# Version 9.07

**New features:**
- New start method for task: "anywhere in start sector"
- Added "Wait after timer" for pilot event start procedure

**Changes:**
- HAWK: Changed default variance
- HAWK: Renamed HAWK parameters
- Increased fontsize in thermal symbol
- Auto size bug marker on speed and altitude indicators
- Updated translations
- Cosmetic changes

**Bug fixes:**
- Fixed sorting bug in Task edit dialog
- LXNAV Connect: File synchronization fixes
- Wi-Fi: Fixed "new FLARM update" bug
- Rear seat: Fixed HAWK needle
- Fixed OLC claim form issue
- Fixed start inside observation zone
- Fixed wind data recording when using HAWK
- Fixed AHRS not visible in some configurations
- Fixed airspace warnings vertical distance
- Fixed Wi-Fi icons
- Raster maps drawing bugfix
- Map background color bugfix
- Map drawing fixes/improvements
- Fixed missing AHRS setup dialog on ultra-light LXxxx devices

# Version 9.05

**New features:**
- Added HAWK netto track and thermal color
- Added HAWK netto for flight track to thermal assistant page
- HAWK: Demo period increased to 100 days
- HAWK reset also resets wind info
- Added manual and automatic HAWK reset function (remote stick, menu)
- Added undirected airfield icon
- Added release notes to About
- Remote stick: added "toggle audio source" function key option
- Added "Vario" option to speed to fly sound modes
- Added task armed comment to IGC file

**Changes:**
- PowerFLARM: Updated high data rate licence
- Radar sym.: Default orientation changed to "Track"
- Updated translations
- Increased AHRS system pitch offset to +/-20°
- Waypoint selection method can now be changed with KEYDOT on remote
- Ballast and MacCready are now reset by default when flight ends
- Increased time between two water ballast warnings

- Various user interface improvements
- LXNAV Connect: Decreased size of the QR code

**Bug fixes:**
- Checklists: Fixed button handling bug when no item is selected
- Minor waypoint editing fixes
- Radar sym.: Fixed drawing when on the ground and direction data is unavailable
- Task: Fixed a problem on devices with a touchscreen
- FLARM update: increased timeout
- NMEA timeout fix
- Fixed FLARM target info when no heading nor track info is available
- Fixes for HAWK netto logging
- Fixed thermal detection based on circling angle
- Fixed premature "low battery warning" at startup
- GPS initialization fixes
- GPS NMEA protocol fix
- Fixed a problem with reading of external FLARM data
- Fixed factory reset for demo files
- LX8000 T20HF: hardware generation detection bugfix
- Remote stick: Fixed a problem with remote button actions outside navigational pages
- Workaround for non-compliant external FLARM sources
- Fixed radar target drawing when target is offscreen
- Fixed logging of HAWK netto value

# Version 9.02

**New features:**
- FLAPS: Added letter C

**Bug fixes:**
- LX8000 T20HF: hardware generation detection bugfix
- HAWK: Fixed a problem with GPS rate, when HAWK is enabled/disabled
- History symbol: Fixed transparency bug

# Version 9.01

**New features:**
- Wi-Fi: Added buttons to switch the updates channel (update to beta/stable)
- Weight & balance: Added dump rate settings for wing tips
- Bridge: Added support for Schleicher water system

**Changes:**
- LC: Show weather data in Pan mode (GEN3+ only)
- LC: Removed cache testing page as it caused too much confusion and misuse

- Rear seat: Wind info is now received from front seat
- Wind is reset on soaring begin event
- Vario: Added SC needle when using HAWK
- HAWK: Corrected colors for HAWK wind
- HAWK: Now also available on systems with V9 + I8/I80
- HAWK: Added SC needle option when using HAWK
- HAWK: Changed HAWK Wind variance input precision
- Data symbol: Allow multiline waypoint description

**Bug fixes:**
- Wi-Fi: Fixed "new update" bug when classic FLARM is installed
- Various UI fixes
- Fixed rear seat application crash
- FLARM: Fixed invalid message bug after obstacle upload
- Voltage reading fix
- User was unable to hide units on WindX data symbol
- LC: Fixed app crash when uploading profile
- LC: Various weather tile download fixes and improvements
- LC: fixed "Waiting for internet" message bug (doesn't upload while airborne)
- Fixed sending of AAT zones to rear/front seat with moved point on the edge of the zone
- "No GPS data" fix for some devices without FLARM
- Fixed Th.Dist and Th.Path calculation
- FLARM: Fixed external PowerFLARM detection & update
- AHRS: Allow leveling at all times
- AHRS, HAWK bugfix: AHRS OFF didn't work when HAWK demo was enabled
- HAWK demo: Fixed "no AHRS" when flying bug
- XML info: fixed HAWK expire date info
- Map: icon fixes

# Version 9.00
**New features:**
- Added HAWK support
- Tasks: New observation zone templates (FAI Sailplane Grand Prix, FAI Annex A, FAI Badges & Records)
- Added pilot event forwarding to other seat (also shows an event message)
- LXNAV Connect: Added WeGlide service
- LXNAV Connect: Added selectable automatic flight upload to any supporting service and/or predefined email

- Wi-Fi: Wi-Fi credentials can now be shared among profiles (saved on the device instead of in user's profile)
- Wi-Fi: Added (Power)FLARM firmware update via Wi-Fi
- Data symbol: Added average glide ratio of current flight
- Data symbols: Added HAWK specific data symbols: netto avg., vario avg., side slip, angle of attack
- Data symbols: Added GS-TAS, thermal distance, thermal path distance
- Data symbol: nearest waypoint/airport now also displays the arrival altitude
- Thermal symbol: Additional thermal symbol properties
- Thermal symbol: Added straight statistics
- Thermal history symbol now also shows MacCready value
- Map: Added "pan mode" text size setting, radar map orientation setting
- Vario symbol: Added HAWK values
- Legend symbol: text size and color are now customizable
- Sideview symbol: Added safety MacCready line, zoom is now synced with map
- FLARM symbol: Added triangle symbol for unknown aircraft types, airship symbol for airship aircraft type (was shown as a balloon in previous versions)
- FLARM symbol: reduced the size of unknown FLARM object
- Wind: Added HAWK wind setting
- Wind dialog: added ability to manually set the wind speed and direction using the touchscreen
- Glider: Added 20m Multi-Seat class
- Weight & balance: Added 2 user defined weights & arms
- Weight & balance: Added total weight value to CG envelope graph
- Weight & balance: Added labels for current weight
- Vario settings: Added "thermal ping angle" setting
- Vario settings: Added HAWK settings and navbox selection for V8x devices
- Flap settings: Added letter N to list of possible flap tags
- FLARM: Added FLARM type info, region info
- FLARM: Added traffic advisory warning
- FLARM: Competition ID is now transferred from main unit to rear unit & vario (no need to install FLARMnet files on rear seat or vario)
- Remote stick: Added "toggle airspace visibility" function

**Changes:**
- LXNAV Connect: Forecast time offset now allows an offset of up to 8 hours
- LXNAV Connect: Faster update of any changes on the service portal
- LXNAV Connect: Improved file sync handling, changed (non-storage) service file syncing from once per day to once per app start

- Flight statistics are now calculated from soaring begin event, except for duration (it remains from take off)
- Task: Changed task PEV start procedure according to the latest sporting code
- Gear warning (on flight start) is now repeated 2 times
- Show confirmation message before dismissing an altitude warning
- Task move: Prevent accidental "confirm" when moving task point
- Improved task editing on LX8030
- SC needle is no longer selectable, if HAWK is enabled
- Radio: increased the last used frequencies list to 10 entries
- Logbook: can now be displayed & exported in UTC or in local time
- Logbook: you can now select multiple flights for sending, save or deletion
- About: added lists of installed and compatible options
- Waypoints: Renamed "History" to "Favorites", selected task points are now added to favorites
- Compass: reduce initial compass detection delay
- Touchscreen: Reduced keyboard sensitivity for repeated keys
- FLARM protocol update
- Weight & balance: Show warning messages for both balast states (empty and full)
- Weight & balance: Gallons are now shown as decimals, corrected value increments
- Weight & balance: Empty weight is now copied from glider list or from external polar file
- Weight & balance: Additional balast checks
- Weight & balance: Allow entering empty glider weight without arm
- Admin mode: allow temporary airspace disabling but not saving, if not allowed to edit airspaces
- Admin mode: Control advanced map settings
- PAN mode: Selection button is now mapped to INFO instead of GOTO
- Touchscreen, task edit: Map now responds to touch
- LX8030/LX8040, Wi-Fi: Offer to update rear seat via USB drive (if SD reader is not installed)

**Bug fixes:**
- LXNAV Connect: Fixed a bug that caused that flight wasn't auto-uploaded to SoaringSpot (if auto upload was turned on)
- LXNAV Connect: Flight upload to SoaringSpot (honoring auto-upload setting) now depends on where the loaded task is loaded from
- LXNAV Connect: Fixed weather layer drawing around New Zealand
- LXNAV Connect: OLC glider autoselect bug fix
- Task: Fixed total distance calculation when start is a cylinder
- Task: Fixed navigation to nearest on finish point

- CUPX files: Fixed a bug when saving a very large CUPX file
- CUB files: Airspace class parsing fix
- Weight & balance: Fixed synchronization between front and rear seat for: McCready, ballast, bugs, tail water
- Weight & balance: Fixed wing tips water limit
- Weight & balance: Fixed overwrite of glider info file when saving on external media
- Weight & balance: Fixed update of all fuel weights after fuel type change
- Various UI fixes: network settings, active profile title, notifications, new task message
- GPS sym.: Autosize text (fixes display issue on LX8030)
- Gauge sym.: Fixed pointer color save
- History sym.: Fixed out of range handling
- Data sym.: Corrected ballast value rounding
- Radar sym.: Fixed saving color settings
- Thermal sym.: Various drawing fixes and improvements
- Flap sym.: Fixed a crash that could happen if flaps are not configured
- Navigation page: Fixed image ghosting that occured when background color was not solid
- Map: Fixed current track drawing bug
- Map: "per page" settings did not save after pressing copy to all
- Map: Fixed map redraw issue when moving fast on a zoomed-in map with weather layers turned on
- Stats mode: Fixed a crash on stats reset
- AHRS: Fixed endless "AHRS aligning" message
- Transponder: Corrected flight level indication
- Task edit: Fixed selection of current waypoint when switching between list and filter view in Task Edit dialog
- Workaround for Naviter's Oudie: prevent spurious switching to internal GPS (can still happen in the first 5 minutes)
- PMU: fixed hardware error reporting for rear seat & simple devices
- Profile: Fixed a bug that could cause a crash when using profiles without a units section
- RS485: Fixed timeout for big data
- Digital inputs: Fixed a bug when no vario is connected
- Fixed FLARMnet database reset bug
- Voice: Fixed FLARM horizontal distance phrase when using kilometers. Distances below 1km are now spoken in meters.
- Fixed repeated FLARM warnings for same targets
- Bugfix: Update current Flarm aliases after loading new Flarm ID database
- Fixed Flarm targets disappearing bug
- FLARM symbol: display correct symbol for balloon, airship and uav aircraft

- FLARM: PLFAA/traffic info bug fix

## Version 8.01

**New features:**
- Wi-Fi: added automatic FLARMnet + OGN database update
- Wi-Fi: added manual wifi password sharing between front and rear seats
- Wi-Fi: added automatic Wi-Fi credentials sharing setting to rear seat
- Hardware: added FES data forwarding to rear seat
- Near mode: added REPORT function
- Radio Bridge: added nearest frequency list
- Weight and balance: added setting to fill/dump main ballast tank first
- Weight and balance: added main tank limit also to "DUMP" dialog
- Weight and balance: added weight limits
- Task: added task sorting function
- Apt/Wp/Tsk point selection: added touchscreen support
- Apt/Wp/Tsk point selection: added keyboard selection via reduced character set
- Flarm Traffic: added "add marker" at FLARM object position function
- Remote stick: added water "DUMP" function
- Logbook.txt: Added used kWh info Logbook recovery

**Changes:**
- Weather: live layer now applies "freeze frame time" to the latest received frame instead of the "current" frame
- SkySight: improved rasterization
- Map: scale map labels according to the importance
- Map: changed powered aircraft radar object icon
- Map: improved airspace drawing when zooming out
- DataSym: improved "energy used" data symbol
- DataSym: nearest point has settable units
- DataSym: nearest airspace zone now shows the frequency in the title
- Automatically clear all marker points when starting a fresh flight
- Flaps: if flaps pointer is out of sight arrows are drawn towards it
- Remote stick, Airspace warning messages: button change from DOT to ENTER
- FLARM settings now show info message while acquiring data
- DAQ data and configuration are now displayed on rear seat
- Increased maximum electrical engine reference voltage
- Compass calibration: indicate rotation direction in user calibration
- Speed improvements
- User interface fixes and improvements

**Bug fixes:**

- Map: fixed map redraw when moving fast (manifested itself as black area at corners)
- Map: fixed FAI rotate bug when per page settings were used
- Map: fixed drawing radar object path when a radar object is located outside of the visible area
- Map: fixed drawing of radar objects
- Map: fixed map elements copying (some elements weren't copied)
- Thermal symbol: invalid value bugfix
- FLARM: settings bug fix (fixed "no tracking" turning off bug)
- FLARM: fixed compatibility with PowerFLARM 7.01 beta update
- Wi-Fi: force DHCP when sharing credentials
- Wi-Fi: fixed "FORGET network" action
- Touchscreen: fixed an user interface bug when message and keyboard are displayed at the same time
- FlightViewer: crash fix
- Task load: ensure "Auto Next" setting is disabled when the task is AAT
- Task: fixed rare "task move" crash
- Compass: disable compass wind calculation & heading if it's not completely calibrated
- Remote stick: prevent triggering non-available function
- Prevent multiple vario inputs of the same type
- Fixed screenshot function (via remote) when in a dialog

## Version 8.0
**New features:**
- Added advanced Weight and balance computation system



- Added data symbol: "alt diff 150'"
- Task load: added sorting by distance to start point

- Added volumes dialog on rear seat devices (All volumes can now be changed on rear seat devices)
- Altitude tape: added target elevation marker
- Map settings: added COPY TO ALL functionality for Graphics/Map settings
- Added set frequency button to Flarm Traffic dialog
- Airspace warnings: added button that sets the airspace frequency on the radio
- Warnings: added water dump warning when landing
- Warnings: added "1h before sunset at current position" and "1h before sunset at target point" warnings
- Warnings: added 30min, 15min, 5min sunset (at target) warnings (shown only if more than 15km away from the target)
- Added 13.5m competition class
- Added QNH data symbol type
- Added Compass installation check
- Added touch scrolling in logbook
- Added new digital input type: Event marker
- Added PGRMZ nmea output (required for FlarmView) on rear seat devices

**Changes:**
- Polar and Glider: complete redesign
- Polar and Glider: glider settings are now stored in the glider
- Polar and Glider: added loading and saving of presets
- Re-designed volumes dialog
- SkySight: Greatly improved layer rasterization
- LXNAV Connect: Allow sending logbook along with flights
- Improved button visibility on light backgrounds
- Changed airspace altitude display and units
- New Compass calibration procedure
- Night mode: switch to night mode before showing night mode confirmation countdown
- Improved drawing of thermals
- Improved NOTAM area handling
- Improved touch-scrolling on lists
- Various keyboard improvements
- Increased repeat delay for water warning while landing
- Removed deprecated overload option for glider load
- Polar to Weight and balance system transition: user is asked to migrate old polar settings to the new gliderset system (no longer saved in the user's profile)
- Weight & balance: empty weight and arm must be re-entered after loading from a file (safety check)
- Takeoff baseline increased to 180s
- Improved internal FLARM handling

**Bug fixes:**
- Speeds dialog fix: allow setting Va, Vfe independently
- Fixed Horizontal flaps tape drawing bugs
- SkySight: fixed color palette bug when changing active prediction layer
- Fixed a bug where SpeedSym wasn't updated (until a restart) after changes in the Setup
- Fixed a rare bug that caused the zoom level to be stuck

- Fixed a bug that caused pan mode to remain active after switching to another mode
- Fixed invalid thermal mode angle
- Fixed units rounding in spin elements (fixed obs. zone turn point radius issue)
- Various user interface bug fixes
- Profile: Prevent removal of non-supported elements from profile when it's used on older hardware variants
- Fixed a bug that sometimes caused Flarm objects to blink
- Traffic View: Fixed duplicate FLARM IDs
- Flarm settings bugfix: "No track" flag wasn't loaded from profile
- Bugfix: set FLARM settings from profile after manual FLARM power on
- Fixed a bug where NMEA output was sent out to incorrect port on rear seat GEN4 devices
- Fixed GPGGA and GPRMC negative lat and lon output
- Fixed a bug where spaces left or right in the name of a WIFI network (fi. " My phone ") were ignored and subsequently device did not connect automatically to the network
- Fixed a bug that caused the profile to be disconnected from LXNAV Connect on the rear seat

# Version 7.13
**Bug fixes:**
- Fixed invalid layout of "Polars" and "Flaps" dialogs

# Version 7.12
**Bug fixes:**
- Fixed airspace dismiss bug (introduced in v7.11)
- Fixed LX9000 portrait user interface layout bug

# Version 7.11
**New features:**
- Near list: added sorting by required E
- NOTAM: Added VIEW button to NOTAM airspace warning
- DataSym: Added live wind data
- Flaps: Added SC flap switch option
- LXNAV Connect, OLC: added copilot birthday to Flight Recorder settings; copilot birthday is automatically entered in OLC claim form, if copilot name matches the one in the OLC claim form

**Changes:**
- FLARM: Competition mode is now automatically turned off upon landing
- Map settings: When editing page specific map settings global settings are disabled
- Profile selection: added safety altitude, MacCready offset info and other info
- Logger: Updated HF records
- LXNAV Connect, OLC: Improved date input
- LXNAV Connect, SkySight: removed layer filtering
- LXNAV Connect, OLC: Offer to move copilot info to commentary section when trying to claim without a known birth date

**Bug fixes:**
- Fixed water dumping message bug
- Navsym "Battery voltage": Fixed decimals
- Map: Fixed a problem with zoom to target
- Map: Fixed map handling near 180° longitude (New Zealand)
- Added invalid thermal mode switch angle check
- Fixed usage of page specific map settings (Radar, Wind, Data symbols)
- Fixed duplicate FLARM IDs in Flarm Traffic dialog
- PowerFLARM/ADS-B: Fixed airplane symbol for large passenger airplanes
- Minor user interface fixes
- LXNAV Connect, Profiles: Upload & sync fix
- LXNAV Connect: Fixed email validation bug when editing using touchscreen

# Version 7.10

**New features:**
- Remote stick: Added "weather" action – allows for quick weather layer selection
- Remote stick: Added "volumes" action
- Added "hide overlap" setting to "Waypoints and Airports" (Waypoint decluttering)
- Added data symbol OLC speed (total)
- Added data symbol average speed
- Added data symbol XC speed
- Added data symbol "used power"
- Added reference voltage setting for electric engines

**Changes:**
- Optimized map redraws
- Flight range now starts the calculation 1 minute after takeoff
- Improved email validation to better handle common mistakes
- Profiles: Renamed "Locked" to "Write protected"
- Changed LAYOUT action order for ease of use
- User must now confirm entering night mode (10s countdown)
- When uploading to OLC save last selected glider to the system settings instead of the profile
- Moved NMEA port settings from user profile to glider settings
- Debug reports now include complete application temporary data
- Touch: Increased the button hit test zone on touch devices

**Bug fixes:**
- Fixed a rare error causing application to freeze
- Fixed map flickering when glider is positioned outside of map center
- Fixed invalid fill color for range circles
- Fixed storage operation cancellation
- Fixed external FLARM baudrate update (no longer requires a restart)
- Task: Fixed a problem when editing zones smaller than 0.5km
- Fixed the current ballast value displayed when dumping water
- LXNAV Connect: SkySight: Fixed rasterization of some layers
- LXNAV Connect: Skysight: Fixed display of surface wind, boundary layer wind (still without direction)

# Version 7.09

**Changes:**
- Improved handling of large or defective cup/cupx files

**Bug fixes:**
- Fixed a bug (introduced in 7.08) that caused an application crash when thermal symbol was used

# Version 7.08

**New features:**
- LXNAV Connect: Added view of current weather layer cache progress to LXNAV Connect dialog

**Changes:**
- Various speed improvements
- ThrdMap: Increased map overhead for closeup zoom

**Bug fixes:**
- Various stability fixes
- Fixed ballast dump not updating polar
- Fixed slow map update
- Fixed history symbol bug
- Fixed FlightViewer bug
- Fixed sorting in airspace info dialog
- LX9050 Simple: Fixed PDA channel output
- LXNAV Connect: Fixed an issue where weather layers didn't start to download before map was shown at least once after startup
- WIFI: Fixed rare application hang when unable to connect to a network or disconnected frequently

# Version 7.07

**New features:**
- LXNAV Connect: Loading spinner is now shown in dialog title while requesting file list from remote storage
- Added faulty external media card detection and testing (password 00112)

**Changes:**
- LXNAV Connect: WIFI networks are now merged from current profile to newly loaded profile, when loading a profile from remote storage
- Flarm Traffic dialog: newly detected targets are now added at the end of the list
- Loger: Default interval is now 1s (instead of 4s)

**Bug fixes:**
- Flarm Traffic dialog: Fixed a bug where no NEW radar target was visible after entering Flarm Traffic dialog without any targets
- Flarm Traffic dialog: Fixed display of avg. vario for selected target
- Flarm Traffic dialog: Fixed doubled glider labels bug
- Fixed a bug where Airport couldn't be selected via dialog due to invalid profile setting
- Fixed a bug where airspace could be changed from/to NOTAM
- LXNAV Connect: Fixed a profile sync bug when loading from remote storage
- LXNAV Connect: A correct message is now shown, if downloaded profile is not compatible with this device

- LXNAV Connect: Precached prediction layers weren't displayed without internet connection
- Fixed manual (forced) task sending to rear seat
- V8/V80 update: detect faulty SD cards causing a failed update
- GEN2: Fixed stability on devices with WI-FI modules

# Version 7.06

**New features:**
- Profiles: Added profile pin lock
- Added semi-automated update of rear seat (via front seat's WI-FI) – firmware and database
- Implemented (limited) LXNAV Connect for GEN2 devices (KARO)
- Task edit: minor improvements for devices with touchscreen (GEN5)
- "Pilot event" is now forwarded to external devices

**Changes:**
- SoaringSpot: Always ask the user to confirm a new or updated task from SoaringSpot
- OLC: Try to select glider type set in polar settings
- Profiles: Read only/lock mode moved to profile properties dialog
- Rain radar for whole world now also on GEN2 devices (KARO)
- Improved delivery of emails with large attachments (automatic download link creation)
- Minor user interface improvements
- Disabled Waypoint decluttering (complaints about missing point names)

**Bug fixes:**
- Fixed map zooming in FLARM Traffic dialog
- NMEA, FLARM: Fixed data acquisition & sending problems
- Fixed Apt/Wpt selection via filter method (when duplicate points are present)
- Map: Fixed bug where some airspaces weren't visible on map on some zoom levels
- Task send: Fixed a bug where setting for sending task setting to rear seat was ignored
- Task edit: Fixed bug when moving task point close to the edge
- LXNAV Connect: fixed a bug which re-set glider type in OLC claim form, if form was shown twice
- LXNAV Connect: Fixed an issue where files on remote storage with uppercase extension were not shown
- LXNAV Connect: Fixed issues with LXNAV Connect services not being available immediately after connecting to the internet
- WIFI: display correct message if WIFI is set to "off" or "on ground only" and flying
- WebUpdate: Force same version on rear seat
- WebUpdate: Refresh rear seat update info after update
- WebUpdate: Save DB update marker immediately after update
- WebUpdate: Faster response to dialog actions

# Version 7.05

**Bug fixes:**

- Fixed ADS-B functionality detection for PowerFLARM devices not produced by LXNAV
- Fixed FLARM usage when using NMEA output via PDA port

# Version 7.04

**Changes:**
- LXNAV Connect: Better SkySight data handling on download errors

**Bug fixes:**
- LXNAV Connect: Fixed weather prediction precache (until sunset)
- LXNAV Connect: Fixed an issue when using SkySight but data isn't available
- Logger setup: Fixed INSERT and SWAP problem
- DataSym: Fixed (displayed) sunrise & sunset values for timezones with negative offset
- About: Corrected generation info (some devices displayed Gen3 instead of Gen4)
- About: Fixed saving of debug report to SD/USB (button had to be pressed twice)

# Version 7.03

**Changes:**
- Remote stick: Changed key mapping for Airspace warning dialogs (simplifies the use with a remote stick)
- Safety MacCready setting no longer influences Mc0 calculation

**Bug fixes:**
- Flight upload bugfix: If upload fails specify to which services
- Fixed upload to SeeYou on Gen2 devices
- Remote stick: Fixed ZOOM & GOTO usage in pan mode
- Map: Fixed line drawing bug when "Goal up" is selected and map is zoomed in
- Various stability fixes

# Version 7.02

**New features:**
- Added wind arrow visibility settings

**Bug fixes:**
- Fixed PCAS, ADS-B settings viewing and refresh
- Fixed drawing stability issues

# Version 7.01

**New features:**
- Added selectable safety MacCready offset/fixed value modes

Bug fixes:
- Fixed crash on task page when "show final glide" option was enabled on Altitude tape
- Fixed translations

# Version 7.0

**New features:**

- LXNAV Connect. Live weather data and predictions from SkySight and TopMeteo, cloud drives, file syncing, profile syncing, GPSAeroData, US sectional chars and more!
- Added automatic preloading of selected prediction layers until sunset
- Added selectable time offset for prediction layers
- Added page specific map settings
- Added altitude offset setting (to offset color table for the map)
- Added safety MacCready setting to QNH and RES dialog
- Added Weather info data symbol (displays currently visible weather layers with timestamps)
- Added "simple" display option to FLAP symbol
- Added density altitude data symbol
- Added data symbol "revolution time"
- Added AAT text color setting
- Allow setting V8 indicator neeedle, theme and dial style
- Added support to load HGT packages via LXNAV Connect or from external media directly from Maps dialog
- Added ENL logging also on the rear seat
- PowerFLARM: set the vertical and horizontal ranges to unlimited
- Show PowerFLARM capabilities and loaded licenses
- Added support for CUP files encoded as UTF-8 with BOM
- Added FREQ button to pan mode
- Added device generation info to About dialog
- Added detection and display of "no internet connection"
- Added custom selectable columns to near mode: "Required LD", "Arrival0", "Code", "Elevation", "Required altitude", "Required MC", "Team", "Frequency"
- Added waypoint image viewer to near mode
- Added task sending to any capable device (S-Varios, any NANO)
- Added support for AirAvionics ACD57 display
- Added support for multi-function radio bridge
- Added (granular) factory reset functionality via password 00666
- Various usability and user interface improvements

**Changes:**
- Altitude tape now shows ground label at target elevation and final glide bars (setting)
- SoaringSpot download, task update improvements
- PCAS objects are now shown with an outline
- Map settings now shows color scheme graphic
- Task move: the moved point is now easier to see (pulsating circle)
- Near mode now allows selecting the amount of displayed data and column selection
- Improved external FLARM support:
    - added stealth mode setting
    - added detection of PowerFLARMs with ADS-B
    - added firmware update support for all external (Power)FLARMs and LXNAV ADS-B modules
- Removed obsolete "rain status" data symbol and replaced "rain age" with weather info data symbol
- Fixed a problem with competition mode on the rear seat

- Autosend task to external devices upon exiting task edit dialog
- Limited email characters to prevent common mistakes
- Improved web data acquisition
- Flarm setup: enable PCAS & ADS-B settings only for supporting devices
- Speech module: Decimal values are no longer rounded when spoken
- FlarmSym: now using Nano4 symbols for FLARM targets
- Prevent wind calculation when using a motor (high ENL)
- Pan mode zooming is now done via "mode select" rotary knob
- Auto-hide names of waypoints, airports to avoid cluttering the map

**Bug fixes:**
- Touch devices: Fixed PAN mode activation bug
- Fixed various Trig/Radio bridge bugs
- Fixed XPDR mode when VFR is pressed
- Fixed radio frequency limits and setting
- Fixed radio frequency name update
- Reset FAI triangle optimization settings if invalid (can happen if profile was edited in older version(s) of LXStyler)
- Fixed wrong sound for some Flarm traffic warnings
- Fixed cause of crash when setting Flarm/ADS-B range
- Fixed a bug that caused a dismissed alarm being shown anyway
- Fixed LCD indicator setup bug
- Task page: Fixed greyed out task SEND button
- Minor settings fixes
- Fixed crash in layout editor
- Fixed profile import not showing any files
- Soaring start and takoff point are updated on new flight
- Fixed various bugs when using on-screen keyboard
- FlarmSym: Fixed heading display for motorized planes
- Fixed task sending: Task is now automatically sent to all (capable) devices upon task edit exit or via SEND button

# Version 6.20

New features:
- Flarm setup: added PCAS & ADS-B horizontal & vertical range settings

Changes:
- Updated FLARM warnings dialog to include new undirected property
- Minor UI adjustments

Bug fixes:
- Fixed calculation of tDis and tReq.Sp. while on the ground
- Fixed ballast dump: prevent entering value 0 as dump rate
- Fixed viewing PDFs with special characters in the name

# Version 6.10

New features:
- Added support for CMR maps containing transparent PNGs
- Added legal disclaimer to IGC files
- Added hPa pressure unit

Changes:

- Layout editor improvements

Bug fixes:
- Task edit: task draw bug fixes
- Fixed logging of Flarm info messages
- Fixed g-meter symbol drawing
- Fixed image drawing in long dialogs
- Fixed CMR, QMP description bug
- Other minor user interface fixes

## Version 6.09

New features:
- Added support for internal ADSB module (coupled with PowerFlarm)
- Added A/C traffic setting to Flarm warnings dialog

Changes:
- Layout editor improvements
- Minor user interface tweaks
- Prevent "update available" notification while flying
- When using Compass a grey wind arrow is painted next to the glider
- Zone editing: Below 500m R1 and R2 are set in 50m steps
- Task calculation improvements

Bug fixes:
- Fixed flight claim issues (OLC)
- Fixed a rare bug in IGC logger that could cause the flight to be marked as invalid
- Fixed connecting to WI-FI networks where name contained special characters
- Fixed connecting to WI-FI networks where special characters are used for password
- Fixed invalid voltage on second seat in some setups
- Fixed problem with STYLESPEED in zone definition
- Fixed AHRS usage for customers with V9 + external AHRS
- Fixes for external Flarm and Flarm target display

## Version 6.08

New features:
- Display WIFI dongle's MAC address on network info page

Changes:
- Changed flight & total engine time display in logbook.txt (from seconds to hh:mm:ss format)
- Improved editing of combined waypoint types in Graphics setup

Bug fixes:
- Fixed sending flights to OLC
- Fixed a rare crash when in Near mode
- Fixed a bug when adding/editing FLARM target aliases
- Fixed a rare crash when editing task right using a huge number of waypoints
- Fixed statistics text cutoff on LX8000 and LX8080
- Fixed occasional erroneous voltage display on rear seat

## Version 6.07

New features:
- Added SWAP button in flight recorder settings for easier swapping of pilot and copilot names
- Added option for single/master layout (admin mode)
- Added gate interval task option

Changes:
- Integrated support for motorized flaps
- Changed ETE calculation when navigating to task start point
- Improved WIFI downloads on unstable/slow connections

Bug fixes:
- Fix for task start out of top of cylinder (US)
- Minor user interface bug fixes
- Fixed engine time display
- Fixed FLARM obstacle update
- Fixed menu selection bug on KARO, PXA
- Fixed application crash in rare cases when using FLARM and 3D map
- Fixed update of very old LX8000 PXA devices

## Version 6.06

New features:
- Added pitch setting to AHRS symbol and 3D map
- Added filtering of airspaces by name in airspace info dialog
- Added ability to change airspace border and fill color seperately

Changes:
- Updated AHRS rounded and circular styles
- 3D view is now properly updated when editing 3D map in Layout editor
- Various translation updates
- AAT zone is now filled with default color when 'None AAT' fill is selected
- Wing area is now shown in 'dropping water' message
- Improved tail/head wind calculation
- Changed titles for head/tail wind
- Improved outlined text readability

Bug fixes:
- Fixed thermal mode issue on Vxxx variometers
- Fixed image display bug introduced in 6.05
- Various AHRS drawing fixes
- Fixed a bug that caused 3D map + AHRS not being aligned in some configurations
- Fixed wind lines drawing bug (manifested in some layouts)
- Flap tape fixes
- Fixed flaps calculation on rearseat
- Minor cosmetic fixes

- Ensured that button text is visible (by decreasing font size, if needed)

# Version 6.05

**New features:**
- FLARM: Added PowerFLARM support for automatic updates
- Added Waypoint symbol size setting
- Added sea to map settings
- Added display of FES warning

**Changes:**
- minor UI changes
- Layout editor improvements
- Wind averaging time reduced to 120seconds
- AAT lines are now plotted with XCspeed unit
- We moved units (settings) from device settings into profile
- Ball symbol improvements
- FLARM: extra flarm warning notification is no longer displayed when there is PFLAU Symbol on navigation page
- Color of selected flap is now based on current speed
- You can now have several software SC toggle switches
- Speed to finish limit set to 20m/s
- QNH is also changed on rear seat, if changed from the front seat

**Bug fixes:**
- Fixed screenshot functionality on several devices
- Fixed "takeoff time" data symbol
- Fixed a problem with Fn keys from rear seat
- Fixed a bug in frequency display
- Gear warning bugfix
- Fixed SoaringSpot usability issues
- Fixed rare flight range glitch
- Fixed email reception issue with some email servers (free.fr, t-mobile.de)
- Fixed 3D text offset on LX9070 (portrait)
- Fixed flickering flaps problem
- Fixed a bug where aircraft type was not saved when received on rear seat
- Fixed PFLAU output on rearseat
- Fixed FLARM traffic data
- Fixed XPDR squawk data in data symbol
- Fixed zoom issue after exit from pan mode
- Fixed displayed flight level value
- Fixed rain radar drawing on devices with hardware version TX51
- Fixed radio volume slider
- Various UI bug fixes

# Version 6.03

**New features:**
- Added new airspace styles
- Added AAT min/max calculation

**Changes:**
- Improved NOTAM processing
- Improved final glide calculation
- Changed PFLAU symbol drawing
- Improved performance on older hardware (PXA)
- Minor overall performance improvements

**Fixes:**
- Fixed data exchange with rear seat
- Minor NOTAM user interface fixes
- Fixed rare device slowdown cause on older hardwares
- Fixed remote stick special button detection
- Fixed drawing bug in checklists
- Fixed drawing bug in picture symbol
- Fixed problem calculating total energy
- Fixed WIFI update bug fix
- Fixed profile enumeration bug
- Fixed problem with IGC altitude on rear seat

# Version 6.02

- check: http://www.lx-avionik.de/version6/

**New features:**
- Added ability to hide airspaces in NOTAM data
- Added new airspace type to airspace edit dialog
- Added manual NOTAM data downloading from web

**Changes:**
- Improved email delivery
- Improved support for CUB files with NOTAM data
- Improved SideView drawing speed

**Fixes:**
- Fixed invalid code bug when selecting protected CUPX files
- Fixed task load bug
- Fixed device slowdown introduced in version 6.0+

# Version 6.01

- Fixed device slowdown when OLC Speed 60 in Speed 60 were present on screen
- Fixed LX8xxx flarm traffic dialog bug
- Fixed communication bug with peripheral devices on RS485 bus
- Fixed various user interface bugs on V8, V9 and V80
- Fixed OAT value jitter on V8, V9 and V80

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# Version 6.00

**New features:**
- Added NOTAM display
- Added sending of task declaration to Nano and other devices via NMEA port
- Added logging for JDU and FES
- Added new polars
- Added additional diagnostic fuctionalities
- Added control of V8/V80 with remote stick's function button
- Added "control point" waypoint style
- Added external inputs processing on rear seat
- Added additional user notification on detected hardware errors
- Added logging of start and land point names to flight
- Added synchronized ballast dumping on second seat
- Added callout for average vario every circle
- Added uncompensated final glide calculation
- Added new "waypoint distance" notification type


**Changes:**
- Various stability improvements
- Using IAS for total energy altitude calculation
- Redesigned altitude warnings, added AGL option, below/above altitude

**Fixes:**
- Fixed a bug present on some LX8000 devices
- Fixed bug in Logbook recovery
- Fixed bug with area units
- Fixed bug with invalid startup ballast
- Fixed landing gear warning
- Fixed relative speed command audio scheme
- Fixed compass detect bug
- Restore selected target after device restart
- Multiple settings share with rear seat fixes

**WI-FI:**
- Added connection to SoaringSpot: automatic flight upload, downloading tasks, viewing contests
- Added OLC (onlinecontest.org) flight upload
- Added rain radar on active map with up-to-date rain info and time lapse rain movement

- Added viewing of meteograms with location selection from map
- Added firmware update via Wi-Fi
- Added database update via Wi-Fi
- Added option to send email attachment as zip
- Added logbox.txt when sending flight via mail
- Added date, pilot and glider info to email when sending flights
- Added Wi-Fi support on rear seat
- Improved various Wi-Fi network functionalities
- Improved sending of IGC files via email
- Redesigned Wi-Fi network view and selection
- Fixed multiple issues with Wi-Fi module detection/usage

**Task:**
- Added NEW (point) and LOAD (task) actions in Task view
- Added task load sorting and grouping by source
- Pan mode on task page: added insert task point to active task
- Added observation zone sending to rear seat
- Added start at top of cylinder (USA rules)
- Task time increased to 15 hours
- Improved task edit sync with rear seat
- Improved speed of task load list (gathered from all cup, cupx, cub files on internal and external media)
- Update selected task point after task is received
- Improved task edit dialog
- Task obstacle zones: if you are inside a zone, draw AAT on that one instead of selected
- Task move dialog: draw AAT gradient on visible zone
- Task edit: start list distances are now calculated based on distance from
- Draw more precise flown task path
- Improved AAT drawing
- Improved FAI area drawing
- Fixed task declarations bug when task points with special characters are used
- Fixed a bug after task finish
- Fixed multiple task edit bugs
- Fixed finish zone elevation bug

**FLARM:**
- Added exchange of FLARMnet info (on change) with rear seat
- Added alert zone alarm for flarm
- Added loading and saving of FLARM user settings
- Added customization for FLARM aircraft symbol size and colour
- Added map to FLARM radar list
- Added Radar dialog load/save
- FLARM view map display change: centered plane, zoom in steps
- Draw FLARM objects above glider tracks
- Show gliders as dots when they have FLARM stealth mode ON
- Fixed FLARM symbol bug on startup

**UI:**

- Added Meteogram symbol (live data via Wi-Fi)
- Added preflight checklists (can be prepared in LXStyler on on device)
- Added sideview plane heading direction
- Added IGC altitude and Total altitude display options on variometers
- Added audio volume visualization
- Added various gauge symbol variants
- Added wind direction pattern customization
- Added zoom change steps
- Added SC button function setting for supported remote sticks
- Added option to disable proximity sensor (on devices with proximity sensor)
- Added multiple "switch to thermal mode" methods
- Added button display timeout and button size settings
- Added SC bar/tape selection for V8/V80
- Added Flap and speed tape selection for Vario indicator
- Added ability to add time alarms at specific hours
- Added visual keyboard for entering special characters
- Added screenshot creation when lower right button is pressed for 6 seconds
- Added screenshot function option to remote stick
- Thermal assistant: added circle color modes (auto span, MC, avg. vario)
- Colour ureachable points
- Added showing of alarms in sideview
- Improved paraglider, ballon and static object display on screen
- Improved layout editor
- Zoom symbol now shows 'T' when in thermal mode
- All time display data symbols now support displaying seconds
- Logbook: calculate time difference with minutes precision
- Near mode, select airport, select waypoint: move to first item upon changing "sort by" current postion
- File update: keep current file selected after media insert/remove
- Display actual font size while editing font size
- Changed tape bug colour
- Changed default button drawing
- Changed message display
- Changed overall drawing of UI elements
- History symbol: put altitude scale to right side by default
- Side symbol: added additional customizations
- Improved airspace drawing
- Various translation fixes
- Fixed min/max voltage gauge symbol
- Fixed multiple drawing issues
- Fixed thermal symbol background color
- Fixed wind dialog problems and wind settings load/save
- Fixed Zoom symbol displayed value on startup and on quick sequential zoom changes
- Fixed drawing of min/max G-Load
- Fixed minor Pan mode bug
- Fixed drawing of Rose and Plane symbols when positioned over or near the edge of the screen

- Fixed battery type dialog input limits
- Fixed inconsistent text and number representation of data symbol values
- Fixed speed symbol refresh (when switching units)
- Fixed pictury symbol image refresh bug when using multiple images with same names
- Fixed "where am i" data symbol bug

**Terrain and map data:**
- Added support for new maps CITv2 (preinstalled on most devices) -> you can check installed and used maps in About dialog (after updating to 6.0+)
- Added support for high resolution elevation data (HGL maps)
- Added drawing of new map elements (from CITv2 where available): glaciers, forests, fields, grass fields, streams, streets, railroads, airport runways
- Added drawing of runways on 3D view
- Improved speed of terrain rendering (especially on old LX8xxx)
- Map: Improved label positioning, decluttering
- Improved drawing of map elements
- Fixed 3D terrain drawing around coastlines
- Fixed map color bug when terrain is switched off
- Fixed drawing of ICAO QMP raster maps
- Fixed rare bug on map draw

**Bridge:**
- Added display of warnings received from devices connected via bridge device
- Added support for Becker CM4201 radio
- Added support Becker 620x radio family
- Fixed KRT2 radio warning notifications bug

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# Version 5.05
**Fixes:**
- Fixed bug in team code calculation
- Fixed flarm targets timeouts

# Version 5.04
**New features:**
- Added "no tracking" option to FLARM settings
- Added flaps settings on rear seat

**Changes:**
- Improved RS485 communication speed
- FLARM track path length is now disabled by default
- Minor speed improvements when using AHRS or tape symbols

**Fixes:**
- Fixed total energy calculation
- Fixed slow down/delayed display issue on LX8000 when FLARM traffic is shown

- Fixed rare issue with long waypoint names, taskpoint names
- Fixed rare points name string corruption when sending task to/from rear seat
- Fixed issue with NMEA output of PFLAA
- Fixed invalid "low space warning" message on LX8000
- Multiple LX8000 internal fixes
- Fixed issue with motorized flaps
- Fixed problem with frequency display
- Fixed an issue that cuased application to restar while shutting down
- Layout editor: fixed navbox descriptions and reordered their positions
- eCopilot: CAN bug fixes

# Version 5.03
**New features:**
- Added circling radius
- Added setting to draw fill area of flight range inside or outside of bounds
- Added airspeed auto zero after landing (can be enabled/disabled in settings)
- Added compass tape symbol

**Changes:**
- Time for optimization restart increased to one minute
- Faster external devices enumeration in hardware menu
- Improved thermals drawing
- McCready/Ballast dialog now doesn't hide automatically if manual DUMP button has been pressed

**Fixes:**
- Fixed indicated airspeed offset bug
- Fixed rare issue where external devices were not detected
- Fixed a problem with auto next, AAT and default observation zone
- Fixed multiple issues with special (localized) characters in waypoints, airports, flight declarations etc.
- Fixed character issues with FLARM task declaration
- Fixed character issues with Nano declaration
- Fixed character issues with IGC declaration
- Fixed a rare issue with airports
- Fixed logbook recovery issue
- Fixed engine time display in "Flights" dialog on small displays
- Fixed battery sym. drawing
- Fixed low disk space warning bug
- Fixed thermal page saving
- Fixed temperature offset in °F
- Multiple NMEA output fixes
- Data symbol units fixes
- Fixed zoom range spinner
- Fixed SideView symbol settings
- Fixed AAT problem on start and finish sectors
- Fixed battery left in minutes bug
- Fixed vario sym. saving and default text size

# Version 5.00

**New features:**

- WIFI option and support for emailing flights (front seat only)
- METAR, TAF data display (with WIFI option)
- Compass calibration and wind calculation
- Support for controlling radio with 485Bridge
- Support for controlling transponder with 485Bridge
- Spport for additional NMEA output with 485Bridge
- MOP2 support
- Added V8, V80 support
- Added additional info on statistics page (Takeoff time, Engine flight time, Task start time, Finish elevation, Task remaining time)
- Added various flight statistics/info
- Added AAT zone calculation and drawing
- Added flight range calculation and drawing
- Added optimal track calculation for assigned area
- Added new predefined polars
- Added water ballast dump feedback, dump rate
- Added new warning/notification types
- Added digital input option for "Canopy locked"
- Added digital input option to disable vario sound when PTT is active
- Added inverted digital input option
- Added more options to zone drawing
- Added battery chemistry dialog
- Added switching to thermal page when circling
- Added switching between plane positions when map orientation is Heading/North or Track/North
- Added goal/north map orientation
- Added option to export/import full configuration to SD/USB
- Added volume popup dialog
- Added airport filtering depending on the size of runway
- Added teamcode (origin, password, target) sending to second seat
- Added wind info sending to second seat
- Added setting for max thermals count in statistics mode
- Added radio frequency assignment option when selecting new airport/waypoint
- Added setting "show only airports from airports database on APT mode"
- Added task ETE calculation during planning
- Added radio mandatory zone (RMZ) airspace type
- Added new FLARM aircraft types & symbols for: paraglider, hang-glider, ballon, static object
- Added map integrity check (via password 00112)
- Added motorized flaps support
- Added symbols:
  - History
  - Vario Tape
  - Wind Profile

- o    Ball
- o    WIFI state
- o    Trim roll (eCopilot)

- **Added data symbols:**

Aircraft Parameters:
- ▪    Flight level(IGC)
- ▪    Altitude raw (IGC)
- ▪    GPS altitude
- ▪    Local date
- ▪    UTC time
- ▪    Longitude and Latitude
- ▪    Current g-load
- ▪    Min. g-load
- ▪    Max. g-load
- ▪    Circling Flight
- ▪    Circling Task
- ▪    Circling 60min
- ▪    Average speed in 60min
- ▪    Flight Time
- ▪    Current ballast
- ▪    Battery left [min]
- ▪    Battery left [%]
- ▪    Ballast

Engine Parameters (only on eCopilot):
- ▪    Engine total time
- ▪    Engine flight time
- ▪    Engine Hours A
- ▪    Engine Hours B
- ▪    ECU Hours A
- ▪    ECU Hours B
- ▪    Calculated Fuel Quantity
- ▪    Fuel Range
- ▪    Consumption

Misc:
- ▪    Nearest Airport
- ▪    Nearest Waypoint
- ▪    Nearest Location (aka. Where Am I)
- ▪    Flarm RXTX
- ▪    Active Frequency
- ▪    Passive Frequency
- ▪    XPDR Transponder

Optimization Data:
- ▪    OLC 60' Speed

Outside Parameters:

- Side Wind Component

  Target Parameters:
  - Target parsed METAR
  - Target parsed TAF
  - Target raw METAR
  - Target raw TAF

  Task Parameters:
  - Task start altitude

- Added new terrain schemes
- Added track colorization for netto value
- Added finish altitude warning
- Added FLARM radar zooming
- Added stopwatch function to info page
- Added engine time column to Logbook screen
- Added support for free QMP maps
- Added new admin mode permissions

**Changes:**
- Changed/fixed visual elements (arc gauge, altitude sym., speed sym., sideview sym., history sym., battery sym.)
- Home optimisation is now saved
- Improved support for external FLARM devices
- Improved wind calculations and visual elements
- Improved TAS and IAS calculations
- Separated setting for map orientation to regular flight and circling orientation
- Adjusted final glide calculation
- Changed FLARM indication to angle reference
- User is now asked if he wants to reset OLC statistic when engine is active
- Last opened navmode is now saved to profile
- Improved wind profile symbol
- Improved performance

**Fixes:**
- Update database bug fix
- Fixed problems with Flaps visual symbol and functionality
- Fixed loading of some non-compliant CUP files
- Fixed observation zone elevation saving in profile and task
- Fixes for overload factor calculation
- Multiple fixes for Rose symbol
- Fixed task point move
- Fixed flight viewer parsing of flights that span over midnight
- Fixed issues with some warnings
- Multiple task edit fixes
- Fixed zone refresh on style change
- Fixes for non-directional warnings
- Fixed warning messages flashing issue

- Fixed issue causing repeated voice messages
- Fixed issue when setting active FLARM target
- Fixed multiple issues with layout editor
- Multiple drawing bug fixes
- Fixed problems with file names with special characters
- Fixed rare communication bug on second seat
- Multiple PDF reader bug fixes
- Fixed SD card format for large SD cards
- Multiple admin mode permission fixes
- Fixed flap tape flickering bug on second seat
- Fixed orientation bug in task thermal mode
- Fixed near mode goto airport issue
- Fixed logbook recovery UTC offsets
- Ignore QNH/altitude offset when loading/changing/replacing profile via Settings->Profiles
- Fixed NMEA data output on second seat
- Fixes for SC and VP inputs
- Display local time on history sym.

## Version 4.03

**Features:**
- Improved internal hardware error detection on newer devices
- Added support for FLARM obstacles version 2.0
- Improved UI responsiveness in file lists (Profiles, File & transfer, etc.)

**Fixes:**
- Fixed issue where file copy didn't show error message on failed copy operation
- Fixed issue on old LX8000 where SD card didn't get detected after format

## Version 4.02

**Features:**

- Users can now copy profiles directly from/to USB to/from SD

**Fixes:**
- Wind calculation fix
- Minor user interface fix

## Version 4.01

**Main features:**
- Added task speed to Logbook
- Added ICAO selection method in airports mode
- Faster Speed and Altitude symbol refresh
- Added color value meaning to FlightViewer
- AHRS symbol now allows partially transparent backgrounds
- Improved color selection

**Fixes:**
- Fixed AHRS on rear seat devices
- Fixed Flight Declaration bug

- Fixed night mode on LX8000, LX8080
- Various Flaps symbol and Flaps settings fixes
- Fixed slow NMEA output on non-flarm devices
- Fixed profile manipulation on Club devices
- Fixed rear seat remote stick Fn button functionality
- Fixed airspace drawing in "Files and transfer ->Airspaces" edit mode
- Fixed invalid task, wind etc. values after update to version 4.00
- Fixed greyed out PFLAU, PFLAA nmea output
- Fixed NMEA output on rear seat devices
- Fixed Logbook update after flight deletion
- Fixed device shutdown delays
- Fixed rare crash during shutdown
- Fixed invalid initial value in MacCready dialog when using remote stick
- Fixed AHRS pitch set bug
- Fixed pan mode bug when using remote stick
- Fixed airbrakes locked warning bug
- Fixed Flarm "clock" drawing bug
- Fixed missing map in FlightViewer

## Version 4.00

- **Vario filter customization**
- **Added V9 AHRS functionality**
- **Added new symbols and symbol subtypes:**
  - Flaps symbol
  - DataSym: Thermal glide ratio
  - DataSym: Optimized Home Distance
  - DataSym: Teamcode for my position
  - DataSym: Teamcode for waypoint
  - DataSym: Requested Flaps
  - DataSym: Current Flaps
- **Added new styles to AHRS symbol:**
  - Square
  - Circle
  - Rounded square
- **Added support to select files from external SD card without loading them to internal flash memory:**
  - Airspaces
  - Airports
  - Waypoints
  - Raster maps
  - PDF files
  - Profiles
- **Added admin mode**
- **Added PDF viewer**
- **Profile changes:**
  - Added full profile import/export (adds points, user airspaces)

- o Added copying of device settings from one profile to another
- **New aircraft warning features:**
  - o Added FLARM traffic ping
  - o Added FLARM data relaying to second seat and also second seat NMEA output port
  - o o Added sending of flight declaration to external FLARM devices
  - o o Added PCAS drawing on map and radar
  - o Added OLC distance, flown distance, takeoff time and landing time
- **Added shaded airspace border drawing**
- **Logbook changes:**
  - o Added OLC distance, flown distance, takeoff time and landing time
  - o Logbook is now also saved on external SD
- **Optimization changes**
  - o ENL is used for flight optimization
- **Added team code functionality**
- **Added NMEA setup on second seat**
- **Added Vario Indicator, V5 and V9 automatic brightness control**
- **Added automatic external device update dialog**
- **Obstacle zone calculation changes**
- **Added wing area to polar settings**
- **Added new glider presets with polars**
- **Landing gear warning improvements**
- **Increased graphical interface text sizes**
- **Track time can now be set to 1200 minutes**

Fixes
- **Fixed ETA calculation when MacCready is 0**
- **Spheroid distance calculation bug fix**
- **Fixed average wind calculation**
- **Fixed task declaration time**
- **Thick line drawing bug fix**
- **CUB file bug fix**
- **Pan mode bug fixes**
- **Side symbol drawing bug fix**
- **Second seat communication fixes**
- **History symbol drawing bug fix**


**Version 3.03**
- + added misc data to debug report
- + added task map edit
- + unified update file for variometer
- + diskspace management improvements
- B fixed a bug in near point calculation for observation zone

- B fixed a bug not working left/right in pan mode.
- B fixed a bug in statistics calculation for tasks with more than 10 points
- B fixed a bug in pan mode

**Version 3.02**
- + improved debug reports
- + improved internal hardware error detection
- + improvements for landing gear warning
- + improvements in task edit map
- B fixed PMU updating
- B fixed a problem with non working status setting
- B fixed a problem when using Fn remote button
- B fixed a problem with acceleration
- B fixed a problem with mode change
- B fixed bug in predicting position, when using wind
- B fixed a rare cup file saving bug
- B fixed gui control bug

**Version 3.01**
- + added FLARM size symbol
- + added support for variometer firmware version 3.0
- + added different views to task edit
- + restart of task can now be also done on ground
- + allow viewing QMPs in LXSim
- + added show raster in map dialog
- + added new translations
- B fixed bug with navigate to nearest, working only on one side
- B fixed bug with authorization of CMR files
- B fixed bug with dialog when updating devices
- B fixed bug with zoom to task
- B fixed pattern line drawing
- B fixed problem with negative distance in DirectEllipsoid

**Version 3.00**
- + distance calculation using ellipsoid according to FAI specification
- + added start out of the top of cylinder for USA rules
- + added color picker for more detailed color selection
- + added PAN mode
- + airport and waypoint list selection can be shown with more detai
- + airport and waypoint list selection icon showing, if images are available
- + Added history selection with soaring begin and take-off location
- + Airspace info dialog showing selected airspace on map (LX9000 only)
- + Added engine total time and engine flight time
- + Digital input (V5/V9) implementation for airbrakes and gear warning
- + Page style can be all set on instrument itself and not only using LXStyler
- + Support for rasterized maps provided by www.ifos.de and www.strepla.de
- + waypoint or airport can be selected by four different methods (filter, list, map or history)
- + other FLARM objects data stored in IGC file

- + changed default map font setting to non-outline
- + impoved statistics page with last four thermal map, task leg statitics and OLC statistics
- + flight viewer
- + added runway width

**Version 2.89**
- + FLARM frequency is read only
- + Added autozero for speed sensor using password 01043
- + Added About dialog with possibility for saving report
- B fixed problem, when updating with ASAPT having a lot of images
- 

**Version 2.88**
- + support for images in airports database
- + support for PDA port on LX8000 and LX8080
- B fixed bug, when too many legs are selected for optimization
- + added polar for Blanik, Tst, Slingsby, Orlik et6.5.2013 11:21
- + sort of task according to first turnpoint
- 

**Version 2.87**
- B fixed night mode
- + added support for V9
- B fixed wrong reading of internal pressure sensor
- + LIST in task edit mode
- + Range circles
- + Remote menu is top item MC/BAL
- + ADSB aricrafts are drawn differently from gliders
- + thermal beep

**Version 2.86**
- + Added new SIMPLE device with PDA port
- + Added waypoint selection from list in task mode
- + Autozoom is quickly accesable through Zoom knob
- B improved airspace integrity check
- B fixed bug with double click on remote
- + Added debug info save in ABOUT dialog
- + Added polar for Antares 23, JS-1c 21m, Genesis and Silent2Targa
- B fixed problem wutg elevation in wpedit box
- B fixed big distance problem in optimization
- + Added DEFUALT button to profile selection screen. This will start with DEFAULT settings
- + No more Flarm reset after power-on in order to avoid problems with BF displays
- B restore battery and gps symbol on V5 vario
- B fixed problem with task transfer to rear seat on double seat system with finish ring
- + speed up of terrain painting

- B fixed AHRS pitch offset setup

**Version 2.84**
- + task finish altitude can be set to any value
- + multiple start points in task.
- + fix calculation for task finish
- B-Speed to fly for MacCready (STFreq) can go only up to Vne
- + range circles around the glider.
- + Flarm object can now be taged as favorites
- + new side symbol showing vertical situation of airspace and terrain
- + support for photos in waypoint file (CUPX file format)
- + new navboxes for IAS, theoretical glide ratio, team partner flight data,
- airspace distances, altitude gained in thermal, average vario for whole flight,
- average vario for task,
- distance and bearing to AAT zone origin
- + three Timer alarms, which can be completely configured by user
- + Remote stick dialog, with selection for FN key on new remote stick (toggle vario range, map settings etc...)
- + AHRS power managment and contest mode rules
- + changed default pages look
- - size of thermal assistant circles depends on size of symbol

**Version 2.60**
- +added AHRS for second seat
- +fixed polars for Arcus
- +added GOTO button to MARK options
- +added new colour schemes for terrain
- +terrain shading
- +fixed bug in communication with rear seat