RELEASE NOTES FOR MISSION CONTROL STATION VERSION 13.2 FOR USE WITH SKYRANGER® R70

The following features have been added or changed in the Mission Control Station (MCS) software since Version 13.1. For more information, see the *SkyRanger R70 Pilot Operating Manual for Mission Control Station Version 13.2*.

For additional documentation, visit https://selfservice.teledyneflir.com/knowledgebase/category/?id=CAT-01097.

The *Pilot Operating Manual* is available in other languages. Those documents should be available approximately four weeks after the English document is posted. Visit the site above to access the translated documentation.

New and changed features

Support for new hardware

This release includes support for the Radionor CRE2-SUAS radio. In combination with a Radionor ground antenna, you can detect, calibrate, and orient the ground antenna in MCS and use the information it provides for position estimation.

Correction for Home and Hover Non-Fatal Condition Response

In MCS Version 13.1, if you set the **Non-Fatal Condition Response** drop-down list in the aircraft flight settings to **Home and Hover**, and a non-fatal warning occurred, the aircraft returned home and incorrectly descended to the configured **Takeoff Height**. In this release, the aircraft now correctly hovers in place at the home position.

Updated UI terminology

In this release, instances of “outgoing waypoint path” and “incoming waypoint path” were changed to “outgoing SafeRoute” and “incoming SafeRoute”.

Additional functional updates

The following additional functional changes were made in this release:

- If you try to take off in GPS Denied Mode or try to take off when the aircraft does not have a GPS connection, the aircraft now shows the T3 – Acquiring GPS lock takeoff error instead of an H3 error.
- If you use a payload that does not support visual navigation, set your GPS Denied Mode to **Vision/GPS** or **Vision/Orientation**, and then take off in GPS Denied Mode, you are now prompted to complete flight control optimization.

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- Previously, if you enabled a camera target and then dragged the reticle in the primary video panel to move the target, the target was turned off.
- Support was added to the Application Development Kit (ADK) for locking on camera targets.
- Further support for tablets running Windows 11 was included.
- The default AutoGrid capture interval for the StormCaster™-E payload changed to 3 seconds.
- In this release, the tether cable torque value in the software more closely matches the value that you set on the V2.2 tether ground station.
- If you are flying the aircraft below the configured **Minimum Safe Height**, when you returned home, the **Climb to Minimum Safe Height** check box appeared in place of **Aircraft Going Home**. Now, the **Climb to Minimum Safe Height** check box appears in an orange bar at the top of the **Aircraft Going Home** dialog box.
- For compatibility with certain video players, support was added for non-mpeg.ts video when metadata is not enabled.
- For non-English languages, this release fixes various display issues and instances of truncated text.
- In this release, default visual navigation masks were added to enable visual navigation mode when flying with the Muve™ B330, Muve C360, or Muve R430 payload.
- You can now click a warning dialog box to dismiss it quickly. For certain warnings, you can also access settings directly from the warning dialog box.
- The following new warnings were added in this release:
    - **W34: Auxiliary power output problem**
      Auxiliary power overcurrent occurred. The aircraft is trying again.
    - **W35: Auxiliary power output failed**
      Auxiliary power overcurrent occurred and could not be recovered. Auxiliary power off.

Fixed issues

The following issues were fixed in MCS version 13.2:

- In some cases, circular flight plans were not deleted from the map. (SW-75748)
- If you were using the StormCaster™-E payload to complete an AutoGrid, pictures might have been missed if the AutoSnaps interval was set below four seconds. (SW-75747)
- If you enabled Vision/Orientation as your GPS Denied mode, took off in orientation control mode, and then opened the Osprey latch, the N29 Flight control optimization cancelled warning appeared. The aircraft automatically changed to using visual navigation for position control before flight control optimization was complete. (SW-75729)

- If you set up your system in a multiple base station environment, then connected to the master base station and two aircraft, if you put both aircraft into simulator mode, you could not complete an in-air replacement simulation. (SW-75146)

Known issues

The following issues exist in MCS version 13.2.

- **If you do not use a base station in your configuration with the Radionor CRE2-SUAS radio, and you update the configuration to add or remove antennas for position estimation, the aircraft's estimated position might not appear in MCS.**
  Workaround: Turn off the ground antenna, restart the aircraft, and turn on the ground antenna again.
  Reference: SW-76480
- **If the aircraft is using arms with 18.5 inch propellers, incoming and outgoing waypoint paths cannot be used.**
  Workaround: Use Heavy Lift – Long Endurance propulsion arms when flying incoming and outgoing waypoint paths.
  Reference: SW-75624
- **If you rotate your tablet to portrait mode when using MCS, when you rotate it back to landscape mode, the menus in the corner of the screen might not appear.**
  Workaround: Minimize MCS and maximize it again. To prevent the issue, lock the tablet's screen orientation to Landscape mode.
  Reference: SW-74815
- **Airspace data might not download correctly in MCS.**
  Workaround: None.
  Reference: SW-73400
- **If you fly the system in external radio and use Follow-Me, after landing and reconfiguring the system to use the internal radio, you cannot enable Follow-Me, set the base station / network node as home, or set a camera target on the base station / network node.**
  Workaround: After reconfiguring the system to use the internal radio, restart the base station and aircraft before proceeding with the next flight.
  Reference: SW-71585
- **Broadcasting CoT from Silvus nodes might not be supported. MCS continues to show Silvus radio data over GPS-D.**
  Workaround: None.
  Reference: SW-71492
- **In some cases, when you turn off or remove a plug-in, it might not be turned off or removed correctly. If you enable or add the plug-in again before restarting MCS, a duplicate instance can be created.**
  Workaround: If a duplicate instance of a plug-in is created, restart MCS.
  Reference: SW-71099
- **If you add a simulated aircraft to MCS, and you configure CoT settings for that aircraft, MCS appears to be applying the settings, but CoT is not enabled.**
  Workaround: None.
  Reference: SW-69870

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- **If you are connected to the aircraft's hidden Wi-Fi network, the aircraft might not assign an IP address to any devices connected to it, even though it is in DHCP Mode.**
  Workaround: Configure the tablet's Wi-Fi adapter to accept a static IP address instead.
  Reference: SW-69693
- **Currently, if you are not using MCS, the aircraft can only send CoT messages over UDP.**
  Workaround: Use MCS when sending CoT messages over TCP.
  Reference: SW-69553
- **When operating the aircraft with XL batteries in areas with magnetic interference or low earth fields (such as the high Arctic), you might not be able to take off because of poor magnetometer readings.**
  Workaround: If you are flying in areas with strong magnetic interference or low earth fields, use standard batteries in the aircraft.
  Reference: SW-68055
- **In rare cases, a Failed to upgrade message might appear in MCS when you attach arms, legs, or batteries for the first time after a software update. The aircraft continues to retry the update until it is successful.**
  Workaround: None. The aircraft continues to try to update the arms, legs, or batteries. If you can proceed with spinning up the motors, all parts were updated successfully.
  Reference: SW-67014
- **In some cases, if you charge batteries fully and then put the fully charged batteries back onto the battery charger, the LEDs do not illuminate to show that the battery is fully charged.**
  Workaround: To determine the battery level, remove the battery from the charger and press the status button on the battery.
  Reference: SW-67004
- **If you are flying an AutoGrid, and you pause the flight, drag the aircraft shadow to a new location, move to a different waypoint or POI, or open the flight planning menu, the AutoGrid stops, as expected. However, a Resume point is not added to the map.**
  Workaround: To resume the AutoGrid, select the last waypoint that AutoGrid passed just before you interrupted the flight.
  Reference: SW-66975
- **In some cases, if you move the base station outside the aircraft's maximum range, you cannot set the base station as the home position.**
  Workaround: If you need to set the base station as the home position, turn on Follow-Me or point the camera target at the base station and then turn it off again. Always ensure that the aircraft is above MSH if the base station is set as home when the base station is outside the maximum range.
  Reference: SW-66791
- **If you are using a tethered aircraft and you connect the tablet to a Silvus radio using a wired connection and then connect to the base station's Wi-Fi network, MCS can't establish a reliable connection to the tethered aircraft.**
  Workaround: Restart the aircraft.
  Reference: SW-64584

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- **If you are operating with two base stations, and you set the first base station as home and point the camera target at it, you cannot enable these features on the second base station.**
  Workaround: Before setting the second base station as home or pointing the camera target at it, turn off the features on the first base station.
  Reference: SW-63404
- **If you use the Target Accuracy Improvement feature near a no-fly zone, the motion from the target estimation process can cause the aircraft to fly into the no-fly zone by up to 20 m / 66 feet.**
  Workaround: If you are using this feature close to restricted airspace, buildings, or other no-fly zones, ensure that the aircraft completes this process at a minimum of 20 m / 66 feet from the no-fly zone.
  Reference: SW-60609
- **If you change your language in MCS, the notifications and options that appear in the Windows notification area do not change. They remain in the previous language.**
  Workaround: Tap the icon in the Windows notification area. Tap Close. Open MCS again.
  Reference: SW-58278
- **In some cases, if you add multiple no-fly zones that overlap, the aircraft can fly into the overlapped area.**
  Workaround: When creating your flight plan, do not overlap no-fly zones.
  Reference: SW-57802