- when it has to be right

Leica Viva Quick Guide
Leica Viva: GS15 Base and Rover Set up

This guide will go through the necessary steps to configure GS15's to be used with Pacific Crest ADL radios, as a reference and rover RTK set up, using one CS10/CS15 and making use of the Rover and Base Worlds.

1. **Configuring the Base Sensor for Pacific Crest PDL or ADL Radios.**
2. **Starting the Base, recording Static Data at the Base and Base Status messages.**
3. **Configuring the Rover Sensor.**

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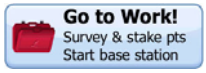
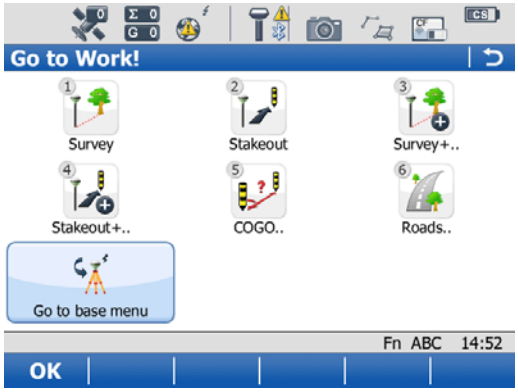
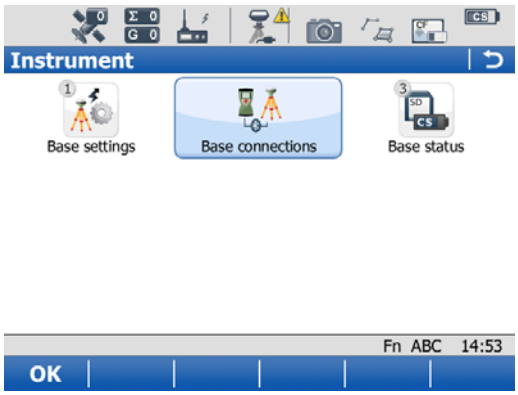
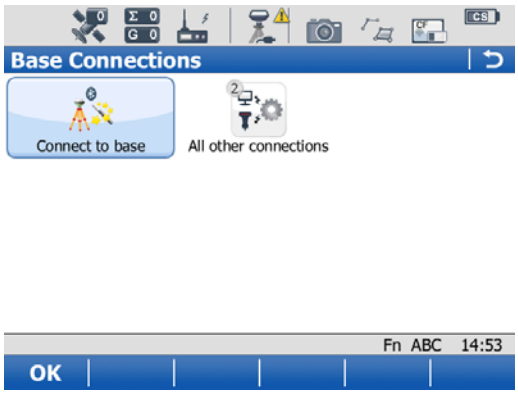
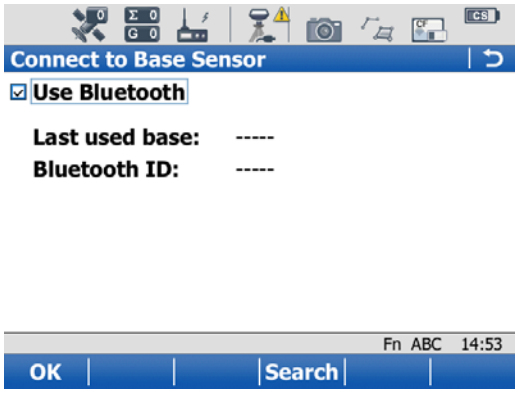
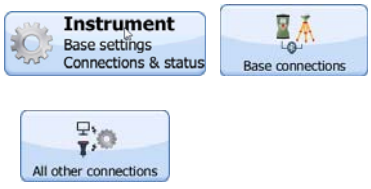
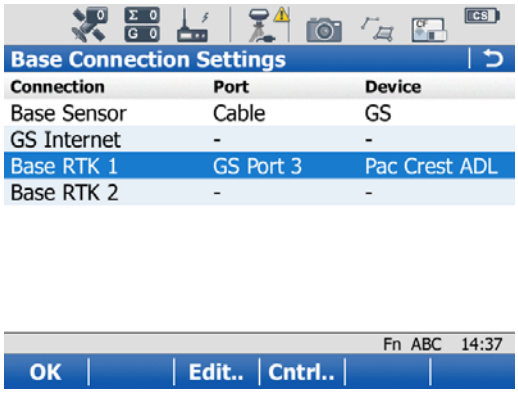
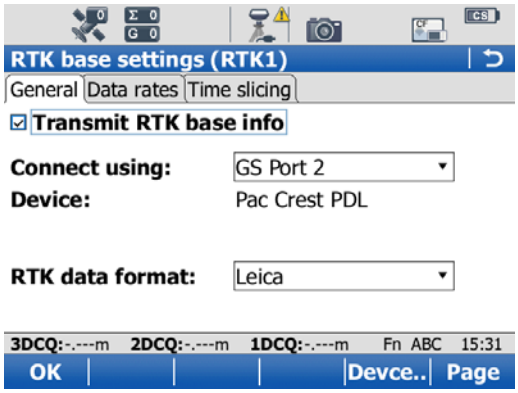
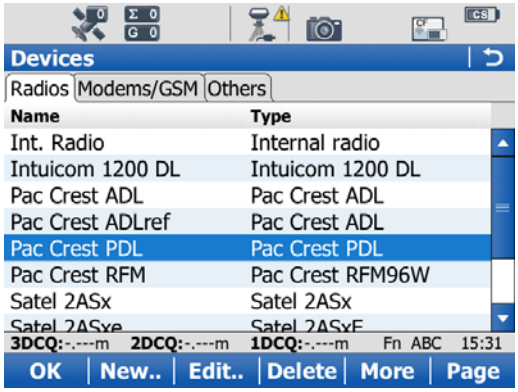
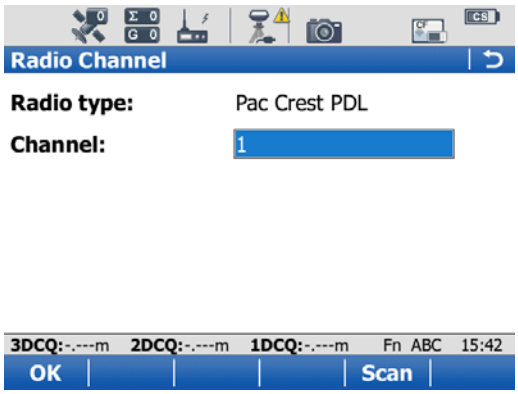
- Leica Viva Quick Guide
  - Leica GS15 Base and Rover Setup – Configuring the Base Sensor

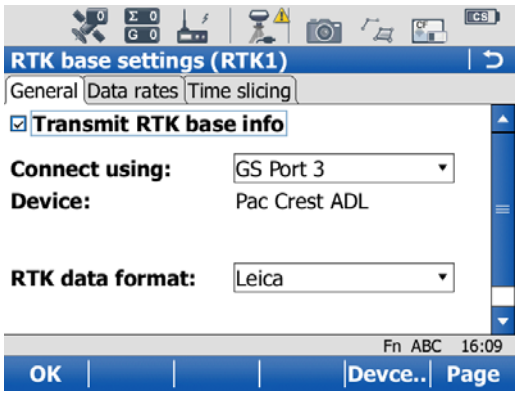
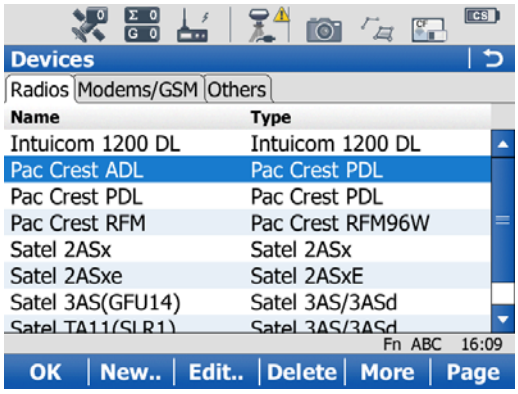
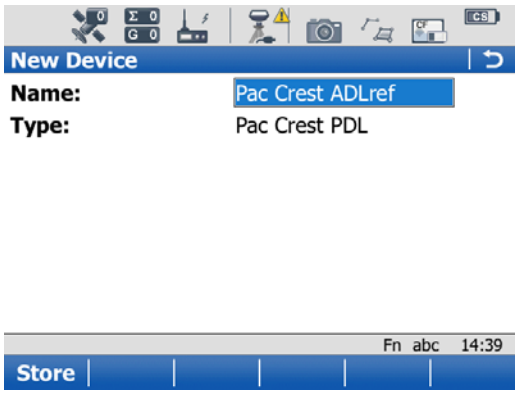
Step	Instruction	Screenshots
1.1	Position the GS15 to be used as the base sensor, and switch it on. If you wish to use a GEB171 battery, connect it to **P1** on the underside. Switch on the CS15, and from the main menu go to  then to the base menu	
1.2	Press  , then **Base Connections.**	
1.3	If you are connecting to the Base GS15 using a cable, or the Bluetooth pairing has already been set up, then go straight to **Step 1.5.** If you are connecting to the GS15 via Bluetooth for the first time, then a Bluetooth pairing will need to be set up. Use the **Connect to base** button.	

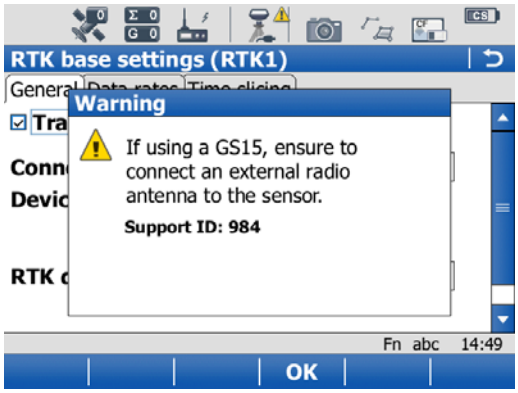
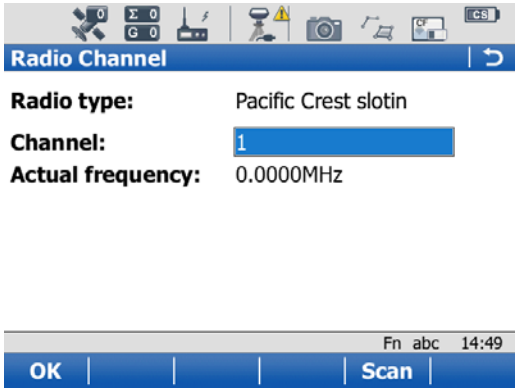
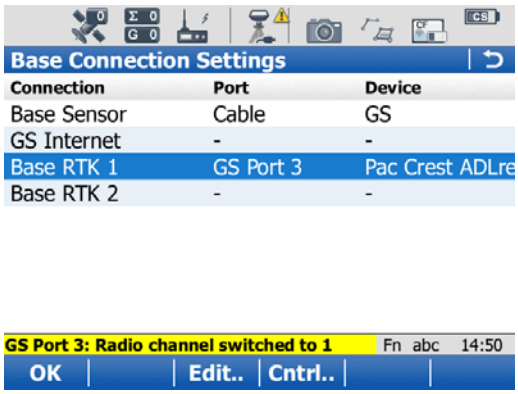
Step	Instruction	Screenshots
1.4	Make sure that **Use Bluetooth** is ticked, and that no other GS15s other than the reference/base one is switched on and press **F4 Search.** A list of available Bluetooth devices will be shown. You'll recognise the GS15 by the name, which includes the serial number, found on the base of the GS15. Select the GS15 and press **OK**. The pairing will be carried out automatically, and the Bluetooth LEDs on the CS15 and the GS15 will turn from green to blue. Press Finish to end the Wizard	
1.5	From the Base Main Menu, use the following buttons to access the All Other Connections Screen.  **If using a blue PDL base radio, go to step 1.6** **If using the ADL radio slotted into the GS15, go to step 1.9**	

- Leica Viva Quick Guide
  - Leica GS15 Base and Rover Setup – Configuring for PacCrest Blue PDL Radio

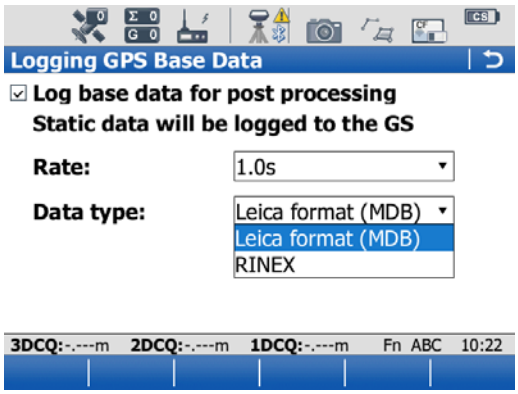
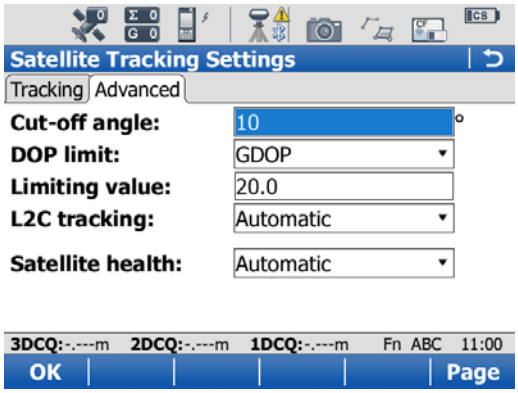
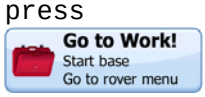
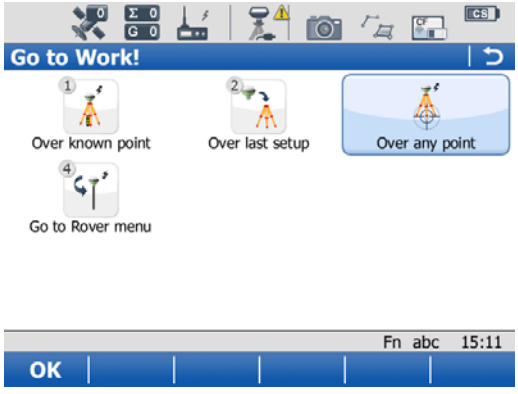
Step	Instruction	Screenshots
1.6	Make sure the blue PDL base radio is connected to **P2** on the underside of the GS15. Tick the **Transmit RTK base info** box, select **GS Port 2** for **Connect using**, and **RTK Data Format** to be **Leica**. Then press **F5 Device.**	
1.7	Go to the **Radios** tab, select **Pac Crest PDL** from the list and press **OK** twice to return to the **Base Connections** page.	
1.8	Press **F4 Ctrl** to select the radio channel to use. Alternatively, on the radio itself, press the **Channel** button until the desired channel number is displayed. Press **OK** until you are back at the **Base Menu.** Note: The channel numbers on the blue PDL radio start at '0', whereas the channel numbers on the slot-in Rover ADL radio start at '1'. Ensure that the channel number selected on the rover ADL radio is ONE HIGHER than that selected on the base PDL.	

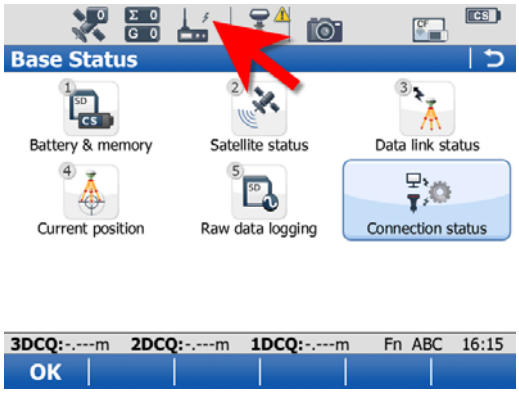
- Leica Viva Quick Guide
  - Leica GS15 Base and Rover Setup – Configuring for PacCrest ADL Base Radio

Step	Instruction	Screenshots
1.9	Tick the **Transmit RTK base info** box, select GS Port 3 for **Connect using**, and **RTK Data Format** to be **Leica**. Then press **F5 Device.**	
1.10	Highlight the device **Pac Crest ADL** in the **Radios** tab. Because the reference and rover configuration have to use differently named devices, we will create a copy of this device to use for the reference. Press **F2 New.**	
1.11	Type a new name as shown, press **Store,** then **OK.** Press **OK** again.	

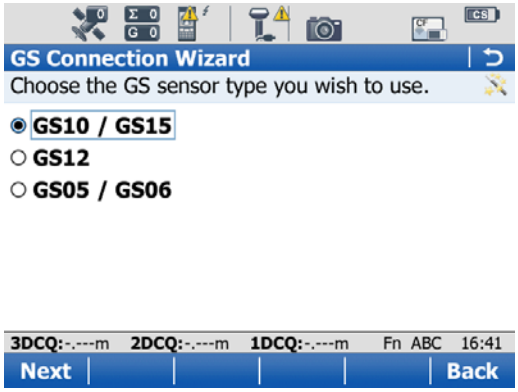
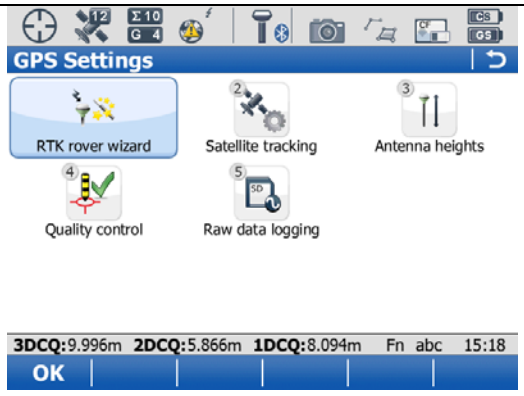
Step	Instruction	Screenshots
1.12	The following warning will show, reminding you to have the external radio antenna attached to the GS15. This is a push fit on the middle connection on the underside of the GS15. Press **OK.**	
1.13	Now press **F4 Cntrl.** Note the radio channel number. The rover radio will need to be set to the same channel number later. Press **OK.**	
1.14	Press **OK** until you are back at the Base Menu.	

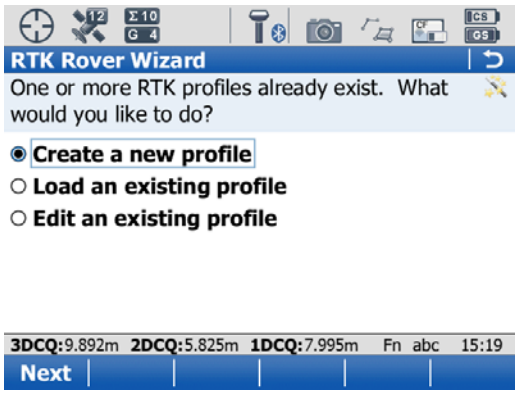
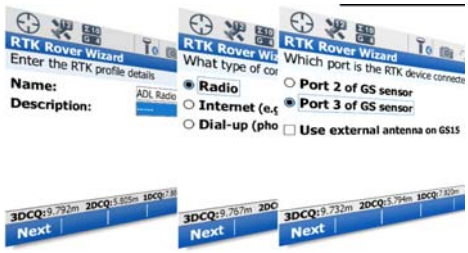
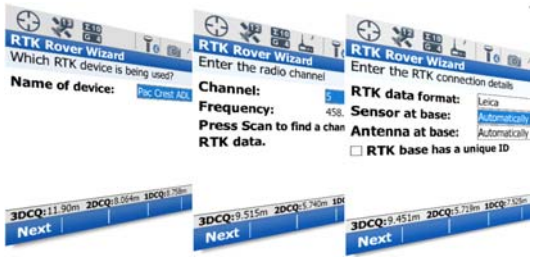
- Leica Viva Quick Guide
  - Leica GS15 Starting the Base, Recording Static Data & Base Status Messages

Step	Instruction	Screenshots
2.1	To log static data while the base is running, insert an SD card into the slot in battery compartment 1 of the GS15. Press  then  then  . Tick the box, select the required data rate and data type to be stored.	
2.2	If you want the data collection to pause if a certain DOP value is exceeded, then go to the **Advanced** tab in  .	
2.3	To start the base running, press  . • If you already have coordinates for your base point, either noted down or stored in the current selected job, use **Over known point.** • If you are returning to the previous used position, use **Over last setup.** • If you are setting up over a point with unknown co-ordinates, use **Over any point.** Follow the wizard for your chosen method. Make sure you have the correct antenna type selected.	

Step	Instruction	Screenshots
2.4	At the end of the wizard for your chosen method, you will be prompted to stay in the Base menu or return to the Rover menu, and the lightning strike (arrowed) will be pulsing to indicate that corrections are being transmitted. If you wish to check the status of the Base, then select **Base.** Press  then  and select the option you wish to check.	
2.5	When you are ready to return to the **Rover menu**, press  then  . The Bluetooth with disconnect from the base GS15, and connect to the rover GS15.	

- Leica Viva Quick Guide
  - Leica GS15 Configuring the Rover Sensor

Step	Instruction	Screenshots
3.1	If the CS15 Bluetooth connects to the rover GS15, then the Bluetooth pairing has already been set up. **Go straight to Step 3.3.** If you are connecting to the GS15 via Bluetooth for the first time, then a Bluetooth pairing will need to be set up. Press  , Then  , then 	
3.2	Select **GS10/GS15,** then press **Next.** Make sure that **Use Bluetooth** is ticked and press **F4 Search.** A list of available Bluetooth devices will be shown. You'll recognise the GS15 by the name, which includes the serial number, found on the base of the GS15. Select the GS15 and press **OK.** The pairing will be carried out automatically, and the Bluetooth LEDs on the CS15 and the GS15 will turn from green to blue.	
3.3	You will then need to configure the Rover sensor to receive the corrections. Press  then  . Use the **RTK Rover Wizard** to easily set up the configuration for the ADL Radio	

Step	Instruction	Screenshots
3.4	Create a new profile.	
3.5	Give the profile a name (eg ADL Radio), and a description if desired. Configure the following pages as shown. Tick the **Use external antenna on GS15** box if necessary.	
3.6	Select the name of the device as **Pac Crest ADL**, ensure that the channel number matches that of the Base, or press **F5 Scan** to find the channel the Base is transmitting on. Set the RTK Data format to be **Leica.**	
3.7	Once you have completed the configuration, the connection status page should have all boxes ticked, and the lightning strike will be pulsing. Press next. You will now be ready to survey.