

J-Field 4.0 Migration Guide

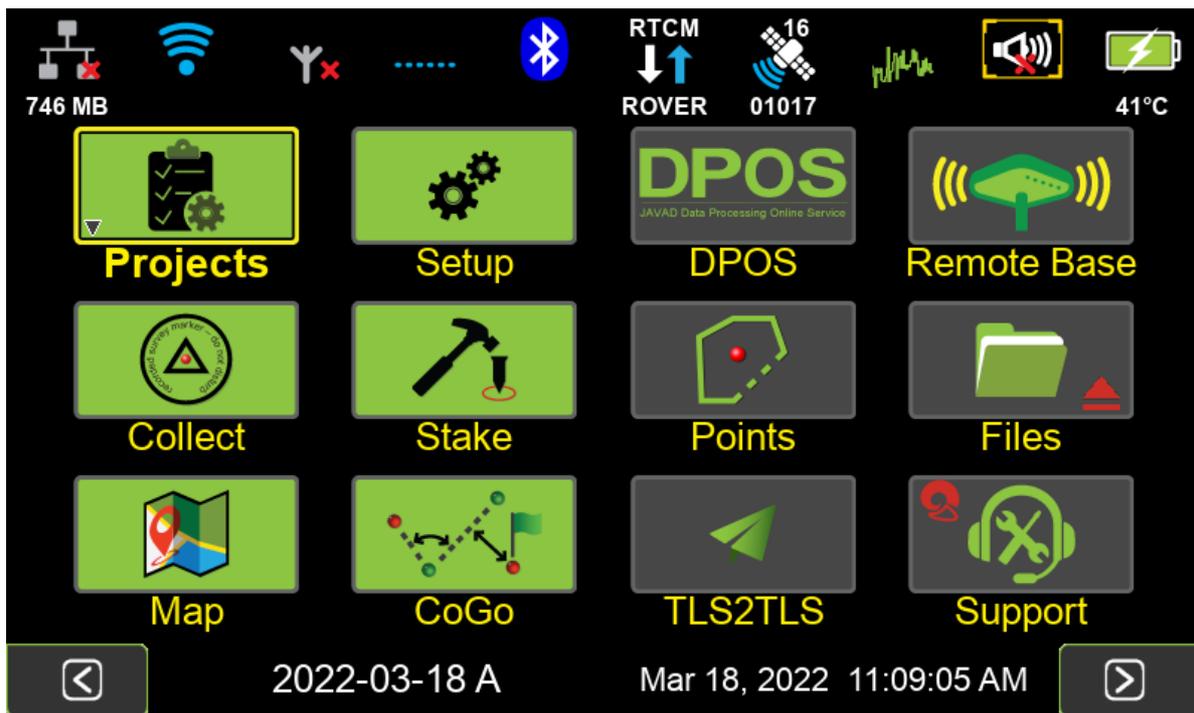
Reference Guide of migration from version 3 to version 4

The following significant changes have been made:

1. Home Screen
2. Projects
3. Correction Stream Icon
4. Setup
5. Stake & Collect Prepare Screens Removed
6. Base/Rover Setup
7. JAVAD CORS Services

Home Screen

The icons on the *Home* screen have been updated.

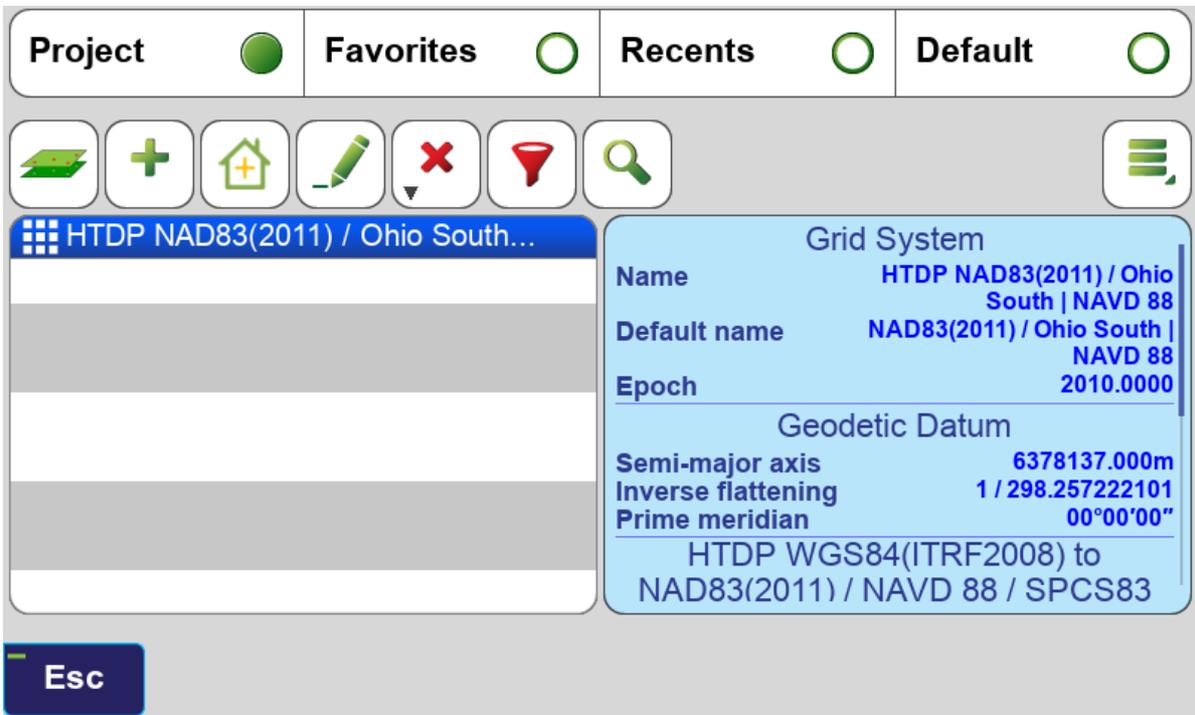


Base/Rover has now been renamed *Remote Base*.

Localize can now be found by clicking the Localize button

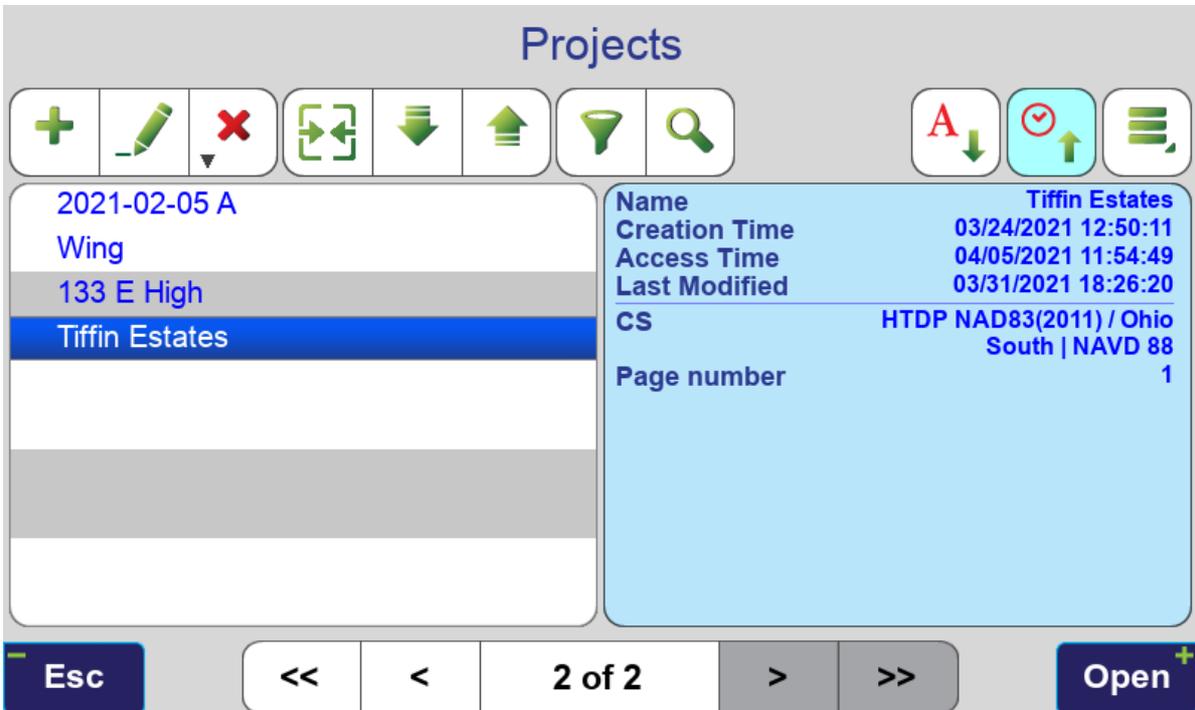


found in *Home Screen 2 >> Coord. Sys*



Projects

Projects are now opened from the Home screen. A long click on the Project icon on the *Home* screen edits the current project. A new project can also be created by tapping the  software button.



Correction Stream Icon

Information about the corrections stream can now be found by tapping the *Correction Stream Icon*



at the top of the of home screen.

The *General Group* profile is no longer involved with RTK correction source selections. The selection of the corrections source must be selected in this screen. The same *General Group* profile can now be used for multiple types of corrections.

Corrections via

Wireless LAN

⚙️ Settings

Access Point	M25	RTN Status	CONNECTED
MAC Address	58:ef:68:ad:c3:bb	APN	ODOT
Auth. Mode	WPA-PSK	APN Protocol	NTRIP Client
Signal Quality	Excellent	IP Address	156.63.133.115
Wlan State	Online	TCP Port	2101
IP Address	192.168.1.135	Mountpoint	ODOT_G_R_E_C_RT...
Subnet Mask	255.255.255.0	GGA	Enabled
Default Gateway	192.168.1.1	Data	RTCM 3.0
DNS1	192.168.1.1	Internet access	YES
DNS2			

Esc

Pause

The source of the correction stream can now be managed with the *Correction via* button.

Corrections via

UHF Modem

Cellular Modem

Wireless LAN

LAN

Close

Esc

The Settings button shows the basic settings for the communications channel.

RTN APN

+ ✎ ✖ ↓ ↑ 🔍

A ↓

▶ ODOT NTRIP	Name ODOT Type NTRIP Enabled Yes Host 156.63.133.115 Port Login Password smrj0118 Decoder RTCM 3.0 NMEA GGA On NMEA Period 5 Mountpoint ODOT_G_R_E_C_RTX_RTCM3
---	---

Esc
Select ⁺

Settings for a RTN through Wireless LAN

Receiving Settings

Channel Bandwidth 12.5 kHz	Frequency 461.02500 MHz
Protocol JAVAD	Decoder RTCM 3
Modulation D8PSK	Link Rate 14400 bps
FEC <input checked="" type="checkbox"/>	Scrambling <input checked="" type="checkbox"/>
RX Mode Auto Detect	

Esc
Apply ⁺

Settings for a UHF Modem

These same settings can also be accessed in the *Stake* and *Collect Action Screens* by tapping the

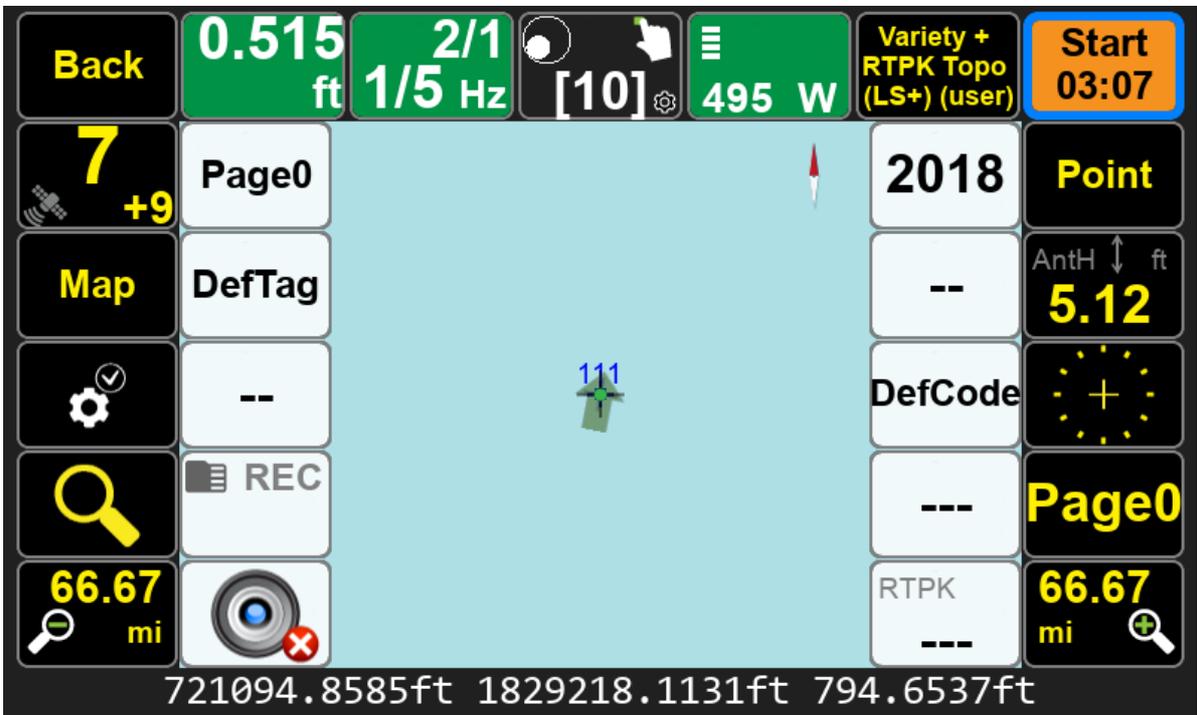
Communications Status button



(W for WiFi)



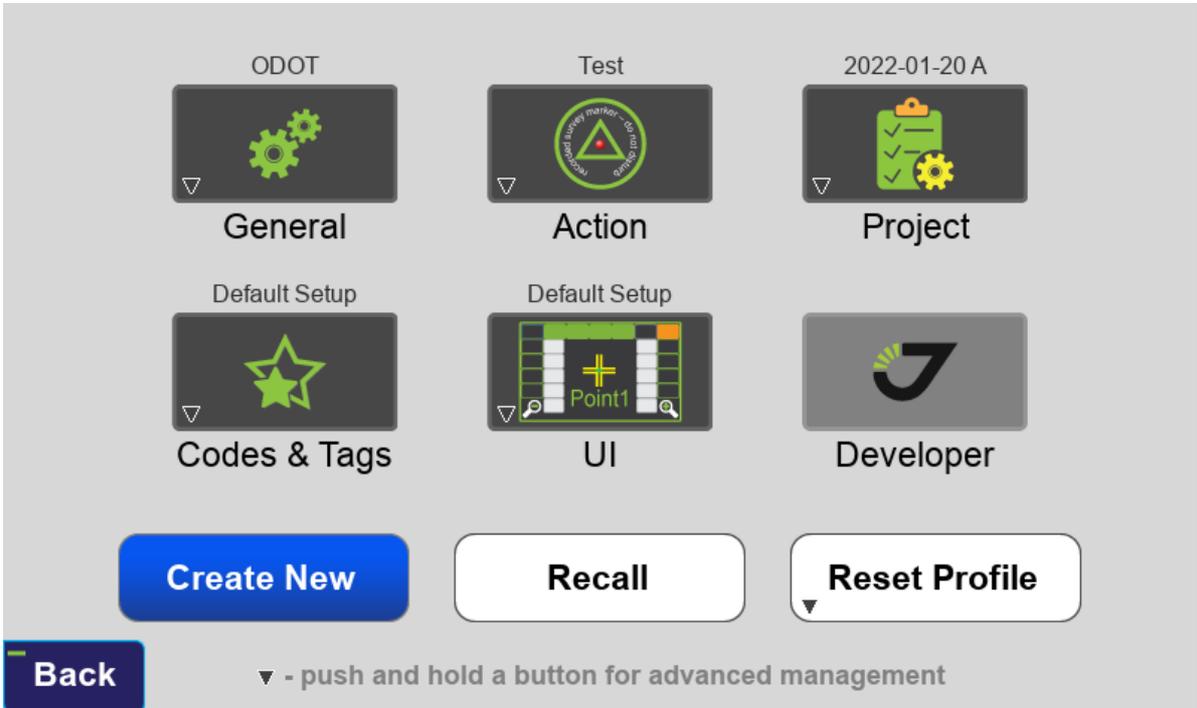
(U for UHF).



The user should always pay attention to the Base ID and correction source shown on the *Communication Status* button as it is now easier to switch between correction sources.

Setup Screen

The *Setup* screen has been updated.



The *General Group* profile is now only used to control the Units and RTK settings. The *General Group* profile is no longer involved with RTK correction source selections. The new

Correction Stream Icon



is used for RTK correction source selection.

A short tap of the icons opens the settings screen for the current profile.

RTK Rover RTK Base Stand Alone

Base Reference Frame NAD83(2011)

Reference Frame Coordinate System NAD83(2011)

Antenna	>	Units	>
GNSS	>	RTK/DGPS	>
TCP Server	>	Remote FTP Server	>

Esc OK

General Group Settings

To recall or create a new profile long tap on one of the icons. It is recommended that the *General Group* profiles previously used for switching between different correction sources be deleted. Unused *Action* profiles should also be deleted.

General Profiles

Factory Defaults

- US Units

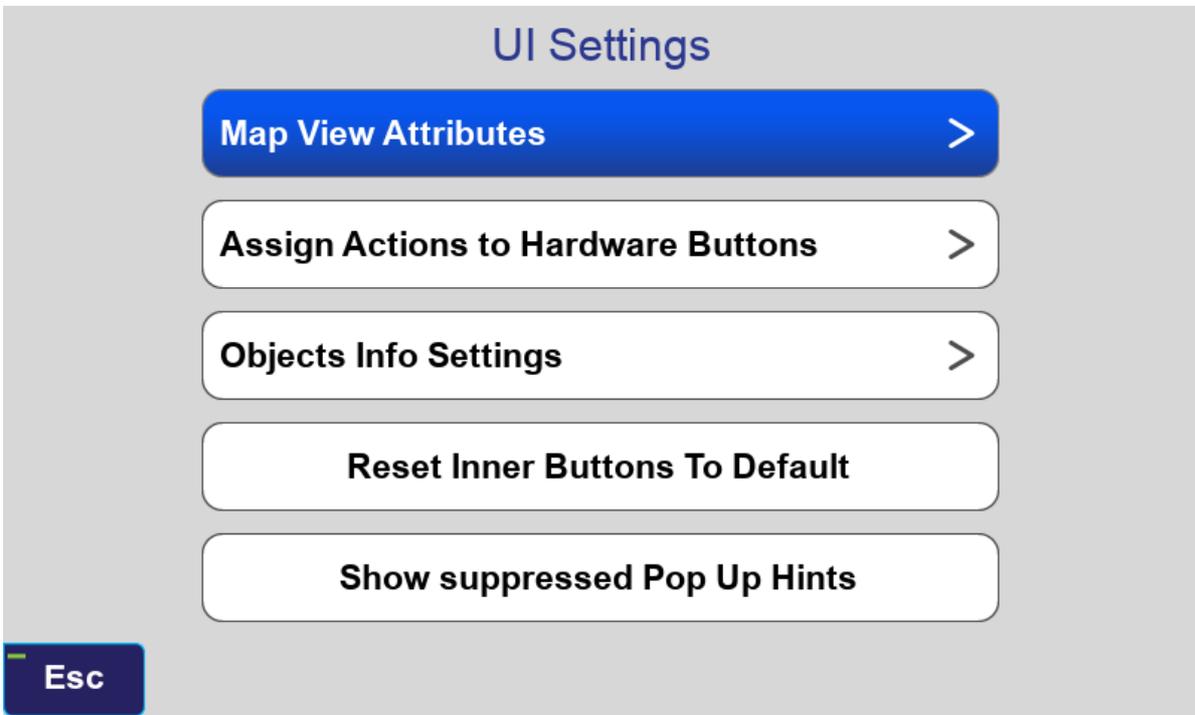
Name	US Units
Last Time	02/17/2022 11:20:25
Mode	Main
Base Ref. Frame	Rover NAD83(2011)
Units	Units
Distance	U.S. Survey Feet
Area	Square USFeet
Direction	Azimuth
RTK Engines	
Engine 1	GPS (C/A, L2C), Galileo (E5A, E5B)
Engine 2	GPS (C/A, L2C, P2), Galileo (E5A, E5B)
Engine 3	GLONASS (C/A, CA/L2), Galileo (E1, E5A)
Engine 4	GLONASS (C/A, CA/L2), Galileo (E1, E5B)

Cancel Recall

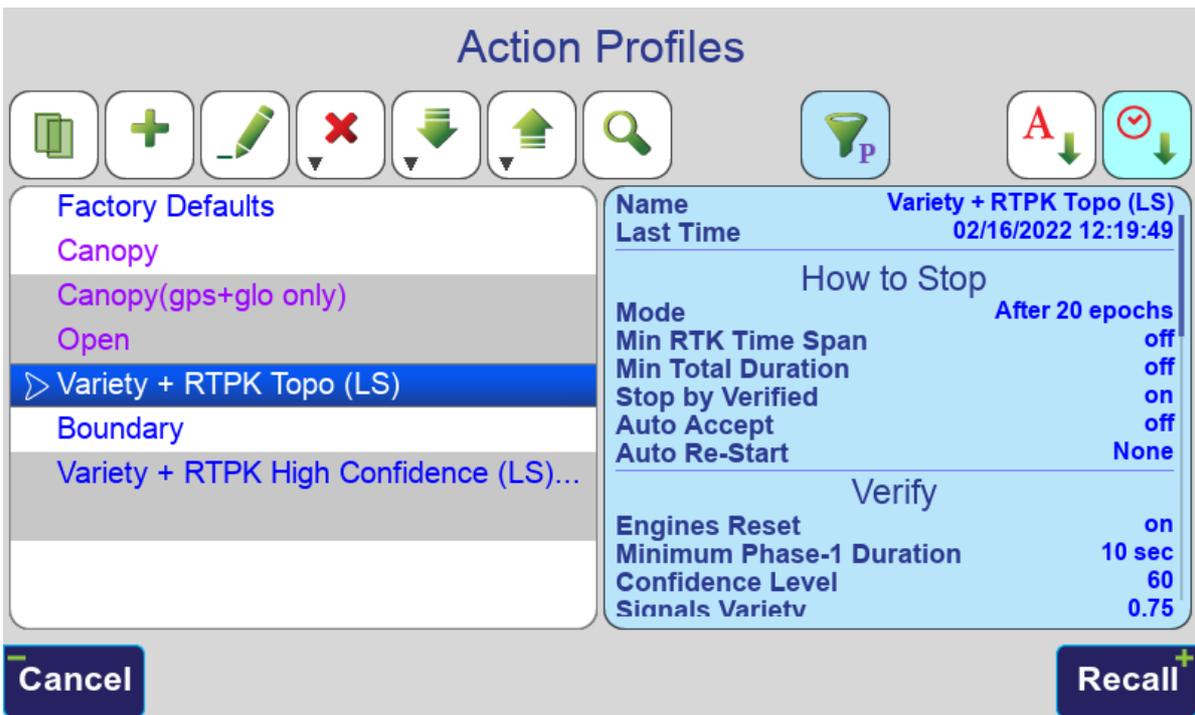
A new profile can also be created by tapping the  software button.

To recall a profile select it and press the Recall button.

A new group for UI (User Interface) settings has been created.



In the *Action Profiles* selection screen the *Predefined Profiles* are shown in purple. They cannot be opened, you must first create a copy of the desired profile and then you can open the copy.



The *Predefined Profiles Filter*  button can be used to hide the *Predefined Profiles*.

Stake & Collect Prepare Screens Removed

The *Stake* and *Collect Prepare* screens have been removed. All the fields and settings that were previously in these screens can now be accessed in the *Action* screens.

The options to stake a line or change the *Stake Points Mode* are now accessed with the *Stake Mode* button below Start in the Stake Action screen.

Points Lines Alignment Points Alignment Stake-Here

Surface Active DXF

Create Point **Select Point**

From Map

Esc

Stake Points Mode

Design Points Skip Already Staked Points Surveyed Points

Points Traverse

Nearest Point Optimized Path Length

Alphabetic Reverse Alphabetic From Map

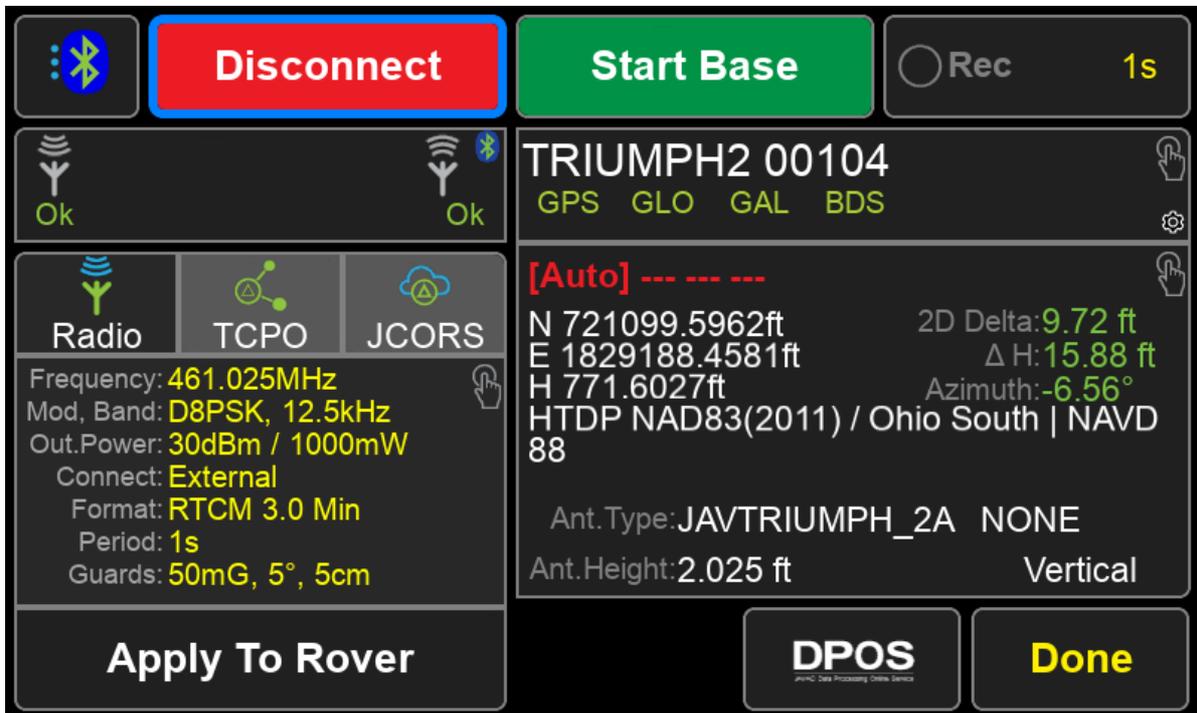
Use All Points On Visible Pages Select Points to Stake >

Max. Points in Sequence 100 Reset Sequence

Esc Stake⁺

Base / Rover Setup

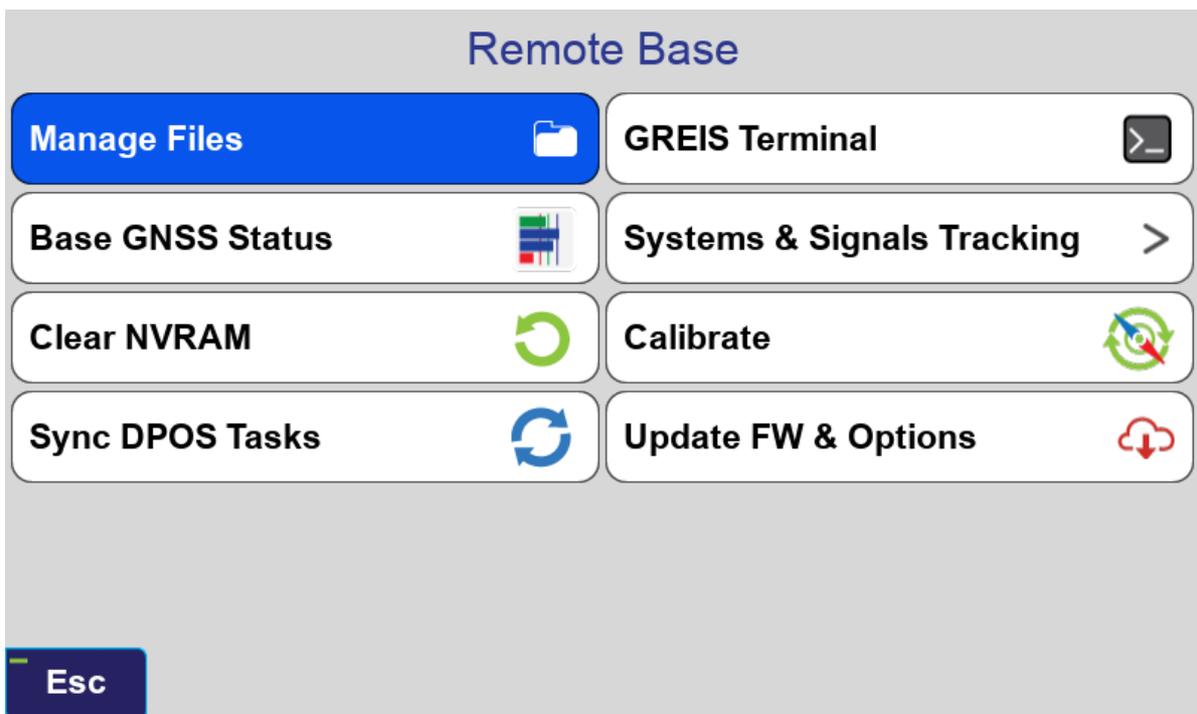
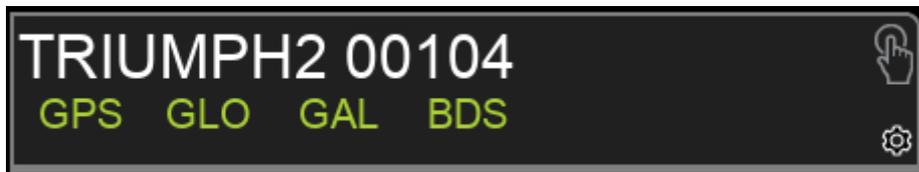
The Base / Rover Setup screen has been updated.



Connecting to the base and starting the base now takes longer than it previously did. Now when connecting to base, it is waiting for the internal radio/cellular modem driver to be ready and information about the module is requested.

When starting base it is waiting for the modem to start transmitting.

The Base receiver can be managed by tapping its button under *Start / Stop Base*. The satellite systems that the base is configured to transmit is shown in this button.

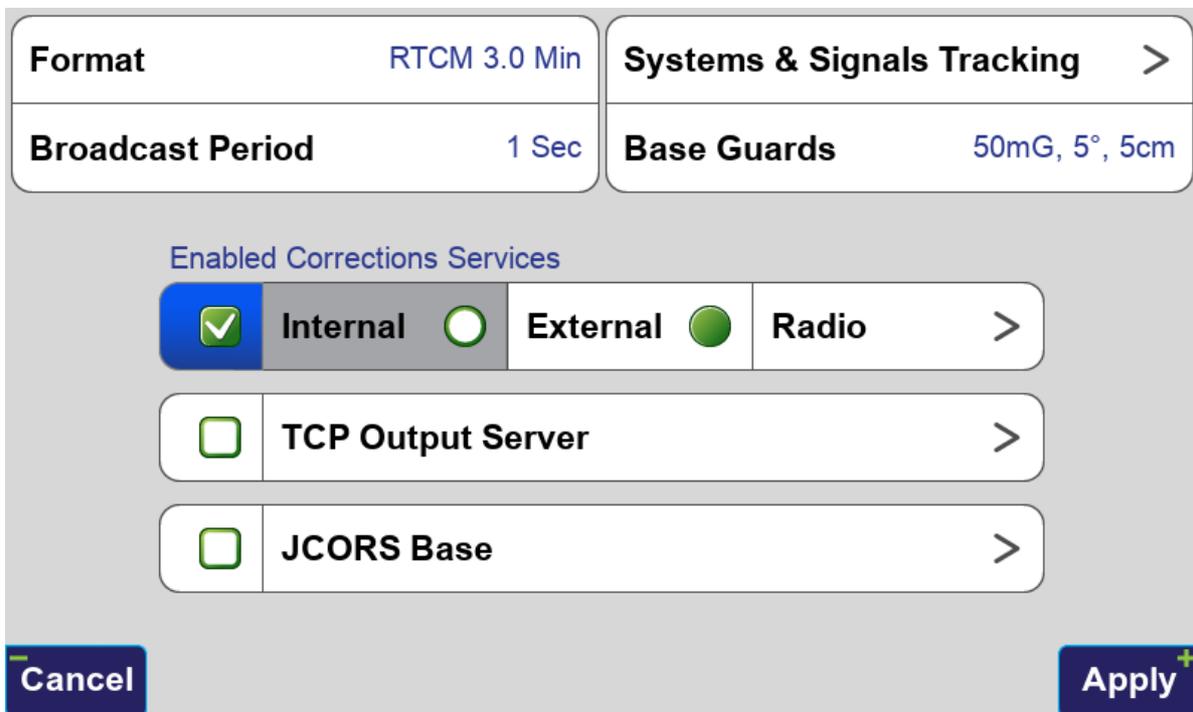


The Firmware on the base should be updated if it is not up to date with the *Update FW & Options* button. Old firmware may cause the internal radio not to be recognized.

The *Communication Parameters* box now has three options to view the settings for *Radio*, *TCPO* and *JCORS*.



Tapping this box opens the *Base Configuration* screen. The options you wish to use need to be checked. Multiple correction stream sources can now be selected. You can have your base broadcasting both through a radio and through TCP or JCORS.



For GPS and GLONASS, the format should be set to RTCM 3.0 Min. For GPS, GLONASS Galileo and BeiDou, the format should be set to RTCM 3.2 MSM3 Short.

To configure the radio parameters tap the *Radio* button.

Base Radio



HPT401BT BAT
FW: 3.2.4.36
Link Rate: 0

ID: 79
MCU: N/A

Unpair

Frequency	461.02500 MHz
Modulation	D8PSK
Channel Bandwidth (kHz)	12.5 kHz
Call Sign	
Output Power	1 W

Back
Apply ⁺

Similarly, TCP and JCORS can be configured by tapping their buttons. TCP profiles are configured with the local IP address of the base by default. If you are using WiFi hotspot to connect your base to the internet you will need to determine the external IP address of the hotspot and update the IP address field to external IP address of the hotspot. The external IP address can be determined by visiting <https://www.whatismyip.com> with a device connected to the internet through the hotspot.

Before starting the base select the tab for the corrections source (*Radio*, *TCPO* or *JCORS*) that you want to use for the rover and press *Apply To Rover* to select this correction source for the rover.

JAVAD CORS Services

JCORS is a new service that allows your receiver to act as a CORS (Continuously Operation Reference Station) without the need for having a static IP address. The base receiver connects to a cloud server that then broadcast the correction stream through the internet. This service is free at the time but there may be a charge for this service in the future.

To begin setting up JCORS tap the *JCORS Base* button in the *Base Configuration* screen *Base / Rover Setup*.

Format	RTCM 3.0 Min	Systems & Signals Tracking	>
Broadcast Period	1 Sec	Base Guards	50mG, 5°, 5cm

Enabled Corrections Services

<input checked="" type="checkbox"/>	Internal	<input type="checkbox"/>	External	<input type="checkbox"/>	Radio	>
<input type="checkbox"/>	TCP Output Server					>
<input checked="" type="checkbox"/>	JCORS Base					>

Cancel **Apply** ⁺

JCORS needs to be setup at <https://community.us.javadgns.net/> (for US customers) or <https://javad.eu.javadgns.net/> (for European customers). After creating an account and logging in click *OPEN DASHBOARD*.

The screenshot shows the JCORS - Community dashboard with the following sections:

- Connect your rover:**
 - Use these credentials to set your rover to receive corrections over NTRIP.
 - Maximum 2 simultaneous connections
 - Caster: us-east-1-caster-0.us.javadgns.net (3.94.49.178)
 - Port: 2101
 - Username: [Redacted]
 - Password: [Redacted]
- Used capacity:** Field mountpoints: 0 of 1
- NTRIP networks:**
 - Available mountpoints: View the list of the mountpoints, available to you.
 - Add mountpoint via Triumph LS: Configure a new mountpoint with Triumph LS.
 - Add mountpoint via JMT: Configure a new mountpoint with JMT app.
 - Add Field mountpoint manually: Interactively create a new mountpoint with a Field base as a source of corrections.
- Manage connections:**
 - QR code connect: Register intelligent controller devices (Triumph LS or JMT) to easily configure bases and rovers.
 - Reset rover credentials: Reset rover connection credentials to ensure they are not used by the third-party.
- DPOS:**
 - Add DPOS job: Configure new DPOS processing job
 - DPOS jobs: View and manage all current and previous DPOS processing jobs.
 - DPOS reports: View and manage all reports in different formats built from DPOS processings.

Click the *QR code connect* button and select this option in J-Field to open the camera and scan the QR code that appears in the web browser.

JAVAD CORS Services

**To continue "JCORS Services Account" is required. Visit us.
javadgnss.net for USA users or eu.javadgnss.net for European.**



Navigate to your JCORS Services Dashboard and connect with QR code option.



Login with your account credentials.

CancelScan ⁺

This will create the mountpoint on the server.

JAVAD JCORS Services

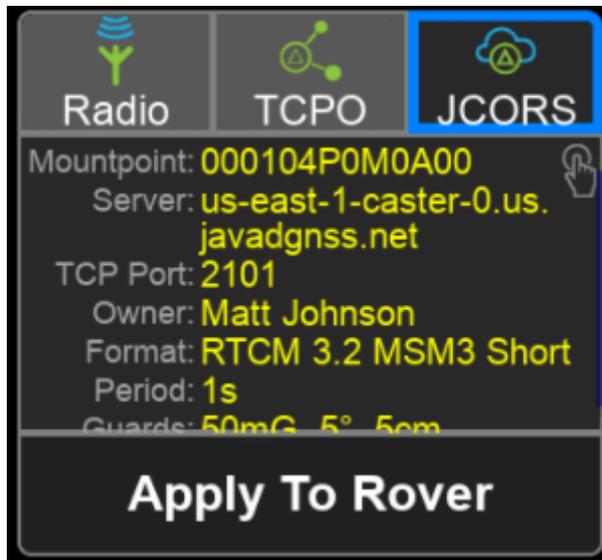
NTRIP Mountpoint Name:
000104P0M0A00

CorrectionsRTCM 3.2 MSM3

Unregister JCORS Ntrip Base

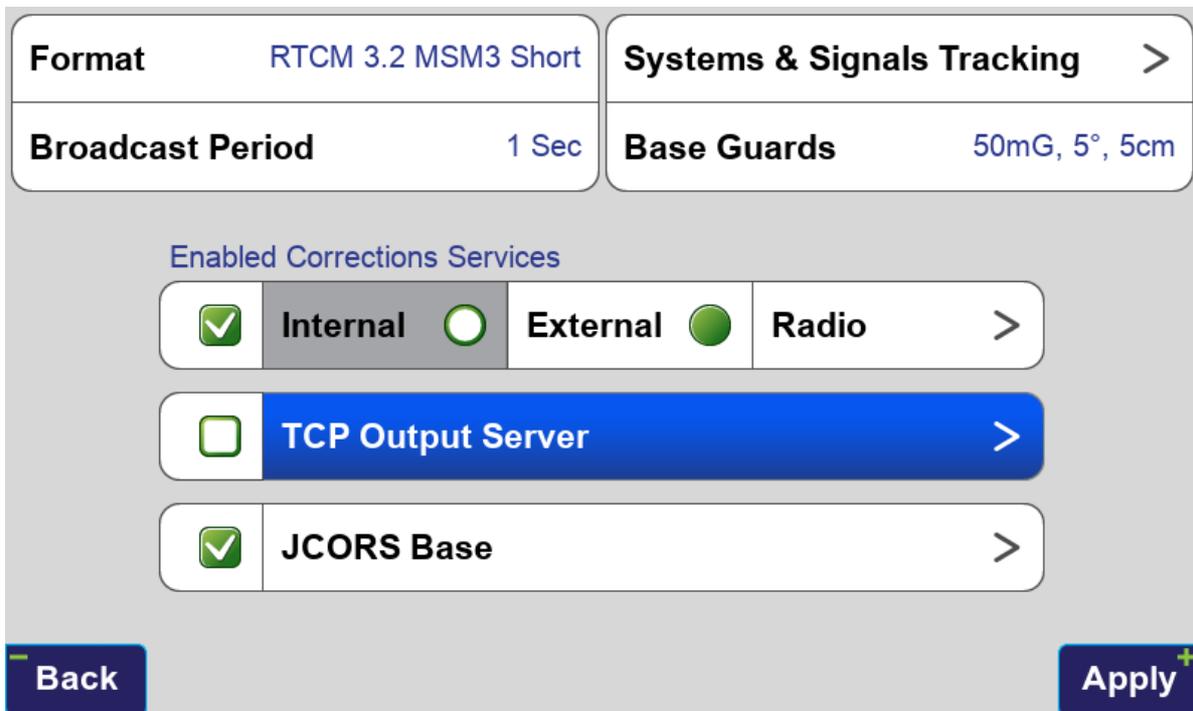
Esc

Before starting the base select the JCORS tab and press *Apply To Rover*. This will create the APN in J-Field and switch the correction source to it.



JCORS is now ready to use.

For this to work, the base receiver must be connected to the internet through LAN, WiFi or through its cellular modem. The network connection can be configured in the *TCP Output Server* screen.



TCP Output Server

TCP Port	8010
Connection Idle Timeout	600

Output Interface

Ethernet	> <input type="radio"/>
WiFi	> <input checked="" type="radio"/>
Cellular	> <input type="radio"/>

Esc
OK ⁺

To configure a WiFi network you need to know the *AP SSID* (network name), *Network Key* (password) and security type (*WPA2-PSK* or *WEP*). *Auto IP* should be enabled. *Networks* helps to browse available networks in view of Triumph-LS and set *AP SSID*.

WiFi

Auto IP (DHCP) <input checked="" type="checkbox"/>	Networks
IP 192.168.2.2	AP SSID JAVADGNSS
Net Mask 255.255.255.192	Network Key
Gateway 192.168.2.1	WPA2-PSK <input checked="" type="radio"/> WEP <input type="radio"/>
State: associated	Power State
Error: none	Enabled <input checked="" type="radio"/> Disabled <input type="radio"/>
MAC Address: 00:18:D7:0E:1A:D2	
IP Address: 172.22.0.17	

Cancel
Apply ⁺