- Near thermal tone active only if the GPS Speed is bigger than 10km/h. This overcomes the problem with the near thermal tone after landing.
- Bugfix: In an end of speed cylinder with concentric goal line, when approaching the end of speed cylinder, the optimized waypoint will be tracked dynamically now, see below.
- Default "E" for a new waypoint in a competition route.
- Autozoom in a cylinder with goal line will remain, until the goal line has been crossed.
- Autzoom near the startcylinder will only become active 30s before starttime.
- Right arrow in the map mode hides all not used waypoints in a route. This setting will remain now, even with auto-zoom and when you switch to the Vario screen. A new brief press on the right arrow key displays the waypoints again. Turning off the device clears this setting and it will again show all waypoints.
- The bug with entering the airspaces manually could not be found until now.
- Amendment: From version 3.32m on, all SD card including SD HC Card with capacities over 2GB can be used.

V 3.32m from 8/8/2011

- Bugfix with copying routes into the competition route. The attributes will be saved now into the EEPROM.
- • Known Issues (Will soon be resolved):

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  - Optimized route: In an end of speed cylinder with concentric goal line, when approaching the end of speed cylinder, the optimized waypoint will be not dynamically tracked
  - If the last waypoint has been defined as a line, this attribute will remain active, even if you delete all route points
  - If you enter manually an air space, and leave the input menu with ESC, it is possible that the airspace database will be corrupted. The problem ist then, that the display freezes as soon the instrument has GPS reception,. Solution: Main setup menu > Clear/initialize memory -> Init CTRs the CTR memeory space will be freshly formatted. Then you can transfer the airspaces again with Flychart to the device

V 3.32l from 29/7/2011

- Bugfix with Startcyl. ENTER in opt.C-Route
- opt. und normale C-Route are similar during entry of the route. With longpress "Route" and F1 the mode can be chosen before start.
- Userfields in Mapmodus for everybody. With the left arrow key the field can be chosen. With the up/down arrow the field can be selected.
- Userfields in Autozoom Modus can be altered in Menu -> Main Setup Menu -> Settings -> Auto Zoom C-Route -> left, middle, right
- The default values Enter and 400m will be set if a route is copied into the cometition route.
- Bugfix in angle calculation in the competition route.
- Default values for the settable Userfields after a firmware update.

V 3.32h from 13/7/2011

- Opt. C-Route with new algorithm and additional acoustic start time elapsed
- No additonal attributes (E, X, L) with normal competition route. The normal competition route should react like before.
- No reserved characters (!$*,\^~) according to FAI in text fields
- No startime in the status row
- Autozoom 30s before start
- Userfield Speed to start SpdStCyl
- XTE is calculated to the track from center to center as before.
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V 3.32e from 1/04/2011

- Competition route will be automatically deactivated after the last waypoint (Line or radius) is reached.
- BugFix in near thermal tone
- Additional date field in $FLYSEN
- Acoustic warning (high pitch - low pitch - low pitch) if FLARM userfield is incremented by one. The instrument cannot distinguish if the the new member was already recognized before. The sound sounds also when the same FLARM partner faded away is is recognized from new. In the info page there is a short warning text.
- FLARM warning can be switched on and off in the FLARM menu -> *Main Setup Menu -> Instrument Setup -> Flarm -> Acoustic Warning -> Yes*
- FLARM Hardware (HW) und Softwareversion (SW) is visible in the lower part of the menu -> *Main Setup Menu -> Instrument Setup -> Flarm*

V 3.32b from 15/03/2011

- Near thermal tone pulswidth adjustable in -> Main Setup Menu -> Settings -> Acoustic vario -> Near thermal tone -> Cycle 10-50%. 10% is a short beep with the same frequency as the normal lift tone. 50% is similar to the normal vario tone.
- Bugfix in Autozoom. If zoomed out from the maximum 0.1km, it remains on this zoom level. Every normal waypoint can be defined as Enter or Exit. Default is Enter. This solves the problem with three concentric waypoints on the same position where first the inner circle has to be reached, then the outer circle has to be leaved and then the second inner circle.

V 3.32a from 10/02/2011

- Bugfix in goal line. In case of roughly north south oriented goallines it could happen, that the WP-reached sound was given too early e.g. before the goal line was reached.

V 3.32 from 27/01/2011

- Automatic zoom near an waypoint for better orientation with a scale of 0.1km. **Attention**: In this zoom level only the route, waypoints and the track are visible. No airspaces are displayed!
- New menu topic -> user settings:
  - Full autozoom from the main page or in the map page, - map only. Autozoom only in the map page - Off: No autozoom.
- A new optimized waypoint will be calculated if the equation (Crosstrack error) divided by (Distance to radius) bigger than 0.2 is true. The shortest recalculation cycle possible is 15s.
- Improved SMS function via DUN to a mobile phone.

V 3.31h from 22/12/2010

- Optimized competition route. See separate description: "Optimized Competition Route"
- Bugfix. Scale in the map screen corrected
- NMEA RMC sentence two extra commas added for magnetic variation, but without content
- New NMEA sentence $FLYSEN: See separate definition in "Bluetooth and SMS Setup"
- suppression of the peak values for the log book for 10 seconds after the flight recognition. This is a workaround for the error with the Vario - peak at the flight recognition. The error itself could not be found, but with this change, the peak values are not entered in the logbook.
- Course-up display in the menu -> Setup Main Menu -> Settings -> Map orientation. The orientation of the map is acurate to one degree when the new calculation was invoked. The direction of the little arrow for displaying the track is approximated and in 45 ° increments. The course up display is calculated every 30 seconds, or if the track is running out of the picture, or after zoom or after a brief press of the right arrow button in map mode.
- Near tone thermal. -> Main Menu Setup -> User Settings -> variometer acoustics -> Near thermal threshold. Tis is a tone with changing pitch depending on the vario. The continuous tone with a volume one level lower than the normal vario sound can be heard between this thermal threshold and the rising acoustic threshold and if a flight recording is active.
- New User Field "Speed to startcylinder". This field shows values when the start time is negative, and if the calculated optimum speed is less than 200km/h. Otherwise two strokes "--" are displayed.

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V 3.30y from 28/7/2010

- GPS initialisation changed due to new GPS module lot.

V 3.30t from 1/7/2010

- The last waypoint in a competition route will be interpreted as goal with possible goal line. After finishing the route, the recording rate in this last waypoint is 1 second to improve race times in case of goal lines.

V 3.30r from 14/6/2010

- FlyLink set to 8Hz
- FlyLink change command for vario output 10 ms increment for duration

V 3.30p from 4/6/2010

- Bugfix rare freezing during Bluetooth NMEA Output
- Bugfix in XML file for waypoints and routes. <\name> und <\desc> changed
- Output of special NMEA string on UART 4 für special purposes.

V 3.30o vom 12/5/2010

- Flarm Userfield shows „- -„ when FLARM disabled
- Bugfix reading *.gpx Data from GPSDUMP and CompeGPS. Name and description from Flychart are different than in GPSDump and CompeGPS.
- Wps and Routen can be strored as 6030_1.gpx, 6030_2.gpx….
- „no card" warning during storage of IGC files on SD Card if no card is present.

V 3.30m from 14/4/2010

- New Menu SD-Card
- Export of flights on SD Card. The SD Card must be formatted with FAT or FAT 16. Therefore maximum size is 2GB.
- Export and import of waypoints and routes on SD card in format *.gpx.

V 3.30j from 23/3/2010

- New FLARM menu with FLARM on/Off and programming mode (transpüarent mode)
- New release code generator
- Bugfix rare freezing of the display and keyboard functions in FLARM mode.

V 3.30b from 24/11/09

- New SW package FLARM added. This needs additional Hardware.
- New userfield FLARM: It shows the number of received FLARM instruments nearby. The reception of another FLARM means not a critical situation.

V 3.30 from 11/11/09

- New handling of the compass rose.
  Empty compass rose with active bearing arrow showing towards up direction in case of no GPS reception. The bearing arrow should show, that a waypoint or route is active.
  Compass rose north up and active bearing also north up in case of GPS speed below 3 km/h.
- Faster recognition of nearby CTRs in case that the instrument was switched off and on in the same region.

V 3.29o from 21/10/09

- Bugfix EEPROM write cycles. The number of write cycles is reduced now by factors to optimize the EEPROM access. This should reduce problems with the so called "memory problem".
- Bugfix CTR recognition: CTRs which have been far away were in the list with distance 0.
- Acoustic CTR Alarm on/off -> Main Setup Menu -> Settings -> CTR Alarm.

- New info page with nearest CTR's. This page will be invoked with the ⓘ key and shows the three next CTR's. The next CTR is checked every second, the second every 20 seconds and the third every 40 seconds. All other CTR are checked according to the CTR list, every second one CTR.
- The CTR alarm in the info line at the bottom is reduced to CTR 0.00. The name and the info line of this CTR is not displayed anymore, because this information is visible on the new info page.
- If the SMS is active and a valid connection via Bluetooth to the mobile phone network is established, function key F1 is „Send SMS". With this function it is possible to send an SMS manually e.g. to inform someone else where the pilot has landed.
- GPS type is displayed in the Startup screen
- Automatic Switch off after 30 minutes with no GPS reception or 30 minutes after end recording if the flight analysis page remains.
- Bugfix in flight analysis. A1 and A2 were wrong, if part of the flight was below sea level.
- Bugfix in flight recognition. An erronous jump in altitude gave excess numbers of vario in the flight analysis. It is not clear if this change eliminates the problem completly. Please give feedback if you see excess vario numbers in the flight analysis again.

V 3.29d from 3/8/09
- Fastrax Module running. Automatic recognition of GH-81 or Fastrax
- FLARM Debugversion working
- Bugfixes SMS via Bluetooth

V 3.28y from 01/7/09
- Fastrax with SiRF protocol. FLARM Timing not yet implemented
- Bugfix freeze after CTR and Bluetooth settings

V 3.28w from 30/4/09
- Stable version with Fastrax, Fastrax remains switched on in Menu •   Bugfix Scale in Map-Mode in the flight analysis, • Recording intervall 1s possible again.

V 3.28p from 23/03/2009
- Setting of Smoothing und Dynamic Index of the GPS-Module in Factory Settings
- Bugfix vario jump in case of start recording
- First Flylink functions for internal tests
- Passive Bluetooth Pairing
- Bugfix in route entry
- Acoustic CTR approach signal
- Displaykontrast +-1V for new LCD types (Factory settings) • map scale units changed to even numbers
- Unit of sink tone threshold changed.
- New Userfield "QNH inHg".
- Sinkalarm up to -12.6m/s .
- After the last waypoint in a competition route, the last waypoint remains active (goal line function)

V 3.28k from 23.10.2008

- New accutype Golden Power 2100 settable in the instrument settings
- Bugfix Priority in IGC file with real time clock settings (time jumps in IGC file)
- Bugfix Reset- Sequence in differential pressure sensor (pitot sensor)
- New sentences in communication protocol : waypoint attribute, Comp-Route radii, read out of flight analysis page values. See document "Interface definition 061008.pdf"
- Battery monitoring in Menumode
- Bugfix in route setting (Xxxx Route)
- Universal LCd temperature parameters in Factory settings
- WP to WP-Distance in route menu visible.
- New Userfield: CylArrival

This new userfield "Cyl Arrival" shows the predicted time difference of arrival at the startcylinder.

$$\Box t_{\mathrm{Predicttocyl}} = t_{Start} - t_{actual} - \frac{Dist_{Startcyl}}{BGSpeed}$$ During lift, the time is calculated with the best glide speed.

$$\Box t_{\mathrm{Predicttocyl}} = t_{Start} - t_{actual} - \frac{Dist_{Startcyl}}{GNDSpeed}$$ During glide to the startcylinder, the time will be

calculated with the actual GND speed.

Before start time, this time will count up from minus (black on white). As soon as the pilot can leave his actual position, the value will cross zero, become positive and turn into white on black background. During glide to the startcylinder this number can become positive or negative, depending on the actual speed. But it should be around zero.

If a pilot decides to thermal longer and to fly with higher speed to the startcylinder, he can wait a certain time, then leave the thermal. During glide he must have a look onto the starttime and the time to startcylinder. Time to startcylinder should be around zero.

This field is only possible for the startcylinder, because it needs the starttime.

V 3.28a from 7.8.2008 ·

New Userfield Alt GPS

V 3.28 from 14.7.2008

- Storing of Zoomfactor
- Bugfix Starttime near the UTC date line. Calculation only with local time.
- Sart screen with language choose
- Display of userfield Race Start changed. Normal display before start. Inverse display after Start.
- Corrected userfield names RaceStart und GLZ SollWP (Only German)
- Order of the userfields during readout changed. □ Backwards compatibility for Flychart.
- NMEA via Bluetooth. $GPGGA Sentence alternating with $GPRMC. Simplifications in GGA: DOP always 3.5, Ellipsoidal separation always 0.0
- New Userfield Distance to startcylinder
- New MC indicator and Page indicator with bigger font.
- New Default Settings for Userfields

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- Bugfix with CTR -Radii: of 65 km or more, plausibility check of the received message from the PC
- Bugfix. Bluetooth module draws too much current if disabled
- Averaging of the battery level (10s)
- No Recording-Start, if manual recording and menu mode.
- "CONF"- command from Flychart ignored if recording is active.

V 3.27a from 21.5.2008

- New Userfield Time to Takeoff "StartTime". +/-60 min with inverted display

V 3.26 from 16.5.2008

- Bugfix: Problem with invalid B-records at the end of the IGC File solved. Improved handling of start/stop/ signature calculation. .
- Hungarian language added
- Bugfix GPS altitude below sea level.

V 3.25l from 9.5.2008

- Bugfix: Menu topic removed, which could cause a freezing: Main Setup Menu -> Settings -> Speed -> Pitot Offset

V 3.25i from 1.5.2008

- Improved Batterie Check
- Bug fix: Improved initialising sequence of the A/D converter. Solves the problem with wrong altitudes during instrument startup.
- No flight recognition with only the pitot speed. Flight recognition is only with possible with more than 10km/h GPS Speed for at least 60s or at least 30m Altitude difference within 60s.
- Manual flight recording (Always On) delayed by 2 minutes. Therefore it is possible to make adjustments during 2 minutes after switch on.

V 3.25c from 15.2.2008

- Bugfix in Alt a. Goal. In spezial occasion it could come to an overrun in the calculation
- Starttime near the UTC date border. With an additional check it would be ensured that the start timer is within +- 12h

V 3.25a from 28.1.2008

- Bugfix in Simulation. Ind. Speed instead of true Speed in Simulation
- Bugfix. 2 „empty" keypresses in 5 Userfields

V 3.25 from 11.1.2008

- Message in case of wrong software download.
- Small changes in menu text.

V 3.24 from 9.1.2008

- Vario Lift threshold again in Menu Settings -> Acoustic
- The lift threshold in the Factory settings is now an offset to the Vario lift threshold.

V 3.23d from 7.1.2008

- 4 Userfields with bigger fonts
- Bigger Arrows in compass

V 3.23c from 30.11.2007

- 7 Userfields with big letters
- Default Settings acoustic filters to 0 (Old 5020 setting).

- Bugfix in SMS-Bluetooth

V 3.23 from Nov. 30.2007

- Filter setting in 5 steps. Detail settings are possible only in factory settings or with Flychart .
- Set waypoint of the actual position with long press WP and then Add Wayp. This is possible in every condition (During flying, in a Route in normal mode)
- Battery threshold für segment 8 reduced.
- Flight date derived from the first valid fix in the IGC file.
- GNSS Alti set to 0 in case of 2D fixes
- Baro Alti is based on 1013.25hPa
- Alt1/Mrk doesn't save a Waypoint in the waypoint list anymore. Instead it sets an E record in the IGC file
- Bug corrected in input of south coordinates
- Units as infor in speed in simulation.
- SMS-Bluetooth function activated
- Reset of the BT-Module after pairing
- Bugfix in drawing circles of CTR's in the map mode.
- Polare table increased to 250 km/h •   Additional characters in Info removed.
- User pressure offset for the correction of the pressure sensor

V 3.21 vom 28.9.2007

- GPS-speed average instead of actual value for termination of the flight recording
- BugFix of ODAC register (internalyy)
- Info key in the map mode brings up a new page with the full information of the next 3 CTR's
- Right key in th emap mode toggles not active waypoints in the map mode on or off
- Bug Fix missing segments in the vario dial
- Bug Fix Black background in userfield Alt. A WP during climb.

V 3.20 vom 24.9.2007

- Bugfix. The instrument could freeze if the flight memeory was more then 2/3 full and a competition route was active.

V 3.19 vom 3.9.2007

- Userfields order changed: **Attention**: Is is mandatory to use only Flychart 4.52.19 or higher after update to Version 3.19
- Wait fro switch off prolonged to 7s
- No Beep during switch off
- Switch on time and Battery check time prolonged by another 2s. Serial Numer in a bigger font to ease the reading for official observers
- Plus / Minus sign in map vario smaller
- Speed offset (to correct influence of the slower speed unde rthe wing) like in the 5030
- Additional userfiled A1 in ft,
- Daytypical climb in grey instead black
- Sound volume with double beep to drain internal capacitor

- Battery bar bank 2 in black

V 3.18 vom 23.8.07

- Validity check of waypoints during transmission from PC. Invalid signs will be converted to spaces
- The CTR's will not be deletes anymore with the command "Del all WP and routes"
- Calibration choices moved to factory settings • Bugfix with black backgrounds of userfield titles
- Switch on delayed.

V 3.17 Release Version Testunits

All important functions implemented. Release version for first test pilots

V 3.07 vom 5.6.07

1. Std 00 in B-Record
2. Opt,. SW-Pachkages
3. CTR increased to 300
4. Bugfix weird textes in opt. SW-Package
5. TAS missing in IGC
6. SpeedDiff wrong
7. Timing switch off changed, but there ar still some stripes visible after switch off
13. Acoustic, 25% changed, Volume change depending on speed 21
Key Info