

APS-3

Revision 1.06

Important Quick Start Guide

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



Your Controller, with SurvCE, has been preconfigured for wireless communication with your APS-3 receiver(s).

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 1GB 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 4pin Power Cable (10031)
- ✓ 1 x LEMO 5pin to Female DB9 RS232 Controller Cable (10029)

Optional Items:

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

Additional Equipment Required

The following additional equipment is needed for basic set up:

- GSM/GPRS Cellular Modem SIM Card per APS-3
- PC with Windows OS & SD Card Reader

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How to Use Your APS-3



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 5 seconds to turn OFF APS-3.

LED	ICON	STATUS
BLUE		ON: Established Communication OFF: Idle for device bonding
ORANGE		ON: RTK corrections are available OFF: No RTK Corrections
RED		ON: Receiver is Powered
GREEN		Rapid Flash: Boot Up Interval Flashing: Tracking Satellites
RED		ON: Active Data Logging 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, and Soft Reboot occurs
Hard Reboot		Press four times < 1 sec. apart, and Hard Reboot occurs

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LEMO Connectors (BOTTOM)

PORT	# PINS	FUNCTION
PWR	4	Ext. power
SER1	5	Controller/PC
SER2	8	Ext. Radio



GSM/GPRS Cellular Modem

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

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 check the parameters to ensure it works correctly prior to field use.

SD Memory and SIM Card Compartment (REAR)



LOCK

Place coin on 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.



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Format SD Memory Card

WARNING: Turn OFF APS-3 when installing/removing the SD Card.

	Turn OFF APS-3. Push SD Card to release locking mechanism and pull out of slot
FAT32 File System Format	Use SD Memory Card Reader and Windows PC to format SD Card using FAT32 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 mounted flush.

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APS-3 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 SurvCE to replace idle battery. Instructions located in **Power or Battery Status Indicator** section of this manuscript.

	Press release button to open battery compartment door (FRONT)
	To Replace battery. Pull the battery out or push to release the battery to slide out and close the compartment door
	To charge battery. Plug the AC wall 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.
	To load battery in APS-3. Slide the batteries in the slot and close compartment door. Check battery status in SurvCE.

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Communicating with APS-3



Serial cable communication takes precedence over Bluetooth®. Remove the serial cable from SER1 port for Bluetooth to resume.

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



Your Controller, with SurvCE, has been preconfigured for wireless communication with the APS-3 receiver(s).

1. Turn ON the APS-3. The RED LED will turn ON and the GREEN LED GNSS Satellite starts to blink.
2. Turn ON the Controller and Run SurvCE software.



Register SurvCE at <http://www.carlsonsw.com/>

3. Go to the Equip tab and select GPS Rover.
4. In the Current Tab, select Manufacturer: Altus and Model: APS-3
5. In the Comms Tab, select the proper APS-3 unit for connection. APS-3_####, where #### is product serial number located underneath the receiver. Click on Bluetooth® button in upper right hand corner of screen to bond with your APS-3.
6. If the APS-3 name is not listed select Configure.
7. Then select Find Receiver, and a Bluetooth® Device search occurs. Highlight the APS-3 name then select the Bluetooth® button to bond.

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SIM Card

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

1. Establish communication with APS-3 using SurvCE
2. Select Equip tab and then GPS Rover
3. GPS Rover window comes up and select RTK tab
 - Select Device: Internal GSM and Configure button for Internal GSM. Select a Provider and Input APN Server for connection.



Configure SIM card for Internal GSM modem only once per service provider.

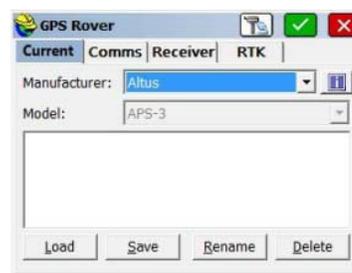
- Select proper Network connection and Configure.
 - TCP/IP Direct | UDP/IP Direct | NTRIP | SpiderNet | Direct Dial
- Select Message Type:
 - CMR | CMR+ | RTCM V2.3 | RTCM V3.0
- Select Base ID and check box to Send Rover Position to Network for VRS Network.
- Select Check button on upper right hand corner
- Flashing orange RTK LED indicates APS-3 is receiving corrections

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

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Power or Battery Status Indicator

Use SurvCE to check APS-3 battery status. In Equip Tab, select GPS Rover or GPS Base Station button.



Click on button for APS-3 GNSS Firmware & Battery Status details. Battery information is not available when using external power.

Questions or Comments

Please contact ALTUS Positioning Systems:

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