

Surveying, Construction, Engineering, Machine Control



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# Flo Chart Leica Viva RTK Base Setup

In this Flo Chart, we will be setting up RTK Base Station over a known point, and or anywhere (here) position. We will also be setting our Radio Channel if need be plus configuring your F9 Hot Key to Change Radio Channel.

## Note:

Make sure when you're placing your antenna on the tripod you have the right one. Each Antenna has to be synced via Bluetooth. Look for the blue light (Bluetooth) on the antenna, when you have connected to the base.

## Helpful Hint:

Use the stickers provided to label base and rover antenna.

	In this Flow Chart we will be Setting your RTK Base over Known Point.				
Step	Action	Display			
1	<ul> <li>From the Leica Captivate - Home</li> <li>1. Step (1) Highlight, Switch to base, then F1 OK</li> <li>Hint You may have to scroll across the Carousel to find this app.</li> </ul>	Leica Captivate - Home			

		🕤 Leica Captivate - Base 🛛 🕱 🐇 📙 💴 📿 💷
2	From the Leica Captivate - Base 2. Step (2) Highlight, Base setup, then F1 OK Hint Make sure the Data Collector Sync's with the Base. Syncing	Image: setup for the base     I
		<ul> <li>← Base Setup</li> <li>← <sup>*</sup>/<sub>15</sub> ↓ <sup>2D 7.324 ft</sup>/<sub>15</sub> ↓ <sup>2D 7.324 ft</sup>/<sub>10 l1.853 ft</sub></li> <li>⊕ <sup>®</sup>/<sub>08:59am</sub></li> </ul>
3	From Base Setup 3. Step (3) Highlight, Over known point, then F1 OK	Image: Cover known point     Image: Cover kn
		Fn OK Fn
4	<ul><li>From the Over Known Point</li><li>4. Step (4) Highlight, the Antenna height Block and Enter your base antenna height.</li></ul>	Image: System
	<ul> <li>5. Step (5) If you are using the height hook make sure you select the specific antenna you are using with your tripod as there is a 36cm offset when using the height hook.</li> <li>If you are not using the height hook, select GS(X) on a Pillar, this will remove the Vertical offset.</li> </ul>	Back
	• Then (F6) Next	

5	<ul> <li>From the Over Known Point</li> <li>6. Step (6) Tap on the arrow box or press enter to drop down the data points in your Job</li> <li>Then (F6) Next</li> </ul>	<ul> <li>Over Known Point</li> <li>Select point over which base is setup</li> <li>Point ID</li> <li>1BASE</li> <li>Northing</li> <li>1626312.452 ft</li> <li>Easting</li> <li>3155915.338 ft</li> <li>Height</li> <li>5868.575 ft</li> </ul>
6	<ul> <li>From the Over Known Point</li> <li>You are now done setting the base station Over Known Point</li> <li>7. Step (7) Tap on Rover or press F4</li> </ul>	Fn       Back       Next       Fn         Image: Second Se
In 1	to connect to your Rover this Flow Chart we will be Setting your From the Leica Captivate - Home 8. Step (1) Highlight, Switch to base,	Rover       Base         Rover       Base         RTK Base over Any Point (Here) position.         Cleica Captivate - Home       Image: Market and the second se
	then F1 OK Hint You may have to scroll across the Carousel to find this app.	here design d       Tap here to create nev       Prost: 2012/01/2 (2012 T2027/2016)       Prost: 2012/01/2 (2002 T2027/2016)       Prost: 2012/01/2 (2002 T2027/2016)         BASE SETUP Settings       BASE SETUP Switch to base       Image: 2012 T2016 (2002 T2027/2016)       Image: 2012 T2016 (2002 T2027/2016)         Settings       Image: 2012 T2016 (2012 T2027/2016)       Image: 2012 T2016 (2012 T2027/2016)       Image: 2012 T2016 (2012 T2027/2016)         Settings       Image: 2012 T2016 (2012 T2027/2016)       Image: 2012 T2016 (2012 T2027/2016)       Image: 2012 T2016 (2012 T2027/2016)         Fn       OK       Fn       Image: 2012 T2016 (2012 T2027/2016)       Image: 2012 T2016 (2012 T2027/2016)         Leica Captivate - Base       Image: 2012 T2016 (2012 T2027/2016)       Image: 2012 T2016 (2012 T2027/2016)       Image: 2012 T2016)
2	From the Leica Captivate - Base 1. Step (2) Highlight, Base setup, then F1 OK Hint Make sure the Data Collector Sync's with the Base. Syncing	Fn OK Fn

		← Base Setup
3	From the Base Setup	
	2. Step (3) Highlight, Over any point, then F1 OK	Over known point Over last setup Over any point
		Fn OK Fn
4	From the Over Any Point	<ul> <li>✓ Over Any Point</li> <li>✓ Marcolar Strategy St</li></ul>
	2. Chan (4) Uishlight this Plask and	Antenna height 4.310 ft
	Enter your antenna height.	Base antenna 5 GS16 Tripod >
	4. Step (5) If you are using the height hook make sure you select	
	the specific antenna you are using	
	offset when using the height	Back
	hook.	
	If you are not using the height	
	hook, select GS(X) on a Pillar, this will remove the Vertical offset.	
	• Then (F6) Next	
5	From the Over Any Point:	Enter Point ID & press 'Next' when ready to measure point
	5. Step (6) Name your Base Point ID	Point ID 6 1BASE
	• Then (F6) Next	
		Back Next

6	<ul> <li>From the Over Any Point:</li> <li>You are now done setting the base station Over Any Point</li> <li>Step (7) Tap on Rover or press F4 to connect to your Rover</li> </ul>	Over Any Point       Image: Second Seco
1	In this Flow Chart we will be going the RTK Radio Channel Helpful Hint Make sure your F9 key the channel so you can avoid these star Favorites below this Flow Chart. From the Leica Captivate - Home 1. Step (1) Highlight, Switch to base, then F1 OK	Leica Captivate - Home This configured as a short cut to change the see Setting your Hot Keys & 2D 10.405 ft 1D 13.643 ft Carter Starter Start Starter Starter Carter Starter Starter Start Starter Starter Carter Starter Starter Start Start Starter Start Start Starter Start Start Starter Start Start Start Starter Start Start Star
	Hint You may have to scroll across the Carousel to find this app.	Impererent design d       Tap hereind       Imperent design d       Imperent design d         Imperent design d       to create new       BASE SETUP         Imperent design d       Imperent design d       Imperent design d         Imperent design d       Imperent design d       Imperent design d         Imperent design d       Imperent design d       Imperent design d         Imperent design d       Imperent d       Imperent d         Imperent d       Imperent d       Imperent d       Imperent d         Imperent d       Imperent d       Imperent d       Imperent d       Imperent d         Imperent d       Imperent d       Imperent d       Imperent d       Imperent d       Imperent d         Imperent d <t< th=""></t<>
2	From the Leica Captivate - Base 2. Step (2) Highlight, Settings, then F1 OK	Image: Settings     Image: Settings     Image: Settings     Image: Switch to rover       Image: Settings     Image: Settings     Image: Switch to rover     Image: Switch to rover       Image: Settings     Image: Settings     Image: Switch to rover     Image: Switch to rover       Image: Settings     Image: Settings     Image: Switch to rover     Image: Switch to rover       Image: Settings     Image: Settings     Image: Switch to rover     Image: Switch to rover       Image: Settings     Image: Settings     Image: Switch to rover     Image: Switch to rover       Image: Settings     Image: Settings     Image: Switch to rover     Image: Switch to rover       Image: Settings     Image: Settings     Image: Switch to rover     Image: Switch to rover       Image: Settings     Image: Settings     Image: Switch to rover     Image: Switch to rover       Image: Settings     Image: Settings     Image: Switch to rover     Image: Switch to rover       Image: Settings     Image: Settings     Image: Settings     Image: Switch to rover       Image: Settings     Image: Settings     Image: Settings     Image: Switch to rover       Image: Settings     Image: Settings     Image: Settings     Image: Switch to rover       Image: Settings     Image: Settings     Image: Settings     Image: Switch to rover       Image: Settings     Image

3	From the Leica Settings 3. Step (3) Highlight, Connections, then F1 OK	Settings Connections	DB:S0am
4	From the Connections 4. Step (4) Highlight, All other connections, then Press F1 OK	Fn OK          Connections       Image: Connections       Ima	08:50am
5	<ul> <li>From the Base Connection Settings</li> <li>5. Step (5) Highlight, RTK Base 1,</li> <li>6. Step (6) Press F4 Control, this will populate the Radio Channels Screen</li> </ul>	Base Connection Settings   Base Connection Settings   State   Device GS16   Port Bluetooth   GS Internet   Device -   Port -   RTK Base 1   Device -   Port GS radio     RTK Base 2   Device -   Port -     Fn   OK   Edit Control	00:51am Fn

		└ Radio Settings	() 17 D 8.492 ft () 11:51am		
6	From the Radio Settings	Radio type	Satel M3-TR3		
	7. Step (7) Highlight the Channel, and select a different one.	Channel 7	5		
		Actual frequency	461.025000 MHz		
		Actual Tx power	1000 mW		
	<ul> <li>Hint you will have to do this for</li> </ul>	Modulation type	Satel 4-FSK V		
	the Base and Rover as they do have to match!	Forward error correction (FEC)	$\checkmark$		
	<ul> <li>Make sure to set a hot key! Hixon presets F9 to Change Radio Channel</li> </ul>	FnOK	Scan Fn		
	<ul> <li>Please see below on how to set you Hot Keys &amp; Favorites</li> </ul>				
	to change the Radio Channel. Helpful Hint Make sure this is completed to avoid having to go thru the steps above. Helpful Hint When you have completed this Flow Chart, you will beable to use F9 to Change Radio Channel on Rover.				
6	From the Main Menu	つ Hot Keys & Favorites	A		
	1 Stop (1) Highlight Sottings then	GS hot keys GS Fn+hot keys GS favorite	es		
	nress F1 OK	F7	GS - Quality control		
	2. Step (2) Highlight, Customization,	F8	Data - View & edit data		
	then press F1 OK	F9 <b>4</b>	GS - Change radio channel >		
	3. Step (3) Highlight, Hot keys &	F10	User - loggle between m/ >		
	favorites, then press F1 OK	F11 F12			
	4. Step (4) Set your F9 Hot Key,	F12	General - F1		
	65 - Change Radio Channel	ОК	Page		

### Summary What we did:

Collected a single point to base the coordinate system on.

All measurements are then relative to this value.

Created a new coordinate system that could be attached to any project.

Attached a coordinate to the measured point.

Defined a direction for a 0 azimuth, in this case GPS north.

Calculated a local Grid to Ground scale factor to produce "ground distances".

When would I use this?

Any time you would assume a coordinate for the total station setup, this would be the corresponding setup.

When the items to be surveyed do not have trusted values.

### Notes:

This is a general guide for One Step Localization.

Depending on your firmware, some screens maybe missing in this flow chart.

Neither Hixon nor Leica Geosystems takes any responsibility in any configuration that you may setup.

If you have any question's please call us at any time.