AltusMetrum

Release Notes for Version 1.4

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Version 1.4 is a major release. It includes support for our new TeleGPS product, new features and bug fixes in in the flight software for all our boards and the AltosUI ground station

1. AltOS

AltOS new features:

- Add support for TeleGPS boards.

- Make the beeper tone configurable, making it possible to distinguish between two Altus Metrum products in the same ebay.

- Make the firing time for extra pyro channels configurable, allowing longer (or shorter) than the default 50ms. Only relevant for TeleMega at this time.

AltOS fixes:

- Replace the *dit dit dit* tones at startup with the current battery voltage, measured in tenths of a volt. This lets you check the battery voltage without needing telemetry, which is especially useful on EasyMini.

- Change state beeping to "Farnsworth spacing", which means they're quite a bit faster than before, and so they take less time to send.

- Fix bug preventing the selection of the *Flight State After* mode in pyro configuration.

- Fix bug where erasing flights would reset the flight number to 2 on TeleMega and TeleMetrum v2.

- Fix u-Blox GPS driver to mark course and speed data as being present.

2. AltosUI Application

AltosUI new features:

- Add zooming and new content types (terrain and road maps) to map view. Change map storage format from PNG to Jpeg, which saves a huge amount of disk space. You will need to re-download all of your pre-loaded map images.

- Add a distance measuring device to the maps view. Select this by using any button other than the left one, or by pressing shift or control on the keyboard while using the left button.

- Add new *Ignitor* tab to the flight monitor display for TeleMega's extra ignitors.

- Add additional ignitor firing marks and voltages to the graph so you can see when the ignitors fired, along with the ignitor voltages.

- Add GPS course, ground speed and climb rate as optional graph elements.

AltosUI fixes:

- When flashing new firmware, re-try opening the device as sometimes it takes a while for the underlying operating system to recognize that the device has rebooted in preparation for the flashing operation.

- Hide Tilt Angle in ascent tab for devices that don't have a gyro.

- Increase the width of data lines in the graphs to make them easier to read.

- Filter out speed and acceleration spikes caused by ejection charge firing when computing the maximum values. This provides a more accurate reading of those maximums.

- Fix EasyMini voltage displays. Early EasyMini prototypes used a 3.0V regulator, and AltosUI still used that value as the basis of the computation. Production EasyMini boards have always shipped with a 3.3V regulator. Also, purple EasyMini boards sensed the battery voltage past the blocking diode, resulting in a drop of about 150mV from the true battery voltage. Compensate for that when displaying the value.

- Display error message when trying to configure maximum flight log size while the flight computer still has flight data stored.

- Handle TeleMetrum and TeleMini eeprom files generated with pre-1.0 firmware. Those ancient versions didn't report the log format, so just use the product name instead.

3. TeleGPS Application

- New application designed for use with TeleGPS boards.

- Shares code with AltosUI, mostly just trimmed down to focus on TeleGPS-related functions.

4. Documentation

Documentation changes:

- Re-create the drill template images; they should print correctly from Firefox at least. Ship these as individual PDF files so they're easy to print.

- Add a description of the *Apogee Lockout* setting, which prevents the apogee charge from firing for a configurable amount of time after boost.