# Version 3.3.2

- Fixed an app crash when viewing a flight log that used the Sony A7R4
- Alta X parameter validation would give a false positive warning about certain TC_ parameters. It now checks to see that they are greater than 0.1.
- The Alta X with Pilot Pro with Silvus radio Mavlink connection option will no longer cause the app to send manual control packets, as the new Pilot Pro firmware can now do this on its own.

Version 3.3.1

Fixed the critical and emergency battery percentage being displayed incorrectly.

Version 3.3.0

Updraft warning
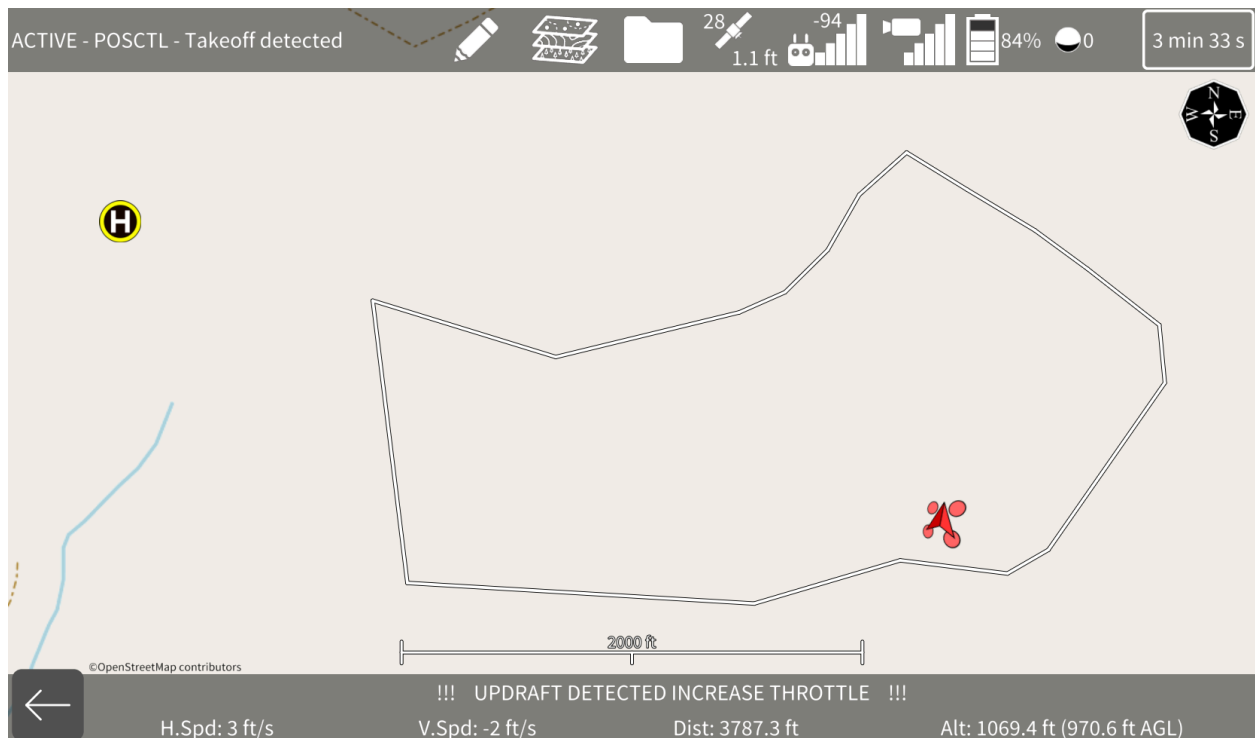
We've discovered a problem with the Alta X's firmware that has caused a few to crash. The logic that detects when the drone has landed and automatically shuts the motors off can trigger if you're hovering in an updraft, which will cause the drone to shut the motors off mid-air and crash. This can happen even with a fully loaded drone. Freefly is working on a fix for their Alta X firmware that will prevent this from happening.

In the meantime we've added a warning in the app that will display at the bottom of the FLY screen and play a warning sound when you're in a dangerous updraft. The specific conditions for the warning are: the drone is experiencing an upward acceleration, the motors are spinning at less than 20% on average, and the drone is more than 3 meters above the ground. If you hear this warning, you have about 5 to 10 seconds to increase throttle before the drone might shut its motors off. The sound the warning plays is similar to the sound used for the low altitude warning, so in both circumstances your reaction should be to increase your altitude. You can listen to the new sound in the Warning sounds screen.

Astro wind speed and direction display

There is a new wind speed and direction indicator below the compass that displays a horizontal wind estimate calculated by the Astro's flight controller. It looks a bit like a wind sock. At 0 wind speed it is an orange circle, and as the speed increases it transforms into a longer triangle pointed in the direction the wind is blowing. Each stripe indicates 3 knots of wind.

The Alta X also calculates a wind speed estimate, but it estimates speeds 3 times higher than the Astro's estimate, so I do not trust nor display it.

Standard Ignis Pilot Pro binding profile improvements

Somehow we missed adding a Vis/IR toggle to our standard Ignis Pilot Pro binding profile.

The R1 button will now toggle Vis/IR on a short click, or toggles recording video on a longer hold. We're making new stickers to reflect this change.


This functionality will also be applied to the D button on the Herelink or NW Blue controller.

Additionally we've added a "Standard Ignis (Pilot Pro) Visual Observer" binding profile. If you select this binding on your VO's tablet, the map/video will only toggle on the pilot's tablet when they press the button. The Pilot Pro tablet should continue to use the "Standard Ignis (Pilot Pro)" profile.

Precisely position markers
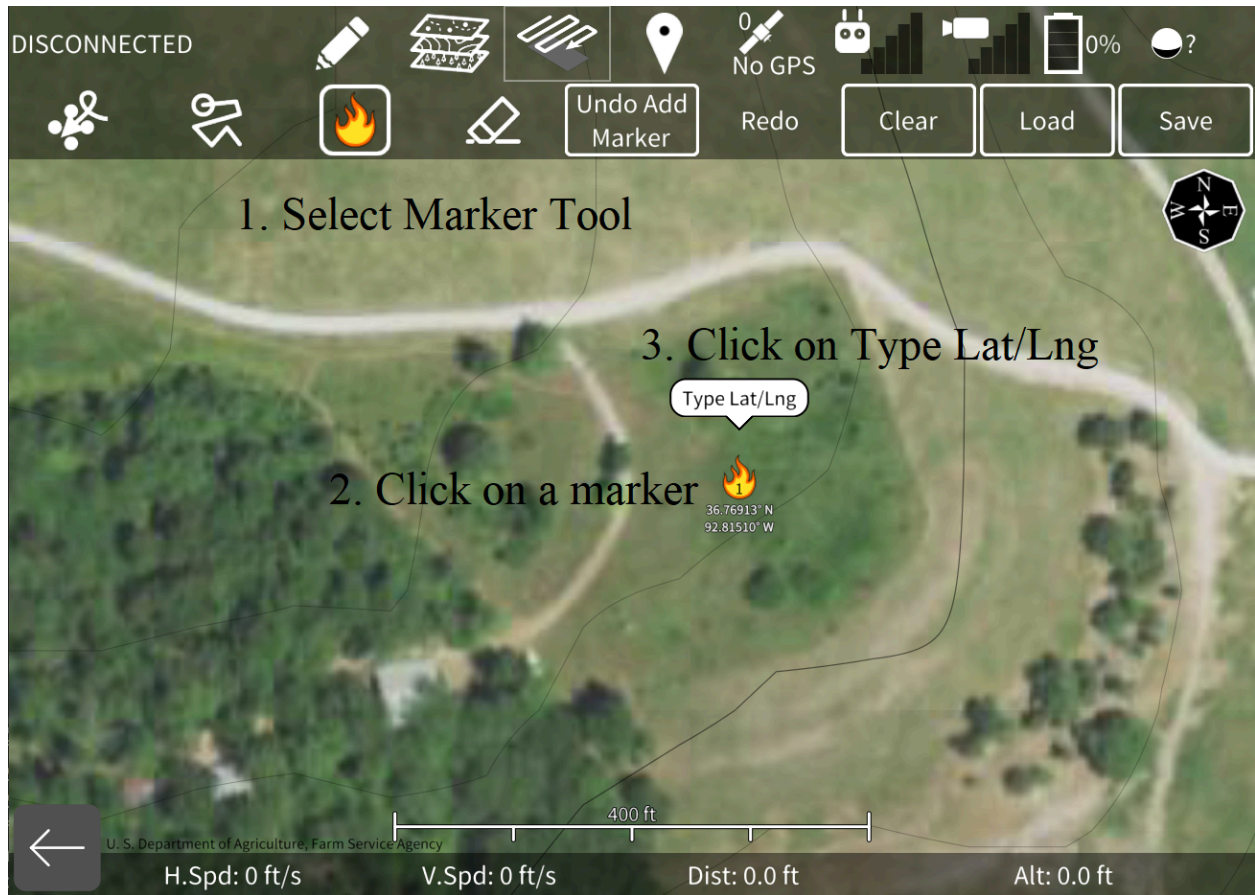
You can now precisely position markers without having to zoom in and drag them. To do this you must have the marker tool selected. Then click on one of the markers and a bubble will appear above it that says "Type Lat/Lng", click this. Next the keyboard will pop up and you'll see input fields for typing the latitude and longitude you want to move the marker to.
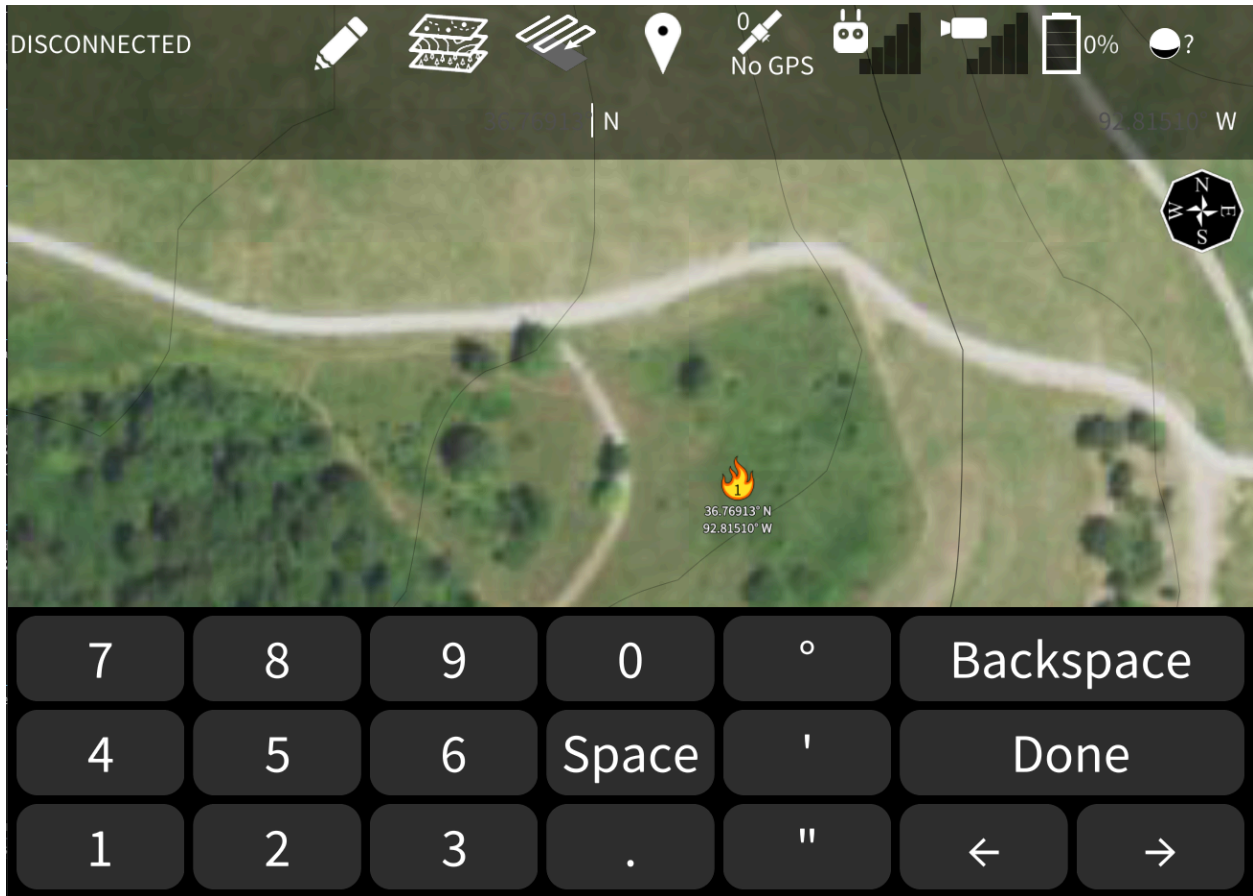
Then you can type in the latitude and longitude you want to move the marker to. You can input the latitude/longitude in decimal degrees, degrees decimal minutes, or degrees minutes decimal seconds. It does not need to be the same format you've selected lat/lngs to be displayed in. If you don't want to bother typing in the °, ', or " symbols you can just separate the numbers with spaces and the app will assume it's in degree minute second order. The hemisphere is assumed to be the same hemisphere the marker is currently in, so there's no need to input negative numbers.

Once you're done inputting the latitude, click Done on the keyboard and it will switch to the longitude input field. Once you click Done on the keyboard after inputting both numbers, it will move the marker and return to the regular interface. Click any of the other buttons along the top before doing that to cancel the operation.

Additionally, when using the line or marker tool, you can now click on the drone icon on the map to place a marker or line at the drone's exact position. Useful for when you're hovering directly above a spot fire. While you have the pencil menu open, clicking on the drone will not toggle Chase mode.

WiFi Hotspot Relaying

This version fixes some problems that would cause packets to be dropped when relaying over the Pilot Pro tablet's WiFi hotspot. We now recommend using WiFi for relaying instead of Ethernet, because it is much simpler to set up, and there's no cable that might come unplugged.

If you're using a Pilot Pro with a Tab Active 3, you must install our DA WiFi Hotspot app from here: https://droneamplified.com/downloads/dawifihotspot/DA_WiFi_Hotspot_1.0.0.apk
Install and run it. Give it permission to change system settings. Then press the START button to start the WiFi hotspot.
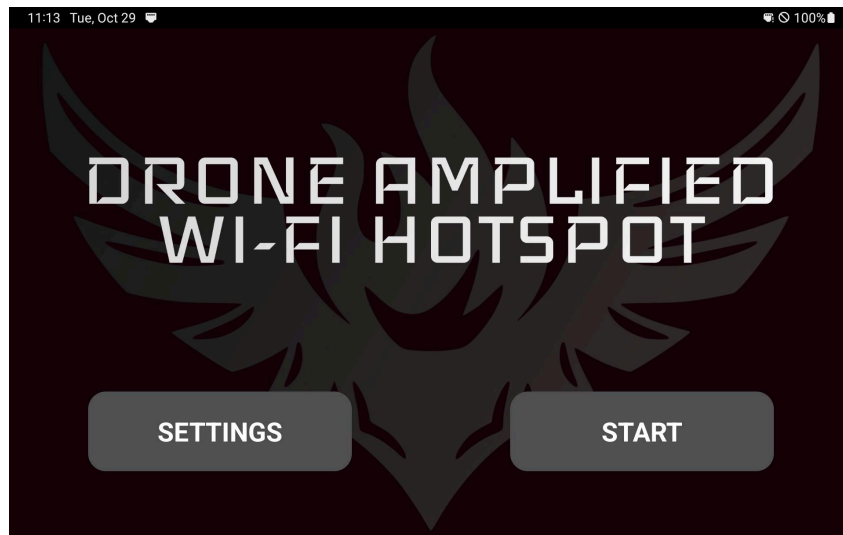

If this is the first time you're using the hotspot, you'll want to change what its name, password, and frequency band are.

The SETTINGS button will open the "Mobile Hotspot and Tethering" Android settings page. If you're using a newer Pilot Pro controller with a Tab Active 5, you don't need to install the DA WiFi hotspot app. You can reach these settings by opening the Settings app, then pressing Connections on the left, and scrolling to and clicking "Mobile Hotspot and Tethering" on the right. It doesn't hurt to install our app if you want to keep the same workflow on the Tab 5 as on the Tab 3.
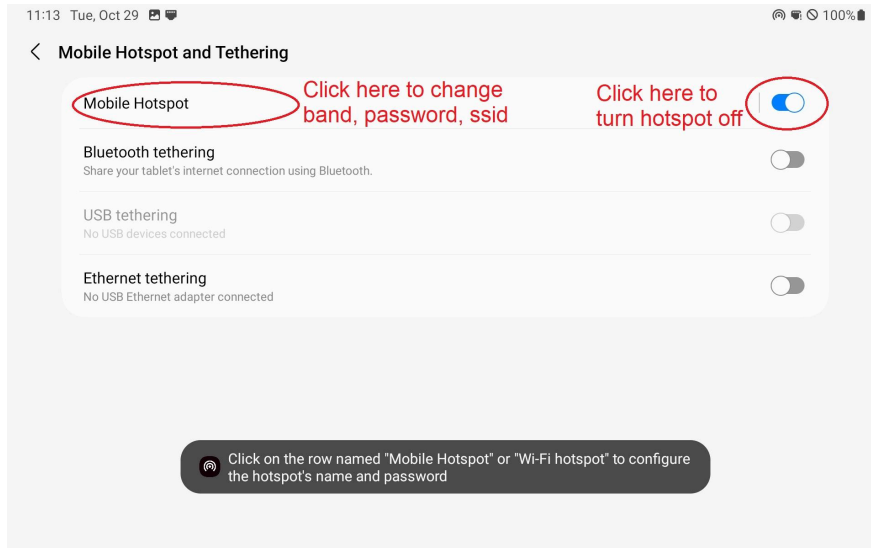
The slider on the right will turn the WiFi hotspot on or off. If you're using a Tab Active 3, you'll get a "No SIM Card" error when you try to turn the hotspot on with this slider, which is why you need to start it with our app instead.

The tricky thing is that the words "Mobile Hotspot" are actually a button that will let you change the name, password, and frequency of the hotspot. If you're using a Tab Active 3, you may get an error when you click on it if the hotspot isn't currently running, so start the hotspot using the DA WiFi hotspot app, then click on it.
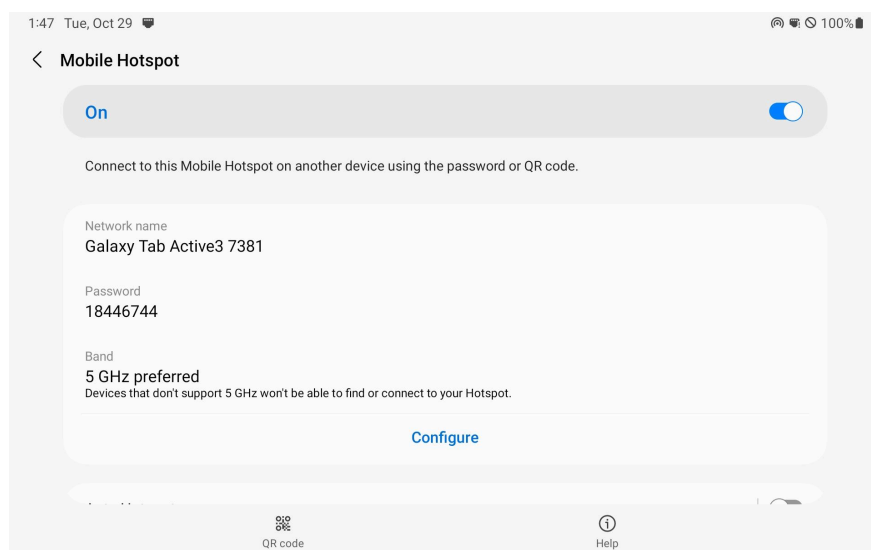

Click "Configure" to change the hotspot's settings. Set the name and password to whatever you want. Set the Band to 5 GHz preferred, because the drone's radios are 2.4GHz and there may be

interference if they're both on 2.4GHz. I didn't see any when I tested at 2.4 GHz, but it may depend on how congested the bands are where you're at.

Once you've configured and started the WiFi Hotspot, you can close the DA WiFi Hotspot app.

Launch DA Flight on the Pilot Pro tablet and check "APP SETTINGS"→"Enable MAVLink relaying". If you've already enabled it, instead you'll see "MAVLink relaying settings". The default settings will work, but in case you've changed them, you'll want to make sure the Local Port is 9876, the Local Network Interface is either "Any" or "swlan0", and encryption is not disabled.
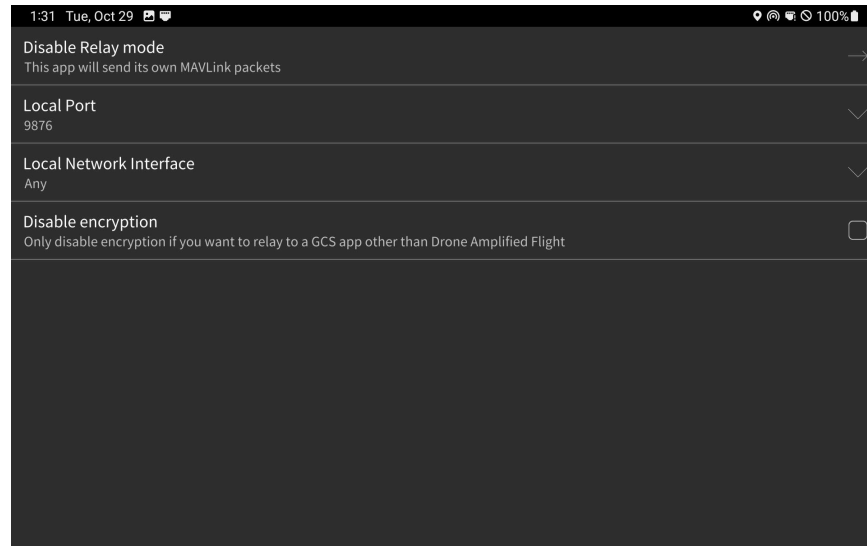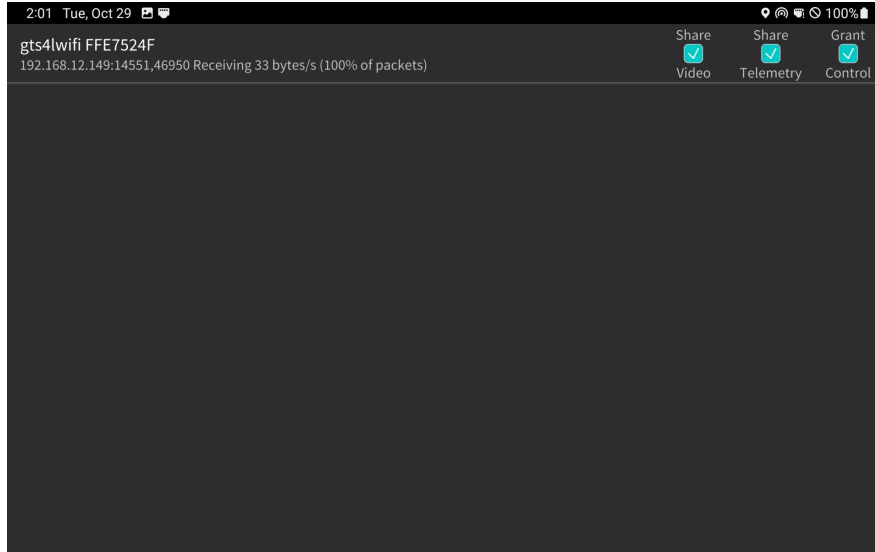

Connect a second table to the Pilot Pro tablet's WiFi hotspot, and run DA Flight on that tablet. Click on DRONE SETUP, then set both "MAVLink Connection" and "Video Stream Connection" to "WiFi Hotspot running DA Flight app". This option will make the app attempt to connect to whatever IP address is hosting the WiFi hotspot, so you don't have to figure out the Pilot Pro tablet's IP address.
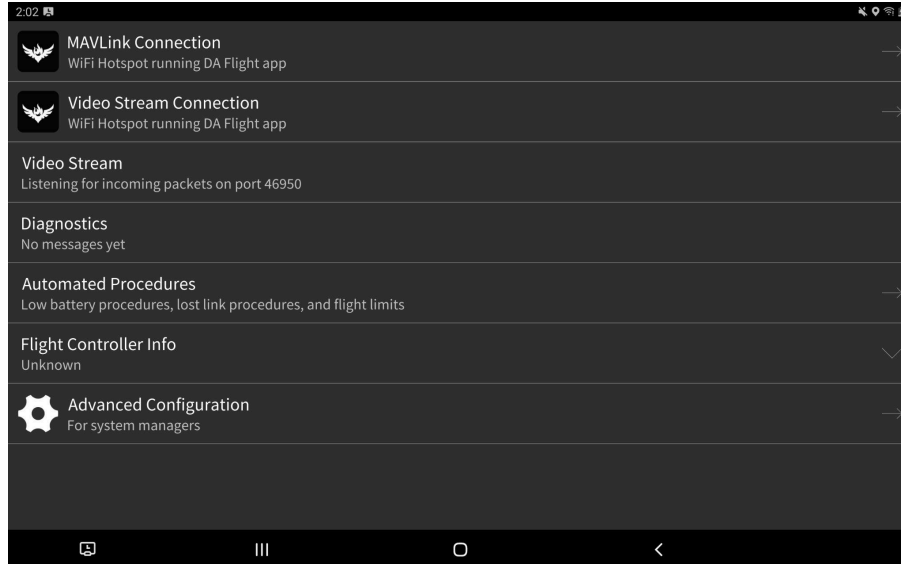
Once you've set these, there should be a new blinking blue button on the Pilot Pro Tablet at "APP SETTINGS"→"Sharing permissions".
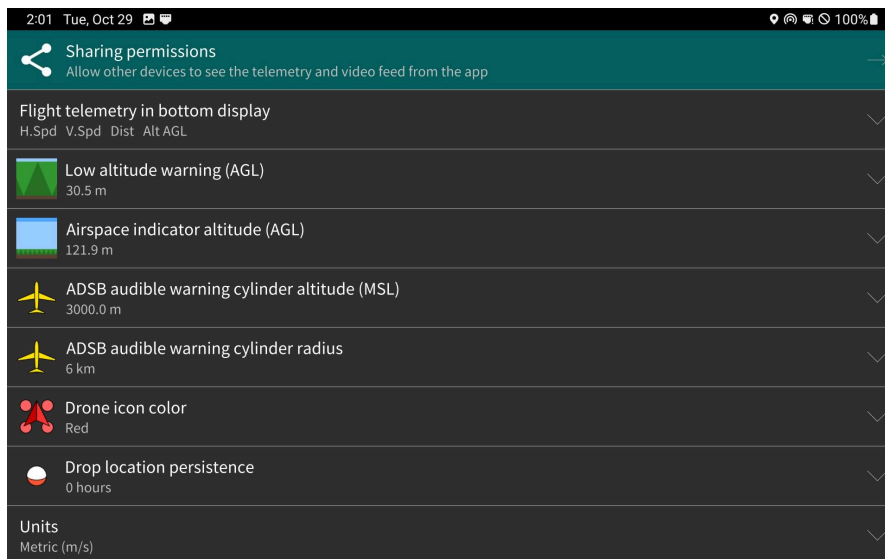
Click on Sharing permissions and you'll see a row with the model and a unique ID of the other tablet. If you recognize it, you can share your video and/or telemetry streams with it, or you can grant it control. You can have multiple devices running DA Flight connected to the Pilot Pro tablet's WiFi hotspot, and manage what data you're sharing from here. Video uses a lot of bandwidth, so the network might only be able to support sharing the video stream to one device.

gts4lwifi FFE7524F
192.168.12.149:14551,46950 Receiving 33 bytes/s (100% of packets)
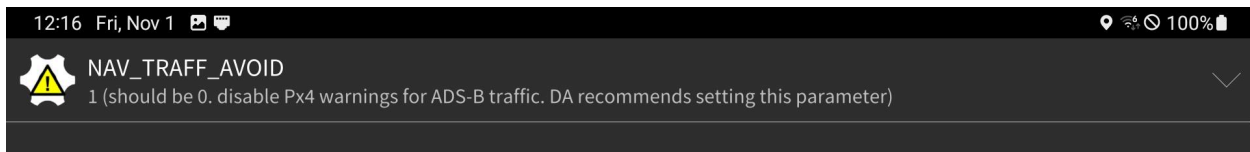
Share | Share | Grant
Video | Telemetry | Control

If you grant control, then it will be as if that tablet is the only one connected to the drone. The pilot will still have control of the drone via the sticks, but the other tablets will only be useful for displaying telemetry and video. Changing settings, setting a geofence, and uploading waypoint missions must all be done though the tablet that has control.

Parameter logging and validation

DA Flight will now read all of the parameter values off your drone, camera, and gimbal, and save them in your flight log, which will help our support team diagnose issues with your drone if you share a flight log with us. There's new export options for saving the parameter values out in the .params file format.

If you know what you're doing, you can now change any parameter value on your system by going to "DRONE SETUP"→"Advanced configuration"→"Full parameter list".

We've added some automatic parameter validation for certain parameters of the Alta X, and the app will now display a warning in Advanced configuration if some parameters have unrecommended values.

12:16 Fri, Nov 1

NAV_TRAFF_AVOID
1 (should be 0. disable Px4 warnings for ADS-B traffic. DA recommends setting this parameter)

Some of them we recommend changing yourself to bring your Alta X up to our current standard values. Others might indicate a problem with your drone and you should contact our support team for help resolving it.

Latest version checking

The app will now check our website for the latest version of DA Flight, and let you know if you're not on the latest. If you would like to download it, go to "APP SETTINGS"→"Download latest version". This page has links for the Android and Windows versions of DA Flight, as well as the Contrast app, which is a stripped-down version of DA Flight designed specifically for the Herelink controller.
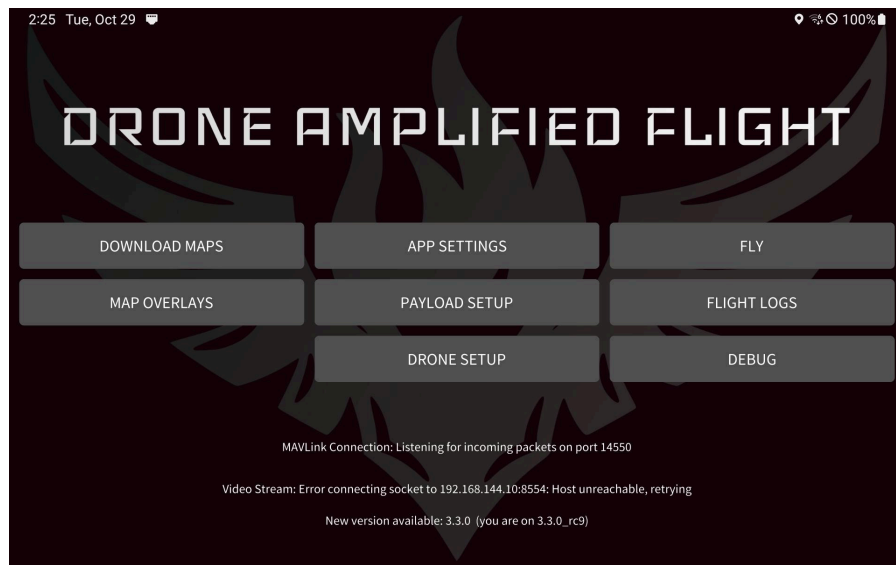
Minor improvements

- Low altitude warning will now have a visual warning on the fly screen, like in the Ignis app
- Display a message on the FLY screen when you toggle the binding for the gimbal control axis. Currently this only appears on the tablet that has control.
- Added Clear drop locations button to drop location persistence setting.
- Zoom controlled via a controller binding has been inverted and will now zoom twice as fast.
- If you're trying to download elevation data while you have a mission planned or the drone's GPS lock, you'll now see an error message.
- Automatically download SRTM elevation data for the area the user is viewing on the FLY screen if they are zoomed in and do not have a mission planned or a drone gps lock.
- Simplified strobe options. Reduced brightness of auto-day setting to prevent overheating.

- Simulated drone will begin armed if no controller is connected, so you can at least simulate flying waypoint missions if you don't have a gamepad.
- The ignition sphere counter in the top right of the FLY screen will reset to 0 after you take off. If you restart the app mid-flight, the counter will still be accurate.
- Play an alarming sound when switching to Manual mode.
- Updated a7R camera UI for Astro firmware 1.7.2.
- Implemented digital zoom control for a7R.
- Improved relaying feature to be able to handle packets reordered by the network, rather than just dropping some of them. Out-of-order packets will be delayed by at most 0.25s, in order to limit lag. You should no longer lose packets when relaying over the Pilot Pro Tablet's WiFi hotspot.
- When running the simulator on a Pilot Pro controller, pressing RTL will no longer cancel RTL. You must press POS.
- Contrast app will use a different Preferences.txt file to avoid problems if you install it and DA Flight on the same device.
- Basic support for Gremsy Vio and Freefly LR1

Bug fixes

- Fixed a crash when saving a drawing with no lines.
- Flight logs were terminating early after about 9 minutes because Android would write the file out slower than I generated it. Sped up file writing on Android to workaround this.
- FLY screen map position persists if you leave the screen and return.
- If there are too many Ignis drop locations to draw them all on the screen, the app will only draw every Nth location, so you can still get an idea of the drop lines. Before, it would just draw the first 1000 or so drops visible on the screen.
- Fixed a bug that could cause significant relaying packet loss when sharing video and telemetry packets simultaneously.
- Fixed the app thinking Ignis dropped a bunch of ignition spheres if you restart the app after doing some drops.
- Fixed the flight log list counting ignition spheres dropped before the flight as drops during the log.
- Fixed incorrect behavior when performing a two-finger zoom gesture on the video feed
- Prevent the app from freezing if Android's video decoder freezes.
- Automatically reset Android's video decoder if it reports an error. Fixes "Error dequeuing output buffer: -10000" error.
- Waypoint heading mode was setting the wrong mode
- The switch feed button will no longer switch from Astro 1 to Astro 2 if you don't have an a7R/LR1 and a USB FPV camera connected.

- Worked around an Auterion bug in which the exposure mode would report an unrecognized value after switching between photo and video mode on the a7R/LR1
- Fixed a green bar at the bottom of the video feed from some cameras on the Tab Active 5.
- Fixed a rare crash when the app is loading base map tiles.
- Fixed a pdf overlay parsing bug
- Fixed a kml overlay parsing bug when a polygon has no coordinates
- Exported kmz drawings with polygons will no longer use the default polygon style (opaque white fill).

Version 3.2.1

Map Rotation and Chase mode

You can now rotate the map by twisting it with two fingers. Touch the compass in the top right to rotate it back so North is up. You can also touch the drone to have the map follow the drone and rotate with it. Scroll the map or touch the drone or compass to stop this mode.

Standardized button and switch binding profiles

Instead of having one "Default" binding, we've now made different binding profiles to suit different controllers and payloads. If one of these profiles is selected, you can't change the bindings, but you can view them. If you switch to the "Custom" profile, you can adjust the bindings to whatever you want, like before. The initial bindings for the Custom profile are whatever profile you selected previously.
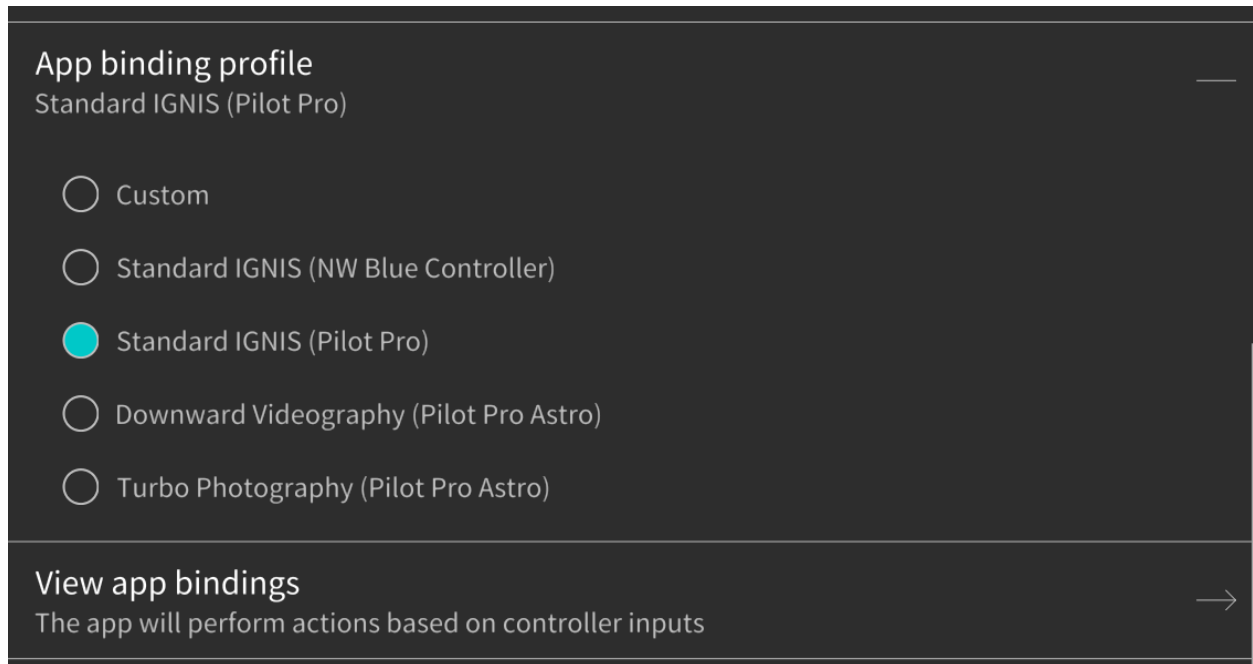
We designed these bindings based on feedback from our customers, so check them out and see which one best fits you.

As a side note, we discovered that when S1 on the Pilot Pro is in the down position, it inverts the left rocker. So, if you needed to invert your left rocker binding, check the position of the S1 switch. Freefly will be releasing an update to the Pilot Pro firmware that removes this feature.

Minor fixes and improvements

- Fixed a crash when saving a drawn kmz containing fire, smoke, or other markers.
- Drawn kmz files will show up in the layer list as soon as they are saved.
- You can now overwrite saved drawn kmz files.
- Updated a7R camera UI for the new options added in the latest firmware.
- Fixed a bug in which the photo info csv export option wouldn't export rows for most of the non-turbo mode images that were captured.

- Added part of the flight controller UUID to the name of the flight log files, so you can distinguish between logs from different drones.
- Simulated flights won't be logged by default.
- Fixed the Pixy U sometimes yawing the wrong direction and getting stuck at its physical limit if you recenter it while it's looking backward.
- Fixed some user interface problems on the download offline area screen.
- On text inputs that only expect a single line of input, typing a newline will finish the input instead of inserting a newline.
- Fixed topographic and terrain warning overlay graphical precision error on Tab Active 3 in high-elevation areas.
- Sped up flight log entry list view.

Version 3.2.0

New name and look: Drone Amplified Flight

We're changing the name of the app to disambiguate it from Ignis, the payload, and to reflect that it doesn't necessarily need to be used with Ignis. You can call it DA Flight for short.
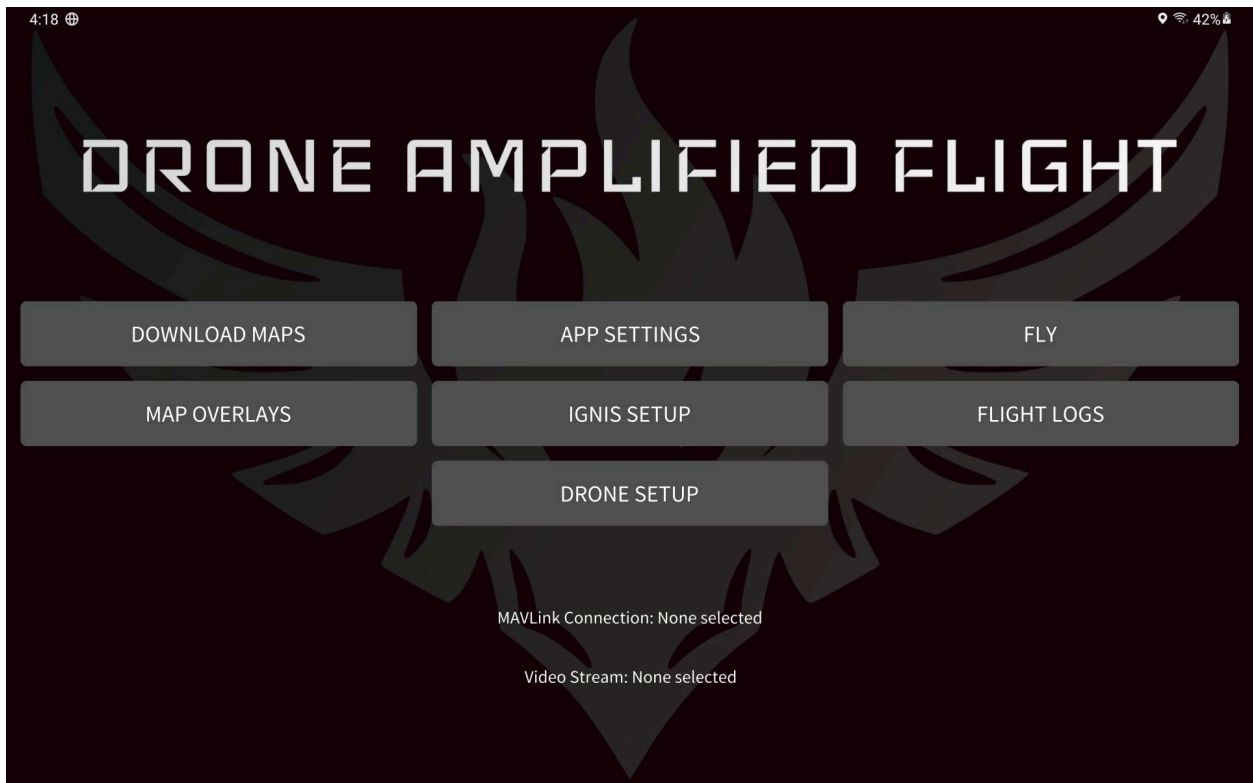
This version won't overwrite the previous version you have installed, so you'll need to manually uninstall the Ignis app after installing this version. Otherwise, you might be running both simultaneously and they'll compete for connection to the drone.

U.S. Satellite imagery base maps
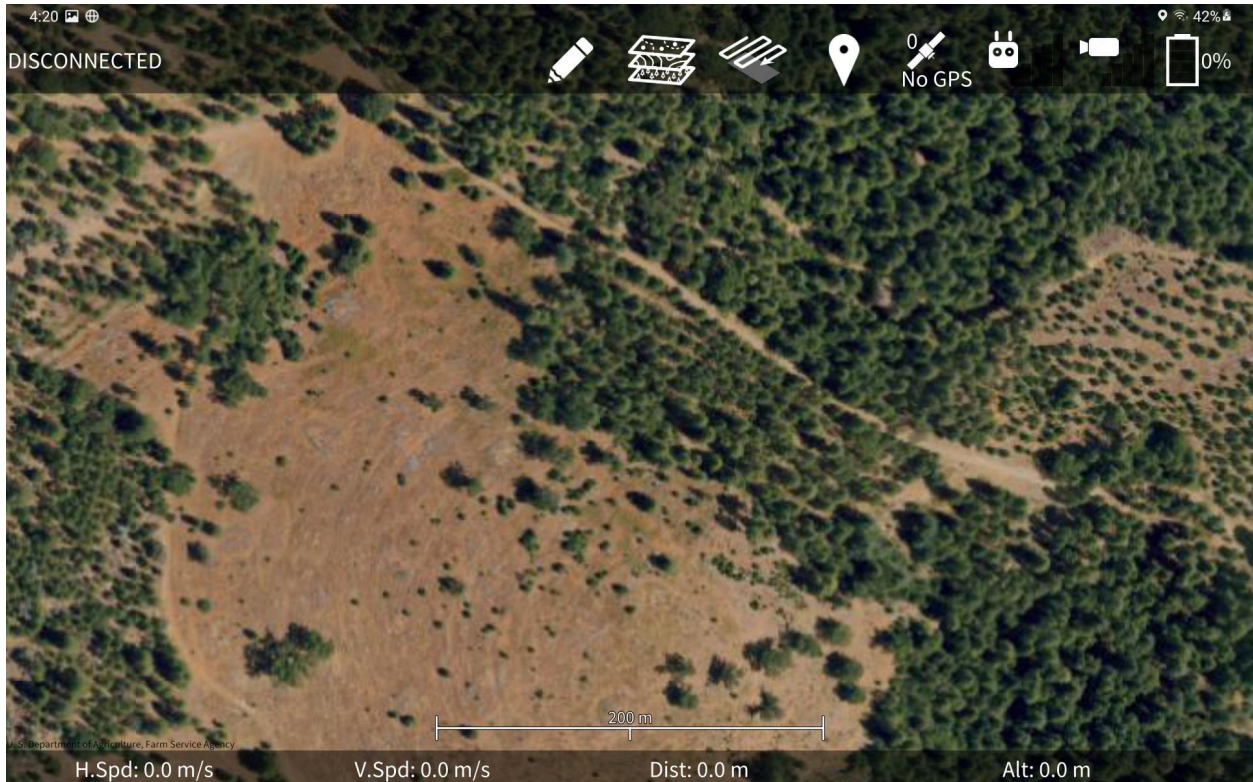
You can now view satellite imagery for the contiguous U.S., Puerto Rico, and Alaska. This can be accessed through the new "Map Layers" icon in the top of the FLY screen that replaced the Folder icon.

When you click the Map Layers icon, you'll see a list with all the kml, kmz, or pdf overlays you've imported. At the bottom, you'll see new options for different basemaps.

49 Mile and 53 Mile Targets.kmz
2024-3-26 10:56

Terrain warning overlay - SRTM
0 file(s) loaded

Topographic overlay - SRTM
0 file(s) loaded

Test1.pdf
2024-7-11 16:25 page 1

ops_arch_e_land_20230907_2059_SRF_Lightning_Complex_CASRF0986_0908day.pdf
2024-7-11 16:24 page 1

OpenStreetMap Carto
Global street maps

National Agriculture Imagery Program
Satellite imagery of the contiguous U. S. and Puerto Rico

Alaska High Resolution Imagery
For federal, state, local, tribal, and non-commercial use only

H.Spd: 0.0 m/s   V.Spd: 0.0 m/s   Dist: 0.0 m   Alt: 0.0 m

You can check or uncheck different layers to combine them together. However, you can only view one basemap at a time, at most one pdf overlay, and at most one kml/kmz overlay simultaneously. The vertical lines connecting the checkboxes indicate which options are mutually exclusive.

Saving and loading missions is now reachable through the Folder Icon visible when editing your transect region, waypoints, or geofence.

When you're viewing a flight log, you can export it to different formats by clicking the timer in the top right, then clicking "Export".

Note that usage of the Alaska imagery isn't allowed for commercial operations.

Area offline map download
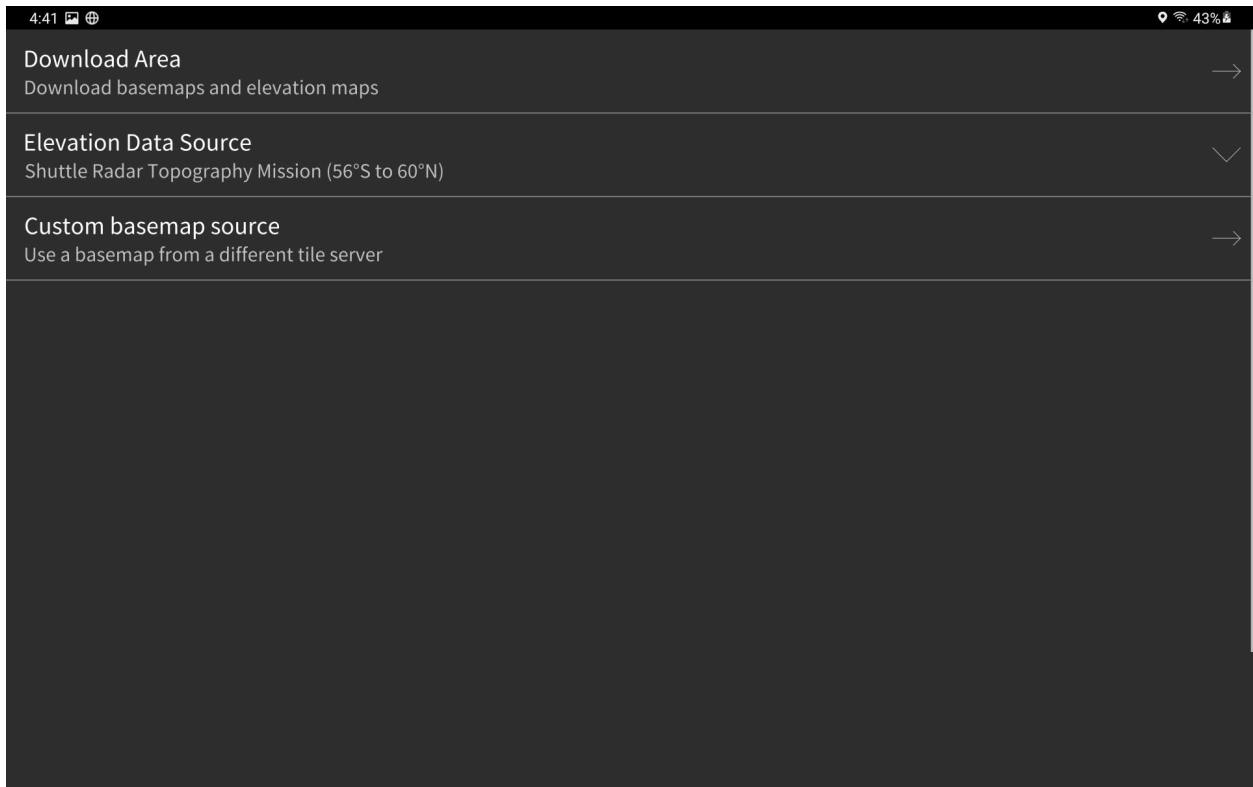
There's a new "Download Maps" button on the main screen. Clicking it will take you to a new screen.
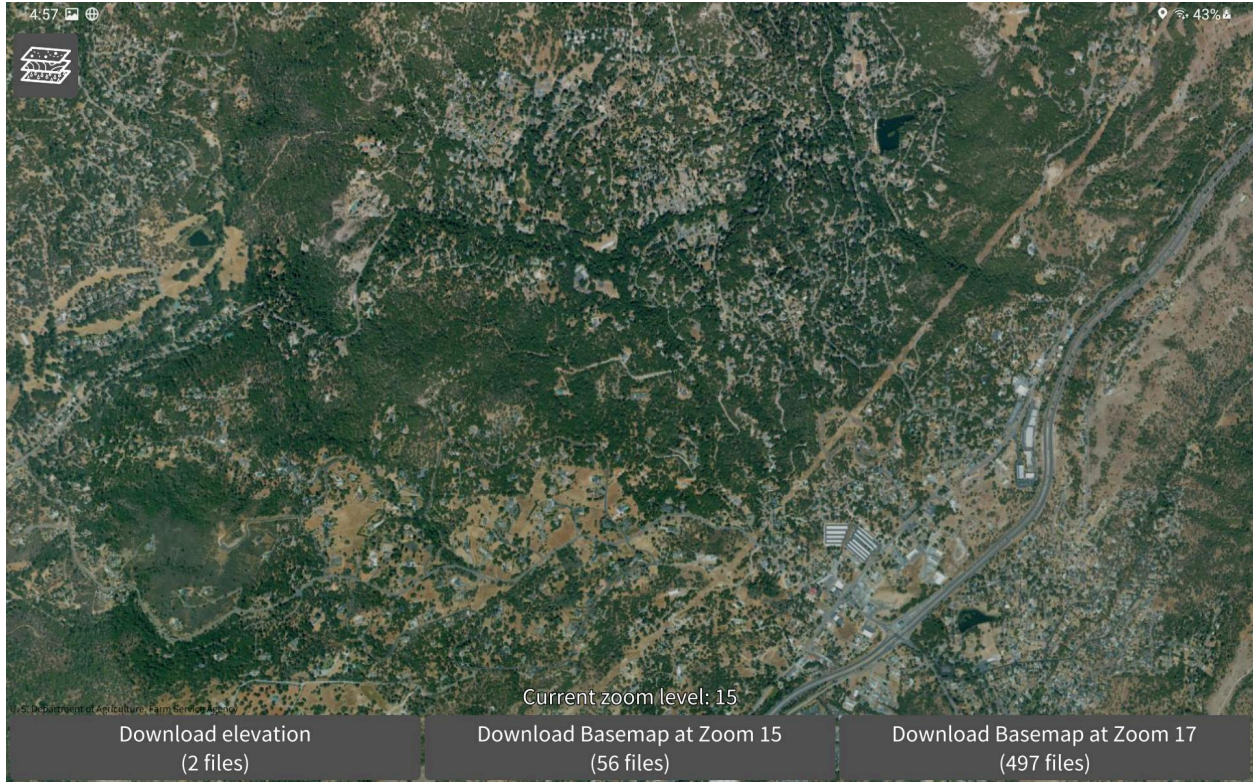
In v2 of the app, this screen would show you the regions you've previously downloaded and let you delete them to free up space. In v3, there's no limit to how many tiles you can have downloaded for offline usage, so you don't need to delete the old ones all the time. If you're about to run out of storage space on the tablet, in which case you can delete the Drone Amplified/Tile Maps/ folder and redownload the areas you care about.

The ability to switch elevation maps has moved here. Additionally, there's a new Custom basemap source option which will be discussed later.

Clicking on the "Download Area" button will take you to a view of the map. You can click the layers button in the top left to show different overlays and switch basemaps. The red lines indicate the North and Southern extents of the Shuttle Radar Topography Mission elevation data.

Zoom in to frame the area you want to download
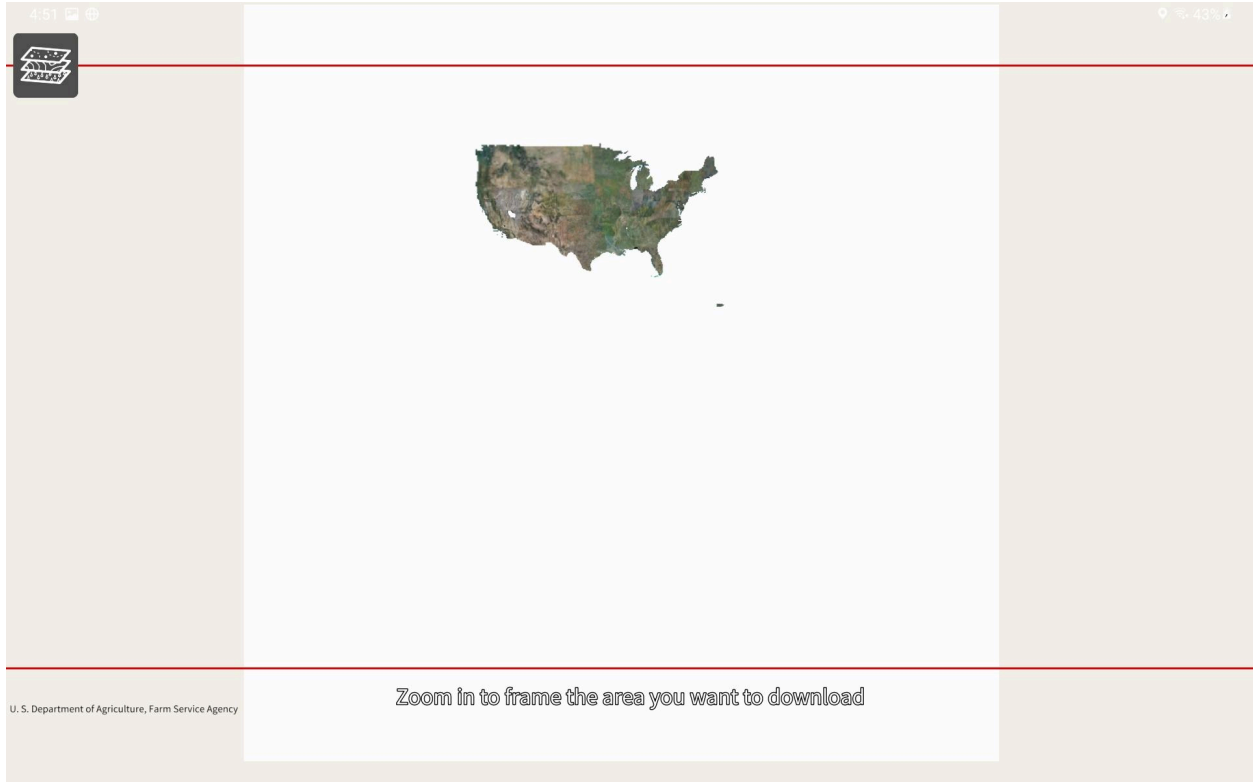
Use the Layers button to select the basemap you would like to download for offline usage, then zoom in on the region you would like to download. If you select an overlay, it will automatically zoom in on that overlay.

Current zoom level: 15

| Download elevation (2 files) | Download Basemap at Zoom 15 (56 files) | Download Basemap at Zoom 17 (497 files) |

Once you've zoomed in far enough, you'll see up to three buttons appear at the bottom, depending on how far you've zoomed in. The "Download elevation" button will download SRTM elevation data for the region you're viewing. The other two buttons will download basemap tiles up to different zoom levels. They're like the "SD" and "HD" buttons in v2, but with a more well-defined meaning. You can download elevation at the same time as you're downloading basemaps.
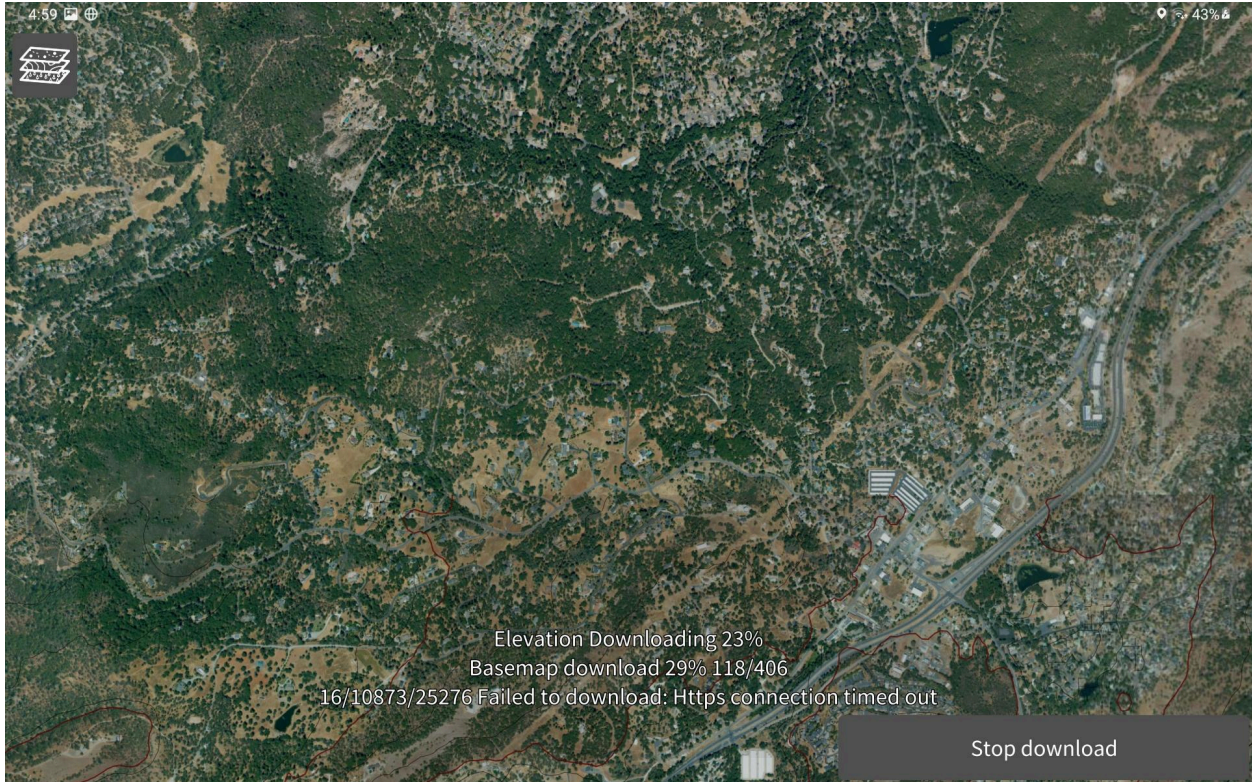
If you get an error message about one failing to download, don't worry. The app will retry the download until it works. Once it reaches 100% and says Download complete, you know you've gotten all of the tiles.

If you press Stop download, this will cancel the basemap download and return to displaying the region you're currently viewing.

There's no indication of what areas you already have downloaded, other than attempting to download the area again and seeing if it completes. The app will first attempt to load the file from the tablet before it downloads it from the internet.

Drawing Tool
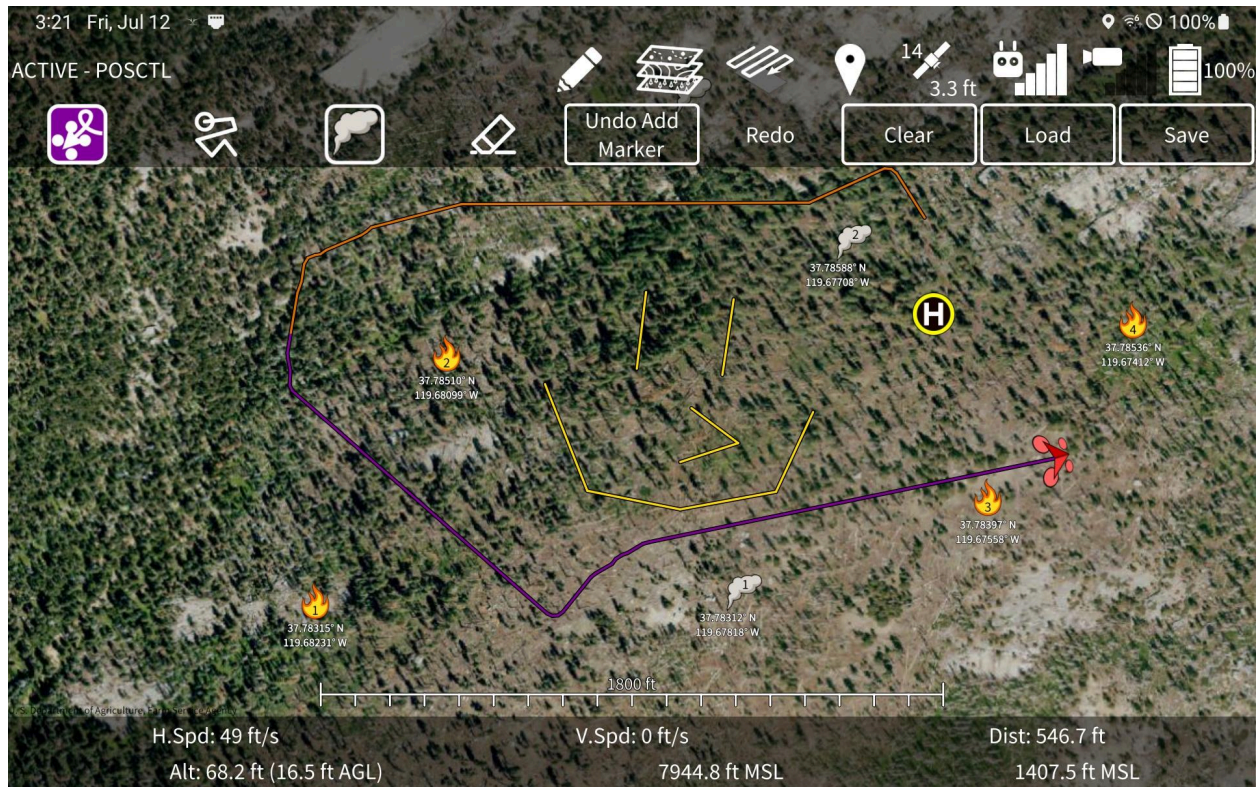
The drawing tool has been implemented like it was in v2, so read section 7.18 of the manual (https://droneamplified.com/downloads/IgnisManual.pdf) if this is new to you.

There are a few minor differences between the implementation in v2 and v3:
- There is now a "Clear" button to erase the whole drawing, whereas in v2, you had to load a blank drawing.
- Drawings are saved in the "Drawn Kmzs" folder, instead of "Exported Kmzs" folder
- Your drawings don't automatically appear in the map overlay list.
- Thumbnails previews will be implemented

ADSB Warning Improvements
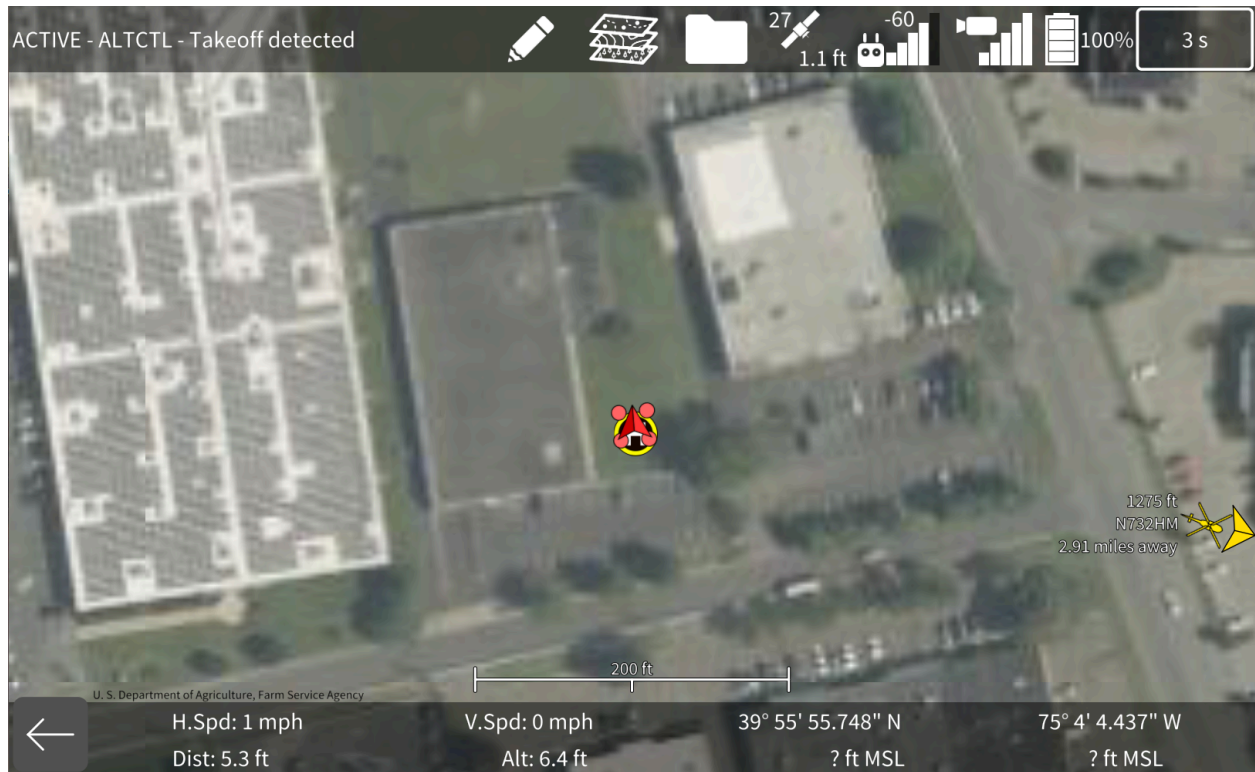
Aircraft within your warning cylinder will now be persistently displayed along the edge of the screen, along with a horizontal distance to the aircraft. Helicopters now have a unique icon.

Tablet position and orientation displayed on map
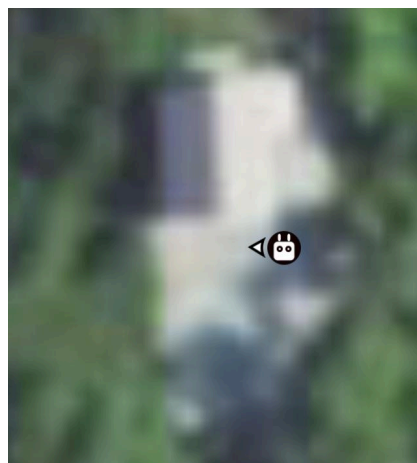
The app will now request the location permission when it starts. If you grant it, it will display the tablet's position and orientation on the map, as shown above.

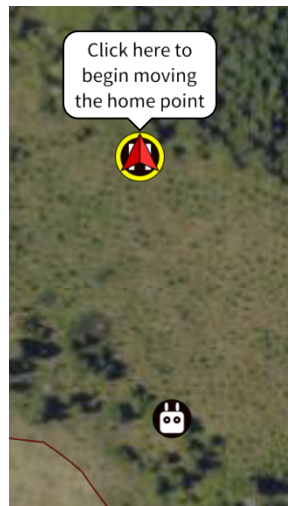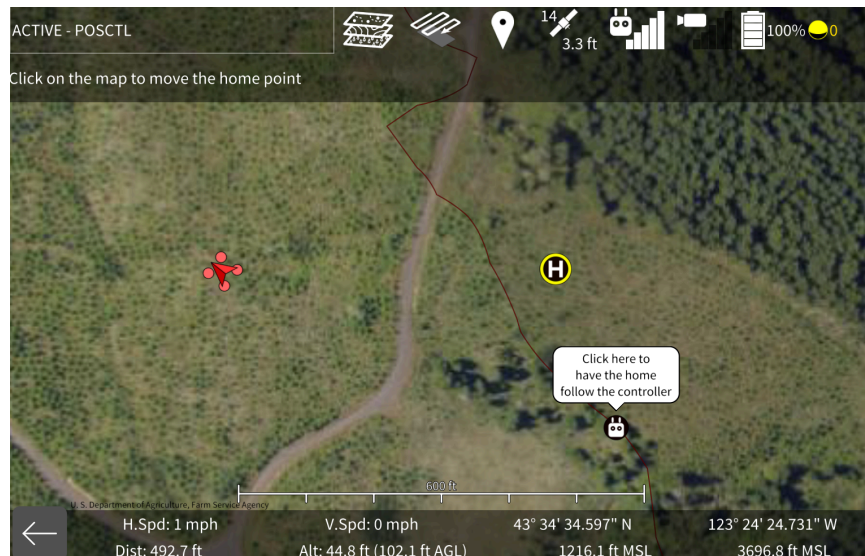# Movable Home Point

You can now change the Home position of the Alta X and Astro, if you would like it to return to a different location when it returns to Home. To do this, click on the home point on the Fly Screen when no other menus are open, then click the bubble that appears above it.

Once you've clicked it you can click on the map to move the home position there. You are not allowed to move the home point if you do not have elevation data for the location you are moving the home point to, or if the drone is flying a waypoint mission or returning to home.

When you move the home position, the app will use the elevation map to figure out the new home position's elevation. The drone's altitude will be measured relative to this new elevation. The altitude above the takeoff location that gets displayed in the bottom of the Fly screen is actually the altitude above the home location, and that value will change when you move the home point. This

altitude is what the drone uses for its return to home altitude setting, so it will ascend to that many meters above the new home position when it returns.

The altitude above ground level and above mean sea level will stay the same after the home point moves. However, you might see a brief jump when the drone starts reporting its altitude relative to the new home point, but before it has confirmed that it is now using the new home position. This might cause the low altitude warning sound to play, but this can be safely ignored.

Another feature is that you can have the home position follow the tablet. This is useful if you are controlling the drone from a moving boat. When this mode is enabled, the home point and the controller will be chained together.
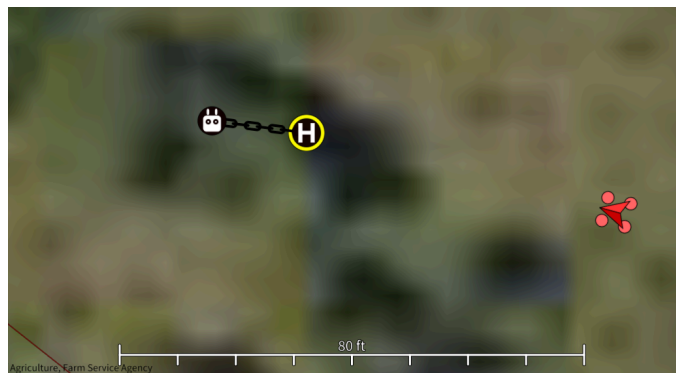
The home location will be moved to 5 meters from the controller, in the direction of the drone. The app will automatically update the home point if it needs to move more than 4 meters.

The Astro has a bug with starting waypoint missions after moving the home position. You'll get a "Temporarily rejected" error for up to a minute after moving the home position. So, don't rely on being able to start a waypoint mission with the Astro after moving its home point. We'll keep investigating this bug and see if we can workaround this.

New start/stop photo/video button binding system
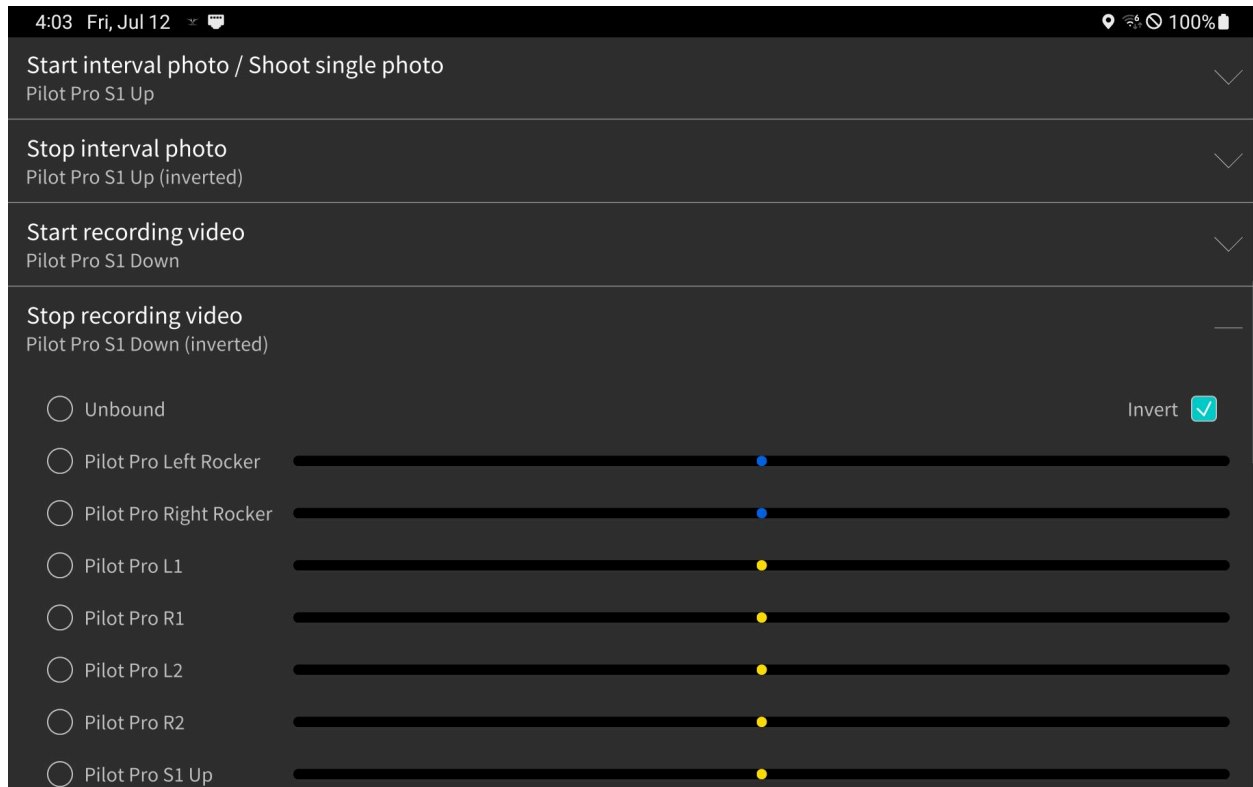
You can now bind functions to the S1 and S2 switches on the Pilot Pro, and it can be nice to have a switch control whether or not you're recording video, rather than a toggle button.

To accomplish this, taking photos, and recording video are now 4 separate bindings, making it more flexible and complicated. Currently, interval photos are only supported on the a7R.

If you want the old functionality of a toggle button, you can bind both Start and Stop to the same button, and it will send the appropriate command for the current mode.

If you're using the a7R, you can bind all 4 to the same button, and it'll either take photos or videos depending on which mode the camera is in. Otherwise, the Start Photo/Video binding will attempt to switch to the appropriate mode when it is triggered.

If you bind start and stop to different things, the app will periodically send the start or stop command while the control is active, to ensure that the message is received even if the radio drops one of the packets. While the control is active, you cannot use the on-screen button to start or stop.

The S1 and S2 switches are 3-position switches, so you'll see bindings for Up and Down for each switch. If you invert one of them, the binding will trigger in the Middle and opposite position. So, you can have one switch that controls both photos and video by binding:

- Start Photo: S1 Up
- Stop Photo: S1 Up (inverted)
- Start Video: S1 Down
- Stop Video: S1 Down (inverted)

If you move the switch up, the camera will take a photo, or begin taking interval photos, and stop recording video. If you move the switch down, the camera will stop taking photos and begin recording video. If you move the switch to the middle, the camera will stop doing both. However, with this binding configuration, you cannot use the on-screen button.

You can also now bind things to A1 and A4 on the Pilot Pro, but these might already do something on your drone, so don't bind to them if that is the case.

Custom Basemaps
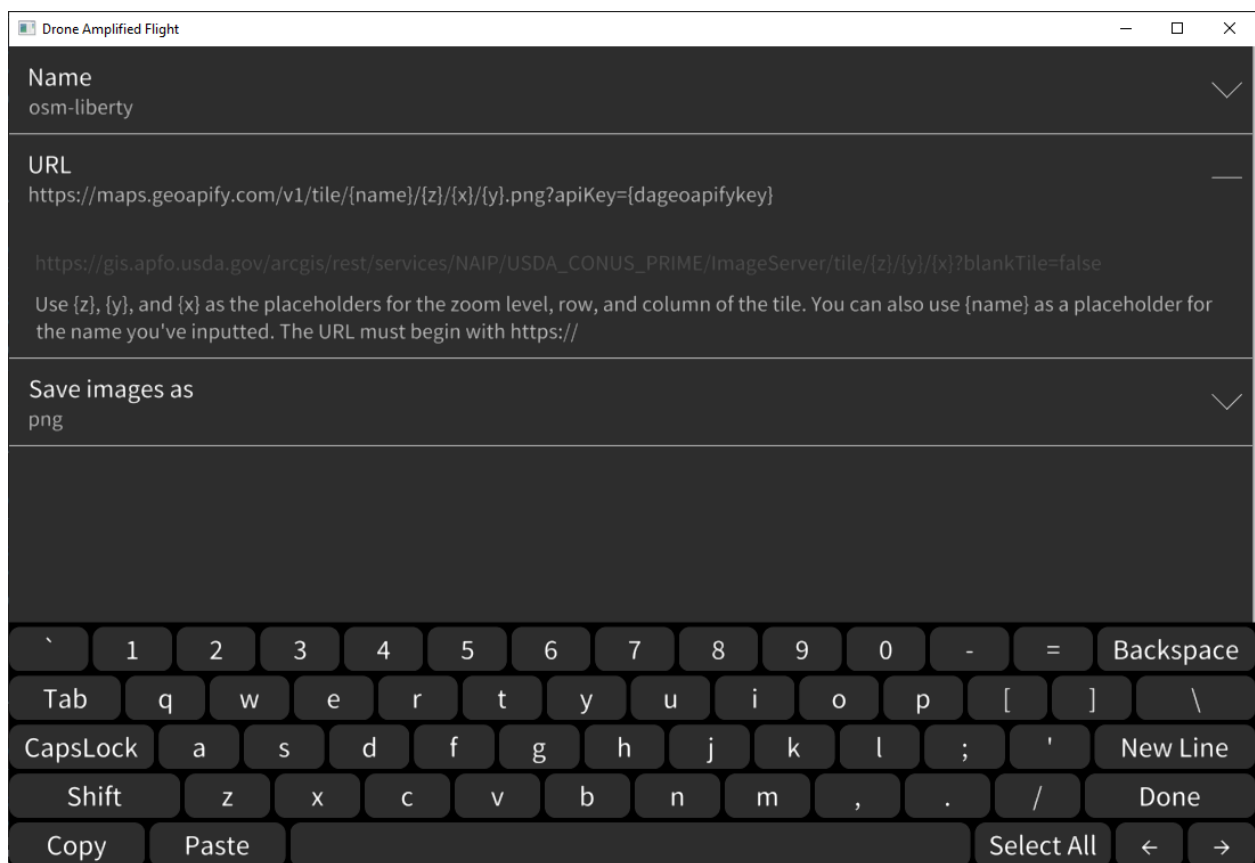
From the DOWNLOAD MAPS button on the main screen, you can click the "Custom basemap source" button to have the app use different map tiles than the default options we provide.

Basically all map services use a similar method of serving basemap image tiles. It's just a URL that encodes the zoom level and position of the map tile. You can input the URL here, with some special placeholders that the app will replace.

Additionally, you have to give the custom style a unique name so that these tiles won't overwrite any tiles you've downloaded from other styles, and you must specify whether it should save the images as png or jpeg files. Saving as jpeg only works if all the images provided by the server are in jpeg format.

I haven't widely tested this, so if you have trouble with your server, let us know.

Minor fixes and improvements

- Added a quick method to connect to a relaying DA Flight app if it is hosting the WiFi hotspot.
- Added a quick method to connect to a relaying DA Flight app if it is on the network, and you know its IP address.
- When no video feed is selected on the relaying app, the listeners will know that is the reason why they aren't getting any video feed, instead of assuming it's because Share Video isn't enabled.
- "Start Mission" and "Start Dropping" buttons are now not both named "Start"
- When the drone is rebooted, the app will forget everything about it and re-request everything it needs to know.
- The app now distinguishes motors on/off status using the field for that, rather than inferring it from the Standby / Active mode. It should now be able to identify whether the motors are on or off if you crash the drone and it goes into Critical mode.
- Export MISB-compliant csv file from .dalog3 file for video multiplexing in ArcGIS
- Fixed a bug in which waypoints in a loaded mission wouldn't be snapped to the snap altitude due to floating point rounding error.
- Display flight controller firmware version in Drone Setup, and log it
- Allow screen rotation between the two landscape orientations
- Fixed Astro Mapping Kit gimbal control bug when AMC app is run before DA Flight
- Can use Freefly's USB FPV camera simultaneously with the Astro Mapping Kit, and switch quickly between the two feeds.
- Added support for Arducopter telemetry, Remote ID, and waypoint missions
- Ignis and DART drop locations created while using the simulator won't be saved
- Fixed being able to toggle waypoint segment activation while not in the waypoint menu.
- Flight log entry view improvements. Can now filter to specific messages.

- If the app crashes due to a bug in my code, it'll save out a file I can use to figure out what caused the crash. The file is accessible if you reboot your device and connect it to a PC via a USB cable, then look in /Android/data/com.droneamplified.daflight/files/

Version 3.1.0

Securely share video, telemetry, and control

This update revamps the Contrast app's relaying functionality with new security features and brings it to the Ignis app too. So, you can now use the Ignis app on a big tablet mounted to the Pilot Pro, and relay through the Ignis app running on the Pilot Pro's small tablet. You can also relay data to multiple destinations, so multiple people can see the telemetry and video from the drone, but on their own devices.

MAVLink relaying is disabled by default on the Ignis app. To enable it, go to "App Settings"→"Enable MAVLink relaying". The option will then change to a button to let you configure more options. If you click on it you'll see this screen:
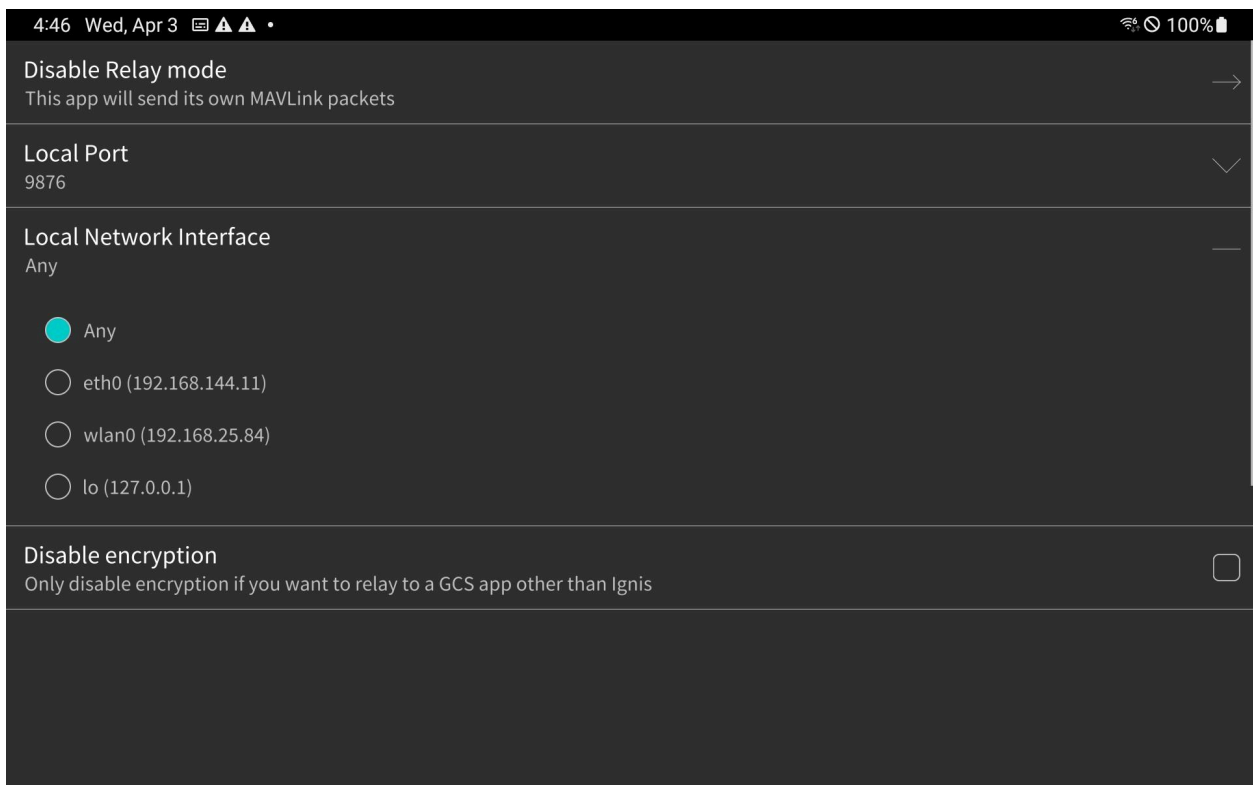
If you expand the "Local Network Interface" option, you can conveniently see what IP address the tablet has on each of its network interfaces (e.g. Ethernet (eth0) or WiFi (wlan0)). You'll need to input this IP address and the relay mode port (default is 9876) as a custom MAVLink connection on the Ignis apps that you want to connect to this one. Additionally, configure a custom video stream connection with the DA protocol to the same IP address, but port 32423.

For people that just want to use a big tablet with a Pilot Pro, we've added new quick-connect options for this setup, so you don't need to configure custom ones.

When a new app is trying to connect to the relaying Ignis app, the APP SETTINGS button on the relaying Ignis app will begin to flash turquoise. Click on it, then click on the new "Sharing Permissions" option.
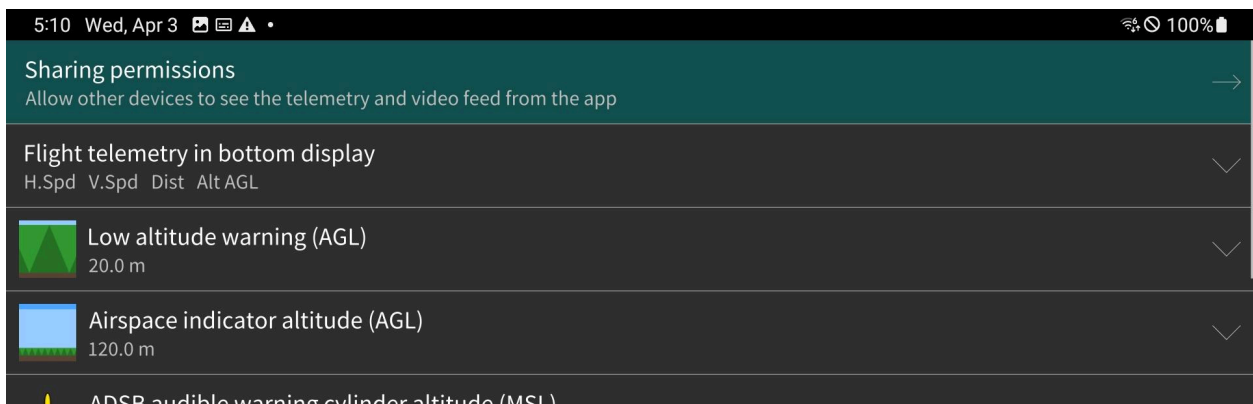
This has also been added to the Contrast app as a new sharing icon along the top.

Click on this, and you'll see a list of all of the devices that are trying to connect to this app, and you can choose what data you share with them and whether or not they'll be granted control of the drone.

5:15 Wed, Apr 3 ⚠ ▣ ⚠ •		⬚⊘ 100%🔋
	Share	Share	Grant
Evan's PC	☑	☑	☑
192.168.24.102:56989,56990	Video	Telemetry	Control
	Share	Share	Grant
gtactivexlwifi B0BB51B4	☐	☑	☐
192.168.26.249:50627,57385	Video	Telemetry	Control
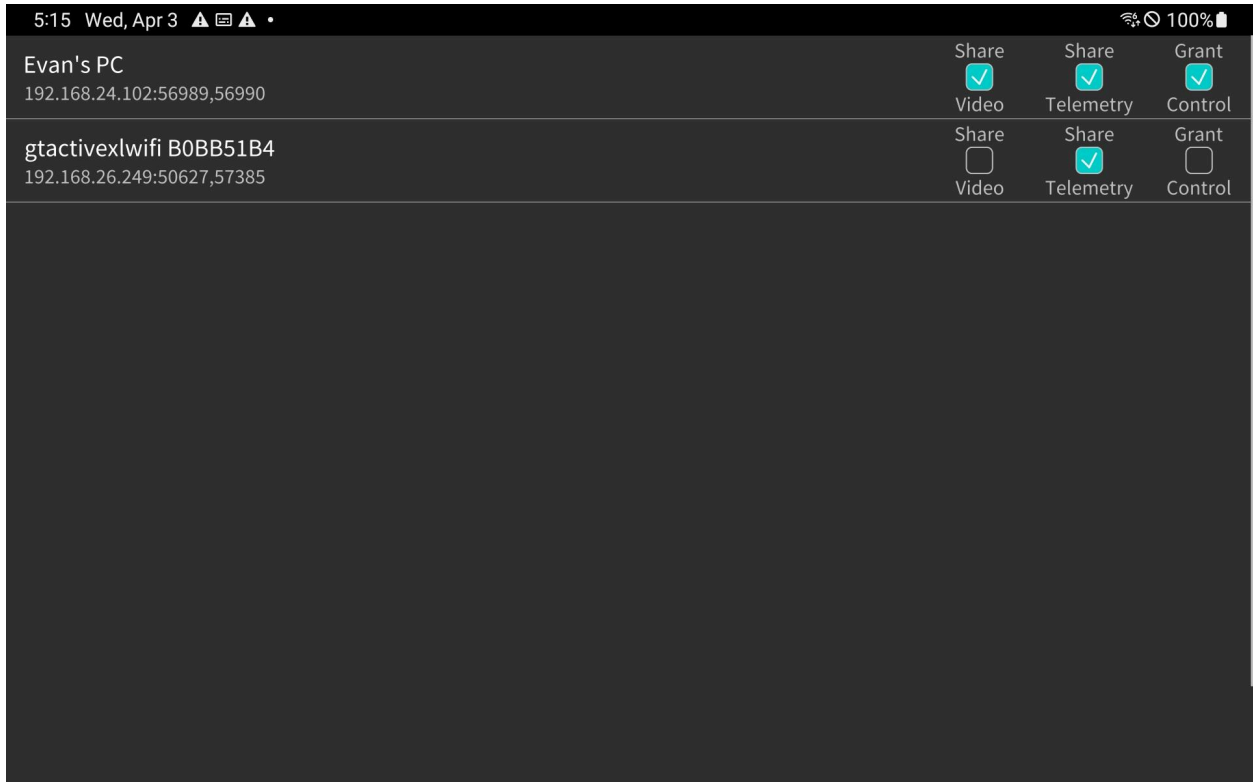
By default, no permissions are granted. Click Grant Control on the device you want to use as your main control device. Each device is identified by a user-configurable name ("App Settings"→"Tablet/Computer name") and their IP address.

Sharing video uses a lot of bandwidth, so you might want to limit which devices you share video to. If the app is transmitting at the maximum bandwidth it can support, you'll see a warning message here and the app will prioritize sharing to the device that has control and only use the remaining bandwidth for sharing to others.

You can only grant control to one device at a time. When you do, the app will remember which one you selected and automatically grant it control the next time you start the app. It also tells that device a randomly generated password so a malicious person can't just spoof their IP address to take control of your drone.

All of the communications between the relaying app and the connected Ignis apps are encrypted with an ephemeral AES key, so anyone sniffing the network the MAVLink and Video is being relayed over won't be able to see what's being transmitted. This is a new protocol, so you won't be able to relay to older versions of the Ignis app without disabling encryption (which I don't recommend doing on an unsecured network).

As an additional security measure, the app now binds its sockets to specific network interfaces. If you're using a Pilot Pro, you should reselect the Mavlink and video connection option for your drone after updating to this version, which will make the app use the ethernet interface. Otherwise, an attacker could potentially feed false data to the app via the WiFi network the Pilot Pro is connected to.

Use a second tablet with a Pilot Pro

With this new relaying feature, you can now use a second tablet with the Pilot Pro.

Connect an Ethernet cable to the Ethernet port on the bottom of the Herelink radio, and use a USB-to-Ethernet converter to connect that to your tablet.

Open the Android Settings app on the big tablet, and go to Connections -> More Connection Settings -> Ethernet. Next, you must disable Ethernet by clicking on the slider in order to be able to configure it.

Configure the ethernet device to use the settings shown below:

‹ Ethernet

Ethernet
Connect to Ethernet network.

Configure Ethernet device

Select Ethernet device

eth0   ▾

Connection type

◯ DHCP

⦿ Static IP

IP address

192.168.144.200

Netmask

255.255.255.0

DNS address

1.1.1.1

Default gateway

192.168.144.11

Proxy

None   ▾

Discard | Save
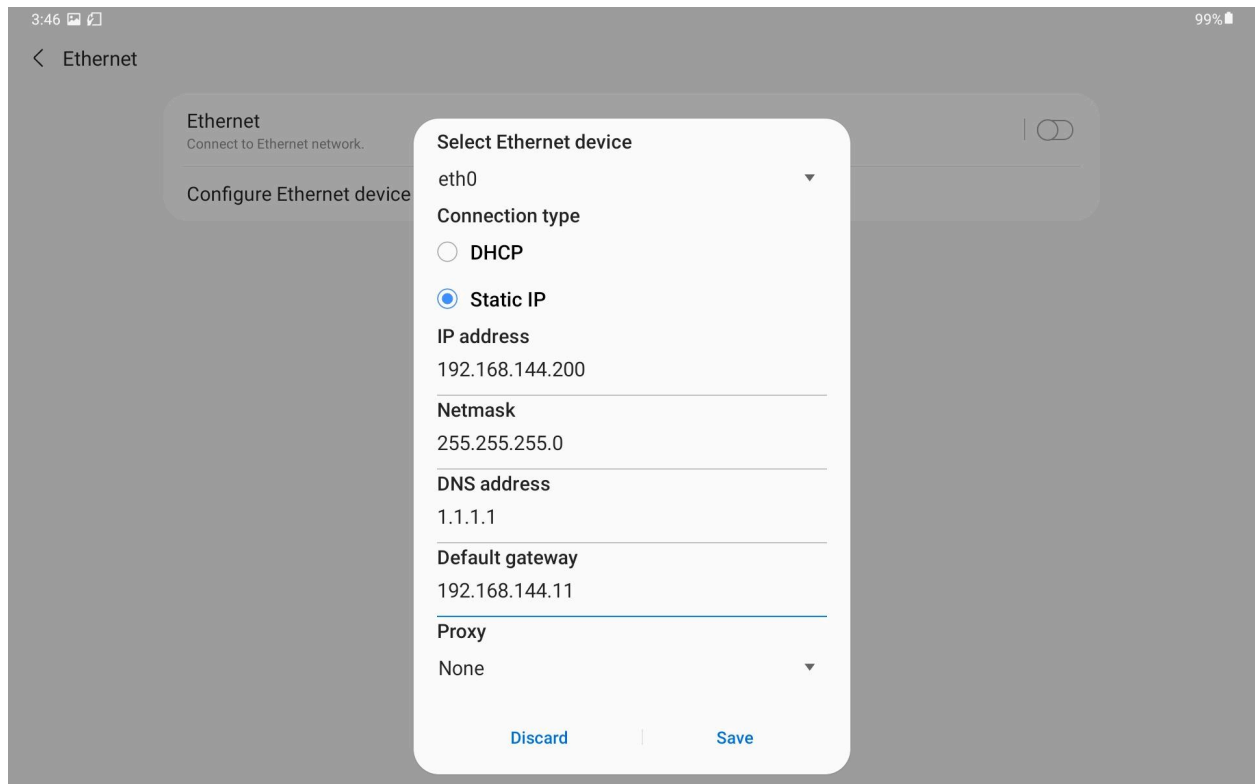
Save, and re-enable ethernet. Additionally, you must disable WiFi on the big tablet, because an Android bug prevents it from communicating over Ethernet if WiFi is on.

On the big tablet, open the Ignis app again, go into Drone Setup, and select the "Pilot Pro with Herelink radio via Ethernet" options for both the Mavlink and Video connections.

Configure custom MAVLink connection
Specify a different IP address and port to connect to   →

N/A No MAVLinkConnection
Disables drone communication   →

NW Blue Controller/Herelink relaying via Hotspot
Connect to 192.168.43.1:9876, run on any network interface, port 14551   →

Pilot Pro with Herelink radio relaying via Ethernet
Connect to 192.168.144.11:9876, run on eth0, port 14551   →

On the Pilot Pro tablet, enable Mavlink relaying. You can use the big tablet in two different configurations:

1. Control on big tablet, Video on Pilot Pro tablet
On the Pilot Pro tablet, grant control to the big tablet, then view a clean video stream by going to Drone Setup->Video Stream.
I have not yet implemented an obvious indication for when the Pilot Pro tablet has reasserted control after being disconnected from the big tablet, so if this connection is unreliable you may want to use configuration 2.

2. Video on big tablet, Control on Pilot Pro tablet
On the Pilot Pro tablet, share video and telemetry with the big tablet, but do not grant it control. On the big tablet, view a clean video stream by going to Drone Setup->Video Stream.

New control bindings options

You will have to rebind your controls for hopefully the last time. The names for the options now make sense. New installations will default to a good binding scheme for your controller. There's also a "Reset to Defaults" button at the bottom.

Other improvements and bug fixes:

- Irrelevant Mavlink and Video quick connect options for your device are now hidden
- Enabling the simulator no longer requires you to select the simulator MAVLink connection option.
- Orientation HUD is displayed when using the controller to move the gimbal.
- You can now set the max number of waypoints to upload
- Better flow through the UI to give the app the permissions it needs.
- Better default styles for kml overlays that don't specify color and thickness
- Fixed a crash when downloading a kml overlay's marker image
- Support some more IFSAR GeoTIFF elevation files
- More Px4 parameters can be set through the app

Known issues:

- When running the app on a Herelink / NW Blue controller, the app will sometimes display a black screen after you wake the device up. Press the square navigation button, then click on the app to fix it.

Version 3.0.4

This update lets you see a topographic overlay with level lines and hill shading. This is much more useful out in the wilderness than the plain street maps.
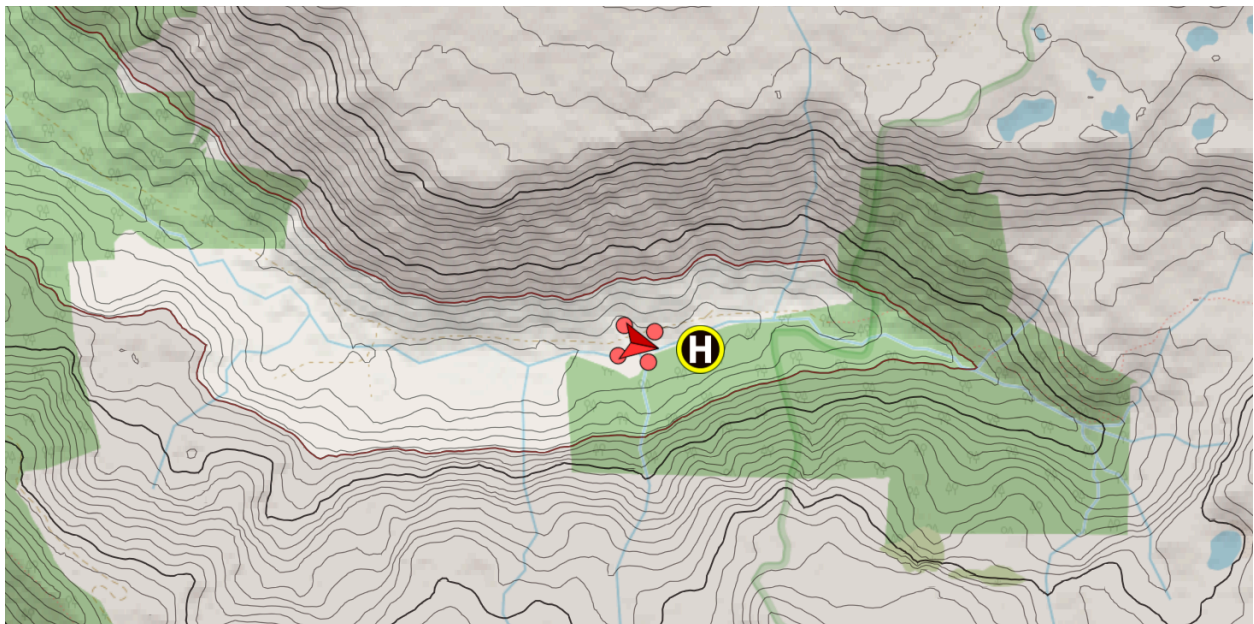

The level line demarcation depends on your units setting:
- Thinnest lines: every 20 feet or 5 meters (not visible when zoomed out)

- Thin lines: every 100 feet or 50 meters
- Thick lines: every 1000 feet or 500 meters

The level lines aren't labeled yet, but you can always tap the map to view the elevation there.

You can enable these overlays by clicking the Folder icon, then Overlays
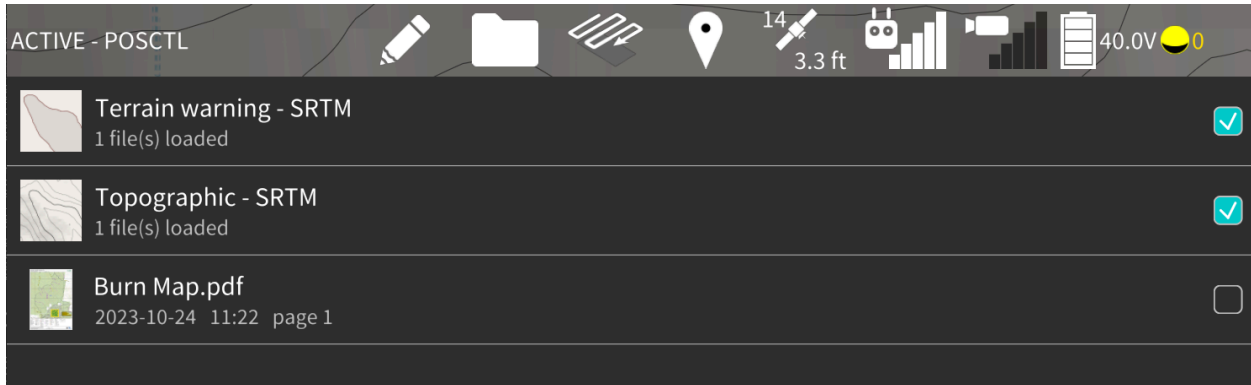
The Terrain warning overlay also has a new look. This overlay shades the terrain in the locations your drone will clip the treetops if you fly into it at your current altitude. It uses the Low altitude warning setting in the App Settings.

The app will only load elevation data around the drone's current location or the location of your waypoint mission. So, you won't see this overlay if you simply enable it and zoom in on a spot on the map. You also need to drop a waypoint to make the app load elevation data there.

These overlays are derived from the digital elevation model the app uses. By default this is the Shuttle Radar Topography Mission (SRTM) dataset. However, you can import your own custom elevation data into the app, and these overlays will use that data instead. The SRTM dataset isn't the most accurate or up-to-date dataset available for the US, so you might be able to get a better topographic overlay in the app if you export one as a georeferenced pdf file.

Other improvements and bug fixes
- Ignis Setup screen now asks for confirmation before you can drop 2 or start.
- Added support for DA strobe light
- The street map tiles will now save and load the file to the tablet's storage before displaying it, so you know that everything you see will be available for offline usage.
- Worked around a bug where the Tab S7 video decoder wouldn't work correctly after switching the Sony a7R between photo and video
- If there's a video decoder error, it will now be displayed on the main screen.
- Modified the RTSP client code to support a new FPV IP camera

- You can now touch the back button to close the video feed on the Contrast app when using a NextVision camera. Touching the video feed doesn't back out anymore because that's how you make it do object tracking.

Version 3.0.3

- Added object tracking to NextVision camera control. Touch the video stream to track that object. Touch the map to maximize the map.
- Added controls for DART payload
- Added UI to explain how to give the app the permissions it needs
- Fixed a bug in which the "Go to Secondary" binding would load the recenter button binding when the app is started.

Version 3.0.2

- New button binding system

Version 3.0.1

- Log most app preferences.
- Change Ignis status text and icon color to yellow or red if there are Ignis faults.
- Use v2 method of starting Ignis.
- Added drop timing and spacing control to Ignis Setup
- Astro Mapping kit exposure settings use slideshow instead of radio buttons.

Version 3.0.0

Initial release.
Supports:
- Alta X
- Astro
- NW Blue Controller / Herelink
- Pilot Pro Controller with Herelink radio
- Wiris Pro and Pixy U
- Astro Mapping Kit

- NextVision Dragoneye 2 (Nose or belly mount)
- Ignis

Major features:

- Much faster, no 3rd party code
- Windows version designed for windows tablets
- Offline street maps
- Download offline SRTM elevation data
- Import IFSAR Alaska elevation data, and some support for other GeoTIFF and BilZip elevation data
- Import Georeferenced PDF Overlays
- Import Kml/Kmz Overlays
- Waypoint Missions
- Non-mapping transect missions
- Flight logging via new .dalog3 format
  - Flight log replay
  - Save missions
  - Export to gpx, photo info csv, fmv csv

Notable missing features (will be implemented eventually)

- Offline satellite maps
- Mapping missions
- Ignis bluetooth setup
- Kmz editor
- Manual download of offline street maps
- Advanced Drone Setup