FLEX NX®

SIMPLE. FLEXIBLE. TRUSTED.

Flex NX Support

Quick Start Guide

MN73-190 Rev C

Have Questions?

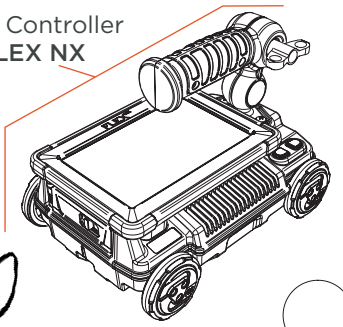
We've Got Your Back

Our promise to you is to provide comprehensive training, unrivaled customer support and world class expertise. That's why your Flex NX comes with our industry-leading two-year warranty, complimentary training, and technical support access. For more information, visit us at **www.geophysical.com**.

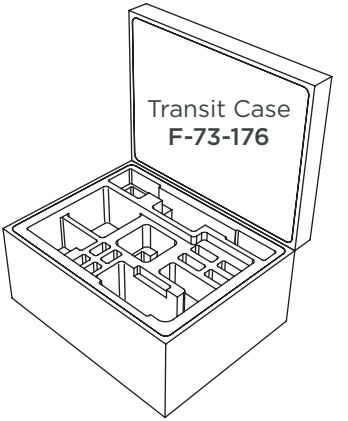
We're Committed to Your Success

Our team of dedicated technical trainers is ready to work with users of all experience levels. GSSI Academy classes are offered on a revolving annual schedule. Check out the GSSI Academy offerings at **www.geophysical.com/gssi-academy**.

What's Included

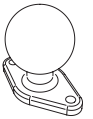


Flex NX Controller
FGFLEX NX

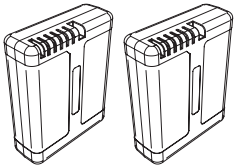


Transit Case
F-73-176

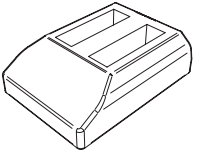
Wrist Lanyard
F-73-159



Extra RAM® Mount
RAM-238U



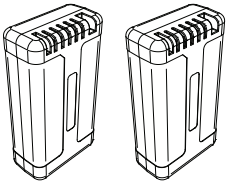
Lithium-Ion Battery (2X)
FGNX-BAT-3 CELL



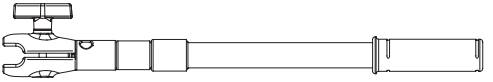
2-Bay Charger
FGMODBC-NX

Quick Start Guide
MN73-190

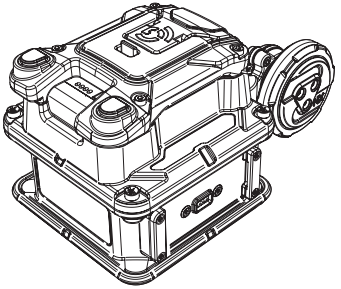
Optional NX Accessories



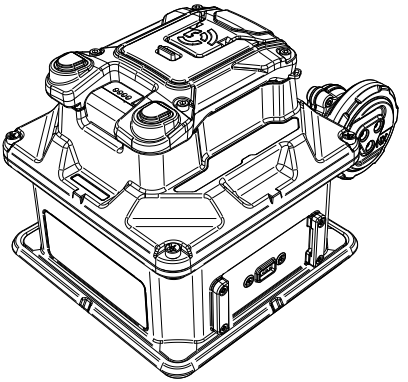
NX25/NX15
Lithium-Ion Battery
FGNX-BAT-2 CELL



Telescoping Pole with RAM Grip
0.5m-1.2m (1.7ft-4.0ft)
For use with Flex NX, NX25 & NX15
FGNX-POLE

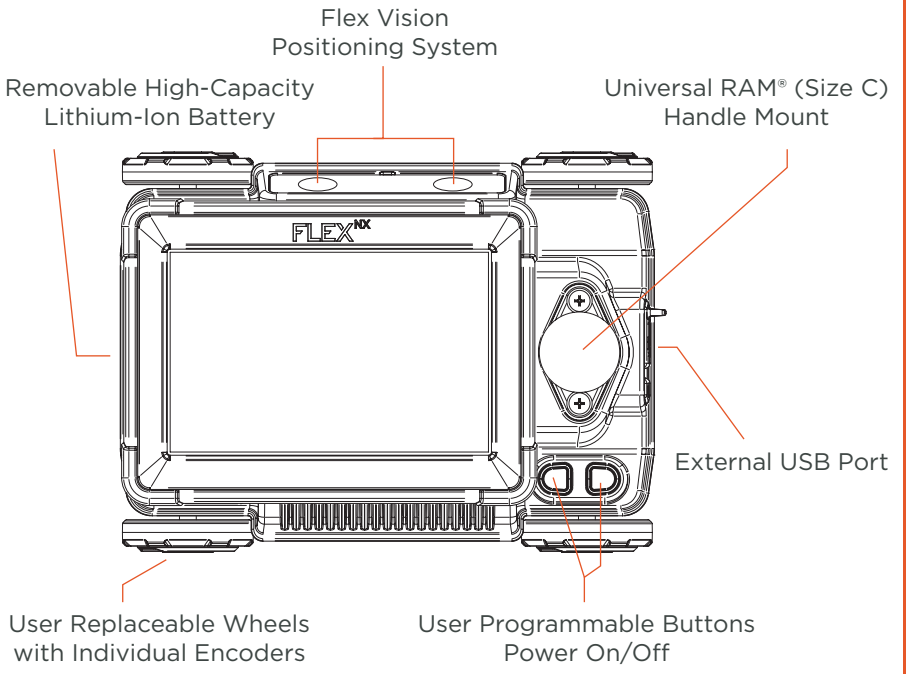


NX25 Wireless Satellite Antenna
FGNX25



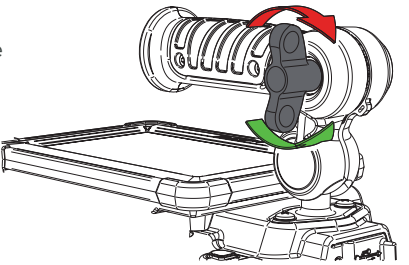
NX15 Wireless Satellite Antenna
FGNX15

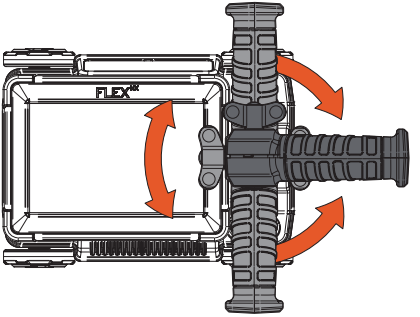
Flex NX Physical Features



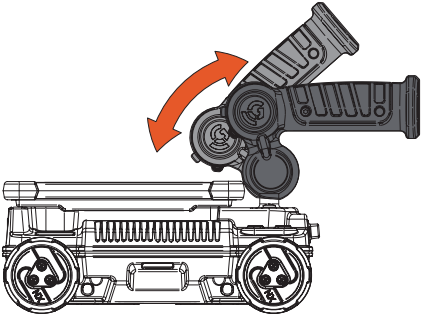
Flex NX Handle Adjustment

Your Flex NX features a fully adjustable and removable handle. To adjust, simply loosen the knob, reorient the handle, and tighten.
To remove the handle, fully loosen the knob.

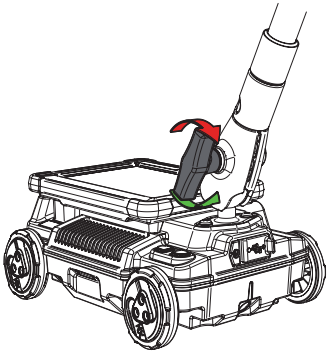




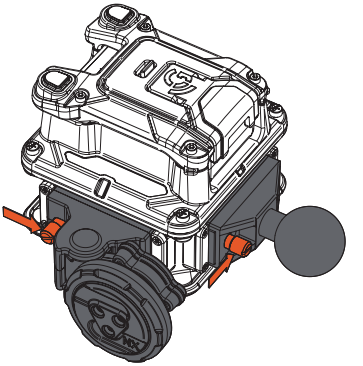
360 degree range of horizontal motion.



Vertical range of movement is limited to prevent display damage.

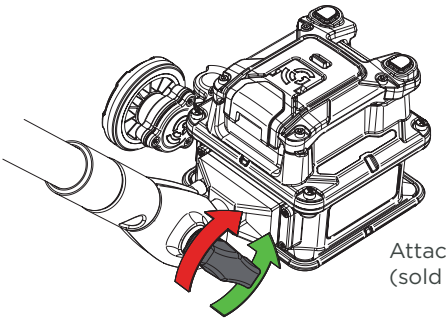


Attaching the Telescoping Pole Accessory (sold separately) to Flex NX.



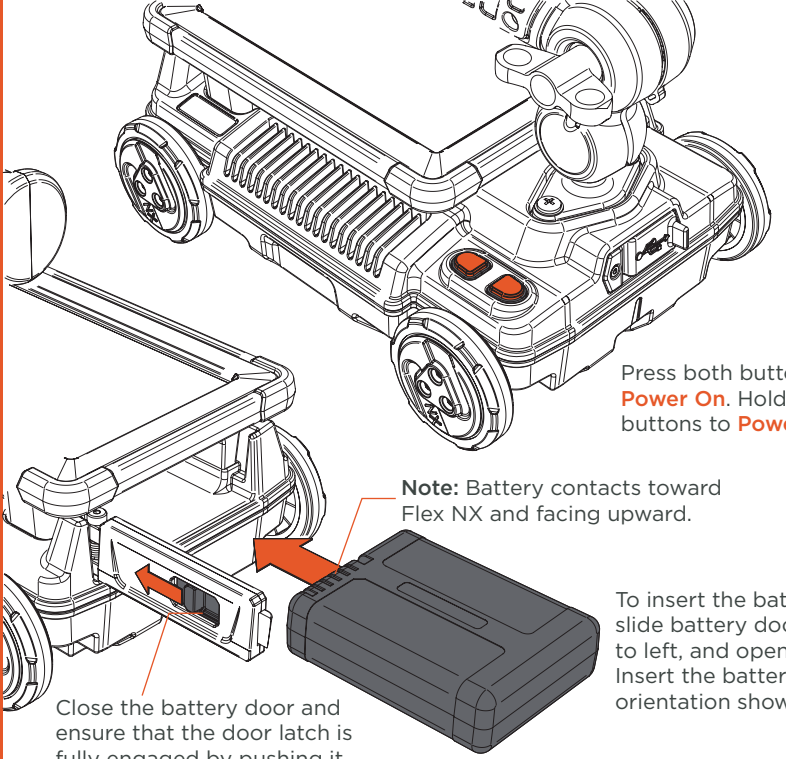
The NX25/NX15 Pole Mount Adapter and Survey Wheel attachment locations are interchangeable. **Note:** They can only attach in orientations shown.

Engage the locking pin and insert the right side, with the locking pin to the left. Next, insert the locking pin side and disengage the locking pin. To remove, reverse the process.



Attaching the Telescoping Pole Accessory (sold separately) to NX25/NX15.

Powering Flex NX

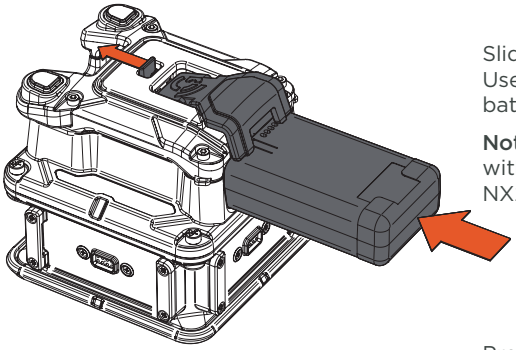


Press both buttons to **Power On**. Hold both buttons to **Power Off**.

Note: Battery contacts toward Flex NX and facing upward.

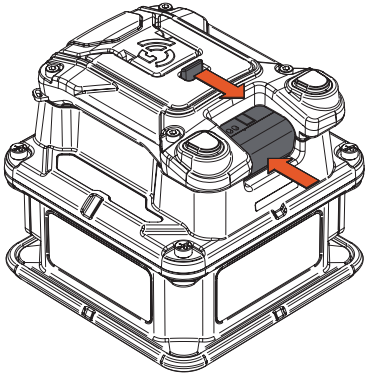
To insert the battery, slide battery door latch to left, and open the door. Insert the battery in the orientation shown.

Close the battery door and ensure that the door latch is fully engaged by pushing it to the right.



Slide battery latch lock forward. Use battery to push up on the battery latch to insert.

Note: Battery can only be inserted with battery contacts toward NX25/NX15 and facing downward.



Press both buttons for 2 seconds to **Power On**. Hold both buttons to **Power Off**.

One-handed battery ejection: Use thumb to press on battery and index finger to slide the battery latch lock. Pinching fingers together will eject the battery.

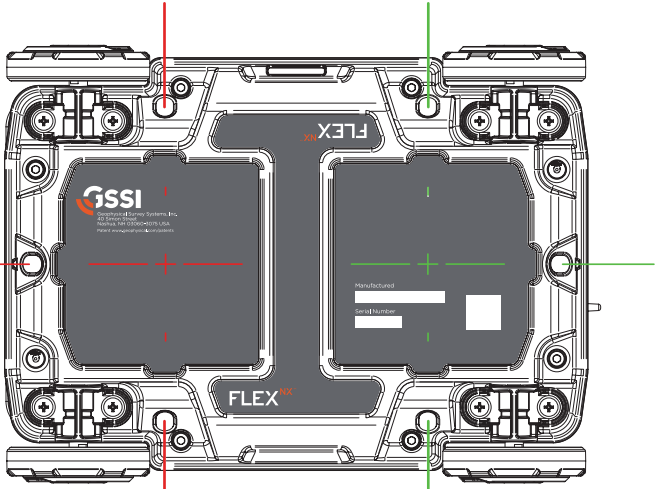
Antenna / Laser Positions

Flex NX incorporates two individual GPR antennas:
A **Standard Orientation** antenna (in front)
and a **Cross Polarized** antenna (in back).

Each antenna has three centered line lasers for highly accurate markouts. The center of each antenna is marked with a colored crosshair.

Forward Direction

Scanning with both antennas produces a more detailed and informative view of concrete targets, especially for complex jobs.



Red Lasers at center points of Standard Antenna

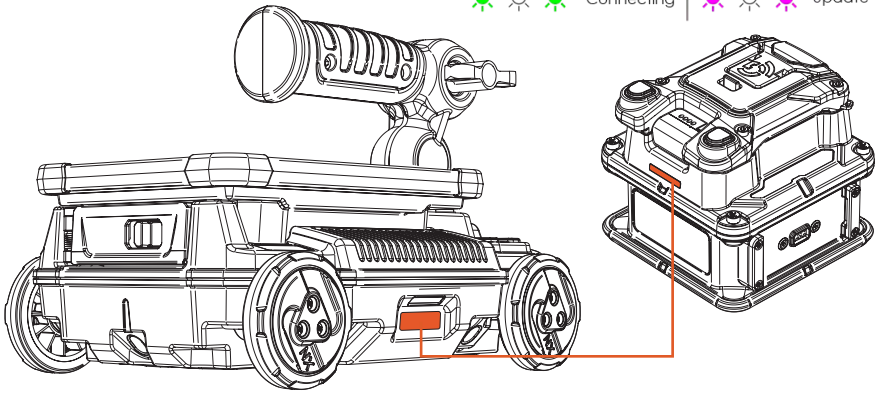
Green Lasers at center points of Cross Polarized Antenna

Flex NX and its accessory antennas connect wirelessly using Tap-to-Connect Near Field Communication (NFC) sensors.

Power on Flex NX and then the accessory antenna. Wait for the accessory antenna's indicator light to flash blue, and then bring the NFC labels together to pair. In future sessions, simply power on the accessory antenna; NFC pairing will not be required.

Accessory Antenna LED Status

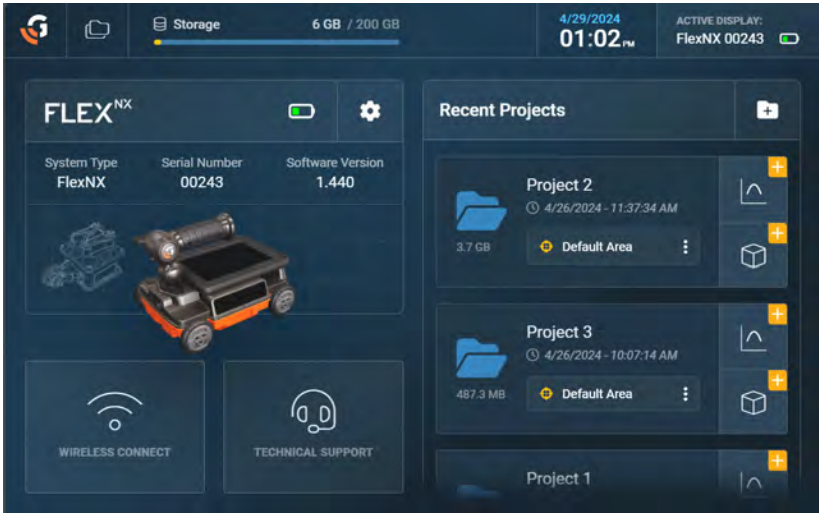
Initializing		Ready	
Searching		Collecting	
Detected		Shutdown	
Connecting		Update	



After powering on, Flex NX will start every new session at the Main Dashboard.

Tap the icon to access system settings.

Tap the icon to start a 2D scan. Tap the icon to start a Flex Mode scan.



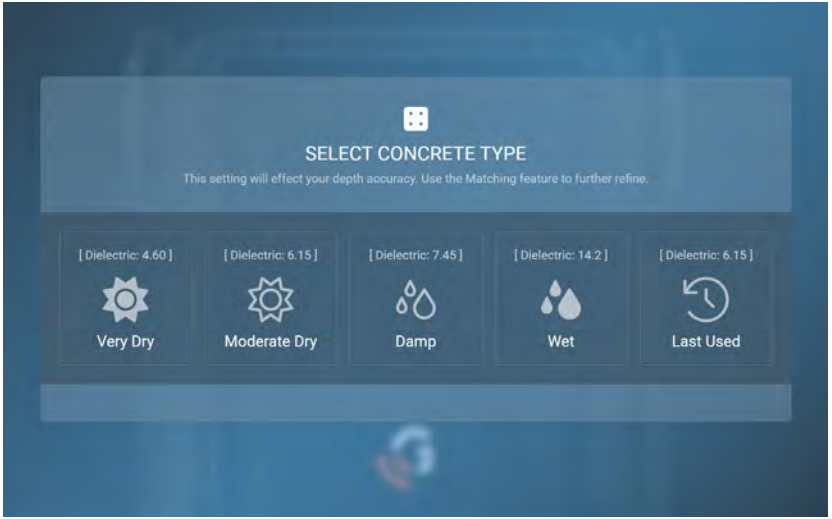
Accessory antennas will appear in the device carousel once connected.
Tap the accessory antenna icon to make it the active device.
Note: accessory antennas cannot collect Flex Mode scans.

The Settings Menu is the control panel for customizing your Flex NX experience. We recommend enabling Wi-Fi and the lasers to get started. When features are active you'll see them represented as colored icons on the Flex NX graphic. Tap the X to return to the Main Dashboard.

Select Concrete Type

Select the appropriate Concrete Type based the state of concrete cure. This menu only appears once during each session.

This setting will greatly impact depth readings. While collecting or viewing data, use the Depth Settings Menu to further refine the depth scale accuracy.



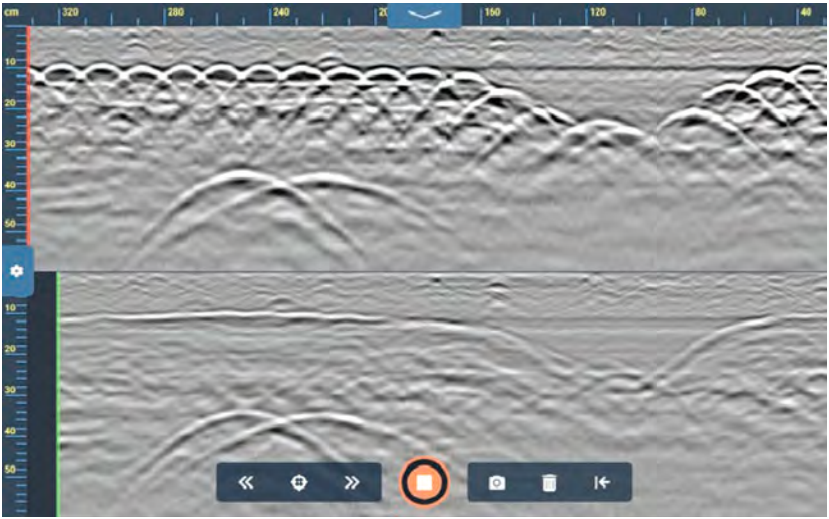
The Last Used option will reuse the dielectric value from previous sessions.

A blank data collection screen will appear. Tap the icon to initiate a scan, and then move Flex NX forward to begin collecting data. Data will populate from left to right. Move Flex NX in reverse to view backup cursors that align with the **red** and **green** side lasers.

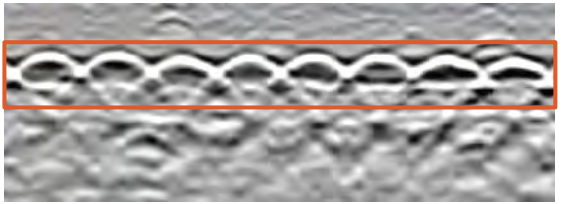
View the Top Navigation Bar

Access and adjust the Gain, Display and Depth settings.

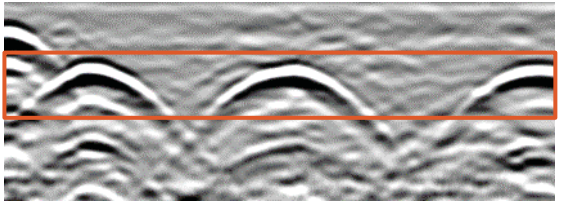
Stop data collection



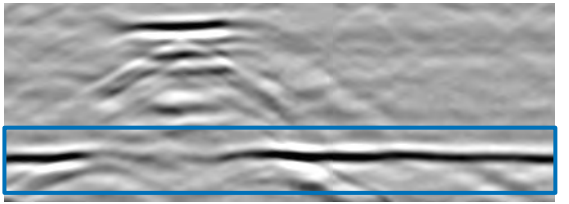
The GPR data will reveal two distinct categories of reflections: targets, and layers. Targets, such as rebar and conduit, are discrete objects below the surface and are represented by hyperbolas (orange boxes). Layers are continuous features, like the slab/grade contact (blue box).



Closely-spaced targets, like wire mesh, produce abundant hyperbolas that overlap on the sides.

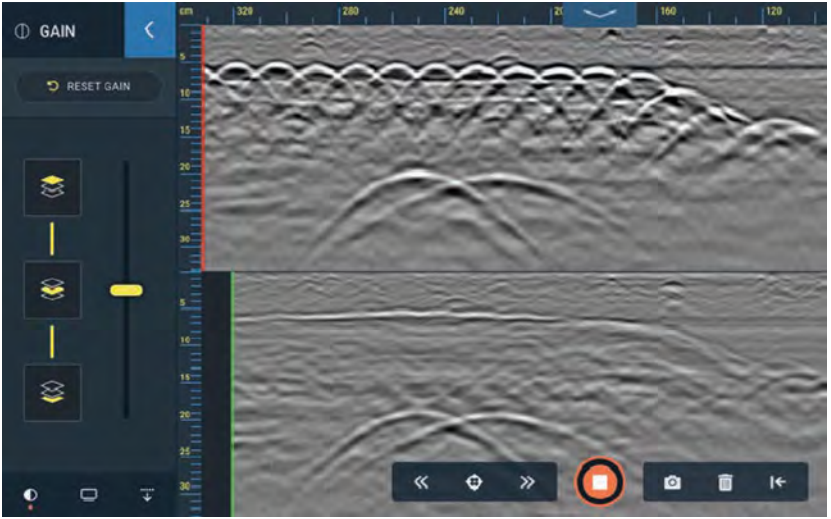


Rebar and other metallic targets produce bright hyperbolas. Rebar targets are often spaced wider than wire mesh targets.



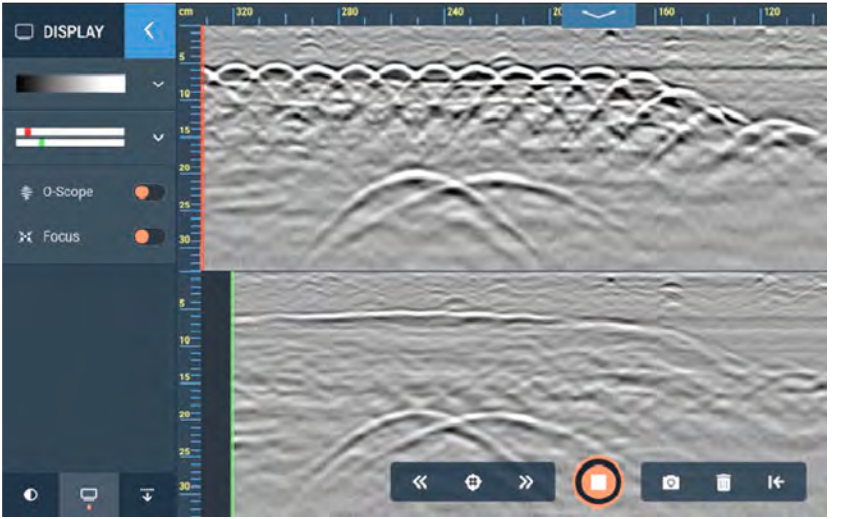
Layers do not produce hyperbolas. They appear as continuous features that often vary in brightness and depth.

While collecting data you can tap the icon on the depth scale. This will open a window with three nested menus: **Gain**, **Display**, and **Depth**. For now, click the Gain icon in the lower left. Here you can use the slider to adjust the overall contrast of the data, or select one of three general depth levels (shallow, medium, deep) to selectively adjust contrast.



Adjusting Display Options

Tap the icon at the bottom of the panel to adjust Display settings. Here you can quickly change your data display from split screen with both antennas to full screen options for the standard (front) and cross polarized (rear) antennas. You can also adjust color tables, toggle the O-Scope, or enable Focus Mode (to be released in an upcoming software update).



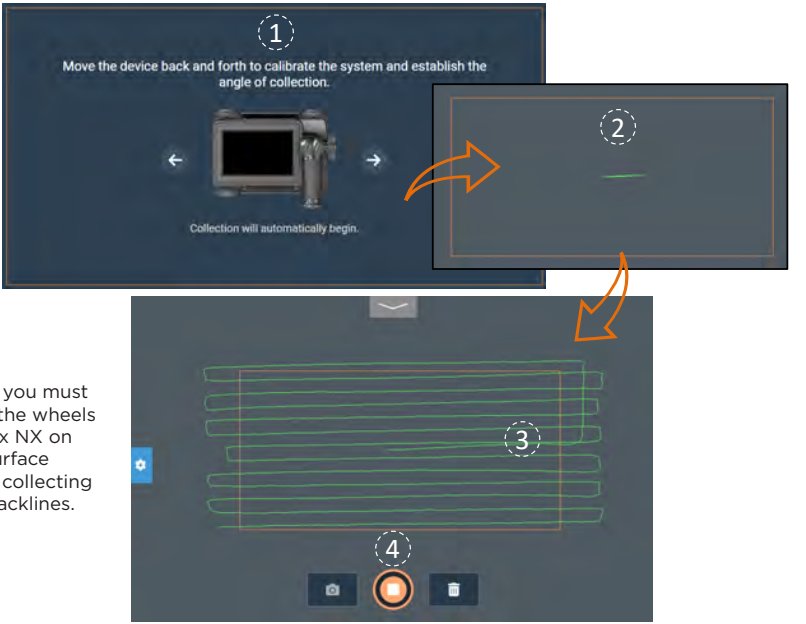
Starting a Flex Mode Scan

Flex Mode is GSSI's newest technological breakthrough. It is a quick and easy 3D rough-out tool designed to augment, but not replace, traditional 2D scanning.

From the Main Dashboard, tap to start a Flex Mode scan. Choose a Concrete Cure Type when prompted. This setting will impact Flex Mode data quality.

Place Flex NX onto the surface you are scanning and tap to start calibration.

Wait for the calibration instructions to disappear **(1)**. Repetedly roll Flex NX forward and backward one inch (2.5 cm) until you see a green trackline **(2)**. The vision system is now calibrated. Continue collecting tracklines and fill the rectangle **(3)**. Tap the Stop Scan icon to process your data **(4)**.

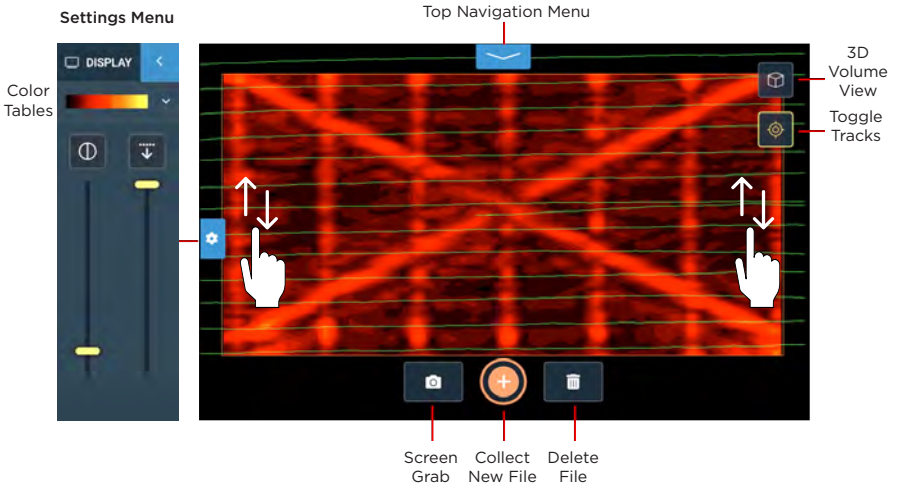


Note: you must keep the wheels of Flex NX on the surface when collecting the tracklines.

Flex Mode data will appear on the screen. From here, you can open the settings menu to adjust gain and depth sliders as well as choose a color table.

You can also toggle tracklines, use gestural controls to adjust gain and depth, collect a screen grab, collect a new file or delete the current file.

Tap the 3D Volume icon to view a rotatable 3D model of the data.

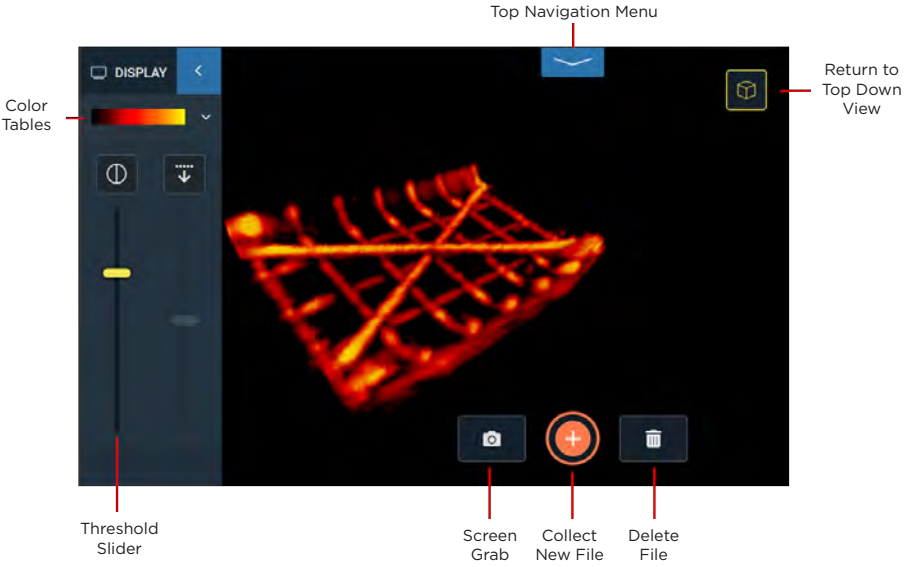


Flex Mode 3D Volume

3D Volume Mode provides an alternative way to view 3D data, delivering an interactive rotatable model you can inspect from any angle.

Use the settings menu to change color tables and adjust the threshold slider to highlight targets of interest and to minimize less important data.

Use one finger to rotate the model or use two fingers to zoom in/out.



Limited Warranty, Limitations of Liability and Restrictions

Geophysical Survey Systems, Inc. hereinafter referred to as GSSI, warrants that for a period of 24 months from the delivery date to the original purchaser this product will be free from defects in materials and workmanship. EXCEPT FOR THE FOREGOING LIMITED WARRANTY, GSSI DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. GSSI's obligation is limited to repairing or replacing parts or equipment which are returned to GSSI, transportation and insurance prepaid, without alteration or further damage, and which in GSSI's judgment, were defective or became defective during normal use. GSSI ASSUMES NO LIABILITY FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR INJURIES CAUSED BY PROPER OR IMPROPER OPERATION OF ITS EQUIPMENT, WHETHER OR NOT DEFECTIVE. Before returning any equipment to GSSI, a Return Material Authorization (RMA) number must be obtained. Please call the GSSI Customer Service Manager who will assign an RMA number. Be sure to have the serial number of the unit available.

Regulatory Information: https://www.geophysical.com/regulatoryinformation

Published by Geophysical Survey Systems, Inc., 40 Simon Street Nashua, New Hampshire 03060-3075 USA. Printed in the United States. Flex NX, Nexus, and GSSI Fusion are registered trademarks of Geophysical Survey Systems, Inc.

Flex NX Support

Geophysical Survey Systems, Inc
40 Simon Street
Nashua, NH 03060-3075 USA

Patent www.geophysical.com/patents