SOFTWARE RELEASE NOTES

VERSION: 1.10.0

1 Summary

1.10.0 is a software release for Golden Eagle and Teal 2. This update is for both the AV and for the GCS. This release should be considered critical for any Teal 2 systems that are not already updated to at least 1.9.2.

This release includes a number of improvements that are expected to improve the user experience of the operator. As such it is recommended that all systems be upgraded when possible.

2 Improved Features

2.1 Time Synchronization

This release adds a more user friendly process to synchronize time between server time, the GCS and the AV. A single press operation will connect the GCS to a saved wireless network and synchronize time across the system. Properly synchronized time is important for optimizing the user experience.

2.2 WiFi Connection Prompt

An acceptable WiFi connection is important to a number of other operations of the system. These include time synchronization and firmware update. The 1.10 release incorporates a prompt to the user when the WiFi connection is unacceptable for these operations.

2.3 Pairing Improvements

The 1.10 release includes a number of updates that significantly increase the success rate of both pairing and connection between AV and GCS and also reduce the time required for both operations.

2.4 Video Improvements

The 1.10 release improves the recorded video pipeline for Teal 2 to increase the recorded frame rate from 15fps to 30fps. In addition the rate of recording of KLV metadata has increased from once every 15 frames to every frame.

2.5 RID Connection Improvements

Prior to the current release users of RID equipped systems may have had to manually reconnect the AV to the GCS each time the system was started up. The 1.10 release improves the functionality so that the RID module will reconnect automatically on every power cycle.

2.6 Follow Me Mode Flight Changes

Prior to this release the Follow Me flight mode would command the AV to a fixed position relative to the GCS when enabled and then maintain that relative position. This could sometimes result in dramatic initial movements of the AV.

In the 1.10 release the engagement of Follow me mode has been adjusted. When this mode is initiated the AV will now orient itself to face the GCS but will otherwise keep its Altitude and Position constant relative to the operator. This relative position will be maintained unless changed by the operator.

The operator will be able to adjust the relative position between the AV and the GCS using their joystick controls.

2.7 Disabling of Manual Mode

Teal Drones does not recommend the use of Manual Flight Mode. However it is the flight controller default fall back for situations where an inadequate number of satellites are available. This can occur when arming of the AV happens indoors or in other confined spaces. If arming of the AV is attempted before enough GNSS satellites have been acquired in the 1.10 release the operator will be alerted. They will then be required to carry out a full screen bar swipe to confirm that they understand that they will be arming the AV in manual mode.

In addition Manual Mode has been removed from any predetermined controls mapping of the GCS.

2.8 Mission Mode Controls

Teal 2 is equipped with a two axis gimbal that can control pitch and roll. The yaw axis is controlled through movement of the AV. Previously mission mode programming allowed the operator to adjust gimbal yaw even though that was not possible. Yaw control has been removed from the operator interface in the 1.10 release.

2.9 Motor Status Warnings

Minor motor status warning were previously displayed to the operator in such a way that they could cause concern. The messaging of these warnings has been corrected so that they do not unnecessarily alarm the operator.

2.10 GeoPDF Improvements

The release addresses a bug that was preventing some GeoPDFs from being successfully imported. This was achieved by updating the drivers used to import those files.

2.10 Microhard radio firmware update

The release checks the radio firmware version on both the AV and the GCS and updates them if necessary.

2.11 Other Improvements

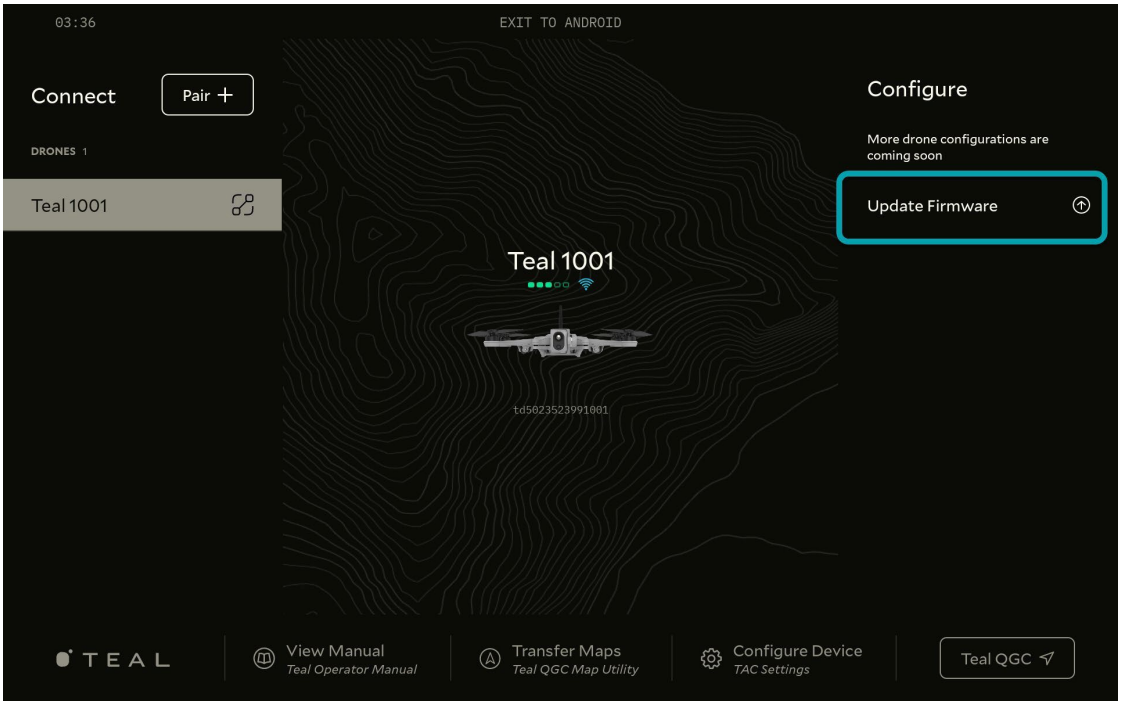
In addition to these major changes the 1.10 software release incorporates a number of other bug fixes and performance improvements.

3 Installation Instructions

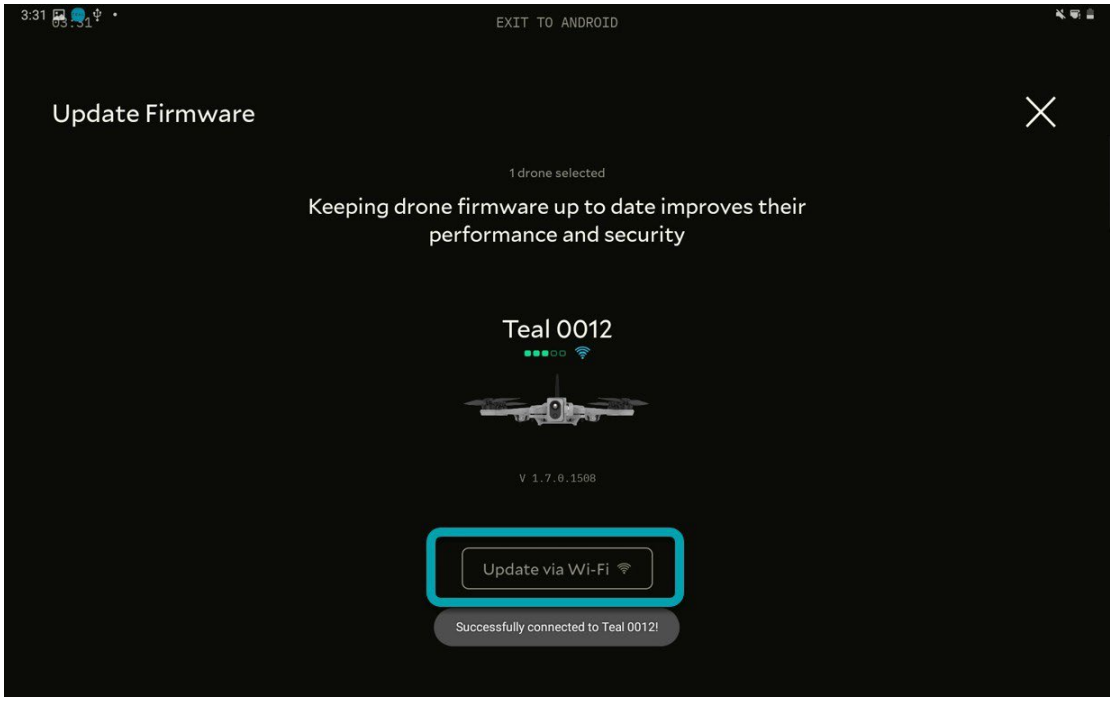
Updating the sUAS should be carried out using Teal Settings. Note that the screenshots below list version 1.7.0 whereas the version being installed here will be version 1.9.2. Complete installation instructions are also available at Teal Drones Update Instructions.

To update firmware:

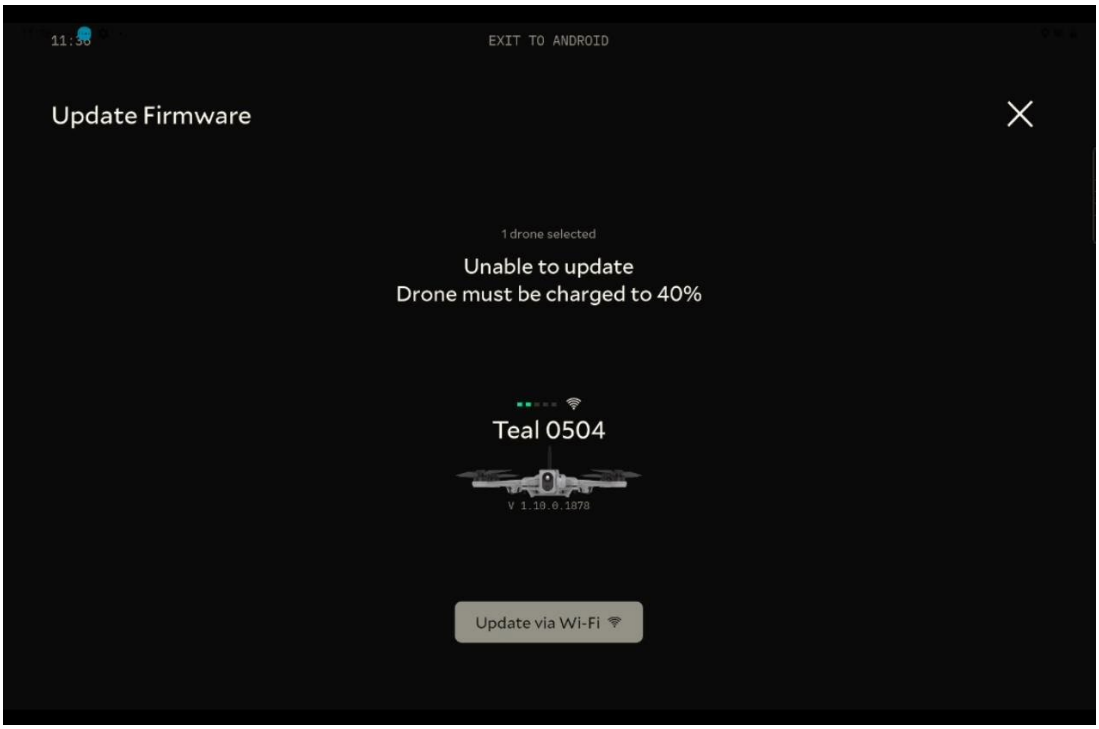
1. Make sure the AV and GCS are connected.
2. Open Teal Settings.
3. Tap Update Firmware.



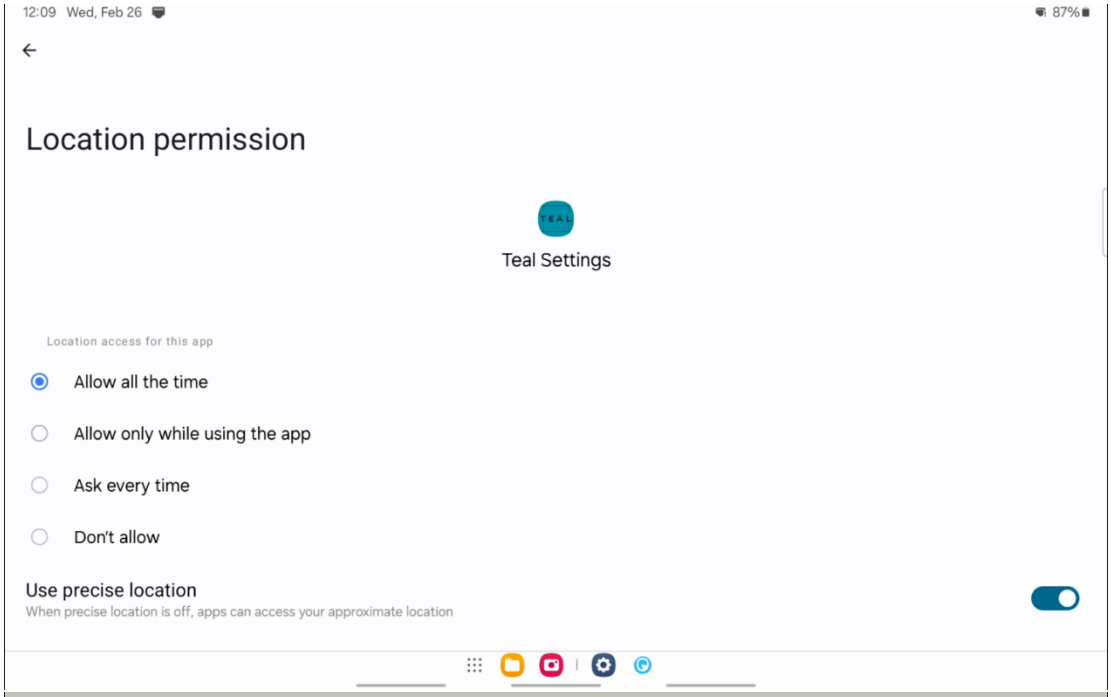
4. Tap Update via WiFi.

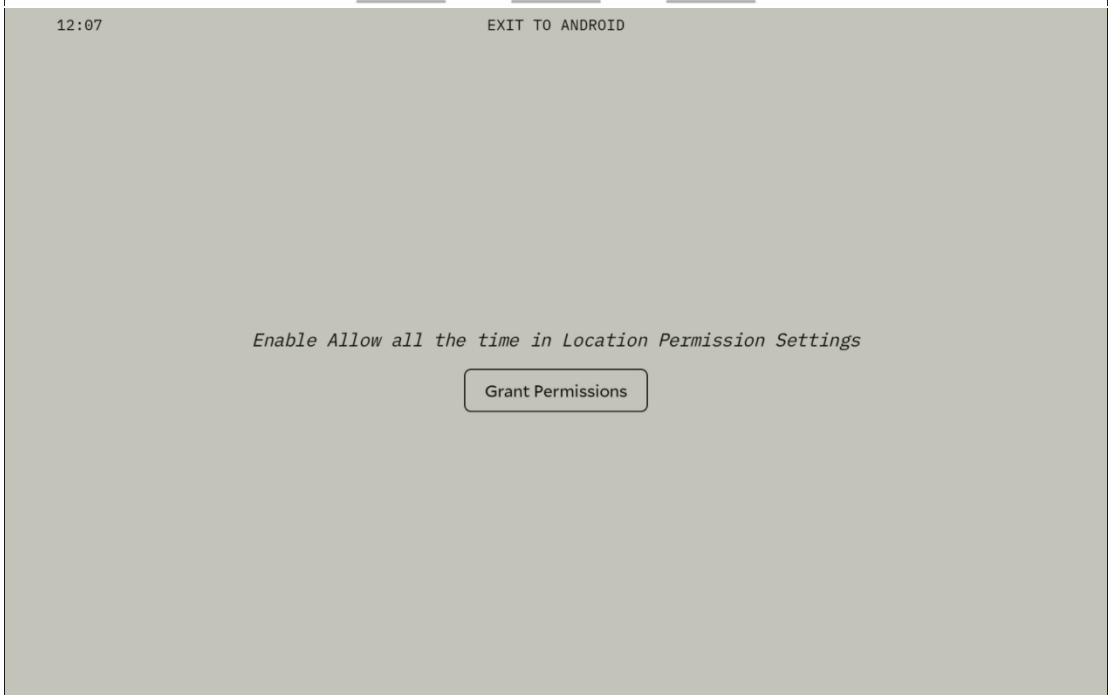


5. Software will not install if the AV battery is at less than 40% charge prior to launching the install process. If this occurs please replace or charge the battery before trying the install again..

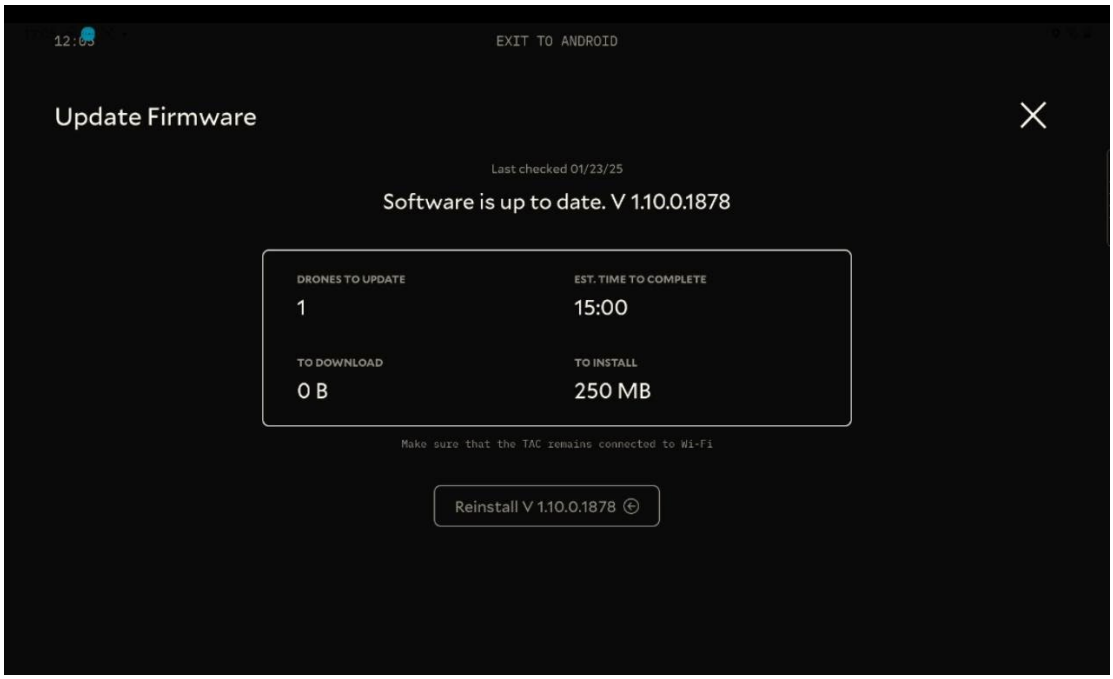


6. During the update process the user will be prompted by Teal Settings to update permissions for location. The user must accept all of the permissions for Teal Settings in order for the system to function properly. The updater will continue to prompt the user to approve the permissions changes until all are approved. The initial prompt and reminder prompt are shown below.





7. Wait until the update completes and software shows as up to date. The update may take up to 15 minutes. The following screen shows the software update information.



Note: If the UAV does not automatically reboot, please manually power cycle the UAV and confirm the new software version. If any problems persist, please feel free to contact Teal Technical Support.