

# NEOS™ Standalone Application

Quick Reference Guide



# NEOS MIL™





# NEOS™ - Overview

**NEOS™** Designed to enhance the operational efficiency of UXV platforms. By utilizing the power of the Aries NEOS™ DogBone, NEOS™ can provide battlefield commanders with multiple video feeds over tactical networks.

**NEOS™** allows users to Network & TAK enable the Full Motion Video of their sensor from the Ground Control System.

**NEOS™** allows users to stream multiple controlled video feeds concurrently over Mobile, Tactical & Command systems.

**NEOS™** is a low-voltage capability designed for extended operations. The system provides automatic network routing for rapid deployment and ease of use.

There is no configuration required and the tool has successfully integrated with Mission Systems such as TAK, APASS, MCH, and others.



# Before We Begin...



This document assumes the following:

1. The Reader has followed the steps found in the NEOS™ Start Guide
2. The Reader has the system set up and the EUD is receiving an IP Address from the NEOS™ System.



This icon indicates the tablet/EUD detects a network connection

This icon indicates the tablet/EUD is receiving an IP address from the NEOS™ System

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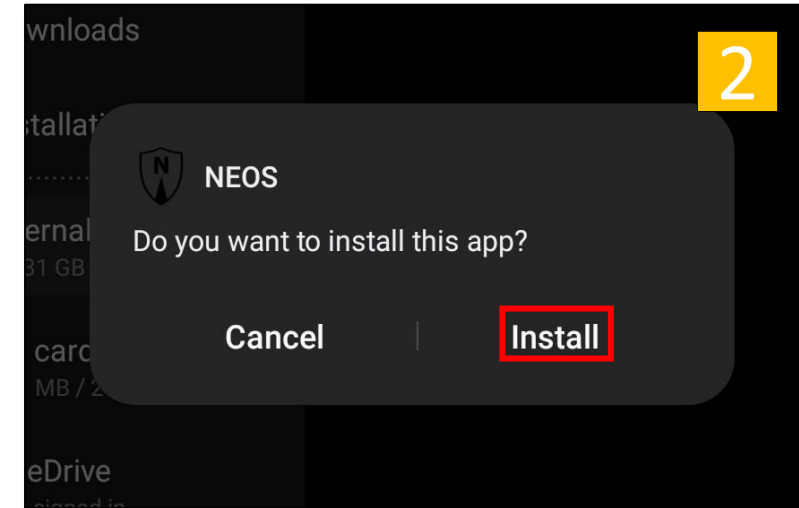
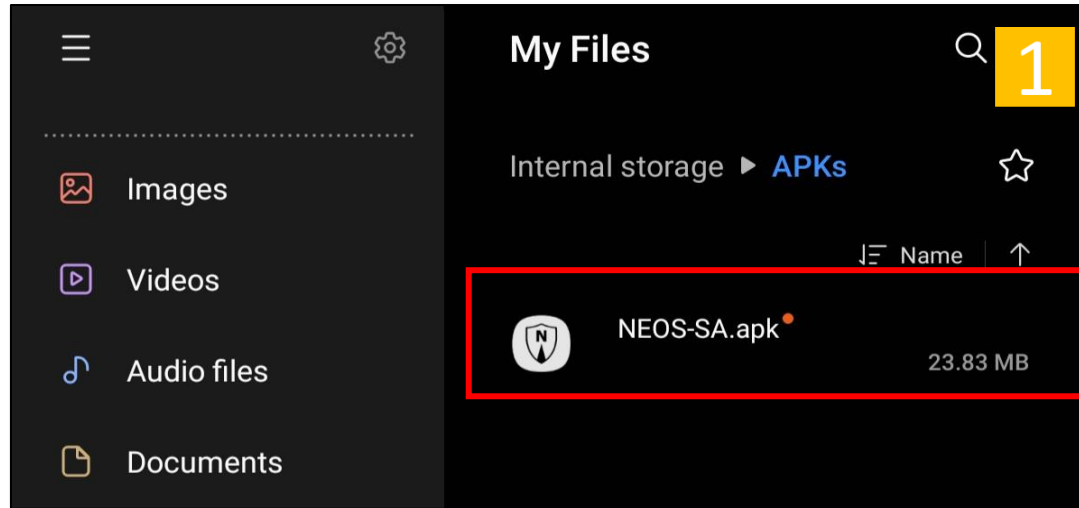
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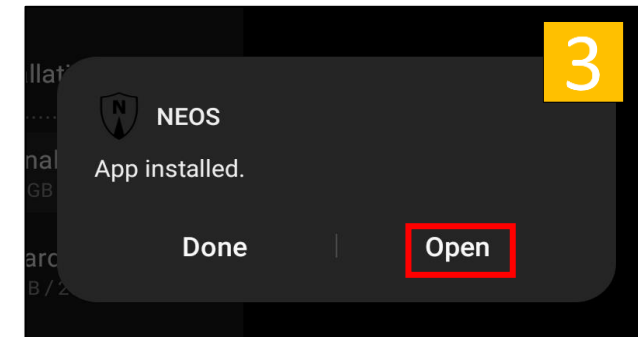
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# Install NEOS™ Standalone App



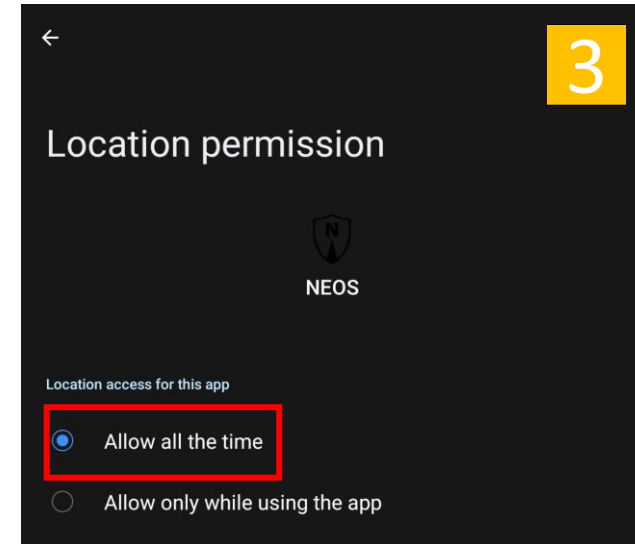
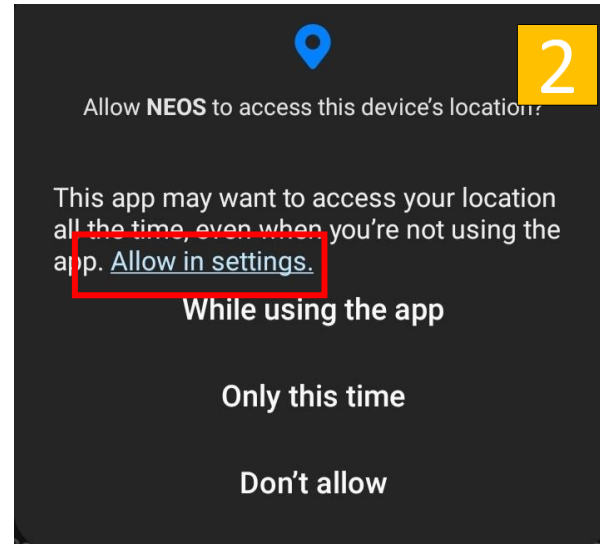
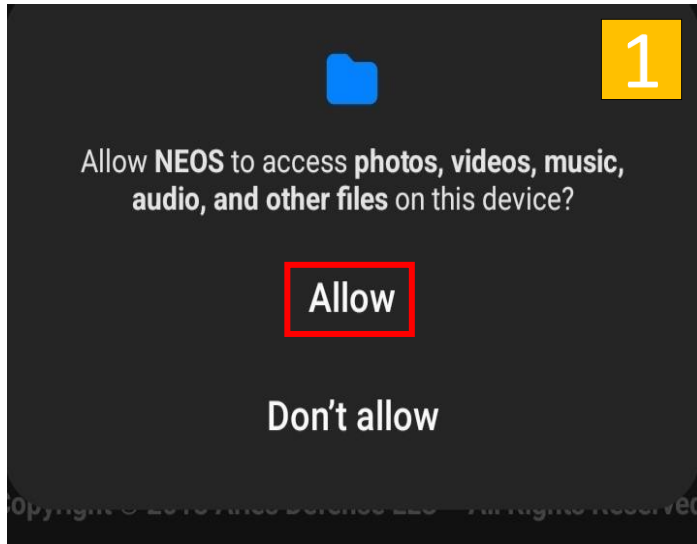
1. **Tap** the NEOS Standalone APK file to begin installation.
2. Review the Permissions Statement then **tap Install**.
3. **Tap Open** once the installation is complete.

**Note:** The actual APK name may change. Also, you may have to adjust the security settings on your device to install this application.





# Allow App Permissions



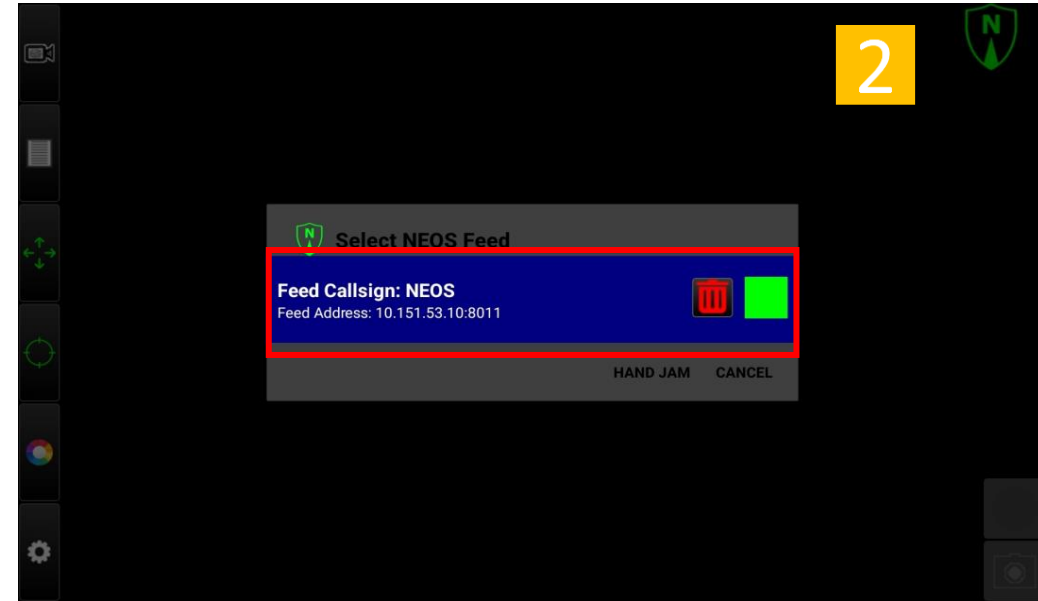
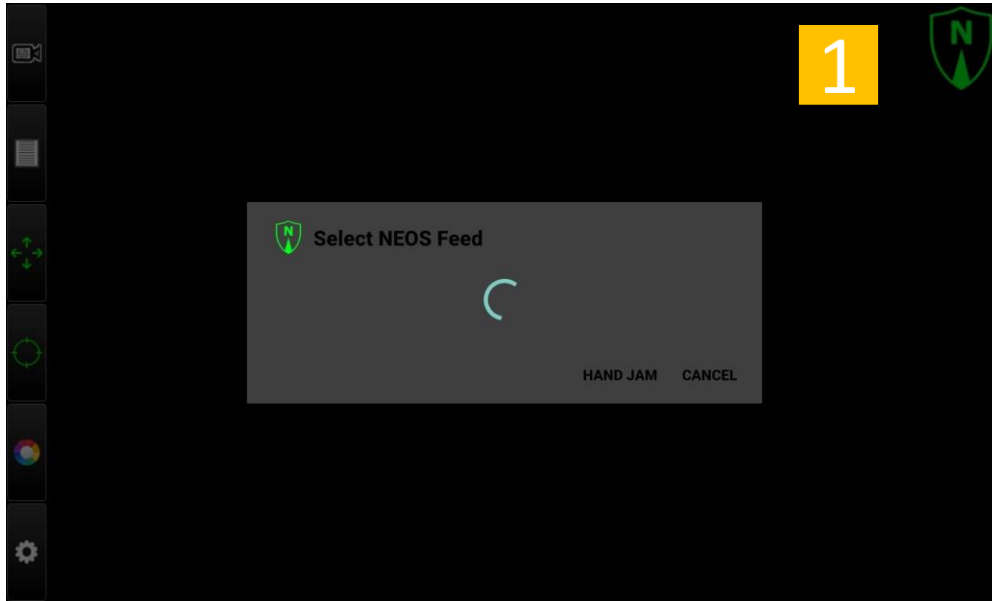
1. **Tap Allow** when prompted to set “Allow NEOS to access photos, media, and files on your Device?”.
2. **Tap Allow in settings** when prompted to set “Allow NEOS to access this device’s location?”
3. **Tap Allow all the time** when prompted to set NEOS “location permission”

***Failing to allow these permissions will limit / prevent proper functionality of the NEOS™ System.***

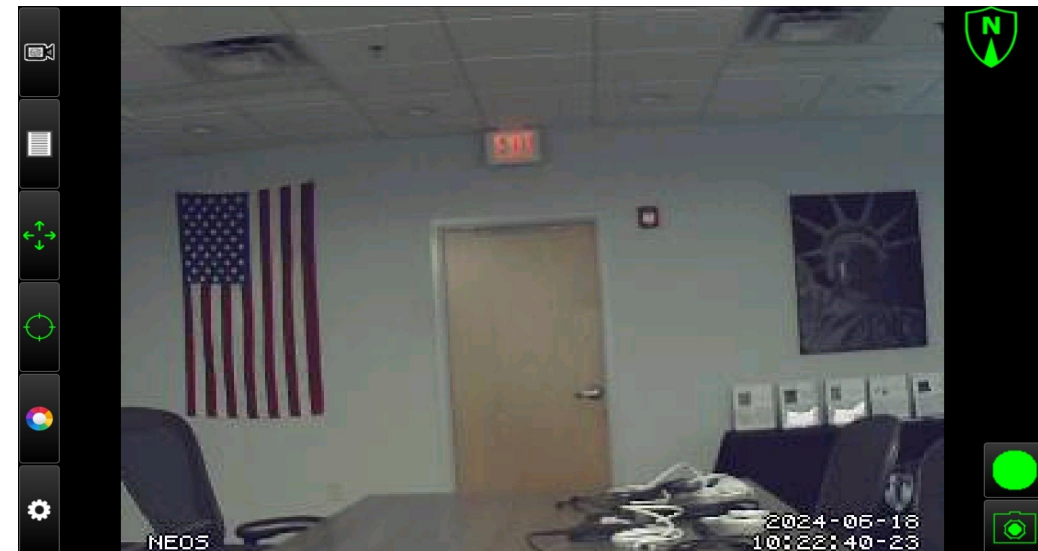




# Initial Sensor Setup



1. Upon initial set up NEOS will look for all NEOS systems on the network:
2. **Select** your desired feed and it will start streaming.



# NEOS Home Screen



# NEOS Select Source



Select Source

Recordings

Adjust Reticle

Select Reticle

Choose Color

Settings

Sensor Name

NEOS

2024-06-18  
10:22:40-23

NEOS Icon

Start Recording

Take Snapshot

Date & Time

# NEOS Source Selection Overview



The screenshot shows a 'Select NEOS Feed' interface with two feed entries. The first entry, 'Feed Callsign: NEOS', has a red trash icon and a green square. The second entry, 'Feed Callsign: NEOS-Handjam', has a hand icon, a red trash icon, and a grey square. Callouts on the right identify these elements: 'Delete Feed' (trash icon), 'Active Feed' (green square), 'Stale Feed (after 5 minutes of inactivity)' (grey square), and 'Hand Jammed' (hand icon). At the bottom of the interface are 'HAND JAM' and 'CANCEL' buttons.

**Select NEOS Feed**

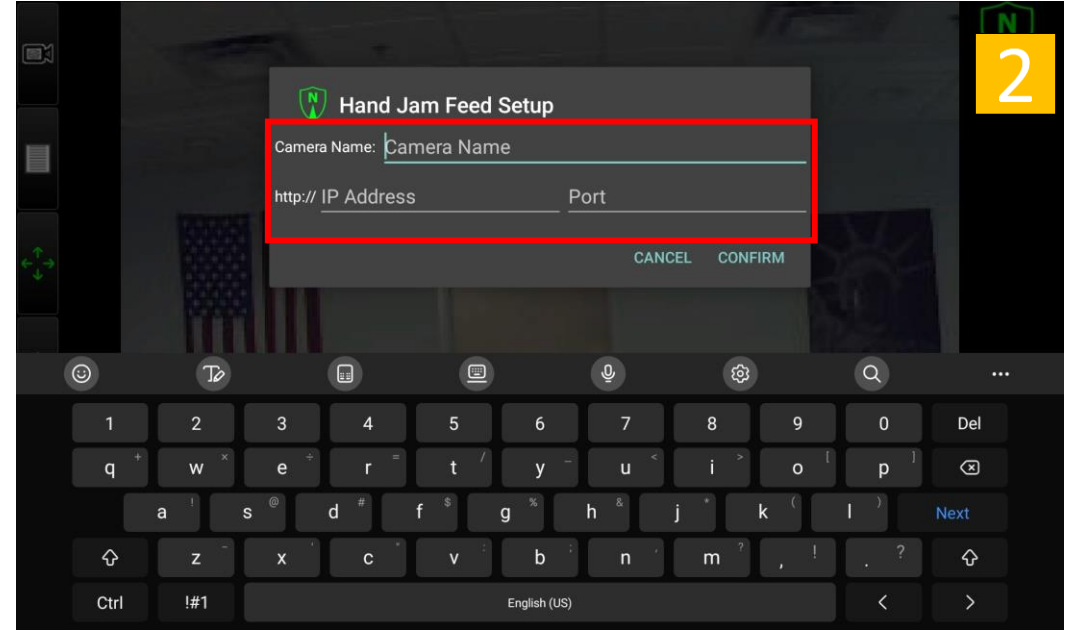
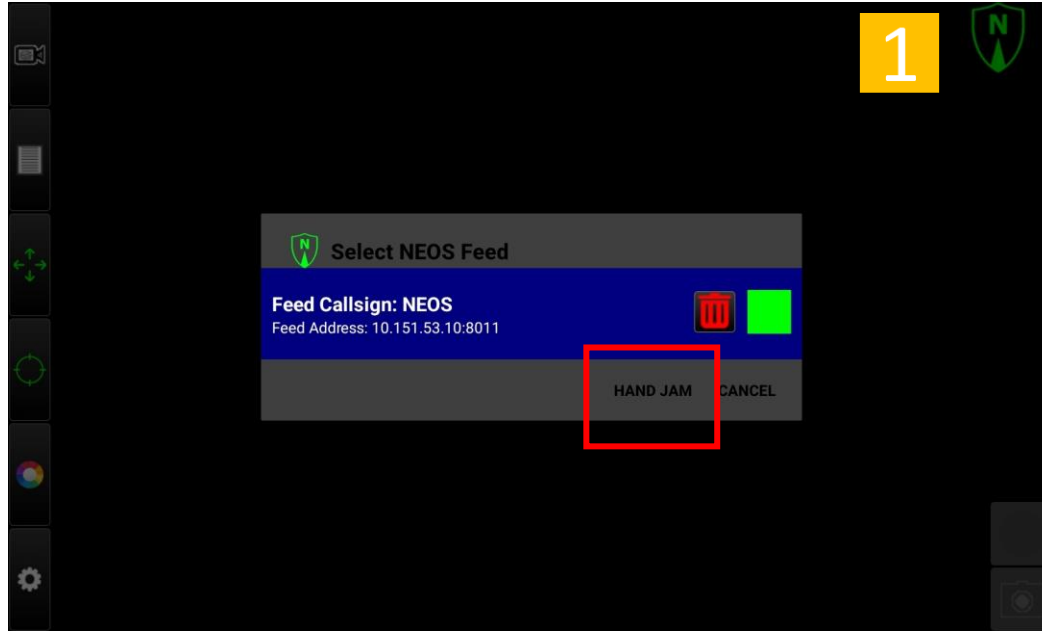
**Feed Callsign: NEOS**  
Feed Address: 10.151.53.10:8011

**Feed Callsign: NEOS-Handjam**  
Feed Address: 10.151.53.10:8011

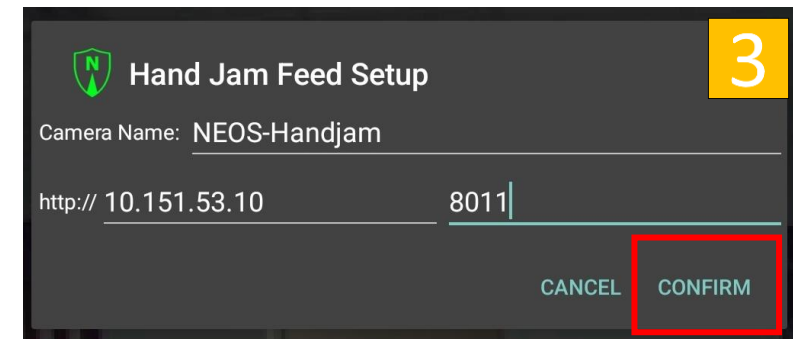
HAND JAM    CANCEL

- Delete Feed
- Active Feed
- Stale Feed (after 5 minutes of inactivity)
- Hand Jammed

# Hand Jam Sensor IP address



1. **Select** Hand Jam
2. **Enter** Required Fields
  - Camera Names are user defined.
  - The Default Camera URL is: 10.151.53.10.
  - The Default Port is 8011.
3. **Tap** Confirm to continue.





# NEOS™ Standalone: Files

# NEOS Files-Video and Snapshots



# NEOS Files-Videos



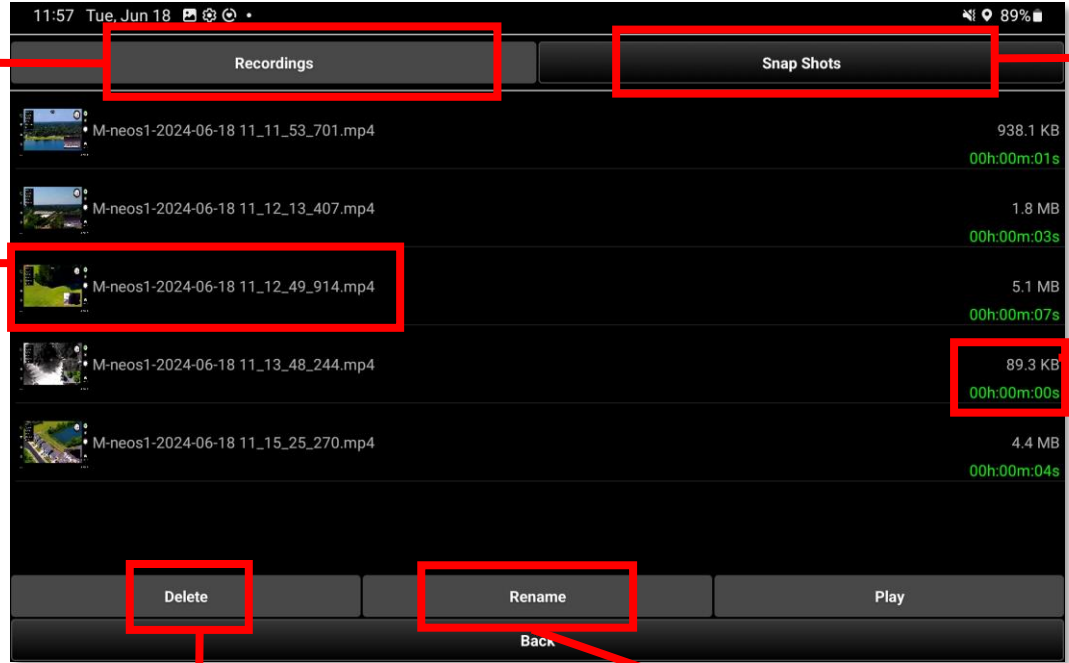
Recordings Screen

Recordings

Snap Shots

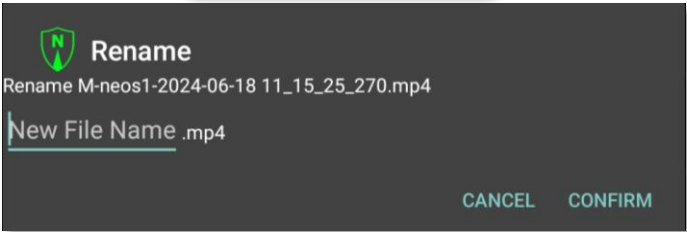
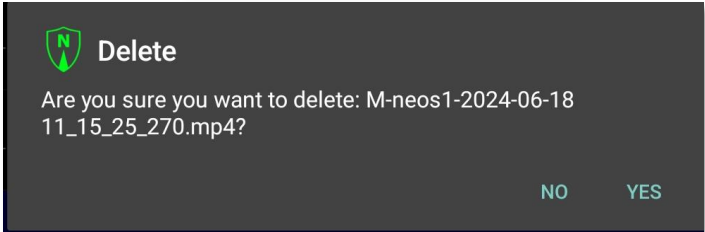
Video Date Stamp

Size and Length



Delete Confirmation

Rename Dialog

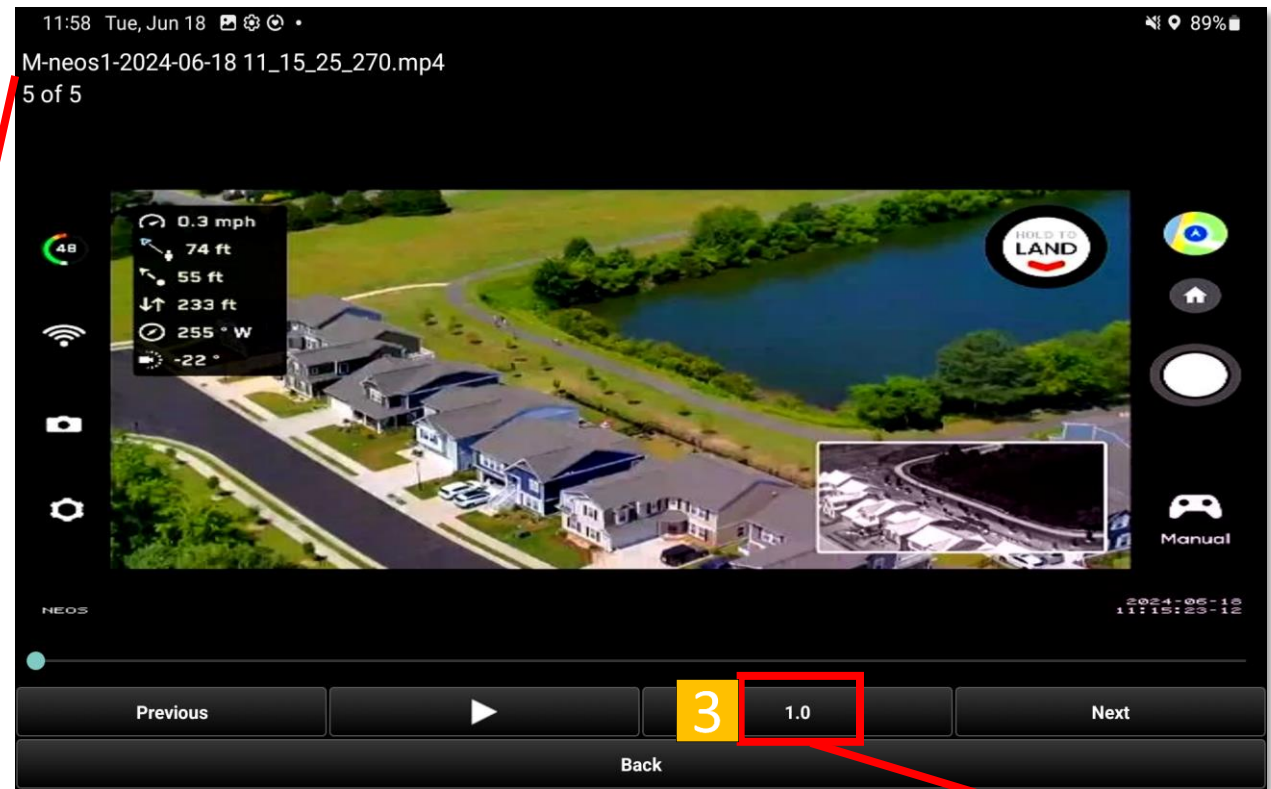
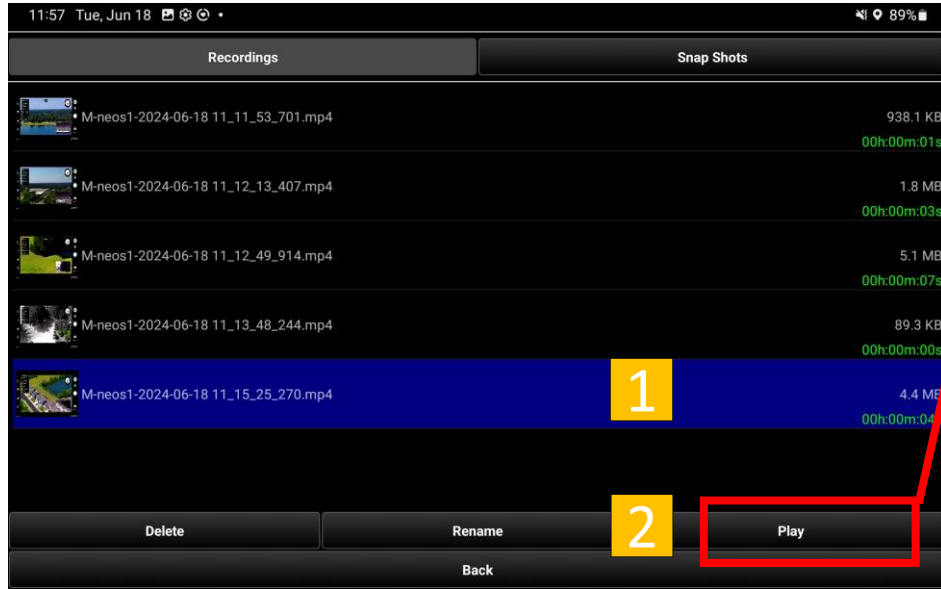




# NEOS Files-Video and Snapshots

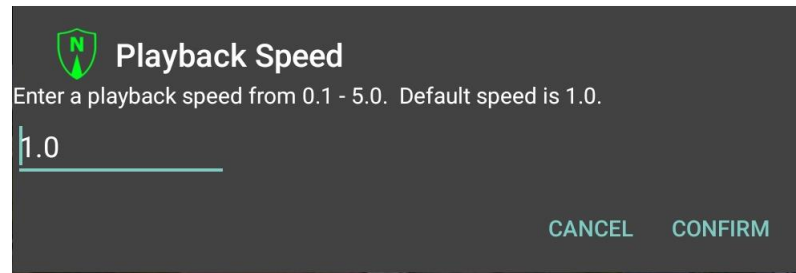


Play Screen



1. **Select** Desired Video
2. **Select** Play
3. **Change Speed** Confirm to continue.

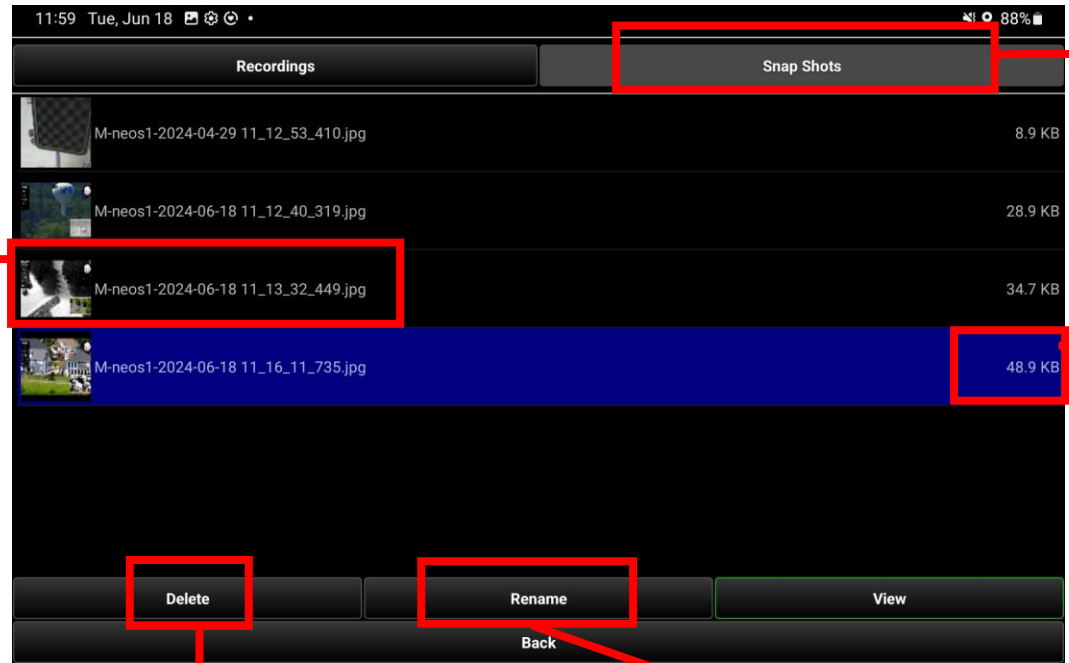
Speed Dialog



# NEOS Files-Snapshots



Files Screen



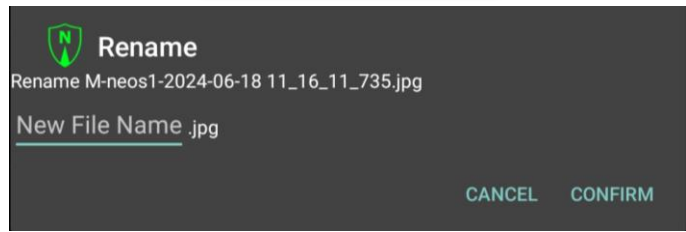
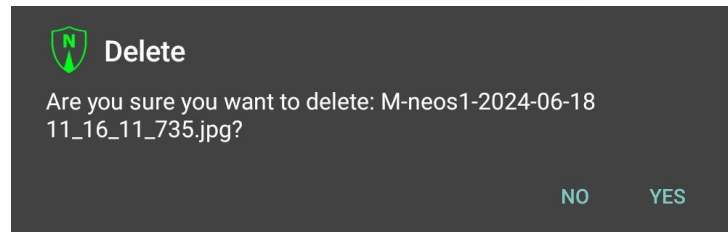
Snap Shots

File Date Stamp

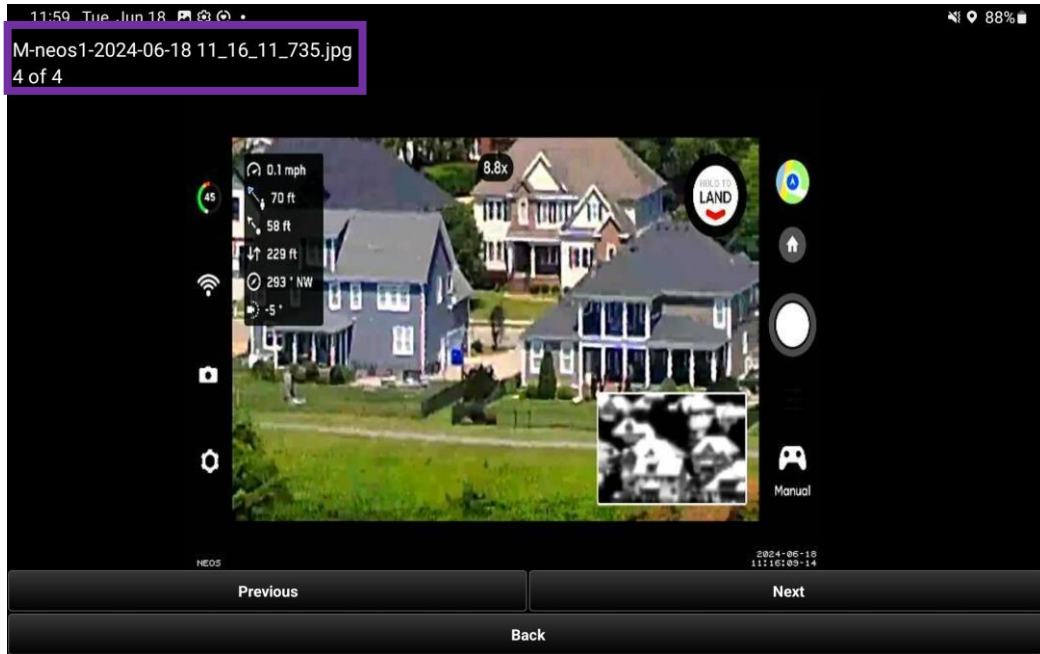
File Size

Delete Confirmation

Rename Dialog



# NEOS™ Standalone: Files – Snapshots (Cont...)



## Video/Snapshot File Syntax

M-neos1-2024-06-18 11\_16\_11\_735.jpg

- 1
  - 2
  - 3
  - 4
1. M – Manual Snapshot
  2. Camera Name
  3. Date Time Stamp
  4. File Extension

4 of 4

Current file of total files

Previous

Go to Previous Snapshot

Next

Go to Next Snapshot

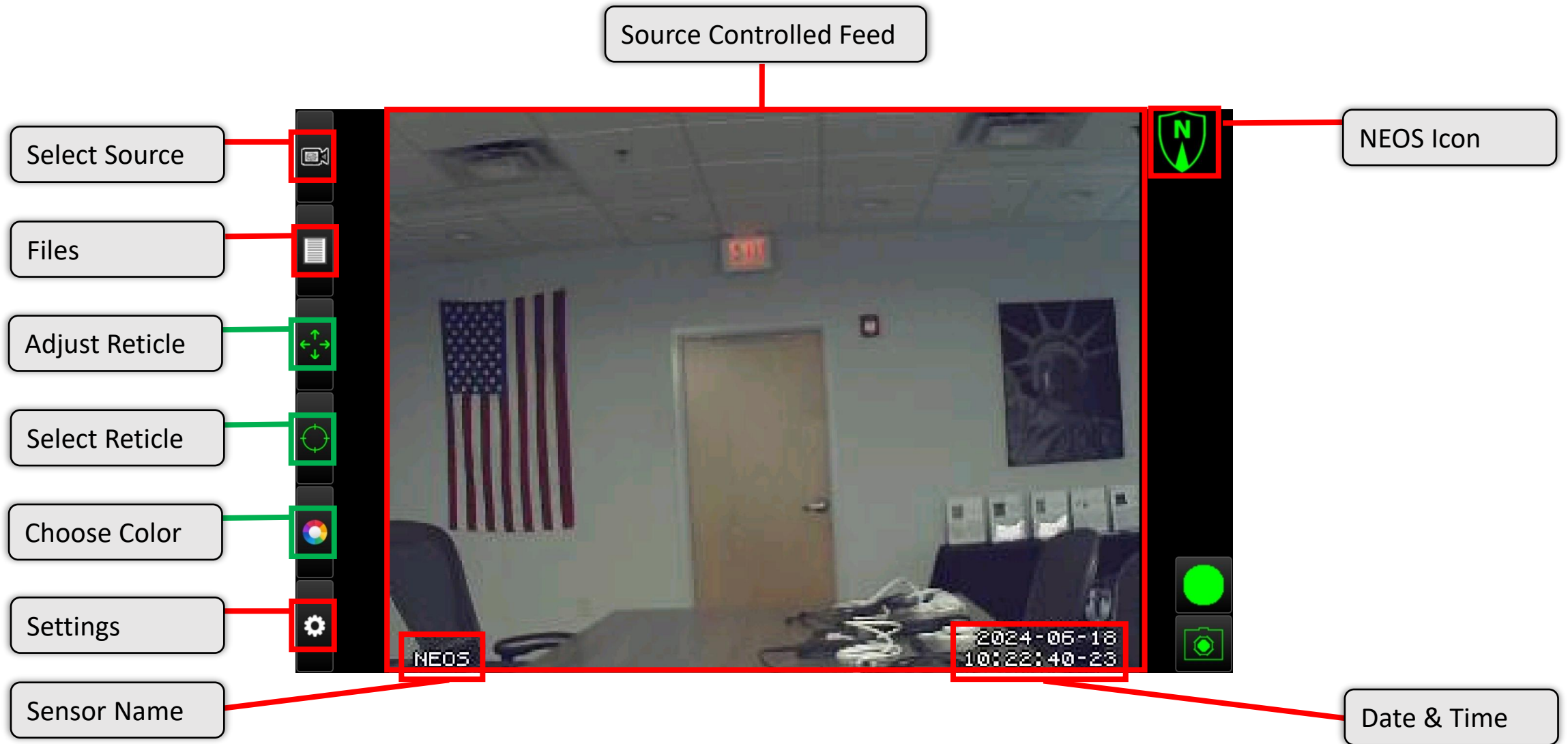
Back

Go Back to Files

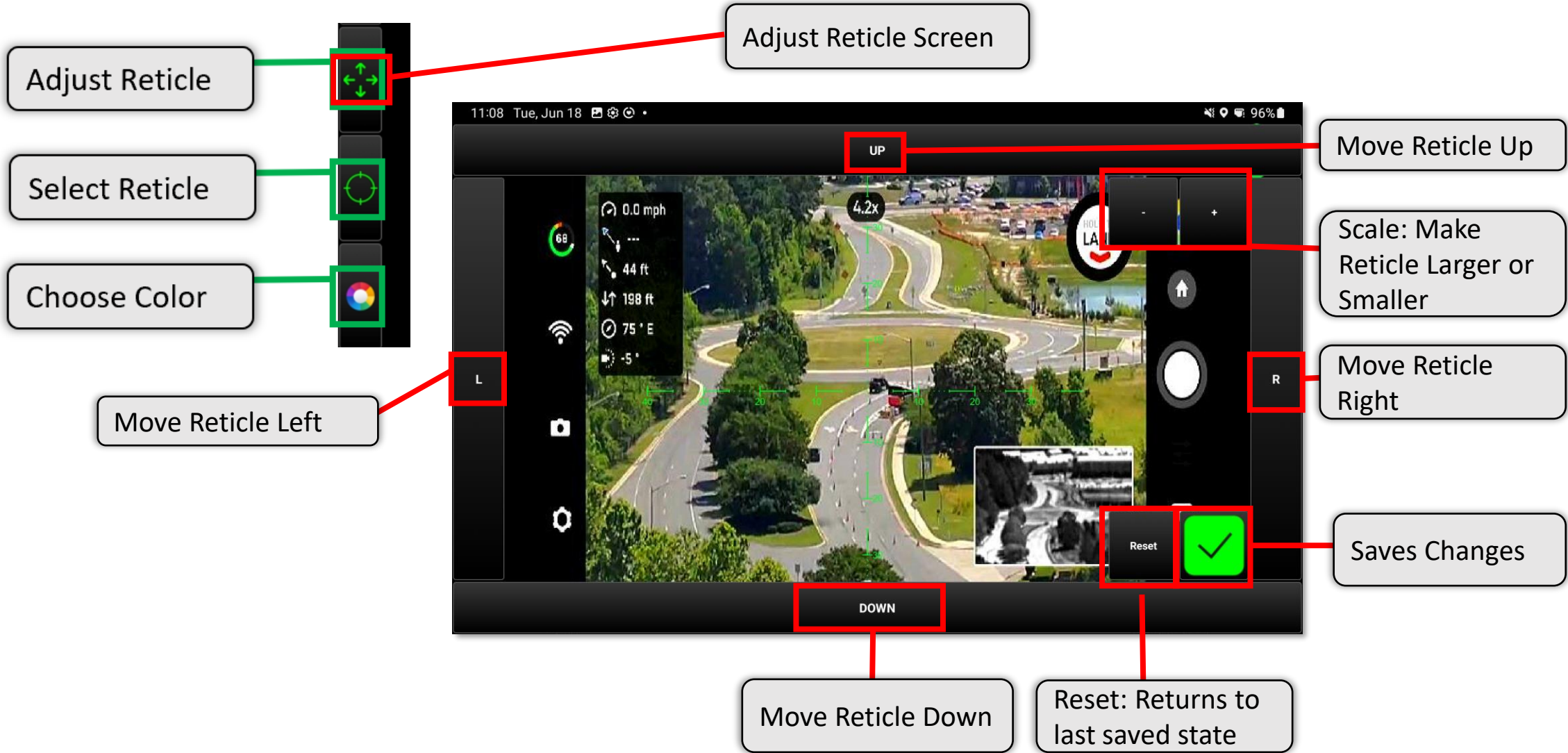


# NEOS™ Standalone: Reticle Adjustments

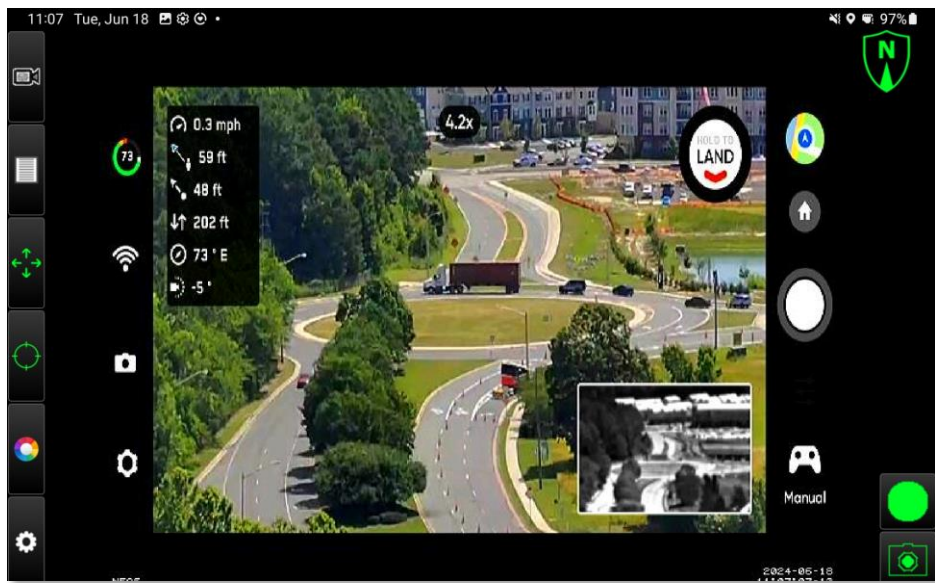
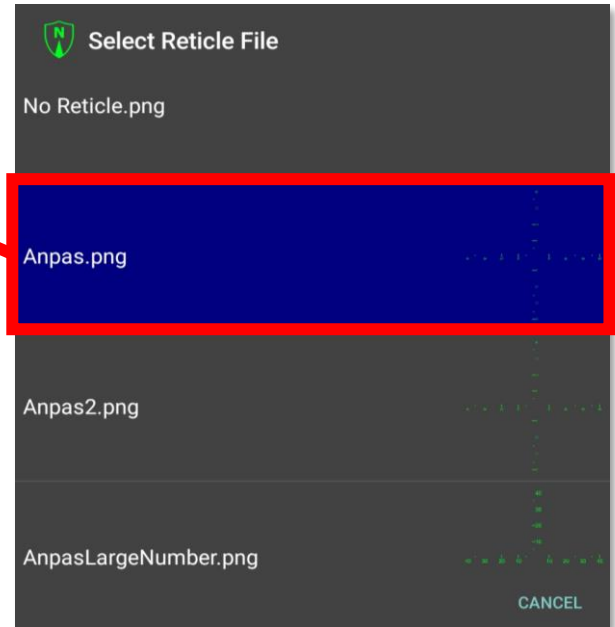
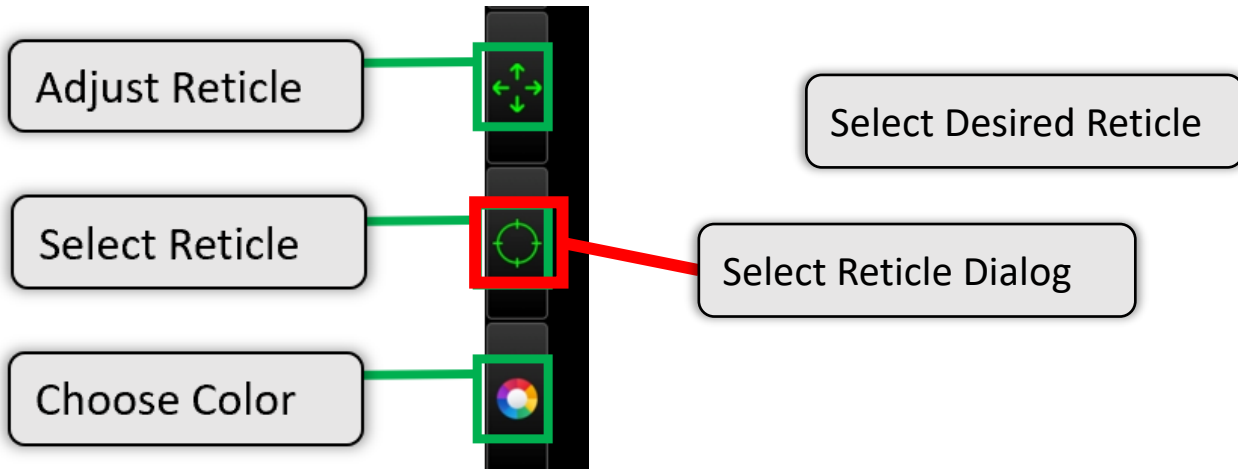
# NEOS Reticle Adjustments



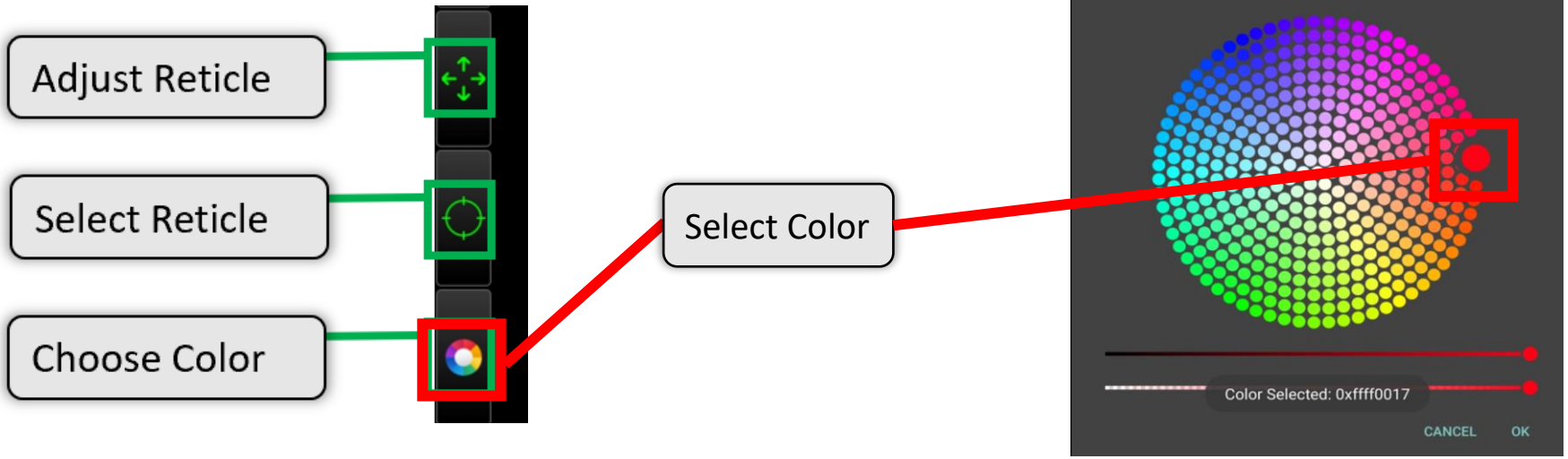
# NEOS Adjust Reticle



# NEOS Select Reticle



# NEOS Select Color Palette







# NEOS™ Standalone: Settings

# NEOS Preferences



The image shows the NEOS interface with several callout boxes pointing to specific features:

- Source Controlled Feed**: Points to the top of the video feed area.
- Select Source**: Points to the camera icon in the left sidebar.
- Files**: Points to the list icon in the left sidebar.
- Adjust Reticle**: Points to the four-way arrow icon in the left sidebar.
- Select Reticle**: Points to the circular reticle icon in the left sidebar.
- Choose Color**: Points to the color wheel icon in the left sidebar.
- Settings**: Points to the gear icon in the left sidebar.
- Sensor Name**: Points to the "NEOS" text in the bottom left corner of the video feed.
- NEOS Icon**: Points to the shield icon with a green 'N' in the top right corner of the video feed.
- Date & Time**: Points to the timestamp "2024-06-18 10:22:40-23" in the bottom right corner of the video feed.

# NEOS™ Standalone: Settings Overview

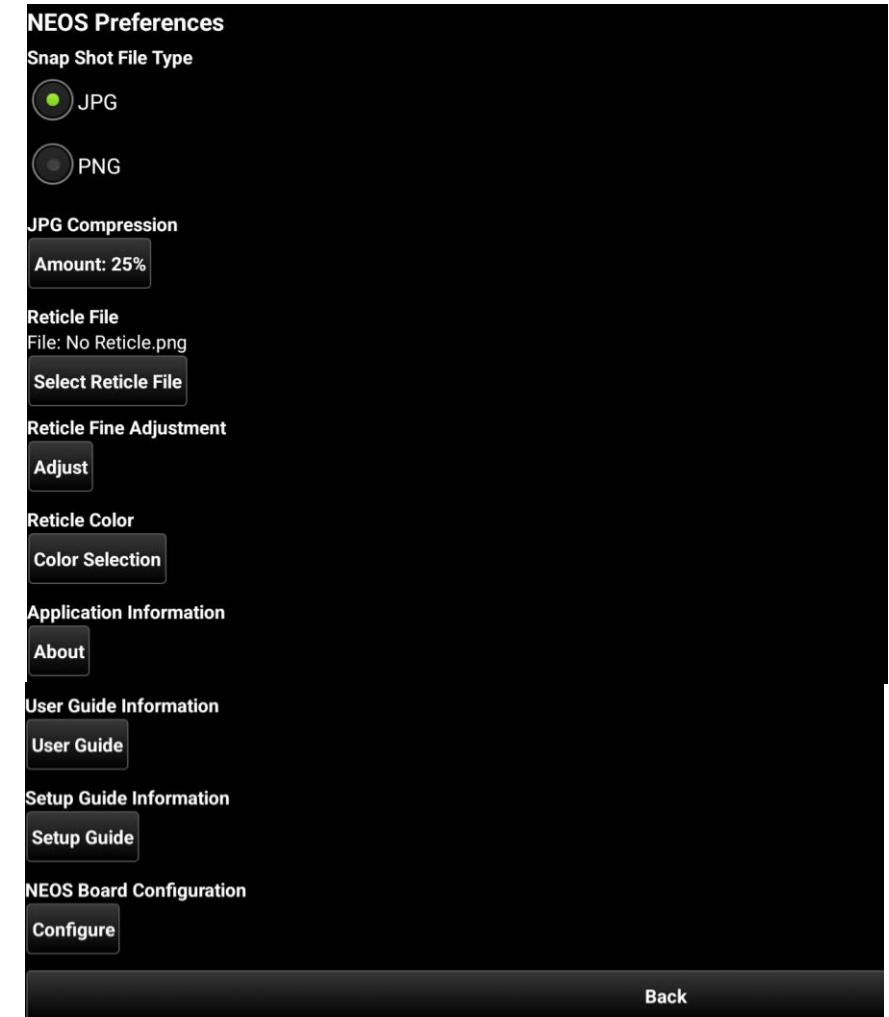


**Tap Settings** on the Main Interface to open the NEOS™ Preferences Window. Configuring the preferences options in this section assumes the user has done this step.

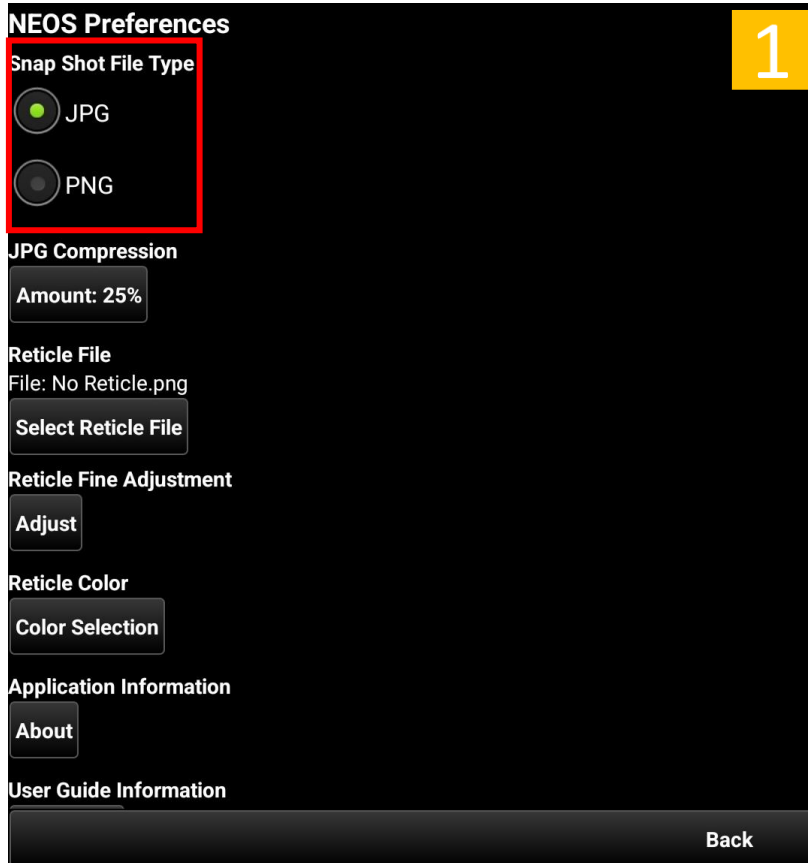
The NEOS™ Settings (aka Preferences) allows the user to:

- Modify Snapshot Settings
- Select Reticle
- Adjust Reticle
- Select Color Palette
- View more About this Application
- Reference this User Guide
- Reference a Setup Guide
- Configure the Settings on the NEOS™ board (ADVANCED)\*

\*This should be done with extreme caution!

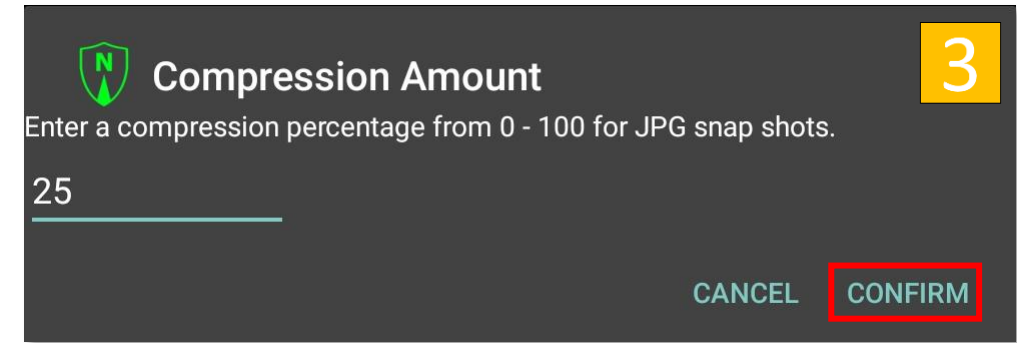
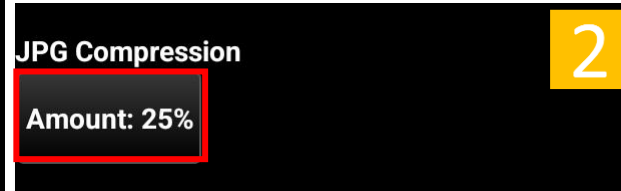
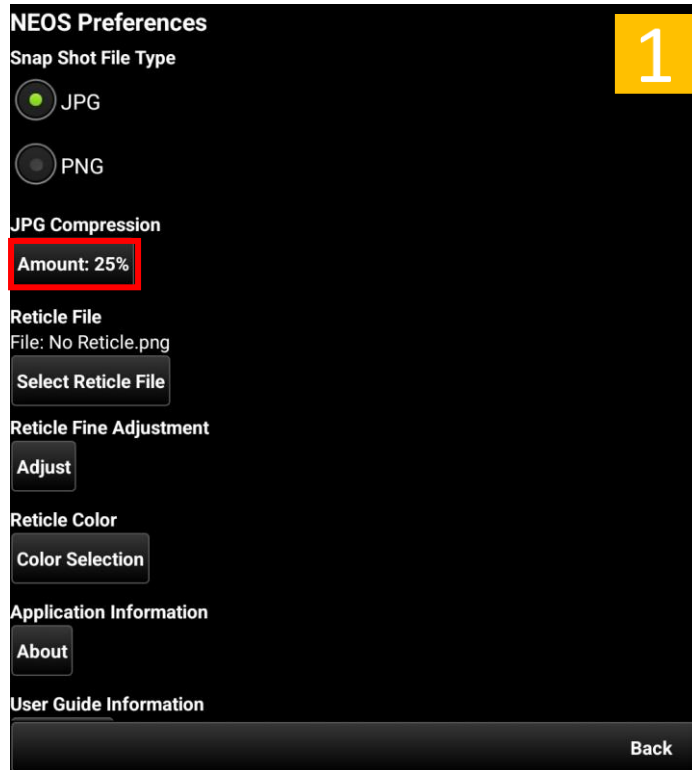


# NEOS™ Standalone: Settings – Snapshot File Type



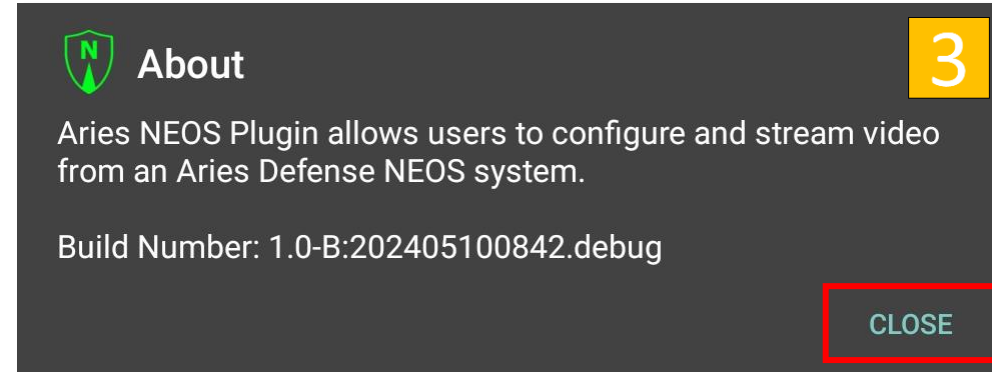
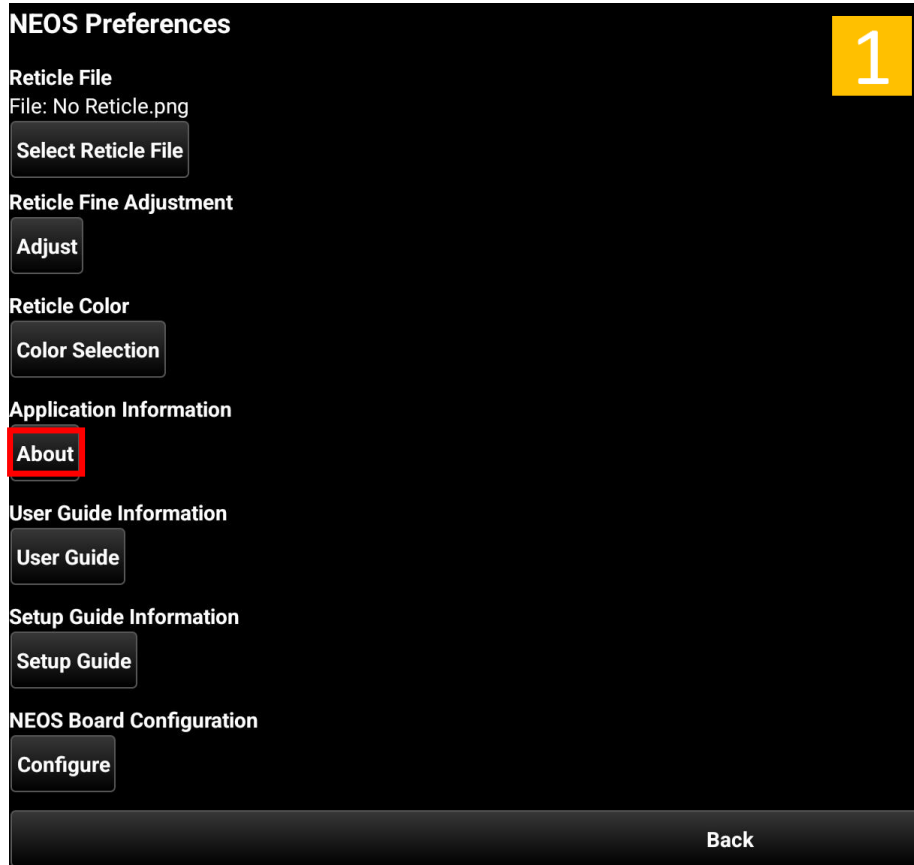
1. Locate Snapshot File Type.
2. **Tap** JPG or PNG to change the snapshot file type. The default value is JPG. **Tap** Back at the bottom of the “NEOS Preferences” screen to return to the “NEOS Main” screen.

# NEOS™ Standalone: Settings – JPG Compression



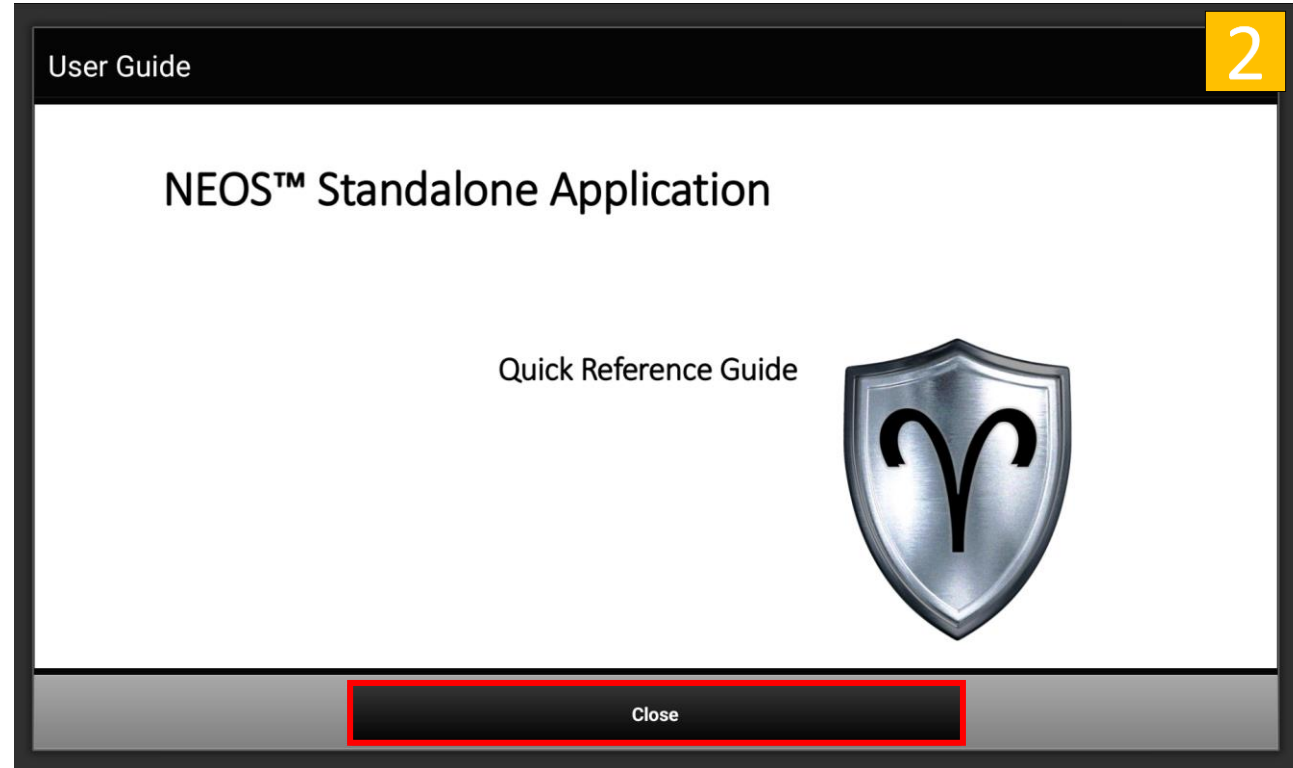
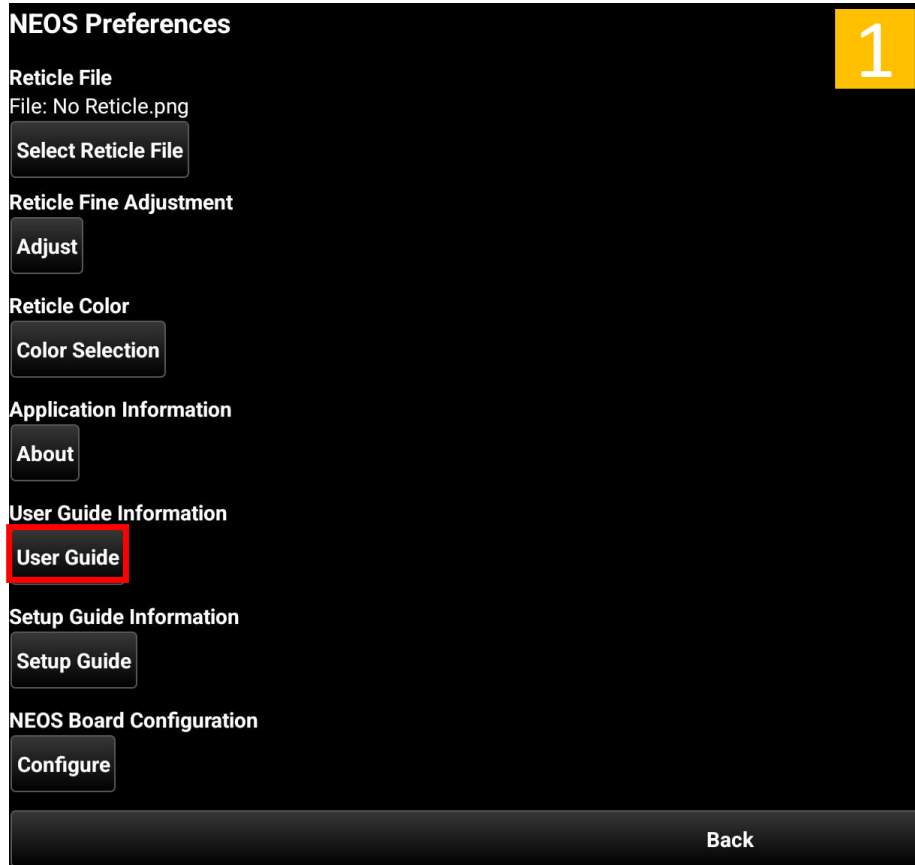
1. Locate JPG Compression
2. **Tap Amount** to change the compression amount of the JPG snapshots.
3. Enter the new compression value. The default value is 25%. **Tap Confirm** to accept the new value or **Cancel** to disregard. **Tap Back** at the bottom of the “NEOS Preferences” screen to return to the “NEOS Main” screen.

# NEOS™ Standalone: Settings – Application Information



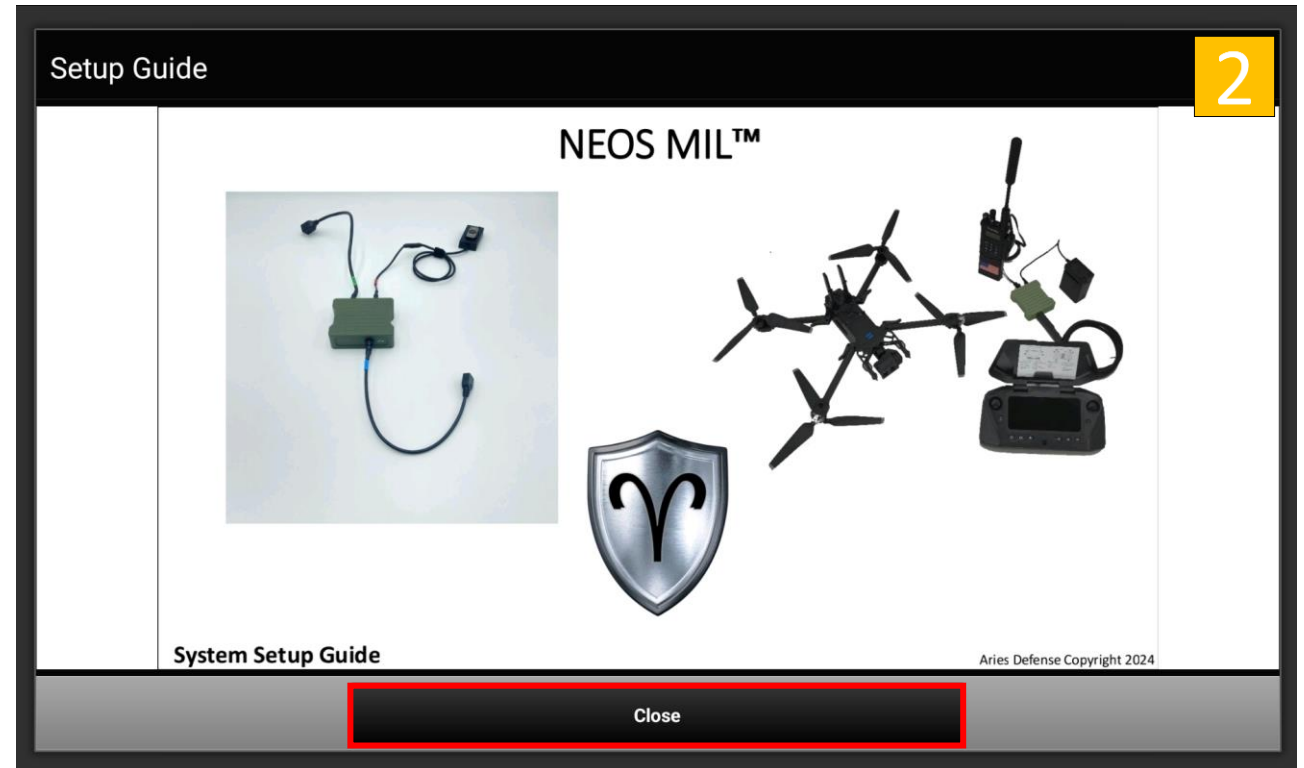
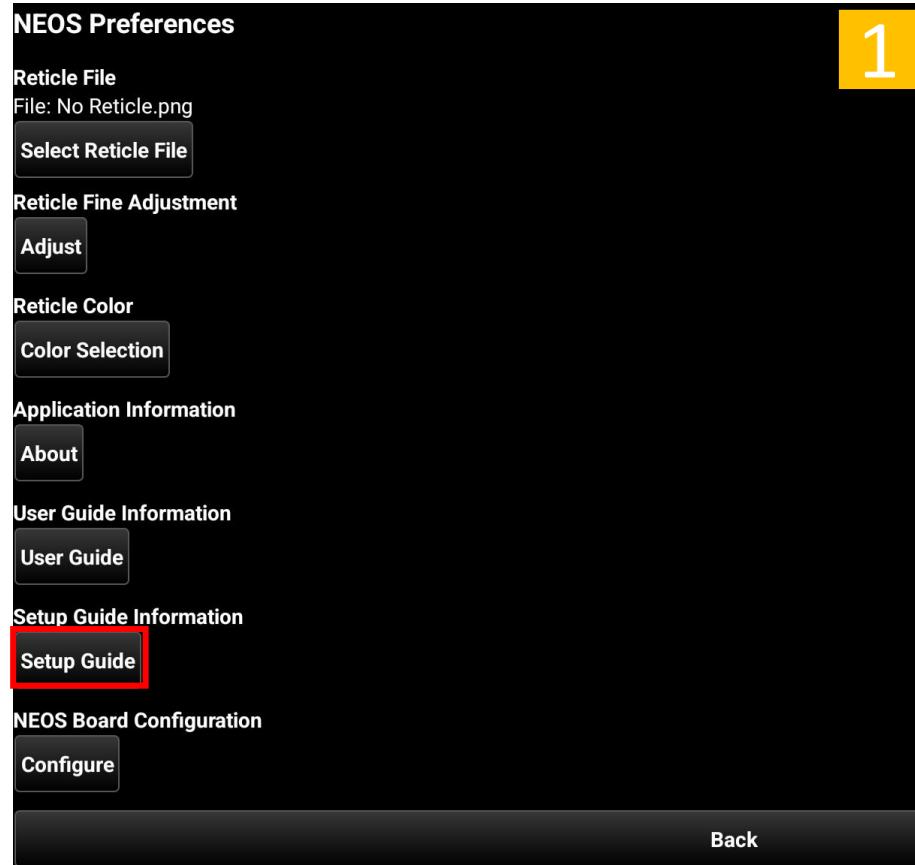
1. Locate Application Information.
2. **Tap About** to view the Application Information.
3. **Tap Close** to exit the About window. **Tap Back** on the bottom of the “NEOS Preferences” screen to return to the “NEOS Main” screen.

# NEOS™ Standalone: Settings – User Guide Information



1. **Tap Guide** to view the quick reference guide information.
2. **Tap Close** to exit the User Guide window. **Tap Back** on the bottom of the “NEOS Preferences” screen to return to the “NEOS Main” screen.

# NEOS™ Standalone: Settings – Setup Guide



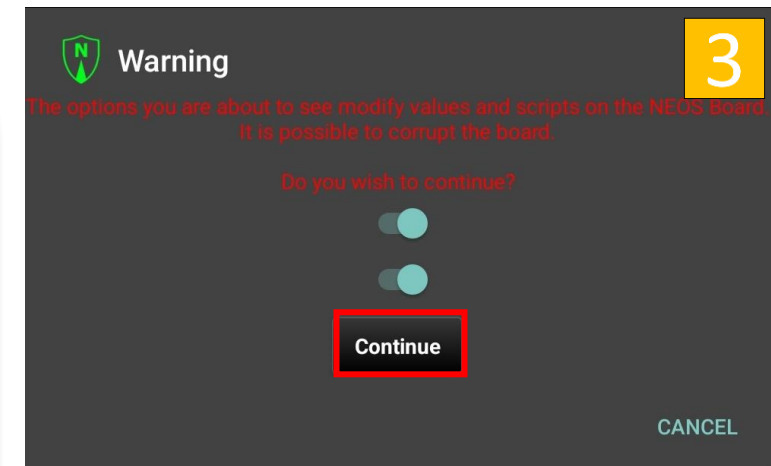
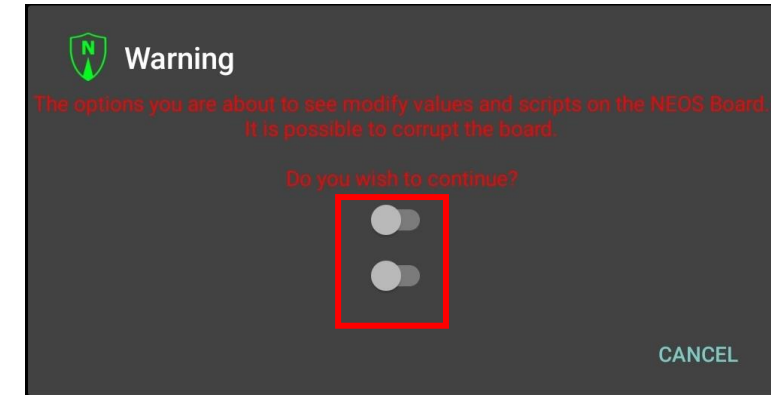
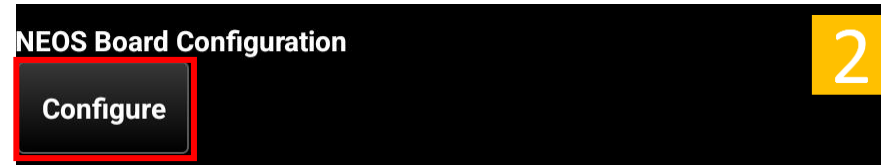
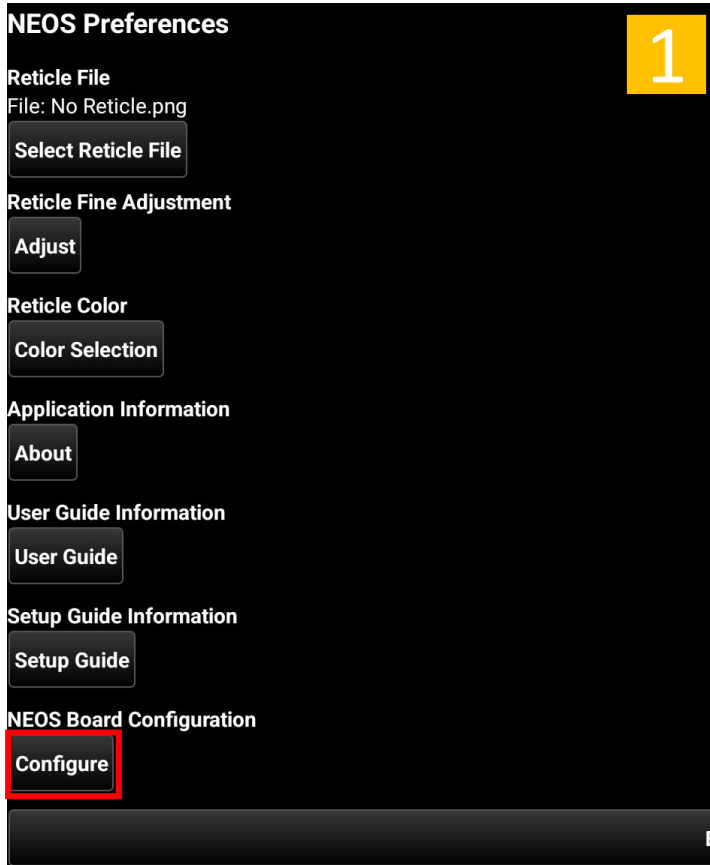
1. **Tap Setup Guide** to view the system setup guide.
2. **Tap Close** to exit the Setup Guide window. **Tap Back** on the bottom of the “NEOS Preferences” screen to return to the “NEOS Main” screen.





# NEOS™ Board Configuration

# NEOS™ Standalone: Settings – Board Configuration



1. Locate NEOS Board Configuration.
2. **Tap Configure**
3. Read the warning message then **Tap** both **Locked** Buttons to set them to Confirm then tap Continue enter the Configuration Menu.  
\*WARNING\* Entering in invalid settings could potentially render the system inoperable.

# NEOS™ Board Configuration - Overview



Please see “NEOS™ Settings – Board Configuration” on Page 21 and follow the steps to access the Board Configuration Menu. Configuring the preferences options in this section assumes the user has done this step.

The NEOS™ Board Configuration allows the user to:

- Set Camera Label
- Adjust Camera Framerate
- Modify IP Addresses and Ports
- Modify network settings

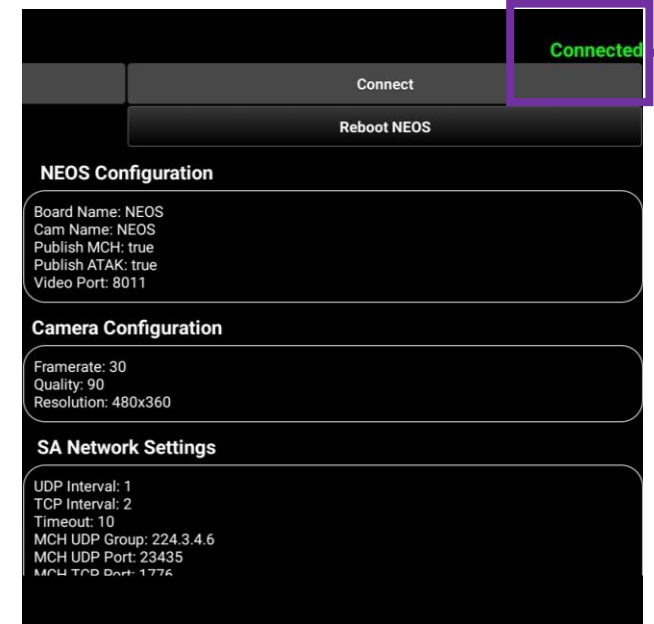
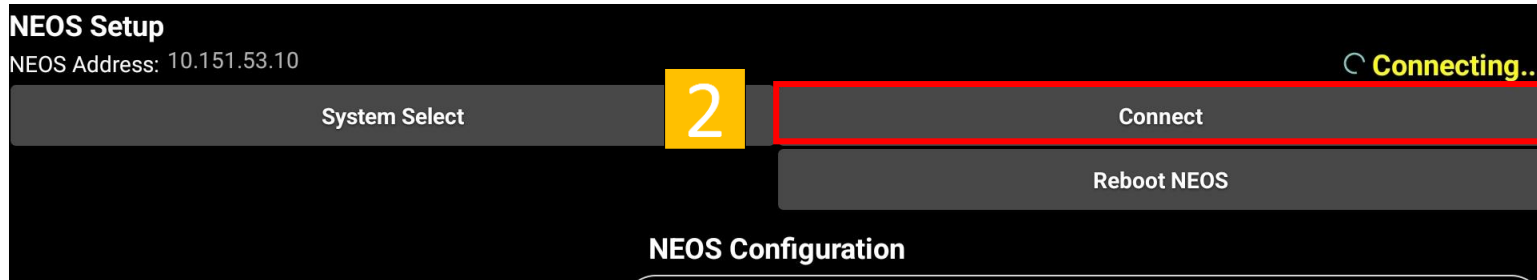
**\*\*IMPORTANT\*\*** After the configurations have been altered the board must be rebooted. This can be done by **taping** the *Reboot NEOS™ Button*. Close the NEOS™ App and relaunch once the EUD receives a DHCP IP Address from the NEOS™ Board.

**Proceed with caution**

The screenshot displays the NEOS Setup interface. At the top, it shows 'NEOS Setup' with the address '10.151.53.10' and a 'Connected' status. Below this are buttons for 'System Select', 'Connect', and 'Reboot NEOS'. The main configuration area is divided into three sections: 'Configurations', 'Camera', and 'SA Network'. Each section has a corresponding button on the left and a list of settings on the right. At the bottom left, there is a 'Back to NEOS App Preferences' button.

Section	Settings
Configurations	Board Name: NEOS Cam Name: NEOS Publish MCH: true Publish ATAK: true Video Port: 8011
Camera	Framerate: 30 Quality: 90 Resolution: 480x360
SA Network	UDP Interval: 1 TCP Interval: 2 Timeout: 10 MCH UDP Group: 224.3.4.6 MCH UDP Port: 23435 MCH TCP Port: 1776

# NEOS™ Board Configuration – Connect to Board



1. Enter the IP Address of the board. The Default IP Address is 10.151.53.10.
2. **Tap Connect.**

### Connection Status:

- Not Connected** – The NEOS App is not logged into the Board
- Connecting...** – The NEOS App is trying to establish a logon session
- Connected** – The NEOS App is currently logged into the board.

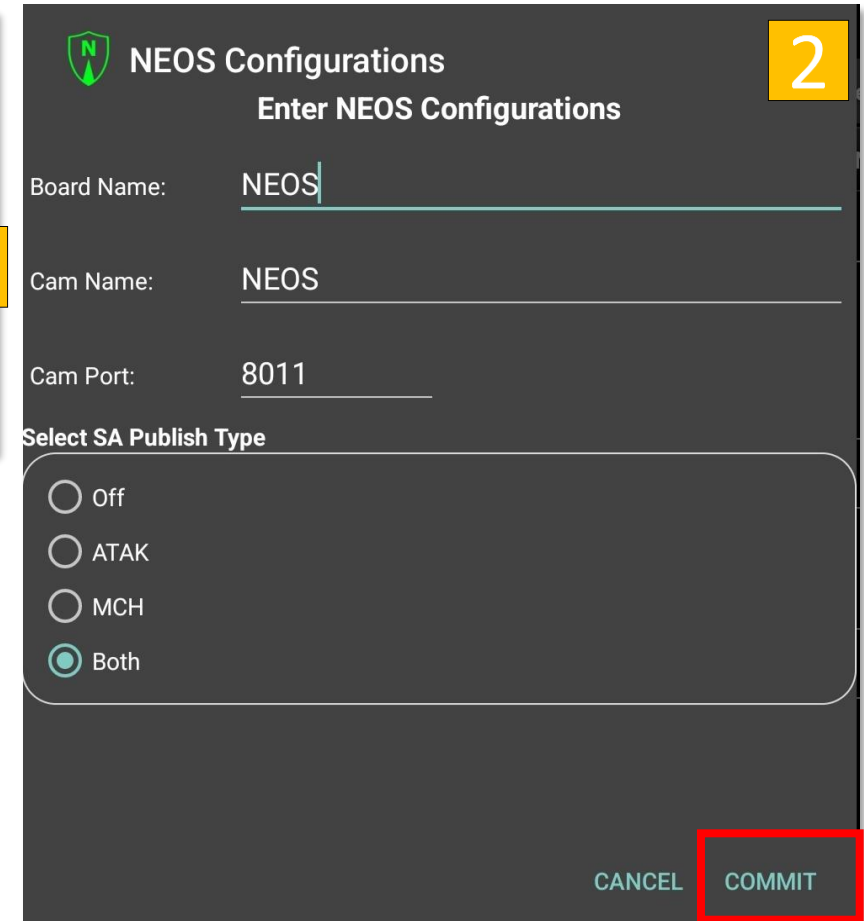
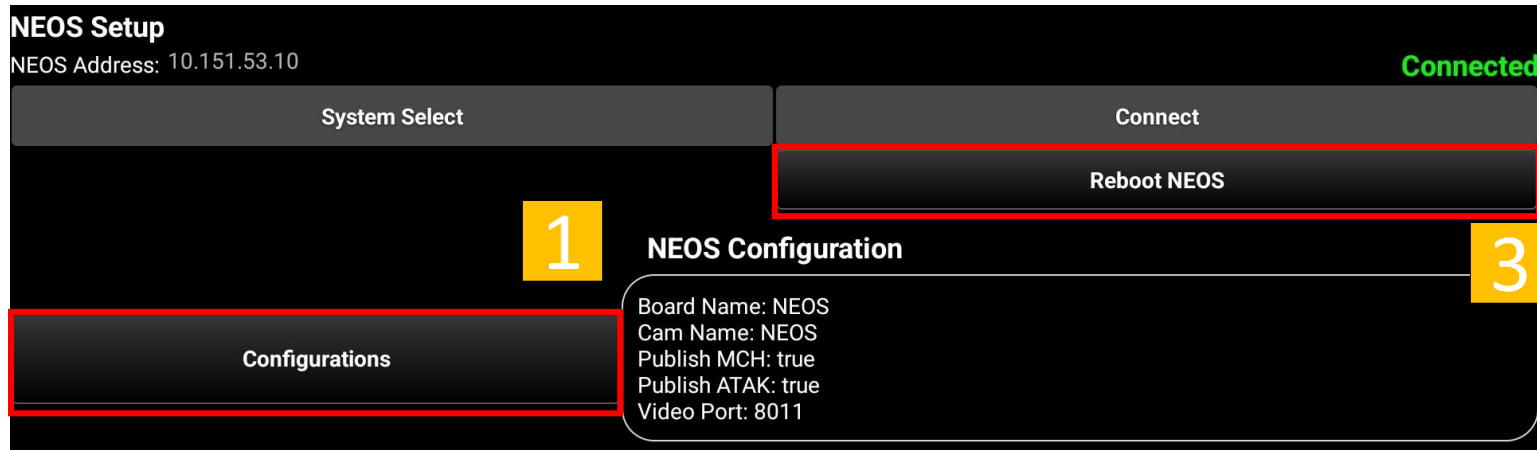




# NEOS™ Board Configuration

## NEOS™ Configuration

# NEOS™ Board Configuration – Camera Label



1. Locate and **tap** Configurations Button under NEOS™ Configuration.
2. Toggle the new NEOS™ Configurations settings then **tap** Commit.

The SA Publish type will send situational awareness ports to either ATAK or MCH but can be set to publish to both (default setting)

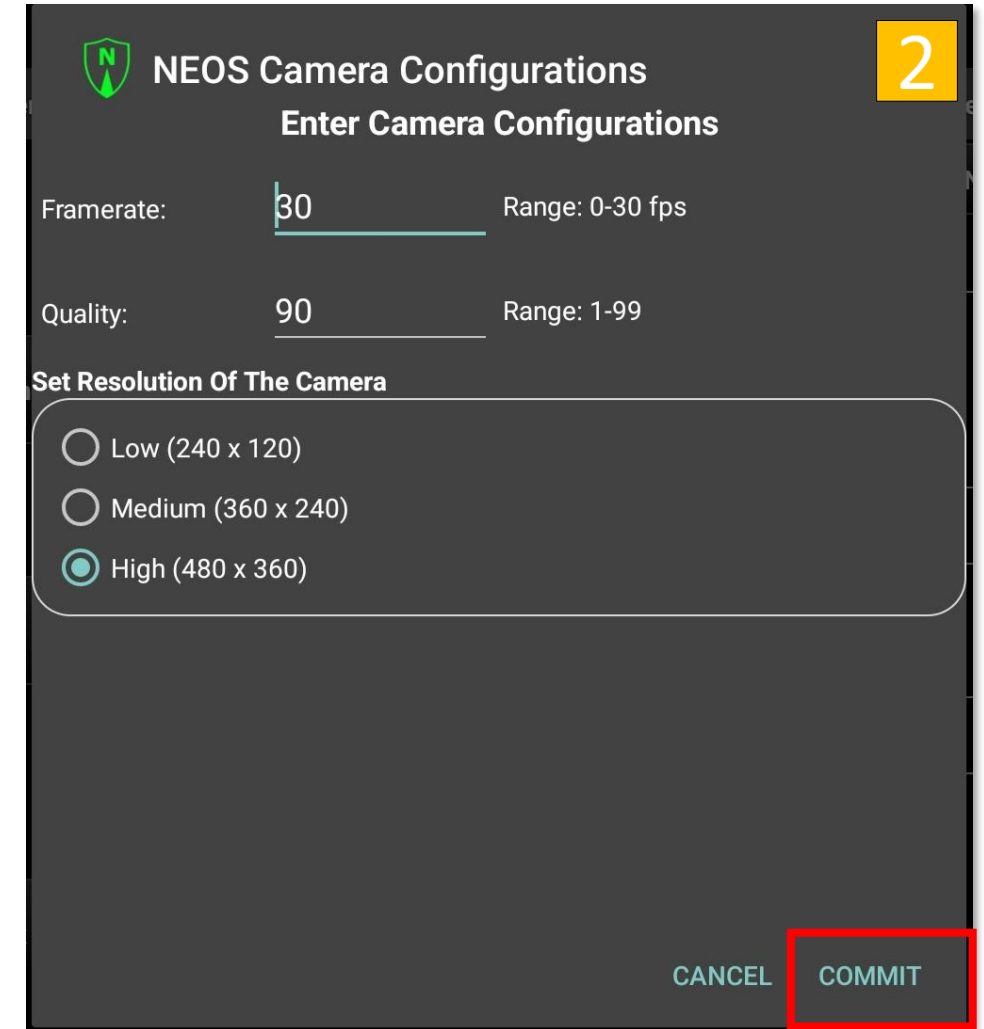
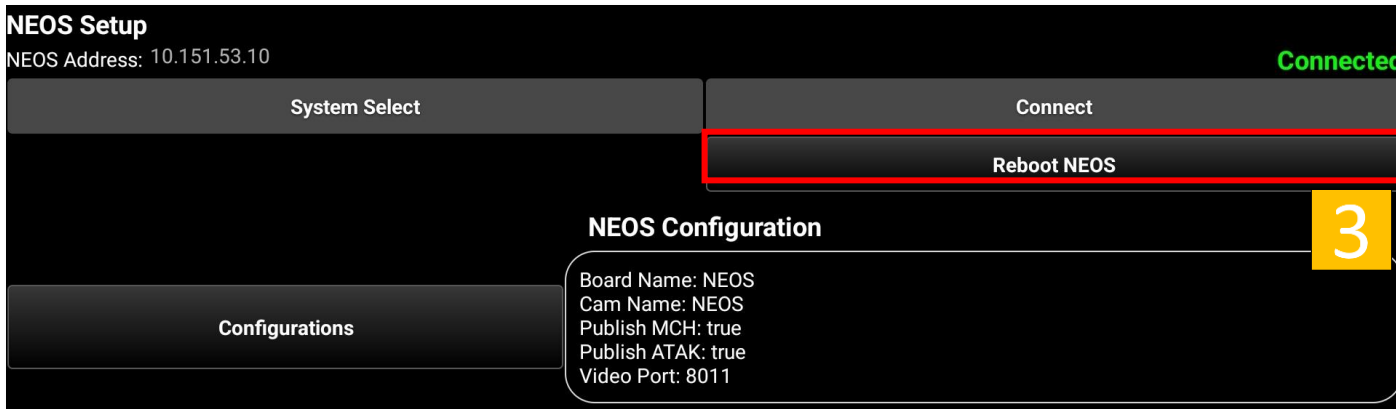
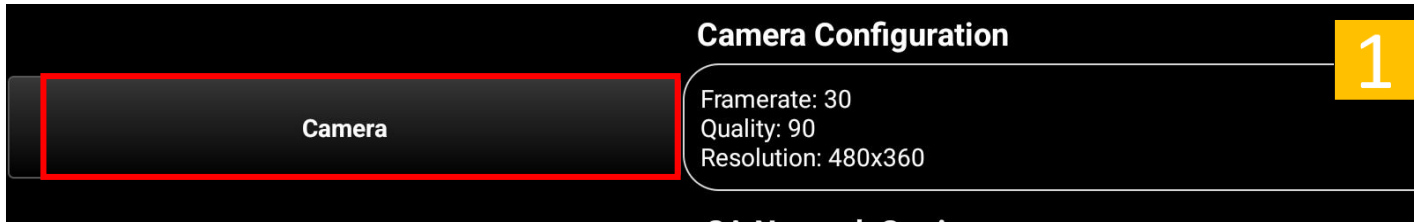
3. You may continue to make changes to the board. When finished **Tap** the Reboot NEOS™ button.



# NEOS™ Board Configuration

## Camera Configuration

# NEOS™ Board Configuration – Camera Configuration



1. **Tap** the Camera button to modify the camera configuration settings
2. Toggle the new Camera Configurations settings then **tap** Commit.

NOTE: If on a tactical radio network use lower values (5-15) for the framerate, 70 or less for quality, and low or medium resolution.

3. You may continue to make changes to the board. When finished **Tap** the Reboot NEOS™ button.





# NEOS™ Board Configuration

## NEOS™ SA Network Settings

# NEOS™ Board Configuration – SA Network Settings



**SA Network Settings**

UDP Interval: 1  
TCP Interval: 2  
Timeout: 10  
MCH UDP Group: 224.3.4.6  
MCH UDP Port: 23435  
MCH TCP Port: 1776  
ATAK UDP Group: 239.2.3.1  
ATAK UDP Port: 6969  
ATAK TCP Port: 8089

**SA Network**

**NEOS Setup**  
NEOS Address: 10.151.53.10 Connected

System Select      Connect

**Reboot NEOS**

**SA Network Settings**

Timeout: 10

**MCH Settings**

UDP Group: 224.3.4.6

UDP Port: 23435

TCP Port: 1776

**ATAK Settings**

UDP Group: 239.2.3.1

UDP Port: 6969

TCP Port: 8089

CANCEL **COMMIT**

1. Locate and **tap** SA Network Button under NEOS™ Configuration.
2. Change the new SA Network settings then **tap** Commit.

Note: Most users DO NOT NEED to change these values!

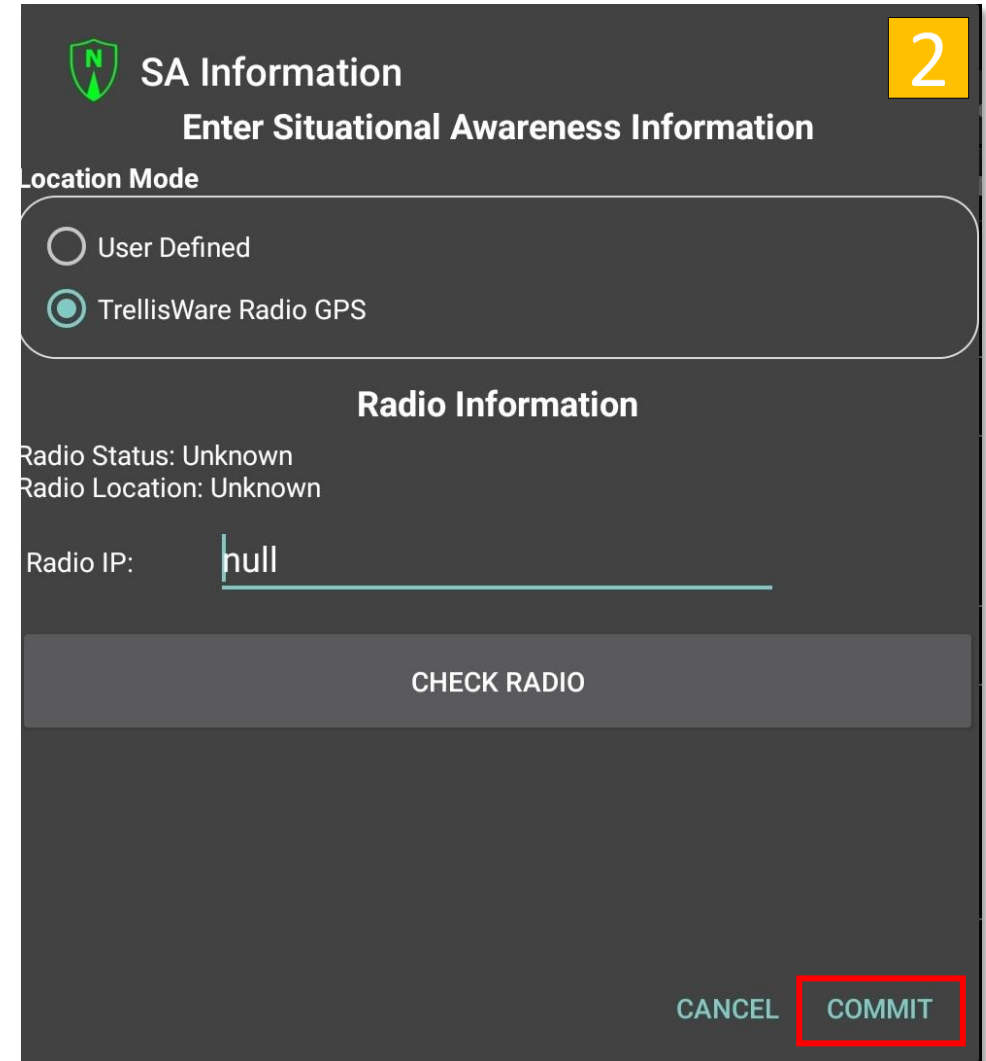
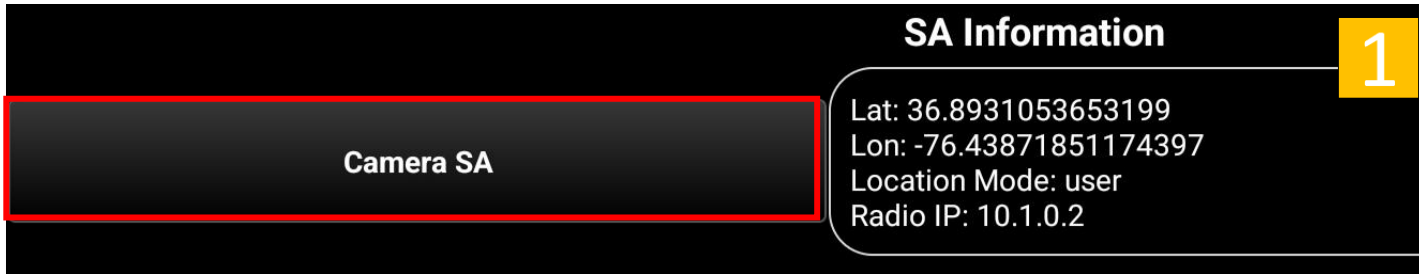
3. You may continue to make changes to the board. When finished **Tap** the Reboot NEOS™ button.



# NEOS™ Board Configuration

NEOS™ SA Information

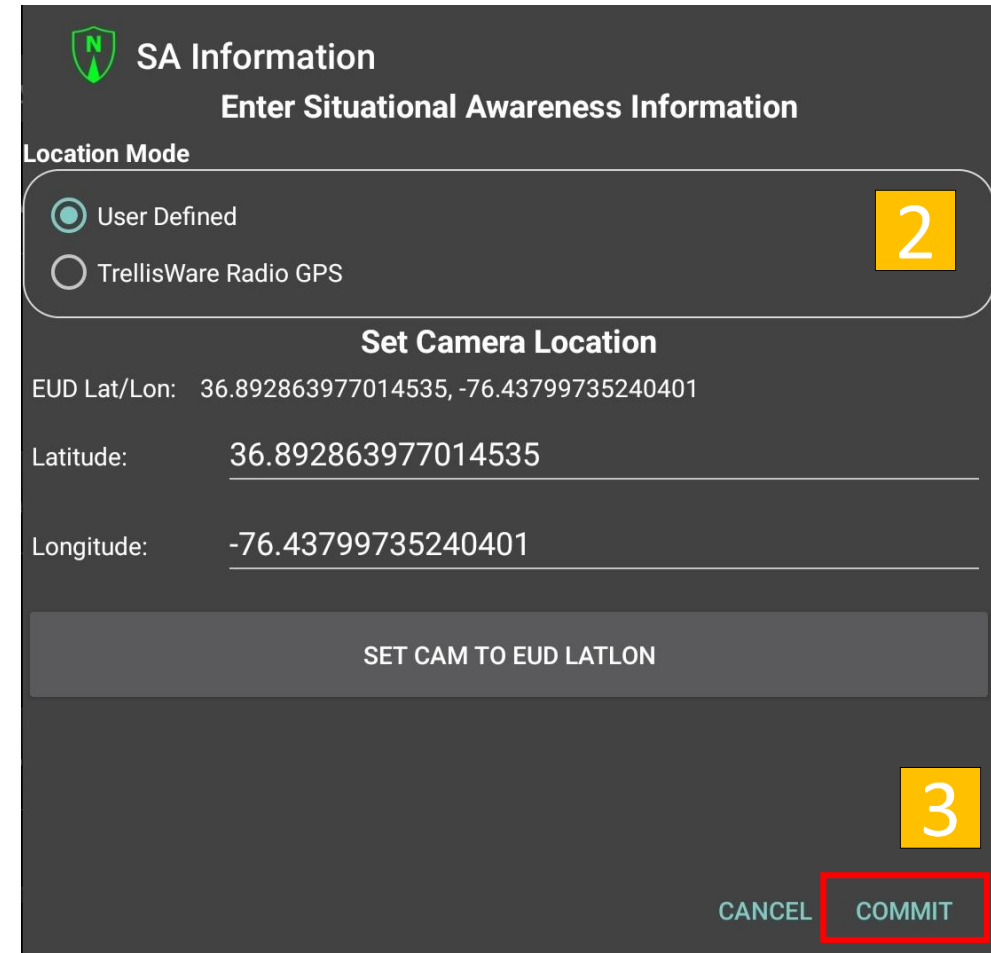
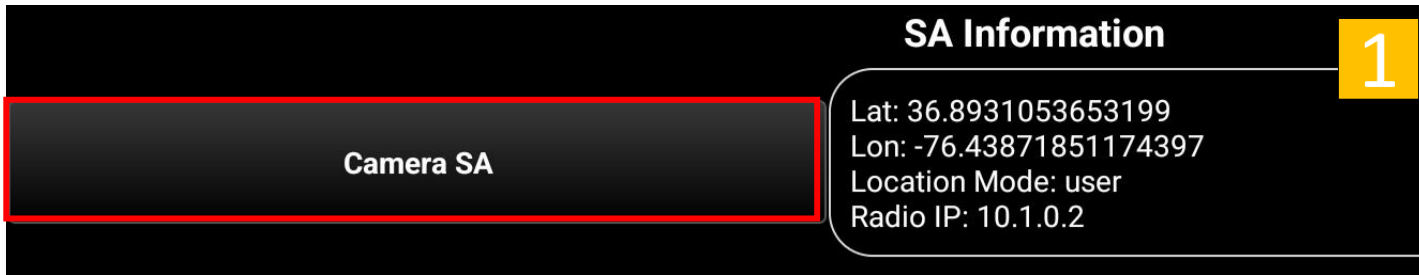
# NEOS™ Board Configuration – SA Information



1. Locate and **tap** Camera SA under NEOS™ Configuration.
2. Toggle the new Camera Sa Information then **tap** Commit.

You may continue to make changes to the board. When finished **Tap** the Reboot NEOS™ button.

# NEOS™ Board Configuration – User defined Position



1. Locate and **tap** Camera SA under NEOS™ Configuration.
2. Select User Defined Position and set position.
3. Toggle the new Camera Sa Information then **tap** Commit.

You may continue to make changes to the board. When finished **Tap** the Reboot NEOS™ button.



# NEOS™ Board Configuration

## NEOS™ Network Settings

# NEOS™ Board Configuration – Network Settings



**1**

**Network Settings**

IP Address: 10.151.53.10  
Netmask: 255.255.0.0/16  
DHCP: false  
Multicast: true  
Unicast: false  
Gateway: 10.151.53.1

**Network**

**2**

**Network Settings**

**Enter Network Mode Settings**

IP Address: 10.151.53.10

Netmask: 255.0.0.0

Gateway: 10.151.53.1

Netmask Input:  Manual  Slash

Toggle Gateway:  On  Off

Authoritative DHCP:  On  Off

Alerting Network Protocol:  Off  Multicast  Unicast  Both

CANCEL COMMIT

Netmask: 8 Default: 8 Range: 8-24

Gateway: 10.151.53.1

Netmask Input:  Manual  Slash

Toggle Gateway:  On  Off

1. Locate and **tap** Network Button under NEOS™ Configuration.

2. Toggle the new Network settings then **tap** Commit.

If your network setup requires a Gateway select either Unicast or Both under Network Protocol.

You may continue to make changes to the board. When finished **Tap** the Reboot NEOS™ button.

Notice toggling gateway to On enables the gateways text field.

Notice changing netmask input changes the way the netmask is input.

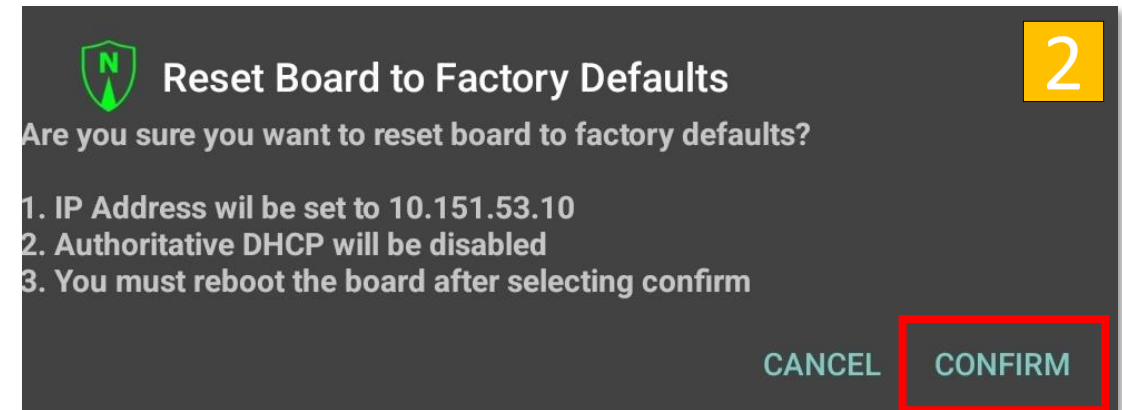
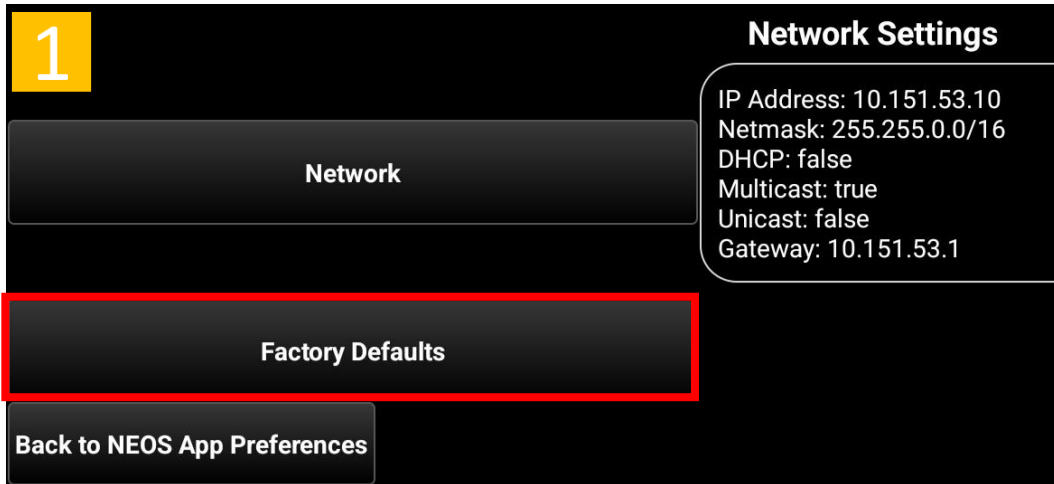


# NEOS™ Board Configuration

NEOS™ Other Settings



# NEOS™ Board Configuration – Factory Reset



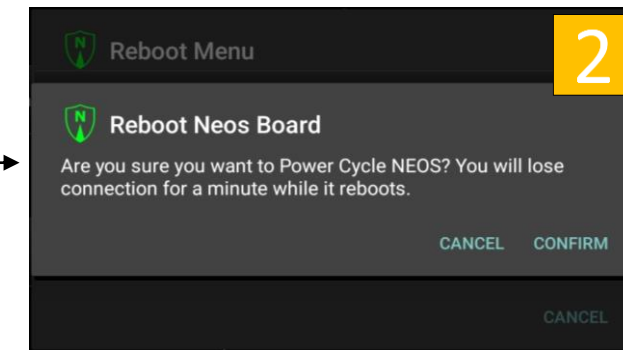
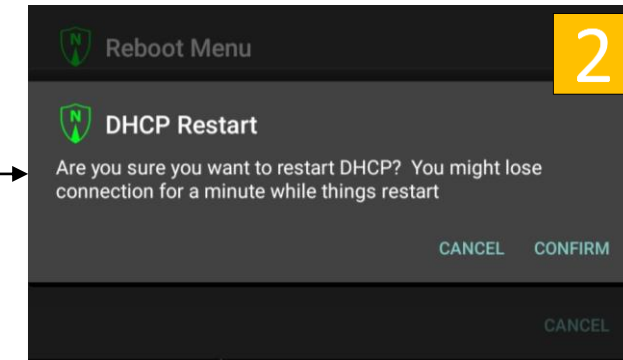
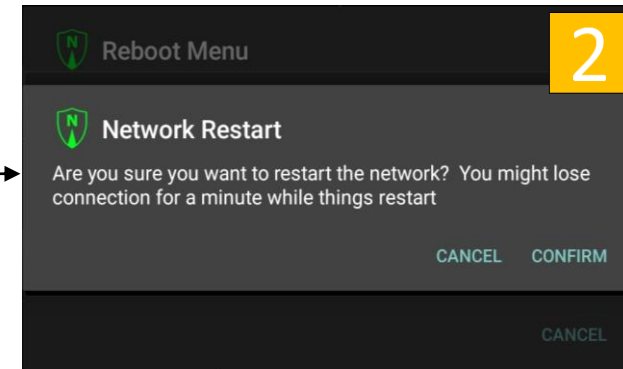
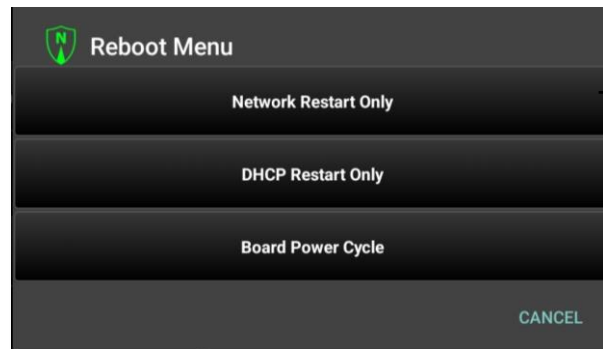
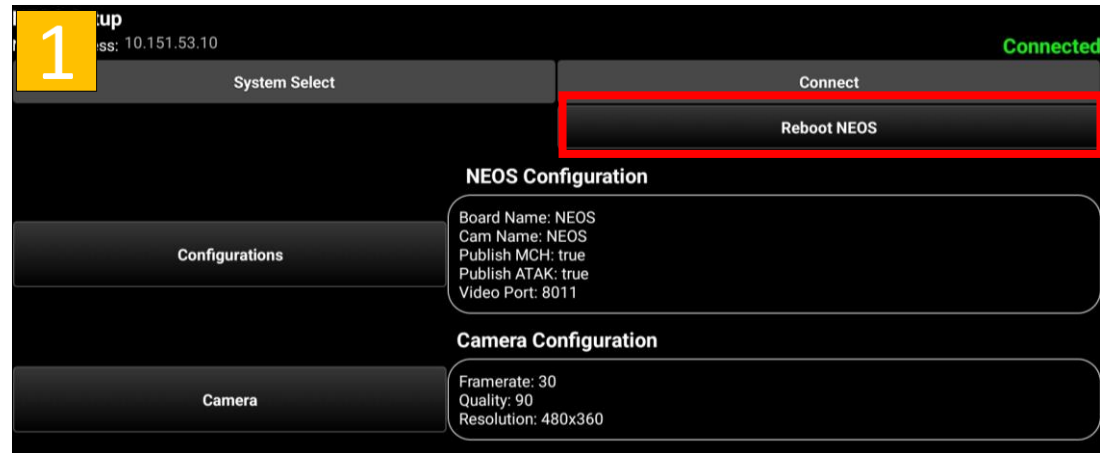
1. Locate and **tap** Factory Defaults Button under NEOS™ Configuration.
2. Read the items and make sure you are ready to reset the board and then **tap** the Confirm Button



# NEOS™ Board Configuration

NEOS™ Other Settings

# NEOS™ Reboots



1. Locate and **tap** Reboot NEOS.
2. **Tap** Confirm to initiate NEOS system reboot.

