## Version 3.00

### 8 April 2013

#### **Software Features**

• Added full function support for sailplanes (Model Type Sailplane)

### Sailplane features include:

- 4 Flight Modes- can be assigned to any 2 switches Launch Cruise Speed Thermal
- Sailplane Types- 4 wing types available
  Normal 1 servo aileron- RES and basic sailplanes
  2 servo ailerons- Discuss Launch and Slopes Soaring sailplanes
  2 ailerons 1 flaps- Sailplanes with one flap servo
  2 ailerons 2 flaps- Full Function Competition and Scale sailplanes
- Tail Types- 3 tail types available Normal V-Tail A V-Tail B

#### • Motor

Supports motor function on throttle stick, push button or programmable switches including flight mode

#### Camber System

Full trailing edge camber can be adjusted in flight via throttle stick or knob. Different camber values are available in each flight mode (4). Brake/ Crow is available per flight mode.

#### Camber Preset

4 camber presets available (1 for each flight mode) for flaps, ailerons and elevator

#### • Flap to Elevator Curve mix

A flap to elevator curve mix can be assigned to a flight mode or switch. Four curves are available.

#### • Aileron to Flap Mix

Aileron to Flap mix allows up to four mix values that can be selected via flight modes or switches

#### • Aileron to Rudder Mix

- Aileron to Rudder mix allows up to four mix values that can be selected via flight modes or switches
- Elevator to Flap Mix Includes offset for snap flap mixing. Four mix values are available
- Six Free Programmable Mixes
- Four Aileron Differential Settings Selectable in each flight mode or via a programmable switch
- Four Flap Differential Settings selectable in each flight mode or via a programmable switch
- Elevator Trim Per Flight Mode Allows active independent elevator trimming per flight mode

#### **Software Corrections**

• No changes to Airplane or Helicopter modes

## Version 2.06

### 24 September 2012

### **Software Features**

• Automatically corrects sub-trim and travel for models created in version 2.04 and earlier after prompting the user. This is functional both for models already in your radio, and for any you import from an SD card. You should always verify operation of a model when making any updates prior to flying it.

### **Software Corrections**

- P-Link Master Trainer mode was using trainer data for channels GEAR and higher.
- When a channel is reversed the endpoint adjustment worked on the opposite side from what was expected.
- Improved French translations.
- Added SD logfile indicator to main screens.

**NOTE:** This change affects sub-trim and travel of existing models and ones you will import. You should double-check sub-trims and travel on any reversed control surfaces in both airplanes and helicopters when using models created in version 2.04 and earlier.

## Version 2.05

## 13 August 2012

### Software Features

- Added support for GPS and High Current telemetry sensors.
- Enabled up to 32-pole motors for the brushless RPM sensor.
- Enabled SD telemetry log file
- Enabled ability to configure inactivity timer
- Enabled backlight configurability (Auto/On/Off)
- Enabled dimming control of the orange Spektrum LED for night flying
- Adjusted vibe motor RPM to be less aggressive

- Fixed bug that could reset the radio when scrolling through Mix options.
- Corrected L/R trimmer 'forgetting' assignment after power cycle.
- Improved translations in French and Italian screens.
- Corrected export of flap configuration.
- Corrected over-travel of flaps that could result in reversed operation at extreme deployments.
- Corrected switch change on Acro throttle cut screen when going from the initial switch selection to the edit page.
- Corrected timer to work properly in Throttle Out mode when using reversed throttle channel.
- Corrected end-point adjustability when Trainer is used as an input to a channel.
- Corrected trainer normal Master mode so that it doesn't modify controls from the slave. In previous versions it could reverse channels vs. what was expected.
   **NOTE:** This change affects sub-trim and travel of existing models and ones you will import. You may need to adjust sub-trims and travel on all control surfaces in both airplanes and helicopters.

## Version 2.04

## 11-17-2011

### **Software Features**

- Added G-Force telemetry support.
- Added "Knob" to calibration screen so users know the status as they calibrate it. The knob neutral point was not being updated during calibration. We also corrected the criteria for centering on the sticks to improve functionality in some radios.
- The Switch Select page more accurately reflects the current switch assignment. If a wing or tail type uses a channel that a switch is on, the switch setting is changed to INH. It remains INH until manually reassigned.
- When a model is copied, the bind information for the copied model is now erased. This will allow the user to see that the model is not bound, as it will not show DSM2 or DSMX on the main screen.
- Calibration for mode changes uses the same screen as when a user manually selects calibration. This means that mode change cal requires the user to move both sticks in a + format (**not** like an O, X, L, or T), as well as rotate and center the knob.

- **Translations** Improve/Correct translation of some terms for some German Helicopter screens. Corrected Italian translation "Alettoni."
- **Calibration** when calibrating, the knob "neutral point" was not being updated.
- **Flap System** The elevon flap system bug has been corrected. The flaps now work smoothly and move correctly for the given speed values.
- **Channel Assignments** Scrolling through the wing and tail types does not change gear or aux channel assignments until the wing or tail type is actually selected.

## Version 2.03

### Software Features

- Changed Monitor screen to improve perceptibility of changes in stick and trim resolution.
- Added new wing type Elevon B. This mode is used if control horn or servo positions don't allow correct throw directions. Eliminates need to swap elevator and aileron servo leads. Also required with some trainer systems like the DX6i.
- When editing the timer configuration, any changes will cause the timer to be reset.
- After reversing the throttle channel, the screen changes to show a reminder to rebind at low throttle for safety.
- To improve the ease of adjusting travel limits for complex servo functions (swash, V-tail, etc), the Servo Setup screens now are tracking servo outputs directly.
- To avoid confusion when binding, we changed the Bind screen to show actual 11ms/22ms bind info instead of what the receiver is capable of doing.
- Enabled adjustment of the telemetry receiver voltage display bar. Adjusting the low and high setpoints (high is NOT an alarm) you are adjusting the scaling of the bar graph for Rx Voltage.
- When importing a model, a confirmation screen now appears to warn about possibility over-writing the wrong model.
- Changed telemetry menu and capabilities to enable access to future sensors.
- Users are now able to calibrate the knob and both stick in both axes. This is done by selecting NEXT several times from the System Setup menu. Move the sticks in a "+" format, NOT in an X or O. It is important not to push the sticks to the corners.

- Flap/Elevator Smoothness Elevator compensation travel was not smooth when there was significant trim on the elevator channel.
- Flap Overdrive Initial flap movement could sometimes cause flaps to jump to one extreme of travel before moving to correct setting.
- **Telemetry** Changed scaling for telemetry alarms Altitude & Airspeed. Fixed 'hidden status' screens when using models created in older versions.
- **Translations** Improve/Correct translation of some terms for German, Spanish and Italian modes, particularly on the Timer and Telemetry screens.

## Version 2.02

### Software Upgrades

• Changed Monitor screen to improve perceptibility of changes in stick and trim resolution.

NOTE: Version 2.02 is a Factory only version.

## Version 2.01

- Language translations corrected in telemetry and helicopter screens.
- Timer screen allows access to change throttle stick position.
- Telemetry screens for PowerBox and other sensors are not shown when the Display control is set to Inhibit.
- A model file that has the timer set to Inhibit can now be imported correctly.
- Flap system output positions are updated immediately as changes are made.

## Version 2.00

## Software Upgrades

- DSMX is enabled.
- DSMX/DSM2 bind mode is now shown on the main screen immediately to the right of the Spektrum logo.
- DSMX/DSM2 mode selectable on the Frame Rate screen. Note that a DSMX receiver is necessary for DSMX operation.
- Added support for new Telemetry sensors Airspeed, Altitude, and PowerBox.
- Receiver Voltage is now shown on the Min/Max screen.
- Telemetry menu is now a scrolling list, to improve ease of use as the number of possible sensors increases.
- When setting the Flight Pack Voltage alarms, you can easily set the alarm points based upon LiPo cell count, then tweak them to your preference.
- The low-level SD interface is updated to improve compatibility with PC's.
- Mix and Gear switches can now be used in mixing functions to have the active position either 0 or 1. These are named Mix-0/Mix-1 and Gear-0/Gear-1. The "1" option is the same as the old Mix or Gear option, as the mix function was previously active in position 1.
- The Timer Setup screen now hides information which is not related to the selected timer mode.
- In Elevon wing types, the Flap System is enabled, providing the flap function on Aux 1 and enabling proper elevator compensation. In this mode, the Aux1 channel would typically be used either as a drag brake or a spoiler.
- The Serial Number screen now includes an EXPORT function to make it simpler to enter the serial number when registering a new radio.

- Mix Switch The Mix Switch was sometimes treated as a 3-position switch.
- **Mode-Change Recalibration –** When changing between Mode 1 and Mode 2, the throttle and elevator sticks were calibrated to different tolerances than during factory calibration.
- **Telemetry Alarming** Corrected problem with multiple alarms on main voltage sensor inter-acting with one another.

# Version 1.05 (Not Released)

• All 1.05 changes are released in 2.00.

#### Software Upgrades

- **Trim Center Pause** When adjusting the trims through center, the pause was lengthened to allow the center position to be more easily accessed.
- **Knob Center Tone –** When adjusting the knob, it generates a "center trim" tone as it rotates through center.
- LiPo Battery Verification Attempting to change the battery type in the Extra Settings screen from NiMH to LiPo will not be allowed until a LiPo battery is installed. This prevents the user from mistakenly selecting the LiPo battery voltage cutoff with a NiMh battery installed.
- **Frame Rate Defaults to 22ms-** The Frame Rate now defaults to 22ms rather than 11ms. This prevents analog servo compatibility issues in the default mode.
- **AirWare Auto-Update –** To guard against inadvertently downgrading the radio's AirWare, after installing version 1.04 or higher the system will rename the update file to prevent it from auto-loading in the future.
- **Startup Screen –** The startup is changed so that no inaccurate "No RF Link" warning is displayed.

#### **Software Corrections**

- Heli Mode Trainer Button if the Trainer button was assigned to a channel in the Switch Select screen, the channel was inactive.
- Flap Trim When a Flaperon wing type was selected and the right or left trimmer was assigned to flap trim, the trim was mixed as ailerons instead of flaps. It was also not possible to deactivate flap trim once selected.
- Acro Throttle Curve Pressing the CLEAR button could allow the displayed throttle curve to not match the values entered numerically.
- **German Timer** The prompts for the German-mode throttle-based timer controls were renamed so as to be more intuitive.

Throttle = Gasstellung Throttle 1-time = Motorstart Throttle Out = Motorlaufzeit

#### Software Upgrades

- Heli Servo Travel Adjust In heli mode, it is now easier to set up the swash endpoints using the Servo Travel screen. The travel limit box remains on the last value that was highlight by the stick position. Centering the stick and pressing clear returns to highlighting both values.
- Enhanced Telemetry Status Screen A new "All-in-One" telemetry screen displays Timer, RPM, Battery Volts, Temperature, Rx Volts, Frame Losses, and Holds.
- **Telemetry Auto-Display** An Auto option in the Telemetry Settings screen will automatically advance from the main screen to the above Enhanced Telemetry screen when the timer is activated and telemetry data is available. The roller can then be used to access any of the telemetry or main screens.
- **SD File Navigation** On the SD file navigation screen the BACK button now operates the same as selecting the <BACK> file.

- Heli Mode Mix Issue In the previous version, mixing to certain channels would cause no travel.
- **Differential issue-** In airplane mode when any dual aileron wing type was selected and a mix was created with the left aileron as a slave (crow mixing) adding differential could cause servo output errors on the aileron channels.
- **Model Save Corruption** If there was an error while exporting a model, it could go undetected and unreported until reading the file back in.
- **Heli Bind Issue** If a model had Expo enabled on all throttle and pitch curves, it would not bind. This is corrected.

- Heli Mode Model Memory Issue In previous software versions, changing the channel in the Gyro or Governor screens from the default setting to any other channel would cause the model memory to default to Model #1.
- Heli Mode Limited Trim Throttle Trim didn't work below ½ trim.
- **Direct Model Access 10-Second Timer –** In some instances, the 10-second time-out function for direct model access was applied to other screens after Direct Model Access was used.
- Improved Flap Switch Selection In Airplane mode, flap switch selection could be in conflict in the Flap System Screen and in the Switch Select Screen. In version 1.02, the flap switch selection is in the Flap System Screen.
- **Center Trim Position Mark** Version 1.02 locates a trim tick-mark next to the trim graph at center trim, allowing convenient reference when the cursor is near center.

## Software Upgrades

- "Throttle Out" timer activation In the timer screen, Throttle Out has been added to the timer start options. When selected this mode uses the throttle servo output position to activate the timer rather than the throttle stick position. This is ideal for electric helicopter use as the timer can be paused when the output throttle position is at idle even though the stick may not be at low stick (like during an autorotation) plus the timer won't turn off when doing full negative pitch maneuvers in stunt mode. MIX and GEAR switches have also been added to the list of available timer switches.
- **Throttle Reverse Confirmation** In the servo setup screen, when reversing the throttle servo, a confirmation screen is now displayed requiring a second step (confirmation) before servo output is reversed.
- **SD Card -** improved support for low-capacity cards.

#### **Software Corrections**

- **Throttle Curve Switch** (airplane mode only) the user-selected switch in the Throttle Curve screen in airplane mode only was always assigned to the Flight Mode switch. This function is now corrected.
- **Multi-Mixes with a Common Slave Channel** if a user had two or more mixes programmed to the same output channel, only the higher-numbered mix would be active.
- **Mix Trim-Include** In some mixes trim include was assigned to the wrong trimmer in certain circumstances.
- Internal Timer In the timer screen the internal timer for each model was not accurately calculated.
- **Trim Steps** When trim step sizes were changed in the Trim Setup screen, values higher than 6 would cause the trim range to decrease.
- **Shifting Screen -** When selecting NiMH vs. LiPo battery, the bottom half of the screen would shift up or down 1 line.
- **Translation Errors** in French, Italian, and Spanish, the "Model Selection" menu optio was named "Special Features" and not translated.
- **RPM Telemetry** The displayed value for the RPM was unstable when using the brushless motor sensor. Also a phantom RPM was sometimes displayed when dashed lines should have been displayed (no recent RPM reading). A filter was added to stabilize the RPM readings.
- **BNF File Import** properly supports multiple languages now.
- **Servo Travel Adjust-** When editing Servo Travel Adjust, pressing CLEAR would cause the channel reverse to be defaulted to normal.

# Spektrum<sup>™</sup> DX8 AirWare<sup>™</sup>

# Change Log

# Version 2.06

## 24 September 2012

#### Software Features

• Automatically corrects sub-trim and travel for models created in version 2.04 and earlier after prompting the user. This is functional both for models already in your radio, and for any you import from an SD card. You should always verify operation of a model when making any updates prior to flying it.

#### **Software Corrections**

- P-Link Master Trainer mode was using trainer data for channels GEAR and higher.
- When a channel is reversed the endpoint adjustment worked on the opposite side from what was expected.
- Improved French translations.
- Added SD logfile indicator to main screens.

**NOTE:** This change affects sub-trim and travel of existing models and ones you will import. You should double-check sub-trims and travel on any reversed control surfaces in both airplanes and helicopters when using models created in version 2.04 and earlier.

## Version 2.05

## 13 August 2012

### Software Features

- Added support for GPS and High Current telemetry sensors.
- Enabled up to 32-pole motors for the brushless RPM sensor.
- Enabled SD telemetry log file
- Enabled ability to configure inactivity timer
- Enabled backlight configurability (Auto/On/Off)
- Enabled dimming control of the orange Spektrum LED for night flying
- Adjusted vibe motor RPM to be less aggressive

- Fixed bug that could reset the radio when scrolling through Mix options.
- Corrected L/R trimmer 'forgetting' assignment after power cycle.
- Improved translations in French and Italian screens.
- Corrected export of flap configuration.
- Corrected over-travel of flaps that could result in reversed operation at extreme deployments.
- Corrected switch change on Acro throttle cut screen when going from the initial switch selection to the edit page.
- Corrected timer to work properly in Throttle Out mode when using reversed throttle channel.
- Corrected end-point adjustability when Trainer is used as an input to a channel.
- Corrected trainer normal Master mode so that it doesn't modify controls from the slave. In previous versions it could reverse channels vs. what was expected.
   **NOTE:** This change affects sub-trim and travel of existing models and ones you will import. You may need to adjust sub-trims and travel on all control surfaces in both airplanes and helicopters.

## Version 2.04

## 11-17-2011

### **Software Features**

- Added G-Force telemetry support.
- Added "Knob" to calibration screen so users know the status as they calibrate it. The knob neutral point was not being updated during calibration. We also corrected the criteria for centering on the sticks to improve functionality in some radios.
- The Switch Select page more accurately reflects the current switch assignment. If a wing or tail type uses a channel that a switch is on, the switch setting is changed to INH. It remains INH until manually reassigned.
- When a model is copied, the bind information for the copied model is now erased. This will allow the user to see that the model is not bound, as it will not show DSM2 or DSMX on the main screen.
- Calibration for mode changes uses the same screen as when a user manually selects calibration. This means that mode change cal requires the user to move both sticks in a + format (**not** like an O, X, L, or T), as well as rotate and center the knob.

- **Translations** Improve/Correct translation of some terms for some German Helicopter screens. Corrected Italian translation "Alettoni."
- **Calibration** when calibrating, the knob "neutral point" was not being updated.
- **Flap System** The elevon flap system bug has been corrected. The flaps now work smoothly and move correctly for the given speed values.
- **Channel Assignments** Scrolling through the wing and tail types does not change gear or aux channel assignments until the wing or tail type is actually selected.

## Version 2.03

### Software Features

- Changed Monitor screen to improve perceptibility of changes in stick and trim resolution.
- Added new wing type Elevon B. This mode is used if control horn or servo positions don't allow correct throw directions. Eliminates need to swap elevator and aileron servo leads. Also required with some trainer systems like the DX6i.
- When editing the timer configuration, any changes will cause the timer to be reset.
- After reversing the throttle channel, the screen changes to show a reminder to rebind at low throttle for safety.
- To improve the ease of adjusting travel limits for complex servo functions (swash, V-tail, etc), the Servo Setup screens now are tracking servo outputs directly.
- To avoid confusion when binding, we changed the Bind screen to show actual 11ms/22ms bind info instead of what the receiver is capable of doing.
- Enabled adjustment of the telemetry receiver voltage display bar. Adjusting the low and high setpoints (high is NOT an alarm) you are adjusting the scaling of the bar graph for Rx Voltage.
- When importing a model, a confirmation screen now appears to warn about possibility over-writing the wrong model.
- Changed telemetry menu and capabilities to enable access to future sensors.
- Users are now able to calibrate the knob and both stick in both axes. This is done by selecting NEXT several times from the System Setup menu. Move the sticks in a "+" format, NOT in an X or O. It is important not to push the sticks to the corners.

- Flap/Elevator Smoothness Elevator compensation travel was not smooth when there was significant trim on the elevator channel.
- Flap Overdrive Initial flap movement could sometimes cause flaps to jump to one extreme of travel before moving to correct setting.
- **Telemetry** Changed scaling for telemetry alarms Altitude & Airspeed. Fixed 'hidden status' screens when using models created in older versions.
- **Translations** Improve/Correct translation of some terms for German, Spanish and Italian modes, particularly on the Timer and Telemetry screens.

## Version 2.02

### Software Upgrades

• Changed Monitor screen to improve perceptibility of changes in stick and trim resolution.

NOTE: Version 2.02 is a Factory only version.

## Version 2.01

- Language translations corrected in telemetry and helicopter screens.
- Timer screen allows access to change throttle stick position.
- Telemetry screens for PowerBox and other sensors are not shown when the Display control is set to Inhibit.
- A model file that has the timer set to Inhibit can now be imported correctly.
- Flap system output positions are updated immediately as changes are made.

## Version 2.00

## Software Upgrades

- DSMX is enabled.
- DSMX/DSM2 bind mode is now shown on the main screen immediately to the right of the Spektrum logo.
- DSMX/DSM2 mode selectable on the Frame Rate screen. Note that a DSMX receiver is necessary for DSMX operation.
- Added support for new Telemetry sensors Airspeed, Altitude, and PowerBox.
- Receiver Voltage is now shown on the Min/Max screen.
- Telemetry menu is now a scrolling list, to improve ease of use as the number of possible sensors increases.
- When setting the Flight Pack Voltage alarms, you can easily set the alarm points based upon LiPo cell count, then tweak them to your preference.
- The low-level SD interface is updated to improve compatibility with PC's.
- Mix and Gear switches can now be used in mixing functions to have the active position either 0 or 1. These are named Mix-0/Mix-1 and Gear-0/Gear-1. The "1" option is the same as the old Mix or Gear option, as the mix function was previously active in position 1.
- The Timer Setup screen now hides information which is not related to the selected timer mode.
- In Elevon wing types, the Flap System is enabled, providing the flap function on Aux 1 and enabling proper elevator compensation. In this mode, the Aux1 channel would typically be used either as a drag brake or a spoiler.
- The Serial Number screen now includes an EXPORT function to make it simpler to enter the serial number when registering a new radio.

- Mix Switch The Mix Switch was sometimes treated as a 3-position switch.
- **Mode-Change Recalibration –** When changing between Mode 1 and Mode 2, the throttle and elevator sticks were calibrated to different tolerances than during factory calibration.
- **Telemetry Alarming** Corrected problem with multiple alarms on main voltage sensor inter-acting with one another.

# Version 1.05 (Not Released)

• All 1.05 changes are released in 2.00.

#### Software Upgrades

- **Trim Center Pause** When adjusting the trims through center, the pause was lengthened to allow the center position to be more easily accessed.
- **Knob Center Tone –** When adjusting the knob, it generates a "center trim" tone as it rotates through center.
- LiPo Battery Verification Attempting to change the battery type in the Extra Settings screen from NiMH to LiPo will not be allowed until a LiPo battery is installed. This prevents the user from mistakenly selecting the LiPo battery voltage cutoff with a NiMh battery installed.
- **Frame Rate Defaults to 22ms-** The Frame Rate now defaults to 22ms rather than 11ms. This prevents analog servo compatibility issues in the default mode.
- **AirWare Auto-Update –** To guard against inadvertently downgrading the radio's AirWare, after installing version 1.04 or higher the system will rename the update file to prevent it from auto-loading in the future.
- **Startup Screen –** The startup is changed so that no inaccurate "No RF Link" warning is displayed.

#### **Software Corrections**

- Heli Mode Trainer Button if the Trainer button was assigned to a channel in the Switch Select screen, the channel was inactive.
- Flap Trim When a Flaperon wing type was selected and the right or left trimmer was assigned to flap trim, the trim was mixed as ailerons instead of flaps. It was also not possible to deactivate flap trim once selected.
- Acro Throttle Curve Pressing the CLEAR button could allow the displayed throttle curve to not match the values entered numerically.
- **German Timer** The prompts for the German-mode throttle-based timer controls were renamed so as to be more intuitive.

Throttle = Gasstellung Throttle 1-time = Motorstart Throttle Out = Motorlaufzeit

#### Software Upgrades

- Heli Servo Travel Adjust In heli mode, it is now easier to set up the swash endpoints using the Servo Travel screen. The travel limit box remains on the last value that was highlight by the stick position. Centering the stick and pressing clear returns to highlighting both values.
- Enhanced Telemetry Status Screen A new "All-in-One" telemetry screen displays Timer, RPM, Battery Volts, Temperature, Rx Volts, Frame Losses, and Holds.
- **Telemetry Auto-Display** An Auto option in the Telemetry Settings screen will automatically advance from the main screen to the above Enhanced Telemetry screen when the timer is activated and telemetry data is available. The roller can then be used to access any of the telemetry or main screens.
- **SD File Navigation** On the SD file navigation screen the BACK button now operates the same as selecting the <BACK> file.

- Heli Mode Mix Issue In the previous version, mixing to certain channels would cause no travel.
- **Differential issue-** In airplane mode when any dual aileron wing type was selected and a mix was created with the left aileron as a slave (crow mixing) adding differential could cause servo output errors on the aileron channels.
- **Model Save Corruption** If there was an error while exporting a model, it could go undetected and unreported until reading the file back in.
- **Heli Bind Issue** If a model had Expo enabled on all throttle and pitch curves, it would not bind. This is corrected.

- Heli Mode Model Memory Issue In previous software versions, changing the channel in the Gyro or Governor screens from the default setting to any other channel would cause the model memory to default to Model #1.
- Heli Mode Limited Trim Throttle Trim didn't work below ½ trim.
- **Direct Model Access 10-Second Timer –** In some instances, the 10-second time-out function for direct model access was applied to other screens after Direct Model Access was used.
- **Improved Flap Switch Selection** In Airplane mode, flap switch selection could be in conflict in the Flap System Screen and in the Switch Select Screen. In version 1.02, the flap switch selection is in the Flap System Screen.
- **Center Trim Position Mark** Version 1.02 locates a trim tick-mark next to the trim graph at center trim, allowing convenient reference when the cursor is near center.

### Software Upgrades

- "Throttle Out" timer activation In the timer screen, Throttle Out has been added to the timer start options. When selected this mode uses the throttle servo output position to activate the timer rather than the throttle stick position. This is ideal for electric helicopter use as the timer can be paused when the output throttle position is at idle even though the stick may not be at low stick (like during an autorotation) plus the timer won't turn off when doing full negative pitch maneuvers in stunt mode. MIX and GEAR switches have also been added to the list of available timer switches.
- **Throttle Reverse Confirmation** In the servo setup screen, when reversing the throttle servo, a confirmation screen is now displayed requiring a second step (confirmation) before servo output is reversed.
- **SD Card -** improved support for low-capacity cards.

- **Throttle Curve Switch** (airplane mode only) the user-selected switch in the Throttle Curve screen in airplane mode only was always assigned to the Flight Mode switch. This function is now corrected.
- **Multi-Mixes with a Common Slave Channel** if a user had two or more mixes programmed to the same output channel, only the higher-numbered mix would be active.
- **Mix Trim-Include** In some mixes trim include was assigned to the wrong trimmer in certain circumstances.
- Internal Timer In the timer screen the internal timer for each model was not accurately calculated.
- **Trim Steps** When trim step sizes were changed in the Trim Setup screen, values higher than 6 would cause the trim range to decrease.
- **Shifting Screen** When selecting NiMH vs. LiPo battery, the bottom half of the screen would shift up or down 1 line.
- **Translation Errors** in French, Italian, and Spanish, the "Model Selection" menu optio was named "Special Features" and not translated.
- **RPM Telemetry** The displayed value for the RPM was unstable when using the brushless motor sensor. Also a phantom RPM was sometimes displayed when dashed lines should have been displayed (no recent RPM reading). A filter was added to stabilize the RPM readings.
- **BNF File Import** properly supports multiple languages now.
- **Servo Travel Adjust-** When editing Servo Travel Adjust, pressing CLEAR would cause the channel reverse to be defaulted to normal.