# **Changes in 32.6.0.8:**

*General:* 

• Added support for STM32L431 MCU (beta state).

External 4way-Interface (Cleanflight/Betaflight):

- Fixed connection issues (first ESCs sometimes missed).
- Added optional FC reboot on disconnect for F7 boards, to ensure reactivation of motor outputs.

## **Changes in 32.6.0.7b:**

*General:* 

- Added 32.6 hex file for:
  - Crazepony\_35A\_BLHeli\_32
  - o Dake\_35A\_BLHeli\_32
  - Furling32\_4in1\_F0
  - Furling32 4in1
  - HSKRC\_35A\_BLHeli\_32
  - o Makerfire 35A BLHeli 32
  - SMOOV\_30A

# **Changes in 32.6.0.7a:**

General:

- Added 32.6 hex file for:
  - AK32PIN 4IN1 6S 25A
  - BETAFPV-16A-BLHeli\_32
  - o Furling32\_Metal
  - GEPRC\_BL32\_4IN1
  - o TEKKO32\_F3\_4in1
  - o TTTRC\_BL32

# Changes in 32.6.0.7:

General:

- Added 32.6 hex file for:
  - Atom32\_35A
  - DALRC\_ENGINE\_PRO\_ESC
  - o HTIRC\_Hummingbird\_32
  - o Lumenier\_Razor32
  - Lumenier\_Razor\_Pro\_F3
  - $\circ \quad R\_FlyFort$
- Added 32.4 hex file for:
  - Atom32 35A
  - HTIRC\_Hummingbird\_32

## **Changes in 32.6.0.6:**

*General:* 

- Added 32.6 hex file for:
  - AK32PIN\_4IN1\_6S\_35A
  - o Dake\_30A\_BLHeli\_32
  - Furling32\_Mini
  - HGLRC\_Forward\_ESC
  - TEKKO32\_F3\_Metal
  - TEKKO32\_F3\_Mini
- Added 32.4 hex file for:
  - o Dake\_30A\_BLHeli\_32

External 4way-Interface (Arduino/Cleanflight/Betaflight):

• Bugfix for readout of BLHeli\_32 ESC, if BLHeli 8 bit is by chance mixed into arrangement.

## **Changes in 32.6.0.5:**

#### General:

- Added 32.6 hex file for:
  - ALIENTEK\_BLHeli32
  - o iFlight\_BL32\_4IN1
  - o iFlight\_BL32\_PRO
  - o RDQ 32 Bit
  - o T\_Motor\_F\_4IN1\_F3
- Added 32.4 hex file for:
  - ALIENTEK BLHeli32
  - iFlight BL32 PRO

#### **Changes in 32.6.0.4:**

## General:

- Added 32.6 hex file for
  - Hobbywing XRotor BLHeli32
- Fixed bug: EConvert Error at start of the app, if Short date format is set to "dd-MMM-yy".

## **Changes in 32.6.0.3:**

#### General:

- Added approved 32.6 hex files.
- Adapted different parameter default values for:
  - o sFrESC 80A
  - HAKRC\_E45A
  - HAKRC\_E50A
  - o RF1

# Changes in 32.6.0.2:

External 4way-Interface (Arduino/Cleanflight/Betaflight):

- ESC connection handling optimized; fixes particular problem (connection for ESC#1 fails after "check" scanning succeeded & "Write Setup" needs to be done in single mode) with GD350 based ESC.
- Optimized parameter comparison between different firmware revisions and LED arrangements.
- Fixed bug in multiple flashing of different ESC-Brands in multi-ESC arrangements.

## **Changes in 32.6.0.1:**

- Added auto checking for updates of BLHeliSuite32.
  - Feature is enabled by default for daily checking, but can be configured for other intervals or disabled (menu "Options"). Manually checking for updates is still possible in menu "?".
- Fix of restoring the last selected screenshot path.
- Added BLHeli\_32 rev. 32.4 hex files for:
  - Airbot Wraith32 Metal Rev1 ST
  - AK324IN1PIN25A
  - o AK324IN1PIN35A
  - Bardwell32
  - Crazepony\_30A\_BLHeli\_32
  - DALRC\_Rocket\_ESC
  - Emax 6S STSPIN32F0 V21
  - Furling32
  - o FVT\_CloudPhoenix\_50A

- o FVT MachineDog 20A
- GetFPV
- o HAKRC 45A
- o Makerfire 30A BLHeli 32

## External 4way-Interface (Cleanflight/Betaflight):

• Fixed small bug in reading MSP\_3D (no practical relevance).

## **Changes in 32.6.0.0:**

## General:

- Added the ability to edit and flash BLHeli\_32 rev. 32.6 (No 32.6 hex files added yet).
- OpenSSL update to v1.0.2o.

# Changes in 32.5.0.2:

#### General:

- Minor visual changes in "ESC Setup" page.
- Fix for LED color assignment at FrESC\_80A.

## **Changes in 32.5.0.1:**

#### *General:*

- Disabled rev. 32.5 for flashing due to a compatibility issue.
- Minor visual changes in "ESC Setup" page.
- Minor fix: "Brake On Stop" parameter handling. (Disabled showing of brake force percentage for ESC, which are not capable of nondamped mode).
- Added hint on transformation of "Motor Direction" between different revisions.

# Changes in 32.5.0.0:

#### General:

- Added the ability to edit and flash BLHeli\_32 rev. 32.5 (No 32.5 hex files added yet).
- Minor visual changes for rev. 32.5 in "ESC Setup" page.
- Added BLHeli 32 rev. 32.4 hex files for:
  - o Spedix\_GS40A\_4IN1\_V1\_1

# **Changes in 32.4.0.7:**

#### General:

- Fix for interface "L" failure on "Flash BLHeli", when logging was enabled.
- Removed obsolete control in Flash Assistant (check box "Show Favorites only").
- Fix for flash issues with bootloader rev. "f" and:
  - o KS BLHeli 32 30A
  - Spedix\_GS30A\_V1\_1

# Changes in 32.4.0.6:

- Improved automatic reflash handling for ESCs where prior the activation failed.
- Minor fix in the MusicEditor (play back function plays wrong notes, if music is disabled).
- Fix for flash issue with:
  - o DALRC\_ENGINE\_40A
- Added BLHeli\_32 rev. 32.4 hex files for:
  - o FrESC\_35A\_32
  - HGLRC\_T-REX\_35A\_ST
  - o KS\_40A\_4IN1\_4S
  - o KS BLHeli 32 35A V1
  - KS\_BLHeli\_32\_50A\_V1

o Tmotor\_32Bit

#### **Changes in 32.4.0.5:**

#### General:

- Minor fixes for FVT USB link/HID tool detection.
- Fix for EagleTree MicroVector interface connection failure.
- Added capability to handle BLHeli\_32 rev. 32.41 Beta.
  - Programmable "Sine Modulation Mode".
  - Programmable autonomous Telemetry output every 32ms ("Auto Telemetry").
  - Expanded Programmable "Motor Direction" to "Bidirectional Soft" and "Bidirectional Soft Rev.".
- Added BLHeli 32 rev. 32.4 hex files for:
  - FrESC 80A
  - HGLRC DinoShot 60A ST
  - o Siskin Lite

#### **Changes in 32.4.0.4:**

#### General:

- Fix for flash issue with
  - Hobbywing\_XRotor\_BLHeli32
  - o iFlight Force32

## External 4way-Interface (Cleanflight/Betaflight):

• Fixed "Initialization of flight controller denied" issue, when FC is setup for DShot or ProShot and Minimum Command is set lower the 1000 or 3D Mode is enabled.

# **Changes in 32.4.0.3:**

#### General:

- Added approved 32.4 hex files.
- Added BLHeli 32 rev. 32.3 hex files for:
  - Exuav FishDrone
  - HAKRC\_35A
  - KS\_BLHeli\_32\_40A
  - YGRC\_32
- Added updated Operation manual for BLHeli\_32 ARM Rev32.x

#### **Changes in 32.4.0.2:**

#### General:

• Fixed "ESC Tools... Verify flash memory" issue, where equal parameter areas are falsely signaled as unequal.

## **Changes in 32.4.0.1:**

## General:

- Added the ability to edit and flash BLHeli\_32 rev. 32.4. (No 32.4 hex files added yet).
- Added 32.3 hex files for:
  - Aikon AK32 4IN1 35A 6S V1 0
  - o Airbot Wraith32 Metal ST
  - Flycolor\_X\_Cross\_BL\_32\_35A
  - o MARS32 40A
  - RobotDOG ST
  - o Spedix\_GS25A\_4IN1\_4S\_V1\_1

#### Changes in 32.3.0.5 Beta:

- Music Editor improved: Simulation, store and load Music script now handles up to 8 channel polyphonic music ("Sync Startup Music to Multiple ESC" needs to be disabled).
- Improved Beta version update checking.

# External 4way-Interface (Arduino/Cleanflight/Betaflight)

- Added additional 2 sec wait time for CF/BF interface to complete FC reboot after failed connection.
- Improved re-flash assistance for ESCs marked as "u" (unknown) or "i" (invalid).

# Changes in 32.3.0.4d Beta:

#### General:

• Music Editor improved: Simulation now uses saw-tooth wave form and playback one octave lower (optional).

# Changes in 32.3.0.4c Beta:

#### General:

• Fixed 32.3.0.3 Beta issue: "Failed to read serial number" error showing, when try to remedy a previous flash write failure.

## Changes in 32.3.0.4b Beta:

#### General:

• Fixed 32.3.0.3 Beta issue: Click on "Flash BLHeli" fails if not "Read Setup" was done before.

#### Changes in 32.3.0.4a Beta:

#### General:

• Fixed issues in Music Script file manager load script file procedure. "Gen. Length" and "Gen. Interval" were not loaded correct, if prior Music was turned off.

## Changes in 32.3.0.4 Beta:

#### General:

- Added support for user programmable ESC startup Music.
- Adapted column width for "ESC Overview" with regard to shown number of ESCs.
- Fixed issues in reading setup from ini/ixi files.

## Changes in 32.3.0.3 Beta:

## General:

- Minor improvement of screenshot dialog window visibility.
- Added readout for input good/bad frame statistics.
- Added readout for input protocol detection.
- Added partial capability to handle coming BLHeli 32 rev. 32.4.
  - Programmable current sensor calibration.
  - Nondamped mode.
  - Showing input signal type and good / bad frames statistics.
  - No support for programmable startup music yet.

## External Interface

 Added hint for USB/COM ("L") and Arduino 4way-interface("K") on hitting "Disconnect" to restart a recently flashed ESC by disconnecting and reconnecting the power connection before use.

#### **Changes in 32.3.0.2:**

- Added 32.3 hex files for:
  - Hobbywing Xrotor BLHeli32
  - $\circ \quad FVT\_CloudPhoenix\_35A$
  - o HGLRC\_DinoShot\_40A\_ST
  - HGLRC\_T-REX\_60A\_ST

- o MARS32 35A
- Slightly improved recognition of corrupted layout revisions.
- Checking server connection before opening flash dialog.

# Changes in 32.3.0.1:

## General:

• Added approved BLHeli\_32 rev. 32.3 hex files.

# Changes in 32.3.0.0:

#### General:

- Added the ability to edit and flash BLHeli\_32 rev. 32.3. (No 32.3 hex files added yet).
- Added support for GD32F350x6 MCU

# External 4way-Interface (Arduino/Cleanflight/Betaflight)

- Added hint for CF/BF interface on hitting "Disconnect" to restart a recently flashed ESC by disconnecting and reconnecting the power connection before use.
- Added GD32F350x6 to device id match.
- Increased 4way-if version number to rev20.0.0.2 to indicate changes. Please ensure to use Arduino/CF/BF interface versions which contains 4way-if code of rev20.0.0.2 or higher. (BF 3.20 and CF 2.10 contain 4way-if version 20.0.0.1)

# **Changes in 32.2.0.2:**

#### General:

• Remove BLHeli rev. 32.2 hex files and disabled rev. 32.2 for flashing due to a compatibility issue if upgrading from rev 32.1.

# **Changes in 32.2.0.1:**

#### General:

- Renamed parameter "Beep Strength" to "Startup Beep Volume" and "Beacon Strength" to "Beacon/Signal Volume" and added functionality clarification in the hint text.
- Added the first approved BLHeli rev. 32.2 hex files.

# Changes in 32.2.0.0:

#### General:

- Added the ability to edit and flash BLHeli\_32 rev. 32.2. (No 32.2 hex files added yet).
- Added additional BLHeli\_32 rev 32.1 hex files.
- Fixed: not recognizing com port, if registry entry contains non ANSI characters.
- Added save/read Setup parameters to/from (\*.ini or \*.ixi) file.
- Fixed: unable to select an ESC with left mouse button into Multiple ESC arrangement.
- Fixed: falsely showing current sensor presence for Spedix\_GS30A\_V1\_1.
- Added indication of ESC activation state.
- Fixed: ESC name not stored with write Setup.
- Various minor fixed and improvements.

# External 4way-Interface (Arduino/Cleanflight/Betaflight)

- Fixed: ESC name did not show up in ESC Overview.
- Fixed: lost indication for the last ESC in a Multiple ESC arrangement, after writing setup to a prior ESC failed.

## **Changes in 32.1.0.1:**

#### General:

Added BLHeli 32 rev 32.1 hex files.

- Added support for STM32F031 MCU.
- Enhanced recognition for unknown (future) MCU types and revisions.
- Increased timeout for server connection to 30s.
- Various other improvements of GUI.

External 4way-Interface (Arduino/Cleanflight/Betaflight)

- Increased timeouts for flashing and writing setup to GigaDevice MCU's.
- Added STM32F031 to device id match.
- Increased 4way-if version number to rev20.0.0.1 to indicate changes. Please ensure to use Arduino interfaces/CF/BF versions which contains 4way-if code of rev20.0.0.1 or higher.

# Changes in 32.1.0.0:

General:

- Added capability to use BLHeli 32 rev 32.1 hex files.
- Fixed bug in saving screenshots of message dialogues.
- A lot tidying up and optimizing speed of application.

External 4way-Interface (Cleanflight/Betaflight)

• "Motors" tab: Disabled "Calibrate ESCs" if DSHOT is enabled.

# Changes in 32.0.0.4:

*General:* 

- Added identification for BLHeli32 rev 31.x test samples
- Added fix for ESC with corrupted settings area, showing up as "u" (Unknown).
- Added support for coming bootloader rev. f.
- MultipleESC sync function now allows optional exclusion of "LED setting". Check or uncheck sync in menu "Options... Sync....".

# **Changes in 32.0.0.1:**

External USB/COM (FVT-Linker) and 4way-Interfaces(Arduino/Cleanflight/Betaflight)

• Fixed timing bug, which leaded to flash failures.

#### Initial release 32.0.0.0