# Release Notes

**Date:** September 13, 2023

**Version:** 1.6.0

## Summary

This is a significant release that improves safety, reliability, and performance. The most significant improvements include flight stability, network quality, and media quality. The main new features are stealth mode, new Teal settings application, and RID support.

This is a critical firmware update. Teal recommends updating the firmware to version 1.6.0 before the next flight. Use the online *Updating System Software / Firmware Instructions* to upgrade to 1.6.0 system for both the vehicle and TAC.

Teal TAC software and firmware automatically update when the TAC connects to a Wi-Fi network. Rebooting the tablet after connecting to Wi-Fi forces the software update. This may not be ideal if it delays a mission or affects anticipated battery pack charge usage. We suggest performing the update as soon as possible for optimal system performance and to prevent the automatic updates from interfering with any mission needs.

Access the update documentation at https://tealdrones.com/support/update-instructions/ or use the QR code below.

**Note:** Remove the SD card and clear any media stored on the Teal 2 sUAS prior to updating the software. Not clearing data may cause the update to fail.

## Improved Features

**Improvements include:**

- Camera and Media Improvements -
- Flight Performance and Safety Improvements -
- Radio Link Improvements -
- General Bug Fixes -
- Operator's Manual Available in New Teal Settings Application -

## New Features

**New features include:**

- Support for Remote Identification (RID) -
- Stealth Mode -
- New Teal Settings Application -
- IR Radiometric Capability -
- 2x Optical Equivalent Zoom -
- Support for 2.3 GHz Configurations -

## Overlapping Functions

The new Teal Settings app and the Teal TAC Settings app share duplicated functionality in the new update. These functions include switching the network between Drone and WiFi and entering KIOSK mode. This will be resolved in a later update.

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## Improved Features

**Camera and Media Improvements**

- IR is now the default video stream instead of EO
- Black Hot is the default IR color palette
- Support for Pix4D photogrammetry
- Refined camera tilting when zoomed in
- Optimized video stream resolution at 1024x768 pixels
- Improved prioritization of media packets
- SD card is now required to take photos and videos
- Enhanced EO sensor tuning and quality
- Recorded media now includes EO and IR video simultaneously
- Recorded media now reflects current zoom level

**Flight Performance and Safety Improvements**

- Optimized motor controller architecture
- Enhanced flight controller robustness and reliability
- Improved landing performance

**Radio Link Improvements**

- Implemented Quality of Service (QoS) architecture
- Prioritization of packet types
- Command & Control (C2) link has a higher priority than video

**General Bug Fixes**

- Decrease in frequency of screen tearing and pixelated video in the streamed video
- Drone firmware upgrade issue resolved
- RSSI sometimes doesn't display in QGC Fixed
- GCS temporarily loses connection to vehicle on bootup
- Pairing sometimes changes the power to 7 dBm instead of 30 dBm

## New Features

**Support for RID**

- Support added for RID
- Implemented RID to align with FAA regulation

**Stealth Mode**

- When enabled, Stealth Mode reduces the audible and visual signature of the system
- Stealth mode disables the downward facing infrared laser to reduce the IR signature of the aircraft. This may cause hard landings. Operators must carefully land the vehicle during stealth mode.
- Exterior lights and IR time-of-flight sensor are disabled
- Eliminates all motor chirping and flight controller tones

**New Teal Settings Application**

- Teal Settings is the new application
- Redesigned pairing manager. See Pairing section on page 4
- Ability to configure hardware
- Reference Operator Manual. Due to the size of the operator manual, it may take a few seconds to load.

**IR Radiometric Capability**

- When enabled, in a defined field of view, minimum, center, and maximum temperatures displayed
- In radiometric mode, IR color palettes are still selectable

**2x Optical Equivalent Zoom**

- Enabled automatic EO 2x optical zoom in daylight conditions
- Maximum EO and IR zoom is 10x

**Support for 2.3 GHz Configurations**

- Intended for international customers
- Support added for pairing and configuration management

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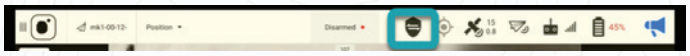
## New Pairing Process

The new pairing process uses the new Teal Settings application to pair the TAC and vehicle. Pairing through Teal QGC is being migrated to the Teal Settings application. After upgrading to the 1.6.0 release, disconnect and delete the sUAS in Teal QGC. Then pair the sUAS in the new Teal Settings application.

**To disconnect the sUAS in Teal QGC:**

1. Click the Shield icon in the Fly View top bar.

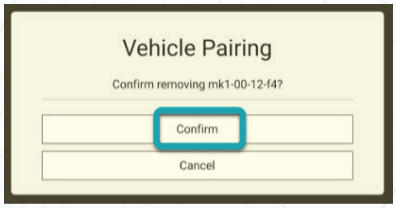


2. In the vehicle pairing box, click Disconnect.

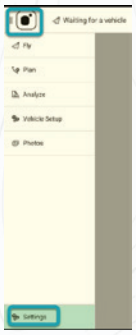
3. Click the Shield icon in the Fly View top bar.

4. In the vehicle pairing box, click the red x.

5. Click Confirm to remove vehicle.

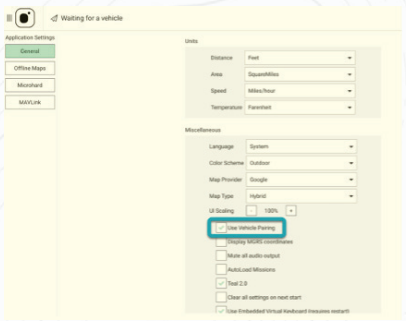



6. Click the Teal icon in the upper left corner.



7. In the menu click Settings.

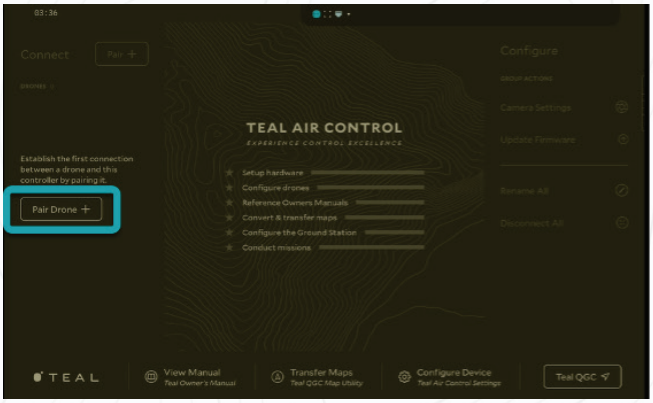
8. Under Miscellaneous uncheck **Use Vehicle Pairing**. The **Shield** icon disappears.

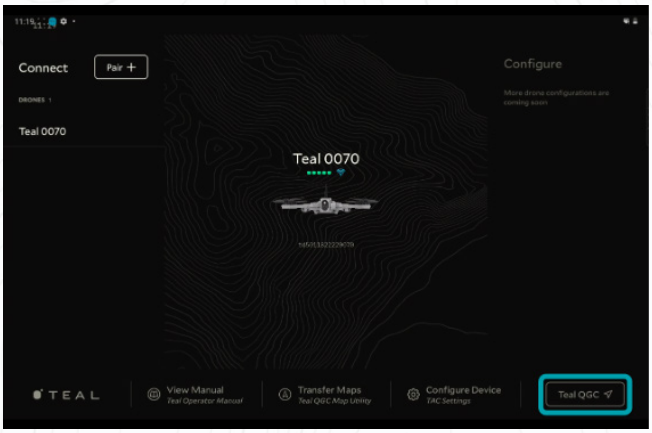


9. Use the new Teal Settings app to pair the sUAS.

**To pair the sUAS with the new Teal Settings application:**

1. Open Teal Settings app and follow the app's pairing instructions.




2. Click **Pair Drone +**.
3. Press and hold the pair button on the back of the vehicle for five seconds.
4. Select the vehicle to pair. Pair one vehicle at a time.
5. Click Pair sUAS with this device.
6. Confirm the settings.
7. Confirm the channel for the vehicle. This is the best time to select the correct channel. To change the channel later, unpair the vehicle and pair again with the TAC. Change the channel at this step.
8. Click **Confirm and start pairing**. Pairing may take a few minutes.
9. When pairing completes, click **Continue**. A Successfully paired message appears.
10. Click **Teal QGC** in the bottom right corner to return to the Fly View screen.