MASTODON design

Beast Firmware Release: 9.0.0

Description: Version Description Document for Beast Firmware version 9.0.0
System: Athena
Release Date: 3 June 2022

Version Description

Previous Version Number: 8.0.0

New Version Number: 9.0.0
MD5 Hash Beast: ac78d41221998ea27c6ee1f1ce251955
MD5 Hash Beast+: 4c9e4a9e483e1d66b737e758b7bc2d50
Compatibility: Diablo Athena release (v7.0.0)

This is a major release for the Beast Firmware. Several new features and improvements are included:

- Beast and Beast+ firmware have been merged to a common binary.

- Wideband Power Amplifier Support

- Frequency Hopping (FHOP) Mission Initial Release (Requires WBDF)

- Tire Pressure Monitoring Systems (TPMS) Detection and Processing (requires Ice Bucket)

- Network Improvements

- Wideband DF Antenna Support

- Added Samsung S20 support; ended Note8 support

- Added Kenwood support

- Numerous bug and crash fixes

Improvements
The following issues/bugs were resolved for this release of Diablo:

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- Active/Reactive effectiveness predictions accuracy has been greatly improved

- Added the ability to manually input coordinates in a GPS denied environment

- User settings persist after power-cycle

- It is now possible to capture DMR, P25, and NXDN simultaneously

- DF calibration information is now user-viewable

- Data logging enhancements

- DF Antenna FPGA version has been made visible to users

- NXDN events are now recorded in their own dedicated log file

- DMR network characterization has been moved from Diablo to the Beast/Beast+

- Beast can now detect which Mastodon DesignPower Amplifier is attached

- The keychain service has been completely refactored

- Default center frequency has been changed to 450 MHz

- Default mission status has been changed to classify

- Demodulation has been changed to allow user to mix and match any three protocols according to preference

- Default demodulation has been changed to Analog, DMR, and NXDN

- Simple-TX support has been added to Beast (product parity with Beast+)

- Added webserver for listening to recorded audio

- MGRS coordinates have been added to logs where lat/lon was already present

Known Issues

- Clone is currently intermittently successful

- FHOP events are sometimes identified as still being active when they are not, to include creating an event for the wrong waveform

- WBDF does not always obey the orientation setting applied by the user when presenting lobs to the compass rose

- DMR base station meta data events use incorrect channel and RSSI values

- After copying the FW install package to the Beast, power-cycling the radio is required before the package will show up in the installation screen – from both the front panel of the Beast and in Diablo

- FW installation is reported to intermittently fail