

# APS-3

Revision 3.0.0

## Important Quick Start Guide

Congratulations on purchasing your new APS-3 System. This Important Quick Start Guide contains information you need to set up and begin using your APS-3.

### Typical Box Contents

The following are provided with your APS-3 System:

- ✓ Each APS-3 GNSS Receiver typically comes with the following preinstalled items:
  - ✓ 2 x Lithium Ion Battery
  - ✓ 1 x 2GB SD Card
  - ✓ 1 x GSM SIM Card Holder
  - ✓ 1 x Internal GSM Wireless Modem
  - ✓ 1 x Internal UHF Wireless Radio
  - ✓ 1 x Bluetooth
- ✓ 1 x APS-3 Battery Charger with AC Adapter Power Supply
- ✓ 1 x LEMO 4-pin Power Cable (10031)
- ✓ 1 x LEMO 5-pin to Female DB9 Serial Controller Cable (10029)

Optional Items:

- ✓ 1 x LEMO 8pin to Male DB9 RS232 Serial Cable(10028)
- ✓ 1 x Field Controller w/ AC Adapter and USB Cable
- ✓ 1 x Data Collection Software (pre-installed in Controller)

### Additional Equipment Required

- GSM/GPRS Cellular Modem SIM Card with data service
- PC with Windows OS & SD Card Reader

## How to Use Your



**FRONT**




**REAR**











*Install UHF Radio Antenna, formatted SD Card and activated SIM card before turning ON APS-3.*

### APS-3 Power Switch ON/OFF & LED Information (FRONT)



Press  ON/OFF button to turn ON APS-3. Hold ON/OFF switch for 4 seconds to turn OFF APS-3.

| LED          | ICON  | STATUS  |
|--------------|---|---|
| BLUE         |    | ON: Established Communication<br>OFF: Idle for device bonding   |
| ORANGE       |    | ON (Solid): Transmitting RTK corrections<br>ON (Flashing): Receiving RTK corrections<br>OFF: No RTK Corrections |
| RED          |   | ON: Receiver is Powered   |
| GREEN        |    | Rapid Flash: Boot Up<br>Interval Flashing: Tracking Satellites  |
| RED          |    | ON: Active Data Logging<br>OFF: Inactive Data Logging   |
| Data Logging | Press  two times < 1 sec. apart, and Data Logging LED turns ON/OFF |   |
| Soft Reboot  | Press  three times < 1 sec. apart                                  |   |
| Hard Reboot  | Press  four times < 1 sec. apart                                   |   |

## LEMO Connectors (BOTTOM)

| PORT  | # PINS | FUNCTION       |
|-------|--------|----------------|
| PWR   | 4      | External Power |
| SER 1 | 5      | Controller/PC  |
| SER 2 | 8      | External Radio |



## GSM/GPRS Cellular Modem

The APS-3 includes an internal GSM cellular modem. In order for the GSM Modem to transmit and receive data, a SIM Card with a data service plan is required.

1. Purchase and activate SIM card with a data service plan from a GSM/GPRS cellular carrier of your choice.
2. Install SIM card in your APS-3 and get the access information to ensure it works correctly prior to field use.

## SD Memory and SIM Card Compartment (REAR)



**LOCK**

Place coin in the slot. Turn clockwise to lock compartment & counter clockwise to unlock.



**UNLOCK**





*Install/Remove SD or SIM card only while APS-3 is turned OFF.*



## Format SD Memory Card







**WARNING:** Turn OFF APS-3 when installing/Removing SD Card.

|   |  |
|---|--|
|  | Turn OFF APS-3. Push SD Card to release and pull out of slot                     |
| <b>FAT<br/>File System<br/>Format</b>   | Use SD Memory Card Reader and Windows PC to format SD Card using FAT File System |
|  | Slide SD Card in the slot until it locks into place                              |

## SIM Card Installation



**WARNING:** Turn OFF APS-3  
when Installing/Removing the SIM Card

|   |  |
|---|--|
|    | Turn OFF APS-3. Push yellow button to release SIM Card holder            |
|    | Place SIM Card in SIM Holder   |
|   | Flip SIM Card Holder over to insert into the APS-3 SIM Card Holder slot. |
|  | Slide SIM Card Holder in the slot until it is flush with the assembly.   |






## Battery Removal, Charge and Installation

Complete the following steps for removal, charge and installation of APS-3 batteries.



*One fully-charged battery can be used up to 5 hours.*

Check which battery is “in use” before removal. See battery status in collection software to replace battery “not in use”. See the **Power or Battery Status Indicator** section of this Quick Start Guide.

|   |   |
|---|---|
|    | Press battery release button to open battery compartment door (FRONT)   |
|    | To replace battery, pull or slide battery out and close the compartment door  |
|    | To charge battery, plug the AC battery charger into the wall socket and power LED turns ON  |
|  | Place APS-3 battery in charger for 2 hours or until LED turns GREEN for full charge. RED LED indicates battery not fully charged. Flashing RED indicates battery fault. |
|  | To load battery in APS-3, Slide the batteries in the slot and close compartment door.   |

## Communicating with APS-3



*Serial cable communication takes precedence over Bluetooth®. Remove the serial cable from SER 1 port for Bluetooth to resume.*

For Wireless Bluetooth® communications with the APS-3 follow the steps below with a Controller (Allegro<sup>2</sup>, Archer<sup>2</sup>, ...). Refer to APS-3 User Manual for variations in controllers.

1. Turn on the APS-3. The **red** LED will turn on and the **green** LED below the satellite icon starts to flash.
2. Turn on the Controller and Run data collection software.



*Be sure to select the appropriate APS-3 model. The model is indicated by the product serial number. Select APS-3 for 10XXX series and APS-3 V2 for 20XXX series.*

For SurvCE go to step 3. For FIELDGenius go to step 6.

3. SurvCE: Go to the *Equip* tab and select *GPS Rover*.
4. In the *Current* Tab, select *Manufacturer* and *Model*.
5. In the *Comms* Tab, select *Bluetooth* as the Type. Select the *Configure* button. Select *Find Receiver*, and a Bluetooth® Device search occurs. Highlight the APS-3 name then select the Bluetooth® button to bond.
6. FIELDGenius: In the *Instrument* selection screen, select *GPS Rover* and select *Edit*.
7. Select *Model and Communication*. Choose the *Make & Model*. Select *Bluetooth Search* and a Bluetooth® Device search occurs. Select the APS-3 name, enter Bluetooth pin 'default', select *OK*, then select *Connect* to bond.

## SIM Card


Follow the steps below to verify that the GSM/GPRS Modem works correctly with an activated SIM Card.

Establish communication with APS-3 using data collection software.

### SurvCE:

1. Select Equip tab → GPS Rover → RTK tab
2. Device: Internal GSM  
Select Configuration button
3. Select a Provider & Dial mode
4. Select proper Network connection and Configure
5. Select Message Type
6. Select Base ID and check box to Send Rover Position to Network
7. Select green checkmark

### FIELDGenius:

1. Select  → Link Configure
2. Link Device: Mobile  
GPS Port: Internal Device  
Select Setup
3. Select Connection Method  
Enter connection details for the RTK network being accessed
4. Select appropriate Data Format
5. Select Connect
6. Select Request Sourcetable
7. Select desired Mountpoint



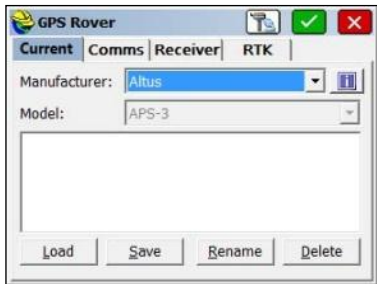
*Flashing orange RTK LED indicates APS-3 is receiving RTK Corrections.*




*WARNING: Incorrect Provider and APN Server will result in connection error.*

## Power or Battery Status Indicator

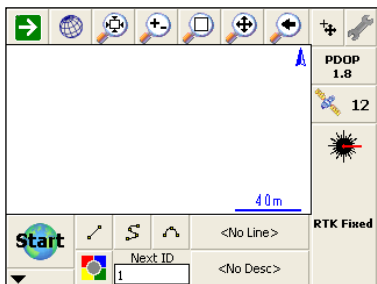
### For SurvCE:



In Equip Tab, select *GPS Rover* or *GPS base*.

Click on  button for APS-3 GNSS Firmware & Battery Status

### For FIELDGenius:



Click on  button. Select *Sensor Information* for APS-3 GNSS Firmware & Battery Status

## Questions or Comments

Please contact ALTUS Positioning Systems:

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