

# Spektrum™ AirWare™ Change Log

## 2016-November-15

### Version 1.12

Changes since 2016-January-26

#### Special Note

- In the Telemetry menu, some sensors may not be reported properly on the display or audibly after updating. If this occurs for you, please remove the sensor from the Telemetry list, then re-add it using the Auto-Config function on the Setup sub-menu. *If you made this change to your model since October 2015, you do **not** need to make it again.*

#### New Features & Improvements

- A Lap Timer system has been added to aid FPV racers.
- Auto-Config is now on the first Telemetry menu, making it easier for people to configure their telemetry systems.
- Changed the default Multi-Rotor type from Aerial Photography to FPV Racer mode.
- It was not possible to force DSM2 or 22ms binding modes in the previous several versions. This has been corrected. (Non-EU only).
- The Timer system now includes the ability to have switches other than CLEAR button to reset the timer(s) separately.
- Analog and Digital Switch Setup screens were moved to the Function List for radios which have those functions in them.
- When transmitter low voltage is warning, it displays the current voltage to allow you to understand the situation better.
- Complete telemetry support for Alpha-6, generic Gyro, and 6-cell and 14-cell LiPo sensors.
- Complete support for user-defined telemetry sensors per the Spektrum Telemetry specification document.
- Model Match Override allows multiple transmitter models to share a common Model Match ID. This should be used with extreme care, as it disables one of the big benefits that Spektrum has to offer. This is available by selecting NEXT on the Frame Rate screen.
- When assigning channels in Multi-Rotor mode, Flight Mode-based changes are now supported when the Aircraft Type is not FPV Racer. FPV Racer is a new option available.

- Added support for new telemetry receivers with signal strength feedback. This shows as either a dBm or percentage (you select which in Telemetry Flight Log setup screen). This strength is shown on appropriate telemetry screens and during Range Test, where it can be useful for locating lost models.
- For Multi-Rotor models, the high-speed (11ms) channels are THRO, AILE, ELEV, and RUDD. For other model types AUX1 replaces THRO.

## Corrections

- Improved system update process to reduce the chance of System Failure messages after an update.
- Channel A/B Warning values were exported as the Throttle warning point instead of as Channel A/B thresholds when using the Inside/Outside alarms. This means that models exported in earlier versions will import incorrectly, and will need to be modified manually. After exporting with this version, they will be retained properly. This applies to Acro, Sail, and Heli models. Multi-rotors were exported correctly.
- Center reports are no longer reset to defaults on power-up.
- When changing the Throttle Trim Setup to 2-/3-position mode, trims are reset to valid values instead of going to invalid extremes.
- Channel warnings could show large negative numbers in certain warning conditions.
- Improved ability to withstand attempted use of bad SD cards. Previously these could lock up a radio, requiring disconnection of battery to recover.
- Changing a 2-/3-pos trimmer will no longer allow invalid trim values.
- When moving a Gyro function to a different receiver channel, it now moves as it should.
- Corrected an import/export issue with “Inside” and “Outside” warning types not functioning correctly.
- “Inside” and “Outside” now alarm properly for general Channel alarms.
- Some blinking boxes on the Timer screens were repositioned correctly.
- Translation and spelling changes in assorted screens.

# Spektrum™ AirWare™ Change Log

## 2016-January-26

### Version 1.11

Changes since 2015-October-24

#### New Features & Improvements

- In Multi Rotor models you may now assign trims to the sticks. The Trim/Channel Config screen is available by selecting NEXT from the Trim Setup screen. You may configure different trims per flight mode if you desire. Trim inputs are limited to the trimmer inputs on each radio.
- In Multi-Rotor models, you may now selectively enable trims for the gimbals using the Trim Setup screen and selecting NEXT. Note that the trims can be en/disabled differently for each flight mode, but the input device will be the same for each mode.
- After 5 minutes of sounding the System Idle alert, the radio will automatically turn off the RF transmission.
- If the transmitter battery voltage gets below 3.8V, the system will automatically turn off RF transmission.
- Added status support for Xicoy, evoJet and Hornet ECUs (turbine telemetry).

#### Corrections

- In Sailplane model type, the L and R trimmers did not display the 2- or 3-position status properly. They were blanks, although the roller would change them.
- The telemetry log file is now created properly again. The session headers are now positioned correctly.
- Correctly exports and imports multicopter models with the “inside” and “outside” warnings enabled.
- Some Italian, French, and German translations have been improved in Multi Rotor model type and Telemetry sections.
- In Multi-Rotor mode, Throttle Curves with only 3 points will now display and function correctly.
- X-Plus channels are now properly configurable and controlled in Multi-Rotor mode. They were previously only usable in Acro, Heli, and Sail modes.
- Telemetry for Turbine Fuel Remaining and Fuel Flow Rate are now properly displayed and alarmed.

# Spektrum™ AirWare™ Change Log

2015-October-24

## Version 1.10

Changes since 2015-October-22

### Special Notes

- In the Telemetry menu, some sensors may not be reported properly on the display or audibly after updating. If this occurs for you, please remove the sensor from the Telemetry list, then re-add it using the Auto-Config function on the Setup sub-menu.

### New Features & Improvements

- None. This is a corrective release only.

### Corrections

- Resets caused by entering the Analog Switch Setup in a Multi-Rotor model have been eliminated.

# Spektrum™ DX18 AirWare™ Change Log

2015-October-22

## Version 1.09

Changes since 2015-January-28

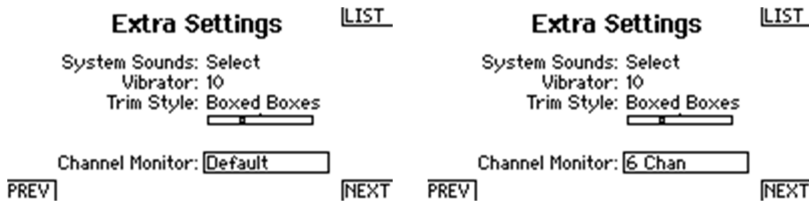
### Special Notes

- In the Telemetry menu, some sensors may not be reported properly on the display or audibly after updating. If this occurs for you, please remove the sensor from the Telemetry list, then re-add it using the Auto-Config function on the Setup sub-menu.

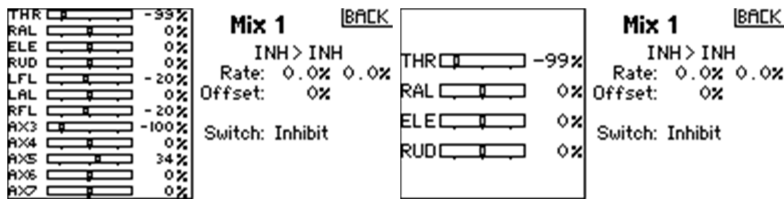
### New Features & Improvements

- Support for Multi-Rotor models. This includes changing the input names to Altitude, Roll, Pitch, and Yaw, the addition of more model images, a few more canned options for your Preflight Checklist (you can always edit them), and a more-usable Flight Mode Setup screen that allows you to easily specify servo output positions. Using the Channel Assign screens, you can select a different input to control a channel in each flight mode – this is useful to have a mode which keeps the model stable, but allows you to operate the camera using the sticks. A manual for Multi Rotor mode may be downloaded from the **Manuals & Support** tab on the product page for your radio.
- When adding channel position warnings, you can now enter positions of up to 150% rather than the previous limit of 100%.
- Two new warning types have been added – Center In and Center Out. These allow you to alarm on a servo position that is within a certain range of center, or outside a certain range around center.
- Configurable Center Tones allow any analog input (stick, knob, or lever/slider) to provide feedback when passing through center. In addition, this function allows you to disable the center tone that normally occurs on the knob and sliders.
- Extended servo/flap/sequencer delay functions to include delays of 33, 36, 40, 45, 52, 60, 72, 90, 120, 180, and 360 seconds. Note that these are for full travel, so you may need to use a longer delay value to get the time you want for a servo to travel a shorter distance.
- Timers can now be named. There is a prompt for the Timer Name on the Timer setup screen. This name will be shown on the main screen.
- The channel monitor can be set per-model from the Extra Settings screen under the System Settings menu. If you use this setting, it will become the new default

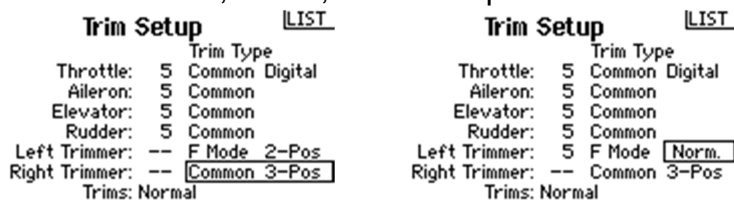
for this model. This feature allows you to see just the channels you need for the receiver in your model.



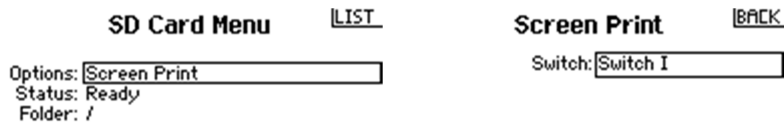
- You may customize the “Monitor” window on most screens showing channel status on the left side. When X-Plus is enabled, you can roll to the right until the box highlights around the monitor window, then click the roller and to select either the desired channels (see above) or X-Plus channels. This selection will remain active in all current screens and the full-size Monitor screen until you select a different setting or power off the radio. On power-up it will return to the normal format for this model.



- When viewing a folder to import a single model, previously the display was limited to 75 models. It can show up to 175 models now too.
- The Left and Right Digital Trims can now be programmed as either Common or F-Mode for Normal, 2-Pos, or 3-Pos operation.



- The model image options to display on the main screen are no longer limited by model type. You can put any model image you want on the display, or none at all. We also added more images of popular planes.
- You can now capture the LCD image to the SD card. Configure the function by going to the SD menu (a card must be in the slot), changing the Option to “Screen Print” and selecting the desired switch. We recommend a momentary switch such as the Trainer. When the image is saved, you will hear the sound of a camera shutter. Images will be numbered sequentially and stored in the root folder of the SD card. It will not overwrite existing images.



- When adding a new model from the Model Select screen or Model Utilities, the new model created is the same type of model (Acro, Heli, or Sail) as the current model. This will especially benefit pilots who fly one type of model, but will be a convenient shortcut for most. The Model Type function can still be used to change the type of the current model.

## Corrections

- In Acro, with 5 Flight Modes enabled, if you had remapped the channel outputs then if you go into the Flap System screen, the channel mappings would be returned to defaults. This reset to defaults no longer occurs.
- Timer 2 in Sailplane mode would default to the I switch for activation, but pressing the switch would not activate it. This has been corrected so that it works properly now.
- When importing models, the analog switch flight mode values were not imported correctly.
- The Digital Switch Setup screen no longer accepts an analog input for editing. Doing so could cause other problems in the model.
- The Trainer screens no longer allow the selection of an analog input as the trainer control switch, as this could result in a loss of control during a recovery attempt.
- When inserting characters into a name (Flight Mode Name, Model Name) using the <+> character, extra characters at the end that went beyond the valid length are now properly trimmed off.
- The "Import All" function will now load all models in a folder at one time. This should help resolve the issues some experienced when attempting to import from a folder which had more than 75 files in it.
- When you changed the Trainer mode several times, it was possible to get into a mode where there were only 4 channels available to configure.
- In DX18QQ and DX18G2, editing a mix curve did not always cause the graph to be updated properly.

# Spektrum™ DX18 AirWare™ Change Log

2015-January-28

## Version 1.08

Changes since 2014-May-21

### New Features & Improvements

- The pre-flight checklist shows the name of the model on power-up. This allows you to verify the right model is being started without having to go through the complete list first.
- New trainer mode “FPV” added to allow head tracker inputs to be mapped to any channel, with adjustable scaling and reversing. This mode enables easy mapping of head tracker channels to receiver ports, while not affecting flight controls.
- Add support for Flight Pack Capacity (mAh) and Receiver Pack Capacity (mAh) sensors
- Add support for ESC sensor
- X-Plus channels are now able to be configured to generate warnings in 18-channel systems, in addition to the normal channels previously available
- On the Model Copy utility, you are now able to select the Source model for copying. It is no longer necessary to use Model Select first.
- When setting up a timer in a speaking radio, a 20-second alert is now available.
- You can now use the “wiggle” function to select analog inputs when entering a “switch” option. Just move the appropriate switch or stick or slider and it will select it automatically.

### Corrections

- .AS3X Gains telemetry screen does not show when configured to not show.
- Sailplane AIL>RUD mix field “Sub Switch” is now exported properly.
- Heli gyro trim values are aligned properly for all flight modes
- Heli trim setup screen operates properly in tray radios
- Digital Switch Setup does not allow selection of Flight Mode switch if the Flight Mode system is not configured.
- Trainer inputs are not allowed to exceed Absolute Travel settings.
- Corrected delay between tx voltage status announcements
- Telemetry screens now refer to Turbine rather than JetCat.
- Telemetry screens with trim displays now properly indicate centered status the same as the main screen.



- Sequencers and Gyros will now properly release a channel when being turned off. Note that you must **completely** disable the gyro for the old channel name and function to be fully restored. That is, you must set the Gain input (first screen) to INH, click NEXT, then set the mix to INH > INH, then the switch to INH. Only then will the channel be completely and properly freed up. For sequencers you only need to set the output channel to INH.

# Spektrum™ DX18 AirWare™ Change Log

2014-May-21

## Version 1.07

Changes since 2014-April-18

### New Features & Improvements

- Added AS3X Gain monitor functions for use with AR636, AR6335, and similar AS3X receivers. When you enable telemetry option AS3X, you are able to see gain status in real time, and adjust it with a trimmer. Note that this function performs the following re-configurations in your radio:
  - The F-Mode switch has its outputs set to the proper values for AS3X operation. If you are using it for other purposes, you will need to reconfigure those features to allow AS3X to use them.
  - Mix 16 (DX10t and higher) is used to control AS3X gain.
  - The selected channel is reconfigured for proper control. If you change the channel, you will need to manually re-assign the old channel to its desired purpose.
  - Enables a screen “AS3X Gains” on the Function List to configure parameters.
  - Enables the AS3X telemetry gain monitor on the telemetry screens.
  - If you are using a DX6, you can tweak the gains using the roller while on the AS3X Gains configuration screen. If you are using a higher radio, you can adjust at any time using the desired trimmer.

### Corrections

- In Heli mode, Governor Trim function now works properly.
- Fixed Servo Travel problem for second Elevator in a 4-Servo swash heli.
- Improved translations in multiple languages
- When using a trimmer in 2- or 3-position mode, trimmers were acting as Flight Mode trims. They are now operating in Common Mode
- Trim decrement tone was being controlled by the Switch Sounds setting
- Governor Trim on Heli Trim Setup screen is now properly adjustable

# Spektrum™ DX18 AirWare™

## Change Log

### Version 1.06

2014-April-15

Changes from Version 1.05Beta

#### New Features & Improvements

- Swash setup with reversed channels no longer needs to be done on opposite throw
- Characters can now be inserted or deleted while editing text. The insert character looks like <+> and the delete character like >-<. Simply select this character during the edit phase to do the desired action
- “Auto-Zoom” on mix curve edit screen shows wave at 10X magnification when it will fit on the display properly
- Flight Mode switch can now have position values defined for each FM. Use the Digital Switch Setup screen to access this. All switches may be redefined, but the main application is expected to be multi-copter flight mode control.
- Flight Mode may be used as a mix input or channel input source. It will use the values defined in the Digital Switch Setup screen as if they were analog inputs
- Added “no image” as an option for all model types, as well as enable several trans-model type icons
- Vario graph width does not reset every power cycle
- Telemetry alarms are suspended while editing telemetry settings
- Improved reasonable options for sailplane throttle switch inputs
- Improved import/export compatibility between all radio types (not DX7s/DX8)

#### Corrections

- Models over 50 now bind properly
- Translation improvements for all languages
- Model image now exports
- Improved import/export for many features including combo switches, sub-FM rates, timers, and telemetry features
- Mixes for 6-aileron wings function properly now
- Trainer status is voiced correctly now based upon settings
- Gyro/Gov trims re-enabled in Heli mode
- Flight Mode Name editor was re-enabled
- Telemetry log switch operation force-enabled properly

- Removed 10% curve mixes could be limitation
- E-Ring is now properly disabled for swashes where it is not supported
- Improved warning for re-mapped channels which use switch inputs
- In certain situations, mixing Flaps to any channel would result in a mix to all channels

# Spektrum™ DX18 AirWare™ Change Log

## Version 1.05 (Beta)

2014-Feb-20

### NOTICE

This version requires that you export all models prior to applying the update.  
This is necessary in order to support additional features in the system.

### Update Summary

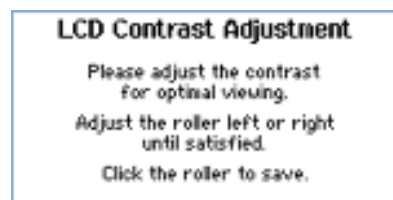
One of the major bonuses of this update is that now all the Spektrum™ AirWare™ radios DX9 and higher can share configuration files much better. The limitations are that the handheld radios do not have the same input switch capabilities that the trays have, and that the tray radio and handheld have different position counts for many switches. For that reason it is very important if you exchange model files between the different formats, it is essential that you check all switch assignments to ensure that your radio format properly selects the functions you desire. This step is over and above the normal checks that you would perform when importing a model configuration file between tray/handheld radios.

### Update Special Instructions

Before starting the update, Export All models to the SD card. Make sure you have a good copy of them; all models in the radio will be erased.

The installation may take several minutes to complete. Please be patient while the update is applied. You will see the scroll bar move back and forth several times, eventually landing you at a screen. Which screen depends on the previous version of code in your radio.

If your screen looks like this:



Adjust the contrast to the desired value using the roller left and right, then click the roller. You will later be able to use the System Settings screen to adjust it further.

If your screen looks similar to this:



Your radio is ready to use.

## New Features & Improvements

- Added LCD contrast calibration on the Raw I/O screen. If your screen contrast after the installation is not correct, hold down CLEAR and BACK as you power up the radio. Adjust contrast with the roller until the LCD shows a good image. Click the roller to save the setting. The normal System Setting contrast adjustment may still be used if you prefer.
- The user is able to select an image for the model. From the Aircraft Type screen select NEXT to access the feature.
- Import File attempts to prevent rebinding when loaded into the same transmitter.
- 250 model memory
- 2/3-Position action is available for the Left/Right trimmers in Acro and Sail modes.
- GPS supports a “home” altitude. This cannot be used to generate an alarm at this time, but it does make it easier to understand altitude above ground level. At the GPS status screen, press CLEAR to set the altitude to 0.
- Telemetry “Settings” menu has new option to auto-populate the list of sensors reporting from the model at the current time.
- Telemetry logging now supports push-on/push-off toggling on momentary switches.
- Added LCD contrast calibration on the Raw I/O screen. If your screen contrast after the installation is not correct, hold down CLEAR and BACK as you power up the radio. Adjust contrast with the roller until the LCD shows a good image. Click the roller to save the setting. The normal System Setting contrast adjustment may still be used if you prefer.
- Does not show hidden Mac files and directories in file lists

- Added ability to create mixes to channels which were moved using the Channel Assignment feature.
- Flow across Flight Mode editing screens is now consistent.
- Full support for the Spektrum Vario SPM9589
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## Corrections

- When using wired trainer, channel 9 is now forced to the Master/Instructor radio. When using wireless trainer, this is not the case.
- Model warnings now import/export correctly
- Pressing CLEAR on the low voltage alarm setpoint will now select the appropriate low voltage based on battery type
- Improves connection reliability (same as 1.04D).
- Improved translations in multiple languages.
- Do not give telemetry warnings when in Range Test mode.
- Wiggling switches does not cause a displayed switch to temporarily change
- Trim Include available on Throttle mixes
- Heli Cyclic to Throttle mix now works properly when trims are adjusted. This may affect the performance of your helicopter if you are using this mix now. Please verify the new behavior before flight.
- Analog throttle trim is properly displayed on the main screen.
- Slider trim input directions are reversible.
- 4-servo swash now properly protects all swash channels from be re-assigned.
- PowerBox telemetry warnings now show text for the fault.
- Added blinking boxes around Acro/Sail trim settings that were missing them.
- Changing the sailplane icon does not reset servo information any more.
- Corrected the display of the current flight mode in the Flight Mode Names screen, and changed the flow to remove redundancy with the Flight Mode Setup screens.
- User-defined warning settings would be changed during import due to an error in the exported file. Be sure to verify Warning settings when importing a model.
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***NOTE: Do not revert to older versions after installing this update!***

# Spektrum™ DX18 AirWare™ Change Log

## Version 1.04C

5 June 2013

### NOTICE

This version requires that you previously installed version 1.04 (8 April) into your radio.

### New Features & Improvements

- Enhancements to improve RF performance.
- Automatically disables France mode as it is no longer necessary.

### Corrections

- Properly display RF PID code on the version detail screen.

### SPECIAL INSTRUCTIONS:

Verify that your radio is currently at version 1.04. If it is not, download and install version 1.04 (8 April 2013) first. Note that you need to export all your models prior to installing version 1.04.

Once your radio is confirmed to be at version 1.04, install version 1.04C. Upon completion of the update, go to the Serial Number screen (use NEXT several times from System Settings). Highlight the version number and click the roller. This will display the versions of several components. Verify that the RF PID is now properly displayed as EA.

If you had to install version 1.04, now you may import your models again. You will need to re-bind them.

*NOTE: Do not revert to older versions after installing version 1.04C or higher!*



# Spektrum™ DX18 AirWare™

## Change Log

### Version 1.04

8 April 2013

#### NOTICE

This version requires that you export all models prior to applying the update.  
This is necessary in order to support additional features in the telemetry system.

#### New Features & Improvements

- Added direct access to System menu from the Function menu.
- Added direct switch selection for toggle switches. When editing a “Switch” field, just wiggle the desired toggle switch to select it. This only works for toggle switches, not stick switches.
- All 5 languages are in a single download.
- Reduced exporting for some unused mixes to improve interchangeability.
- Added Version Info screen by clicking version on Serial Number screen.
- When changing Trainer mode, settings for Master/Slave channels are always preserved.
- The default telemetry filename is changed to be based on the model name in the same way as it is for saving the SPM files. The name may be edited, and is retained through power cycles. It is not exported/imported.
- Added “Distance to Model” feature for GPS. This calculates the distance from the starting point (“Home”) to the model, and the bearing from Home to the model. It does not include altitude in the calculation. Home may also be reset to the current position by pressing CLEAR on the GPS Status screen. It can also generate a max distance warning to help prevent flying too far away. Distance alarms may be set in 30m increments (about 98 ft).
- The JetCat sensor now may generate alarms on various items reported by the ECU.
- Disable telemetry alarms while in Preflight mode. If alarms occur during the Preflight, they will be activated immediately upon completion of the checklist.
- Added third Gyro function in Acro mode.

#### Corrections

- Enabled UMX telemetry display (AR6400's with DSMX provide Flight Log data but not receiver voltage).
- Correctly display data from SPMA9590 current sensor.

- Corrected a display area for GPS altitude at high altitudes.
- Corrected an issue which could cause a slight oscillation of the rudder channel when expo was set to unrealistically high values and the stick deflected to extreme positions.
- In Sailplane mode, when exporting a model with functions set on Flight Modes B1 to B5, various items were not exported including FM-specific trims, and DR/Expo settings. These export correctly now.
- If a sequencer is paused, it will now retain its previous A logical switch position. If paused on power-up, the position is indeterminate but will be in range 0-4. Do not start up with sequencer control switches in “pause” position.
- When using a switch with more than three positions (Flight Mode or Sequencer, typically) to control flaps, the display shows appropriate titles for each line, Pos or FM.
- In Heli mode, D/R and Expo are now properly mapped per flight mode.
- In Acro Gyro, the curve settings are no longer erased when moving from the opening Gyro screen to the Gyro curve edit screen. They are only erased when changing the gyro type between Acro and Heli.

# Spektrum™ DX18 AirWare™ Change Log

## Version 1.03

8 October 2012

### New Features & Improvements

- In a V tail model, if the Aileron > Rudder mix is used, the V-Tail Differential setting is now fully supported.
- Reduced exporting for some unused mixes to improve interchangeability.
- Improved RF binding performance

### Corrections

- Properly display the top L/R trimmer status in heli mode
- Improved French and Italian translations
- Properly count Sailplane flight modes in custom setup

# Spektrum™ DX18 AirWare™ Change Log

## Version 1.02

13 August 2012

### Corrections

- Corrected lock-up issue when used in trainer mode.
- Corrected change to US region caused by version 1.01 installation. Other system-level fields could have been changed as well.
- Corrected helicopter curve mixing.

### Open Issues

- When the V-tail is slaved to an Aileron > Rudder mix, the V-Tail Differential setting is ignored.

# Spektrum™ DX18 AirWare™ Software Change Log

## Version 1.01

3 August 2012

### New Features & Improvements

- Enabled telemetry sensor for GPS, JetCat, and High Current (Amps).
- Enabled up to 32-pole motors for the Brushless RPM sensor.
- Enabled access to more switches as telemetry log starters.
- Enabled French and Italian languages. Note that these are two separate downloads (English/German/French or English/Italian).
- Improved interchange with DX10t-created SPM files.

### Corrections

- Visiting the Sailplane Type screen would reset any channel mapping in the model. Channel mapping is now correctly changed only when the wing, tail type, or motor type is changed.
- In Sailplane mode, channel mapping could be un-done when reloading a model for certain configurations.
- Master-mode trainer was inactive unless the user went off Switch I (default) and returned.
- Flap System in Acro mode did not properly support analog input devices to control the flaps, nor did the L/R trimmers work properly.
- Model export would put in a record for GPS even if no GPS device was enabled. When later imported, this would show a bogus GPS entry in the telemetry list.

### Open Issues

- When the V-tail is slaved to an Aileron > Rudder mix, the V-Tail Differential setting is ignored.

# **Spektrum™ DX18 AirWare™ Software Change Log**

## **Version 1.00**

**29 May 2012**

This is the initial release of the DX18 AirWare software. This version will turn off the registration reminder screen that will show during power-down and some power-up cycles.

Thank you for purchasing the Spektrum DX18 transmitter!

The Spektrum Team