



Post Processed Kinematic- What Is It and Why Should I Care?

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GPS Methods

- Post Processed Static
- Real Time Kinematic
- Post Processed Kinematic



Post processed Static

- ❑ Most accurate of the methods
- ❑ 0.016 feet + 1 ppm



Real Time Kinematic

- Base station set on accurate known point or the ORGN
- Rover receives correctors from base station or the ORGN
- Positions are known in real time (no post processing)
- Correctors sent via radio or cell phone



Real Time Kinematic

❑ Advantages:

- ❑ Used to tie or stake out positions
- ❑ Immediate feed back in the field

❑ Accuracy-0.03 feet RMS +1 ppm

❑ Disadvantages

- ❑ No radio or cell coverage, no correctors



What to Do?



PPK



What is kinematic?

- ❑ Movement or motion
 - ❑ Real Time Kinematic (RTK)
 - ❑ Post Processed Kinematic (PPK)

- ❑ RTK and PPK are moving operations



Post Processed Kinematic

- ❑ Allows positioning without radios or cell coverage
- ❑ Requires a base set on an accurate known position within 6.25 miles of your work
- ❑ Requires simultaneous data received by the base and rover



Post Processed Kinematic

- ❑ Requires that the epoch interval at the base and rover be the same
- ❑ Requires the rover to be locked on to 5 or more satellites
- ❑ Occupation time 1" or more



Post Processed Kinematic

- ❑ Accuracy 0.03 feet RMS+ 1 ppm

- ❑ Advantages
 - ❑ No radio or cell coverage needed
 - ❑ Accuracy is the same as RTK
 - ❑ Great for tying points or for data collection

- ❑ Disadvantages
 - ❑ Cannot be used for stakeout



How Does It Work?

❑ Initialization While Moving

- ❑ Acquires five or more satellites
- ❑ GDOP less than 8
- ❑ Ambiguities are resolved

❑ Once initialized

- ❑ Rover is tracked continuously
 - ❑ Stored as moving points

- ❑ Rover occupies position of points to be tied
 - ❑ Stored as static points

Contents	Name	Location	La
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- ▽ Reference
- ⊙ Average
- Measured
- ⊗ SPP
- Navigated
- + Estimated

System

Project PPK Test 3



32.808399 fti



Post Processed Kinematic Config.

13:26

CONFIGURE

Real-Time Mode

R-Time Mode: None

Q1A ↑

CONT

L1=0
L2=0

Icons: Person with cane, Bluetooth, Network, Warning, Batteries A/B

Buttons: Close (X), Left Arrow, Right Arrow



Post Processed Kinematic Config.

13:30	L1= 0				
CONFIGURE					
Antenna & Antenna Heights X					
Antenna	:	AX1202 Pole ◀▶			
Default Ht	:	6.562 fi			
Vert Offset	:	0.000 fi			
Meas Type	:	Vertical ◀▶			
Moving Ht	:	6.562 fi			
					Q1A ↑
CONT					



Post Processed Kinematic Config.

13:33

CONFIGURE

L1= 0

L2= 0

Logging of Raw Obs

Log Raw Obs : **Static & Moving**

Log Rate : 1.0s

Q1A ↑

CONT

FILES



Post Processed Kinematic Config.

13:34
 CONFIGURE

L1= 0
 L2= 0

Point Occupation Settings

Pt Occupation: Normal

Auto OCCUPY : No

Auto STOP : No

% Indicator : None

Beep On STOP : Yes

Auto STORE : Yes

Beep On STORE: Yes

Q1A ↑

CONT PARAM



Before Data Collection Begins

The screenshot displays a surveying software interface. At the top, the time is 14:09 and the word 'SURVEY' is shown. The status bar includes 'L1=0', 'L2=0', a person icon, a Bluetooth symbol, a warning triangle, and battery levels 'A' and 'B'. Below this, a window titled 'Survey: LATLON' is open. A table with columns 'RAPID', 'Code', 'Annot', and 'Map' is visible. The main display area shows the following data:




Point ID	:	0001
Antenna Ht	:	6.562 fi
GDOP	:	-----

At the bottom, there are navigation buttons: 'OCUPY', 'NEAR', 'H PNT', and 'PAGE'. A 'Q1A ↑' button is also present in the bottom right corner.



Icon	Position mode	Point occupation	Raw data logging	Logging of auto points	Move antenna
	Static	Yes	Yes	No	No
	Moving	No	No	No	Yes
	Moving	No	Yes	No	Yes
	Moving	No	Yes	By time	Yes
	Moving	No	Yes	By distance or height	Yes
	Moving	No	Yes	By stop & go	Yes



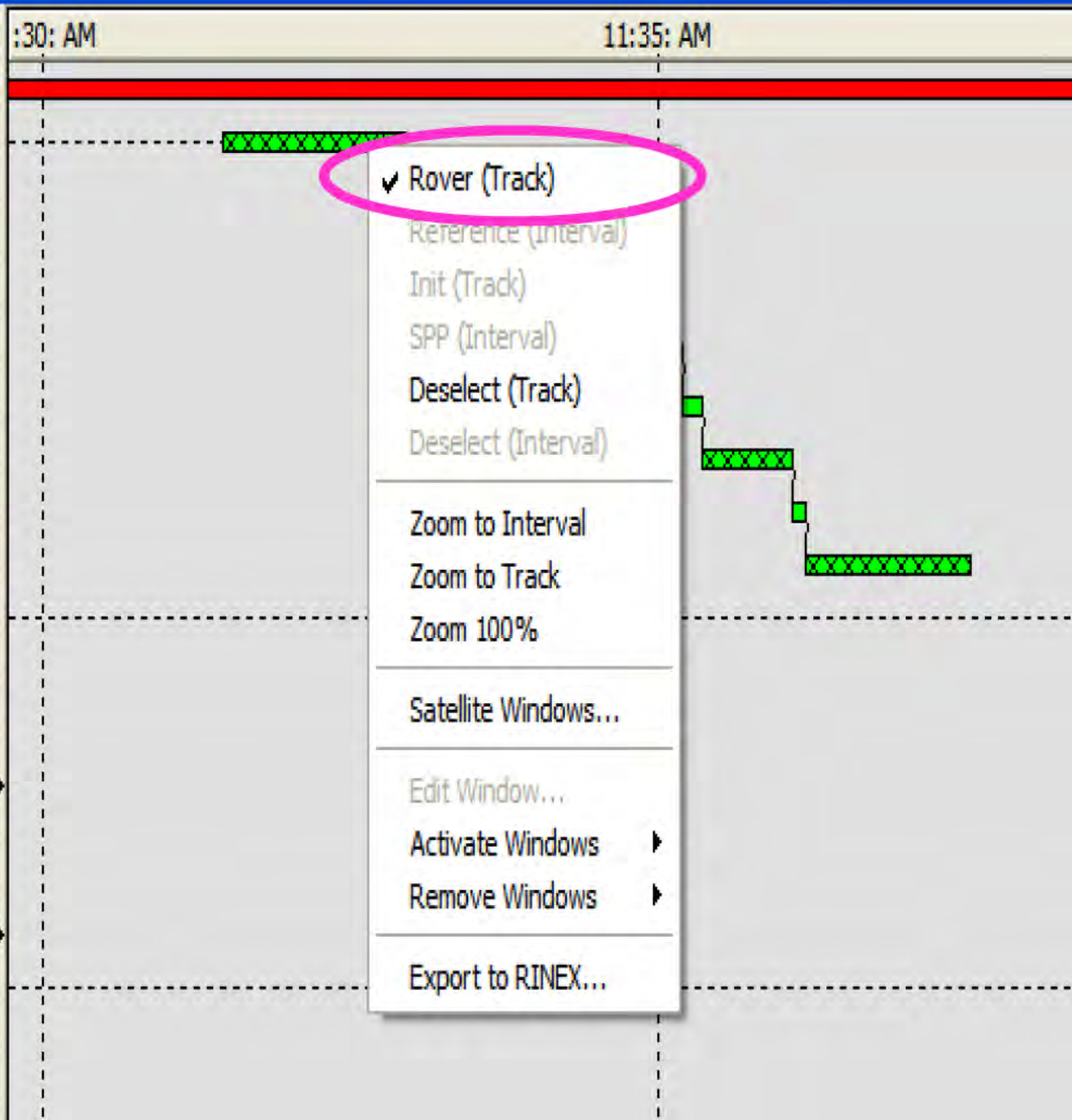
Icon	Description
No icon	No position available
	Autonomous solution available.
	Code solution available.
	Phase fixed solution available. The ticks indicate that an ambiguity check is being made.



LGO Post Processing

- Create a project
- Import data from base station
- Import data from rover
- The GPS-Proc tab will show your base interval and rover tracks
- Set the base as a Reference Interval
- Set rover as Rover Track Interval

Point Id	Point Class	Start
MCSO	Reference	4. Feb 11 10:
-	-	4. Feb 11 11:
52000	Measured	4. Feb 11 11:
-	-	4. Feb 11 11:
52001	Measured	4. Feb 11 11:
-	-	4. Feb 11 11:
52002	Measured	4. Feb 11 11:
-	-	4. Feb 11 11:
52003	Measured	4. Feb 11 11:
-	-	4. Feb 11 11:
-	-	4. Feb 11 11:
1002	Measured	4. Feb 11 11:
-	-	4. Feb 11 11:
1001	Measured	4. Feb 11 11:
-	-	4. Feb 11 11:
1000	Measured	4. Feb 11 11:
-	-	4. Feb 11 11:
-	-	4. Feb 11 11:
52004	Measured	4. Feb 11 11:
-	-	4. Feb 11 11:





Questions?