

# mojoRTK Quick Start Guide

For use after mojoRTK installation



- when it has to be **right**

**Leica**  
Geosystems

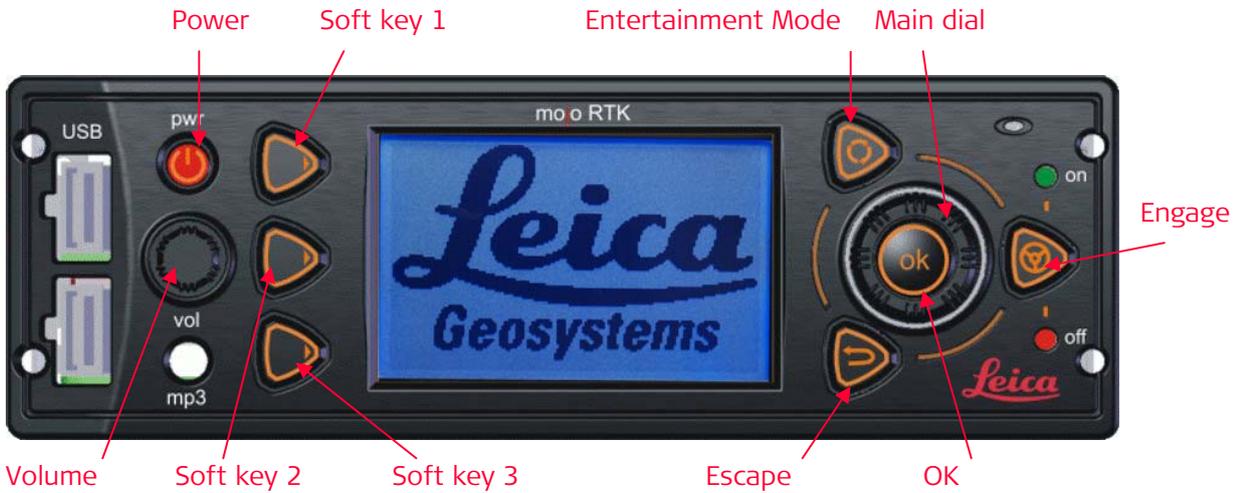
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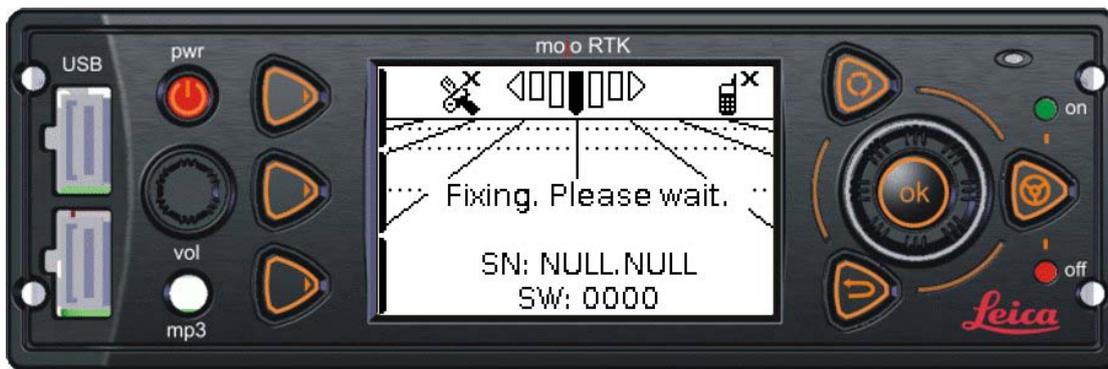
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# 1 Turning the System on

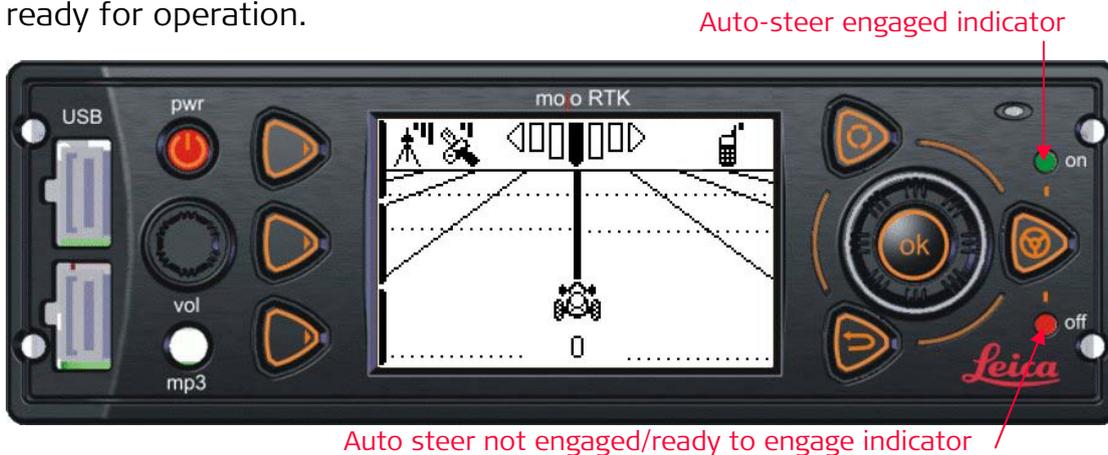
With the ignition on, press and hold the Power button for 4 seconds. After a short delay the Leica trade mark will be displayed along with a progress bar at the bottom.



When the progress bar has reached its full length the Navigation screen will be displayed.



It will take a few minutes for the console to see satellites and obtain a position fix. When the tractor icon and auto-steer not engaged/ready light appear, your console is ready for operation.

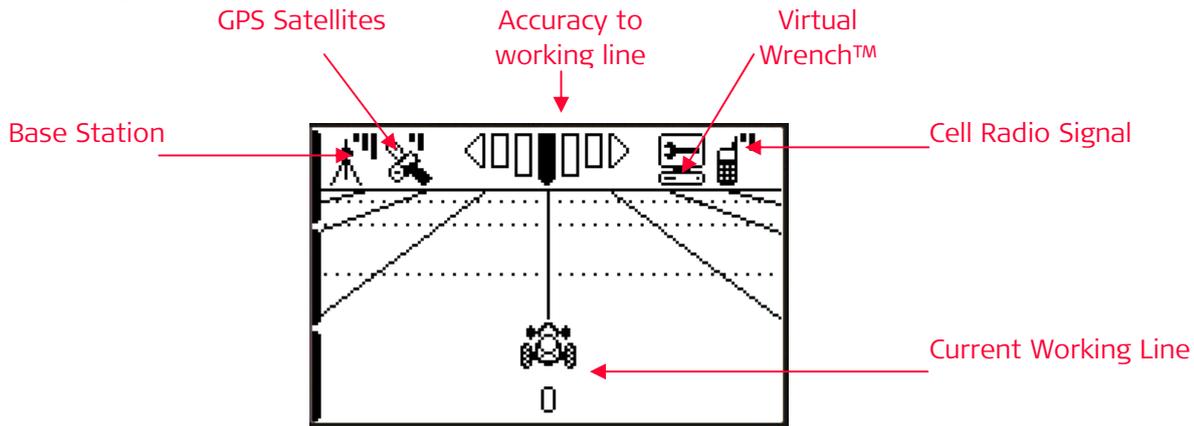


**Note:** Ensure the base channel setting is the same on the console and the base station. See chapter 12 of the mojoRTK console user manual for more information on setting the base channel.

**Note:** If there is a cross through the tractor icon, roading has not been turned off. See chapter 11 of the mojoRTK console user manual for more information about turning roading off.

## 2 Screen explanation

The Navigation screen shown below will only appear when you have an accurate fix.

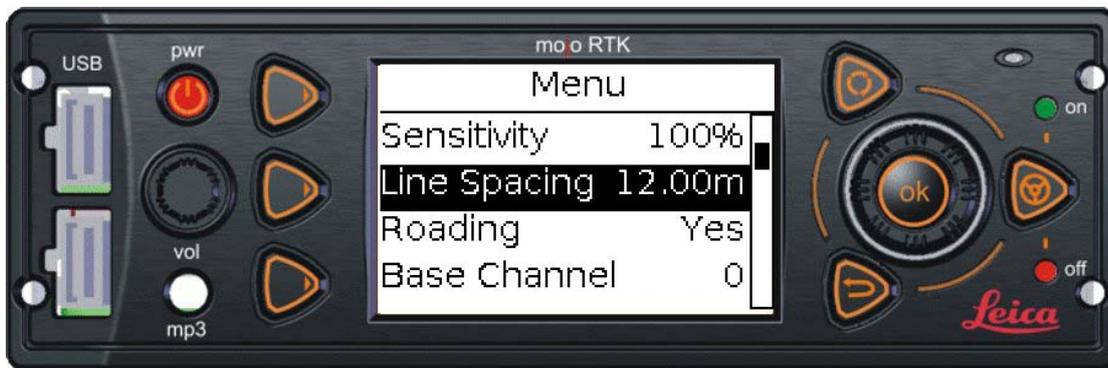


Screen Item	Description
<b>Base Station Icon</b> 	A flashing icon with an <b>X</b> means there is no communication between the console and the base station. A solid icon with three bars means you have excellent signal. A solid icon with two bars means you have good signal. A solid icon with one bar means you have poor signal. A solid icon with no bars means you are receiving data but do not have a good fix.
<b>GPS Satellites/Signal Strength</b> 	An icon with an <b>X</b> means the system is not seeing any satellites. An icon with three bars means you have excellent signal. An icon with two bars means you have good signal. An icon with one bar means you have poor signal.
<b>Accuracy to Working Line</b> 	This shows the accuracy of the system relative to the current working line while in motion. The centre bar indicates that the error is less than 5cm.
<b>Current Working Line</b> 	Current working line is in bold, and zero is displayed below the tractor line for the first pass; all other passes are numbered to the left ( <b>L</b> ) and right ( <b>R</b> ) of the centre line. A cross over the tractor icon means that roading is on.
<b>Cellular Signal</b> 	An icon with an <b>X</b> means there is no cell radio signal. Note that in this condition Virtual Wrench™ will be unavailable. An icon with three bars means you have excellent signal. An icon with two bars means you have good signal. An icon with one bar means you have poor signal. An icon that alternates between bars and an <b>X</b> means you cannot connect to the internet. This may be due to no SIM card (for GSM and HSDPA units) or no data coverage (CDMA)
<b>Virtual Wrench™</b> 	When you are connected to Virtual Wrench™ and a service technician is servicing your device this icon will appear. When the service technician disconnects the icon will change to 

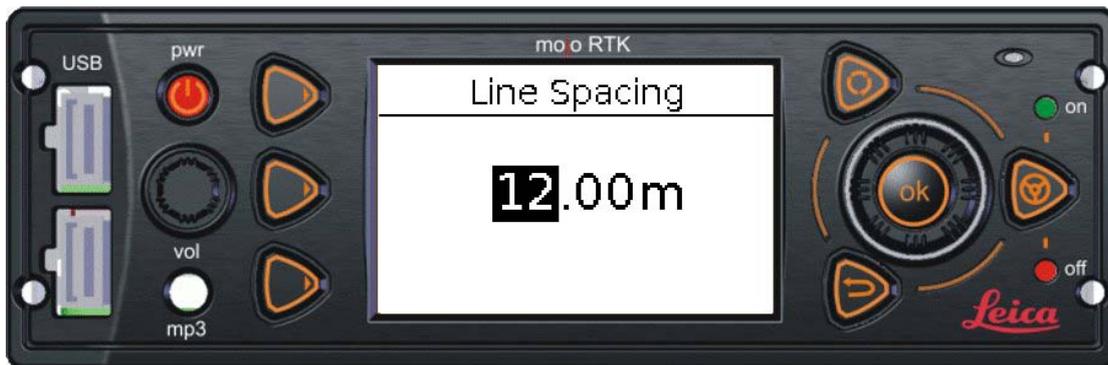
### 3 Setting the Line Spacing

The line spacing represents the width of your implement.

Start at the Navigation screen. From any menu, pressing the Escape key repeatedly will return you to the Navigation screen. When in the Navigation screen press OK to enter the main menu.



Use the main dial to scroll through the menu to select 'Line Spacing'. Press OK when Line Spacing is highlighted.



Use the main dial to change the whole digits first, rotating the dial clockwise to increase the value or anti-clockwise to decrease it. Once you have set the whole units to the desired value press OK, this will then allow you to change the fractional units (after the decimal point). Rotate the main dial to enter the fractional units. If you make a mistake while changing the line spacing, you can go back by pressing the Escape key.

Press the OK button to enter the new line spacing and return to the main menu. Press the Escape key to return to the Navigation screen.

**Note:** If the line spacing is changed, a warning will appear reminding you to alter the implement offset if necessary.

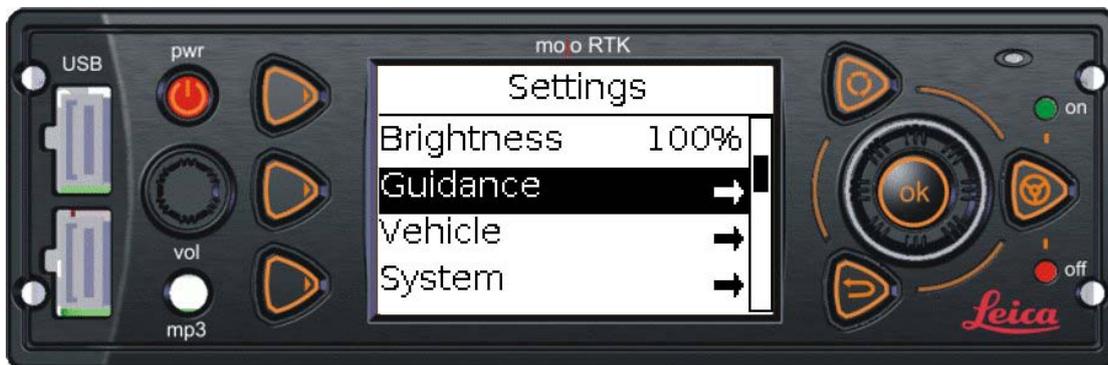
## 4 Setting the Implement Offset

The implement offset needs to be set when you are using an implement that does not line up with the centre of your vehicle (e.g. offset discs).

Start at the Navigation screen. From any menu, pressing the Escape key repeatedly will return you to the Navigation screen. When in the Navigation screen press OK to enter the main menu. Use the main dial to scroll through the menu to select 'Settings' and press OK.



Once in the Settings menu use the main dial to select 'Guidance' and press the OK button.



Press the OK button again to select 'Implement Offset'.



To change the implement offset, use the main dial to change the whole units first, rotating the dial clockwise to move the offset right or anti-clockwise to move the offset left. Once you have set the whole units to the desired value press the OK button, this will allow you to change the fractional units. Rotate the main dial to enter the fractional units. If you make a mistake you can go back by pressing the Escape key.



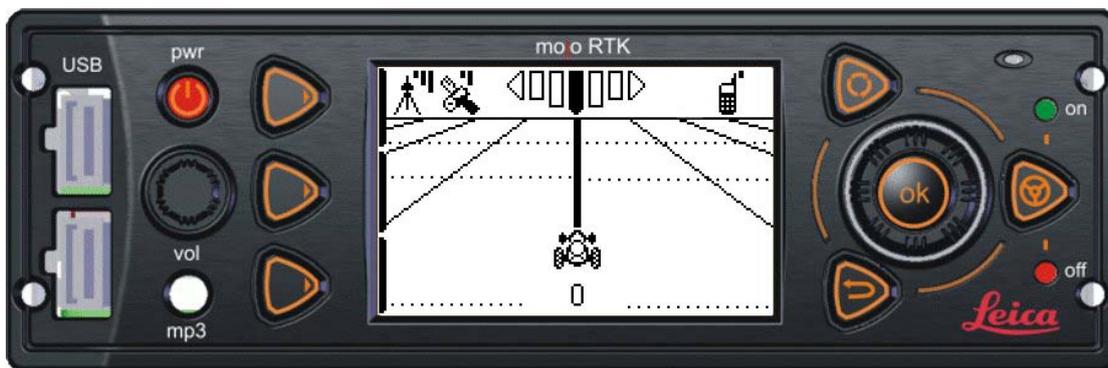
Press the OK button to use the new implement offset and return to the Guidance screen. Press the Escape key three times to return to the Navigation screen.

## 5 Setting A/B and A-Heading Waylines

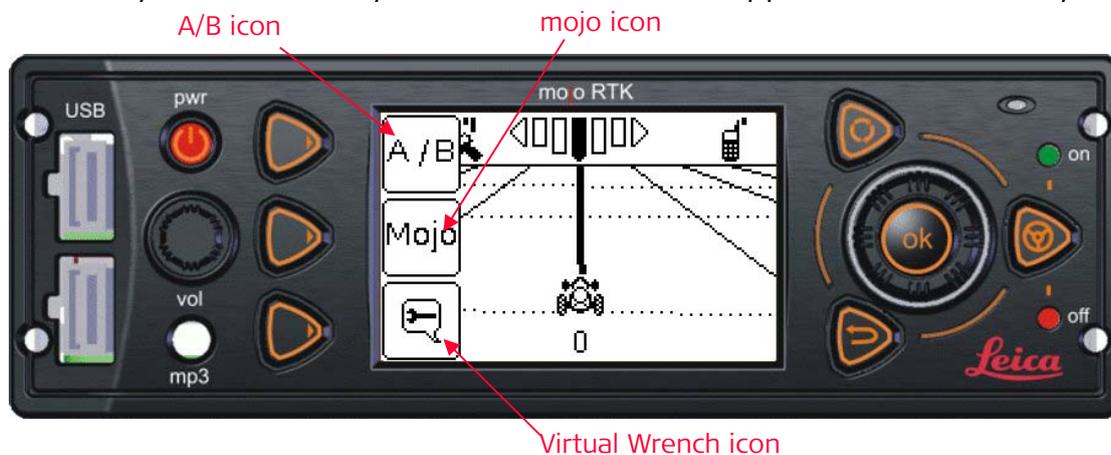
The A/B line function represents a line of best fit between two points. These points are used to generate a line that you want to guide on.

Before you can set a wayline the system must have a position fix and the Initial Setup Wizard must have been completed. When a fix has been obtained the auto-steer not engaged/ready light (red) comes on. If auto-steer is engaged, the auto-steer engaged light (green) will come on.

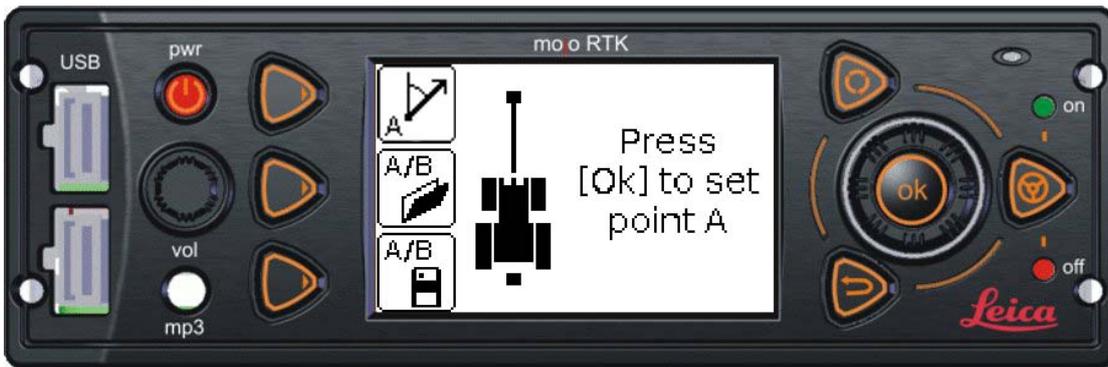
If you are not in the Navigation screen press the Escape button until you return to the Navigation screen.



Drive your vehicle to the desired starting point. This will be point A. Press any of the Soft keys and the A/B icon will appear beside Soft key 1.



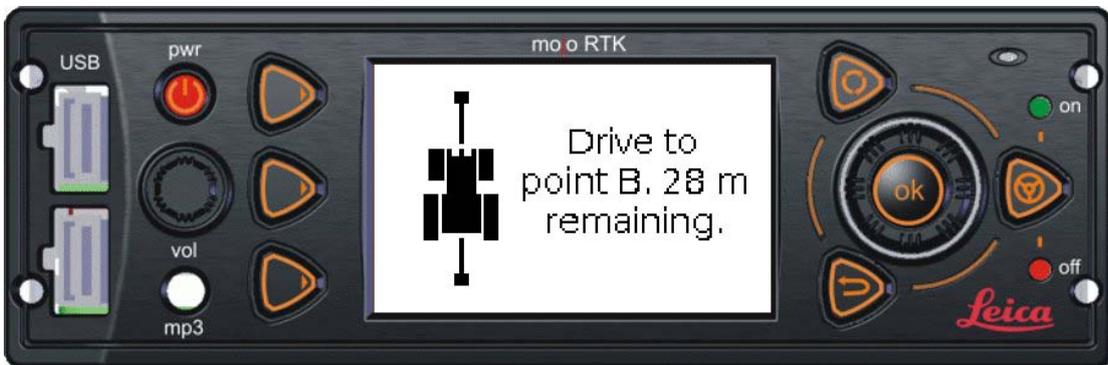
Press Soft key1 to go to the Wayline Wizard.



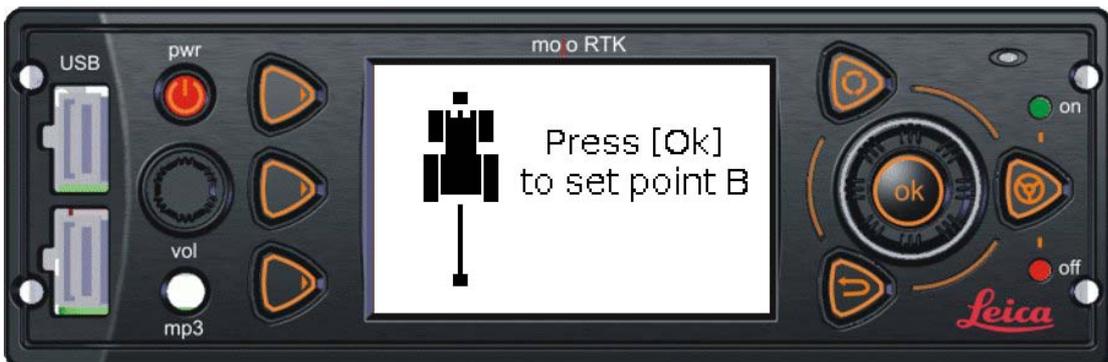
To set an A/B wayline position the vehicle at your desired A point and press the OK button. If you wish to set an A-Heading wayline then position the vehicle at the desired A point and press Soft key 1.

The A point can be set if the vehicle is stationary or in motion. To cancel setting an A point press the Escape button.

If you are setting an A/B wayline then once you have successfully set the A point the tractor icon will start to move. The vehicle must then be driven at least 30 metres before the B point can be set. A countdown of the remaining distance before the B point can be set will be displayed. While 30 metres is the minimum distance between the points, it is recommended that the B point be set as far from the A point as possible to gain the best representation of the desired line.



Once you have driven more than 30 metres, the tractor will stay at the end of the line and you will be prompted to press the Ok button. Press the OK button to set the B point. Press the Escape button to cancel setting a B point.



When the point has been successfully saved the B symbol will stop flashing and the screen will display 'Saving new wayline'. The Navigation screen will then be displayed and normal operation resumed.



If you are setting an A-Heading wayline then after setting the A point you will need to enter the desired heading.



To enter the heading use the main dial to increase and decrease the currently selected digit. Press the Ok button to move to the next digit or the Esc button to move to the previous digit.

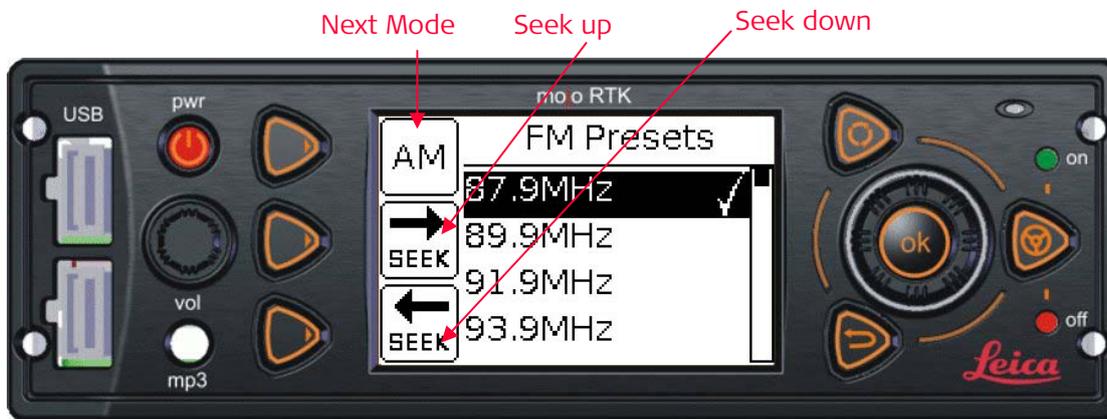
If you are on the first digit, pressing Esc will exit from the heading entry screen. If you are on the last digit, pressing the Ok button will save the wayline.

## 6 Tuning the Radio

The mojoRTK is equipped with an AM/FM radio. To listen to the radio press the Entertainment Mode button. The current entertainment mode will be displayed. The next mode will be displayed beside Soft key1. Press Soft key1 until the desired mode, either AM or FM, is reached.

Tuning is the same for AM and FM. The mojoRTK console can store 10 preset stations for AM and FM. To listen to a preset station, use the main dial to select one. When a preset is highlighted it should be heard through the speakers.

To change a preset, use the main dial to select the preset you wish to change. To use the seek functions press either Soft key 2 (scan up) or Soft key 3 (scan down) to start seeking. The seek function will stop when a station is found or if any key is pressed. If the seek function finds a station or is interrupted it will automatically update the selected preset.



To manually tune a preset station, use the main dial to select the preset to be changed and press the OK button. This will bring up the manual tuning screen. Rotate the main dial to change the frequency and press OK to save the desired frequency as a preset or Escape to cancel. The selected station will be heard through the speakers.

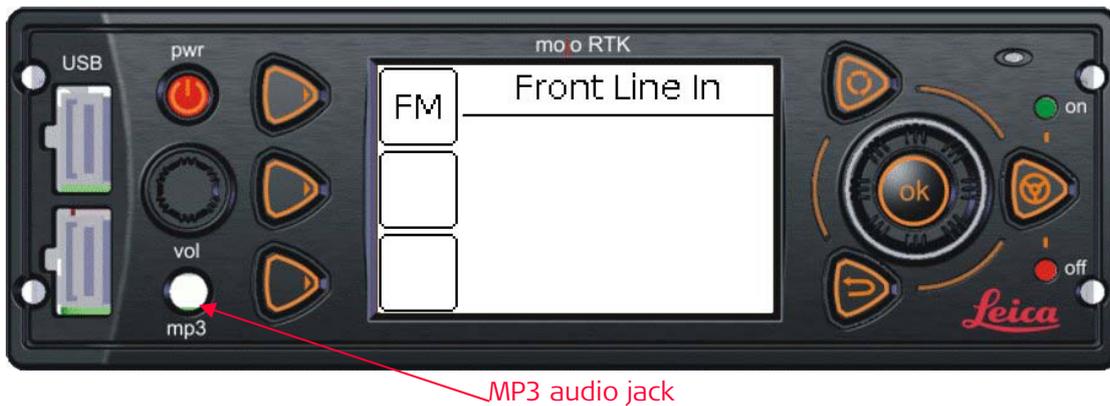


To return to the Navigation screen from the Entertainment screen press the Entertainment mode button.

## 7 MP3 Mode

To use your MP3 player with the mojoRTK console, connect it via the MP3 jack located on the front panel.

To listen to the MP3 player press the Entertainment Mode button. The current entertainment mode will be displayed. The next mode will be displayed beside Soft key 1. Press Soft key 1 until the 'Front Line In' mode is selected as shown in the figure below.



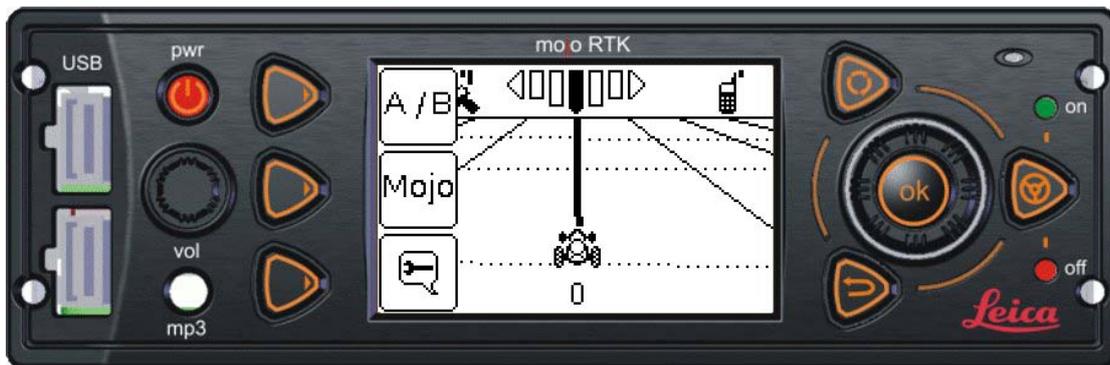
Adjust the volume to the desired level using the volume control on the front panel.

To return to the Navigation screen from the Entertainment screens press the Entertainment Mode button.

## 8 mojo Feature (Soft key 2)

The mojo feature is designed to move an A/B line to a new location, similar to the 'nudge' function seen on other guidance products. However, rather than nudging the A/B line, mojoRTK automatically moves it to the vehicle's current location.

If you are not in the Navigation screen press the Escape button until you return to the Navigation screen. Press any of the Soft keys to bring up the mojo icon beside Soft key 2.



Press Soft Key 2 to select the mojo feature and follow the instructions on the screen.



Once your vehicle is positioned correctly press the OK button.

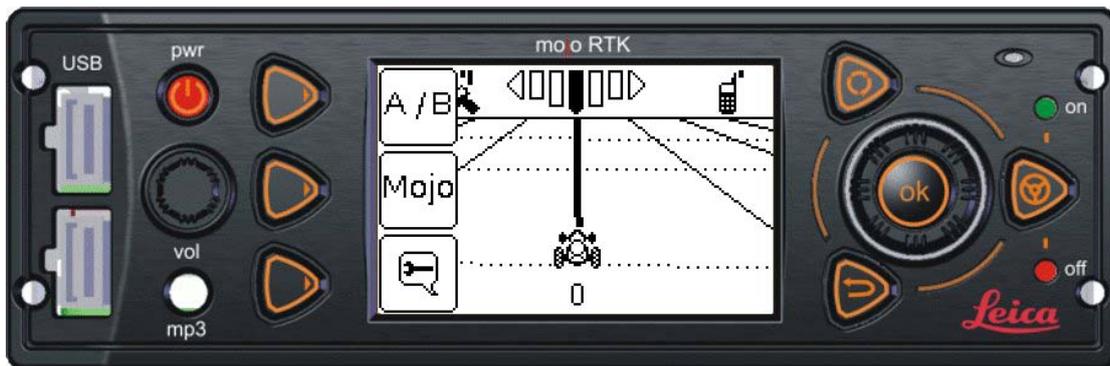


The A/B line will now be set to your current position. You will be returned automatically to the Navigation screen.

## 9 Tech support request (Soft key 3)

Virtual Wrench™ is a built in remote service device that enables you to contact a service technician via the mojoRTK console. When service is requested, an email and SMS text message is sent to a technician who can then service your console remotely.

If you are not in the Navigation screen press the Escape button until you return to the Navigation screen. Press any of the Soft keys to bring up the Virtual Wrench™ icon beside Soft key 3. Press Soft key 3 to access Virtual Wrench™.



To connect to Virtual Wrench™ select 'Yes' by rotating the main dial until it is highlighted and then press the OK button.



When you are connected to Virtual Wrench™ the screen below will be displayed:



To request support rotate the main dial to select 'Yes' and press the OK button. If you have been instructed to connect to Virtual Wrench™ by a technician, you do not need to request support at this time so select 'No'.

If you chose to request support you will need to enter a phone number to be contacted on. If a phone number has been entered before you will be able to select it from the list as shown below:



Use the main dial to scroll through the stored numbers and press the OK button to select a number. If you wish to add a new number use the main dial to select 'Add new number' and press the OK button. If a phone number has never been entered you will be taken directly to this screen.



Use the main dial to change each digit. Press the OK button to move to the next digit or the Escape button to move back. Once you have entered the number press the OK button. The console will display a request for confirmation screen as shown below:



Use the main dial to select one of the 3 options:

- Use -> Submit the support request with the displayed number
- Edit -> Change the number to use for support requests
- Delete -> Delete the current number

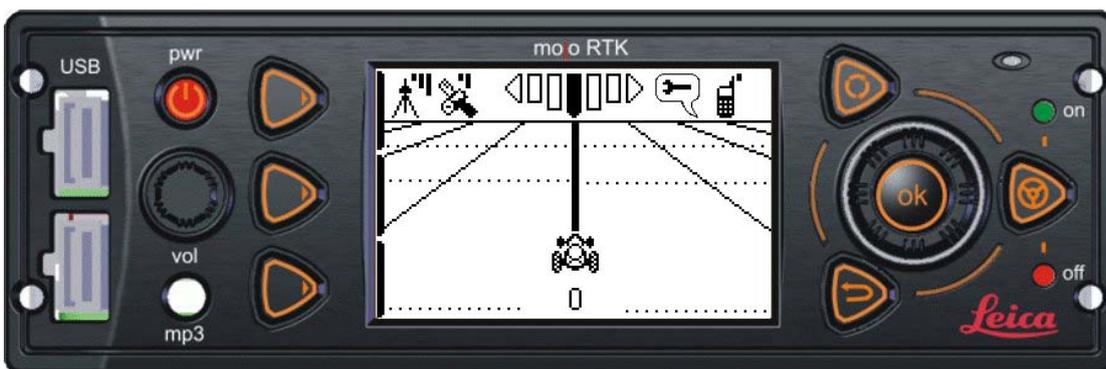
If you choose to delete the current number another request for confirmation screen will be displayed. Use the main dial to select 'Yes' to delete the number or 'No' to cancel. Press the OK button once you have made your selection.



Once a support request is submitted the confirmation screen below will be shown. Press the OK button to return to the Navigation screen.



When back in the Navigation screen the Virtual Wrench™ icon will appear in the upper right hand corner of the screen to indicate that your service is connected.



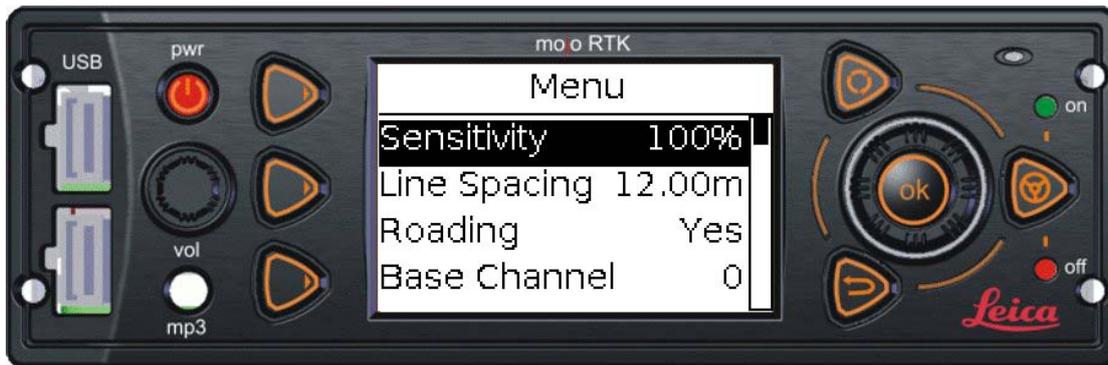
To disconnect from Virtual Wrench™ press the Soft key 3 twice. Use the main dial to select 'Disconnect' and press OK.

**Note:** There is no need to be connected to Virtual Wrench™ if you are not receiving service support from a technician. If you notice the Virtual Wrench™ icon on your Navigation screen and you do not require service please ensure you disconnect Virtual Wrench™.

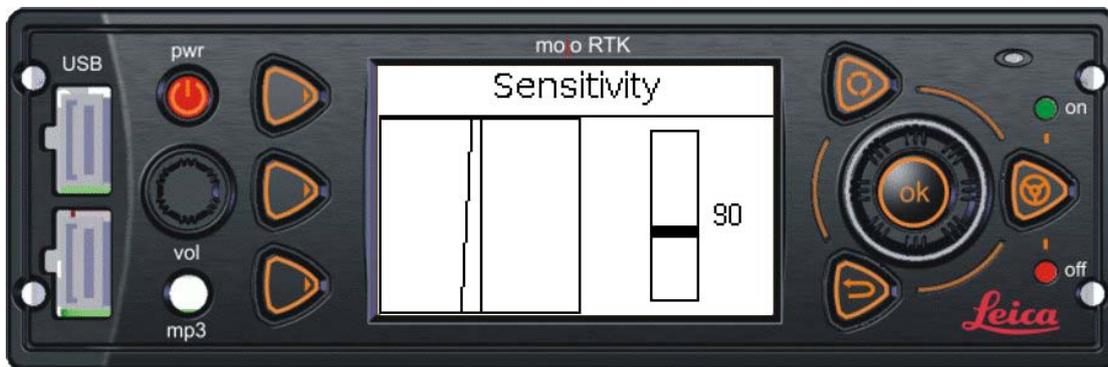
## 10 Sensitivity Adjustment

This feature allows you to control how sensitively the mojoRTK controls the vehicle's steering towards the working line, with a minimum setting of 50% and a maximum of 150%.

Start at the Navigation screen. From any menu, pressing the Escape key repeatedly will return you to the Navigation screen. When in the Navigation screen press OK to enter the main menu. Using the main dial, select 'Sensitivity' and press OK.



To adjust the sensitivity rotate the main dial, clockwise to increase the sensitivity or anti-clockwise to decrease the sensitivity. The sensitivity setting will be applied as you change it. The graph on the left side of the display shows the location of the tractor with respect to the current working line.



Press the OK button to save the changes when you have set the sensitivity to the desired level. This will save the setting and return you to the main menu. Pressing the Escape button from the Sensitivity screen will undo any changes made. To return to the Navigation screen press the Escape button once.

## 11 Roding

Roding is a safety feature designed to ensure that the system is not engaged inadvertently whilst travelling on a road. This feature will only appear when you try to engage the auto-steer for the first time.

Start at the Navigation screen. From any menu, pressing the Escape key repeatedly will return you to the Navigation screen. When in the Navigation screen press OK to enter the main menu.

Once in the main menu use the main dial to select 'Roding'. If 'Yes' is displayed on the screen roding is currently enabled. Press the OK button to turn roding off. Roding can be re-activated by pressing the OK button again.



## 12 Base Channel

**IMPORTANT:** The base station and the console must be set to the same base channel.

### Setting the Base Channel on the Base Station

The PRS 200 (Portable Reference Station or base station) has 10 available channels, numbered from 0 to 9, as well as two external radio options, External 1 and External 2, to be used with the optional serial cable. The following procedure describes the necessary steps to change the channel or use an external radio.

After the PRS powers up it will begin to acquire GPS satellites and the display will read 'Please wait ...' with a countdown in the top right corner. Once the countdown reaches zero the PRS will finish powering up. When the screen shows the satellite count in the right corner the menu system may be accessed.



To enter the channel menu option press either of the up/down buttons or the OK button. The menu option 'Channel' will be displayed. If you are already in the menu system you need to scroll through the menu options using the up/down buttons until you reach the channel option.

Once you see 'Channel' displayed press the OK button. Doing so will bring up the current channel on the left and 'OK' on the right side of the display. The default channel is set to 0.



To enter a new channel, use the up or down button to select the desired channel number and press the OK button. The display will now read 'Channel changed' and after a short while normal operation will resume.

To use an external radio and disable the internal radio, instead of selecting a channel number, scroll through until 'External 1' is displayed. Press the OK button to enter your selection.

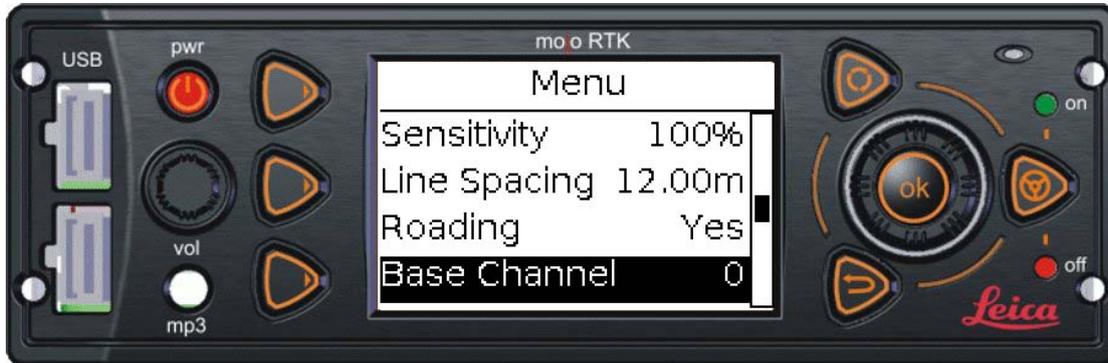


You will then be asked to choose the correct baud rate, which should be found in the user manual for your external radio. Use the up/down keys to select the appropriate baud rate and press OK.

The screen will then ask if you want no parity or even parity, again use the up/down buttons to make a selection and when satisfied press the OK button. The display will now read 'External Radio Changed' and after a short delay normal operation will resume.

## Setting the Base Channel on the Console

To set the Base Channel, start at the Navigation screen. From any menu, pressing the Escape key repeatedly will return you to the Navigation screen. When in the Navigation screen press OK to enter the main menu. Use the main dial to scroll through the menu and press the OK button when 'Base Channel' is highlighted.



To change channel rotate the main dial until the desired channel number is displayed and then press the OK button.



The channel will now change and once changed the main menu will be displayed. To return to the Navigation screen press the Escape button.

To use an external radio and disable the internal base radio, instead of selecting a channel number, scroll until 'External' is displayed. Press the OK button to enter your selection.

You will then be asked to choose the correct baud rate, which should be found in the user manual for your external radio. Rotate the main dial to select the appropriate baud rate and press OK.

The console will then ask if you want no parity or even parity, again use main dial to make a selection and when satisfied press the OK button.

