

HOW TO GUIDE: Ez-Steer Installation and Configuration

Note: If the installation of the mojoRTK is to be done using an Ez-Guide 500 the software in the T2 controller needs to be downgraded from SCM firmware 4.01.00 back to SCM firmware 3.00.01.

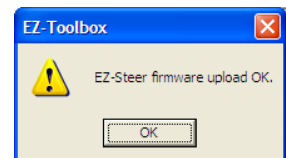
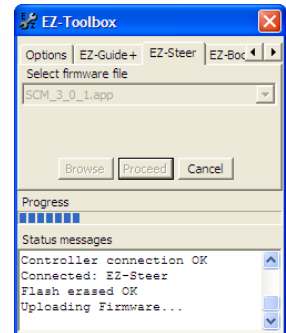
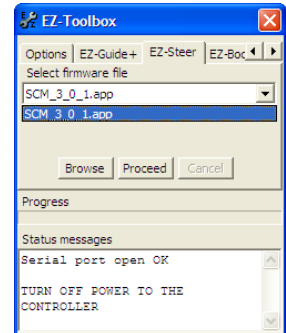
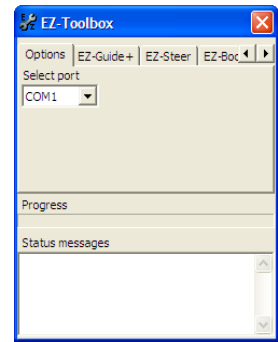
The latest SCM firmware 4.01.00 will only be loaded onto the T2 if the steering kit is being used with an Ez-Guide 500. The downgrade procedure is as follows:

Procedure for Down Grading the T2 controller:

1. To clarify which part of the system is being downgraded a picture of the T2 controller is shown right:
2. Go to the Trimble website
<http://www.trimble.com/agriculture/ez-steer.aspx?dtID=support>
3. Download the Ez-Toolbox. This is the software used to make the upgrade. Once downloaded run the program which will make a shortcut on your computer's desktop called Ez-Toolbox
4. From the website above, download the software SCM firmware 3.00.01 and save to an accessible file on your computer
5. You will need to have the T2 controller connected to a cigarette plug to give power to the unit
6. Using a standard Ez-guide plus Ez-steer cable with the red and green RS232 DB9 connectors plug the red connector into the T2 and the green into your lap top



7. Double click on the newly created Ez-Toolbox shortcut on your computer's desktop
8. Change the COM port to match the port that you are using on your computer
9. Click on the Ez-Steer tab at the top of the program
10. Hit the browse button to locate where you have previously saved the correct version SCM firmware 3.00.01 and press OK
11. Once you have chosen the location where the file is you need to select it in the list if it isn't already
12. Turn power off to the T2
13. Hit "Proceed"
14. Turn power back on the T2
15. The firmware will now be loading. Wait for this to complete – you should see the message below:
16. You can now turn off the power to the T2 and close down the EZ-Toolbox application on your computer



System Installation

- Install the EZ-Steer motor and T2 as per the Trimble installation instructions
- If installing with an EZ-Guide 500 system use the interface cable for the EZ-Guide 500 (Leica Part # 675783)
- If you are just using the EZ-Steer motor and the T2 use the interface cable for the EZ-Steer (Leica Part # 675763)
Note: This cable requires that you connect the Trimble cable that normally goes from the T2 to the Trimble lightbar and mojoRTK interface cable with the connector that normally goes to the lightbar.
- Install the mojoRTK system in the vehicle as per the standard mojoRTK user manual

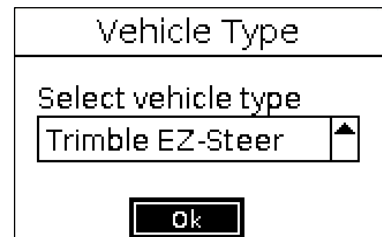
Configuration Procedure

When the mojoRTK console starts up for the first time it will start a configuration sequence designed to guide you through the initial setup of the console.

The mojoRTK user manual explains most of the standard configuration for the mojoRTK console (refer to the section 'Running the mojoRTK Console for the First Time')

This part of the installation guide refers to the selection of the Trimble EZ-Steer kit and its configuration for use with the mojoRTK console.

1. Once you have reached the vehicle type section of the setup sequence you need to select "Trimble Ez-Steer" as the vehicle type. Pressing okay will confirm that the CAN bus is connected and the steering kit is enabled



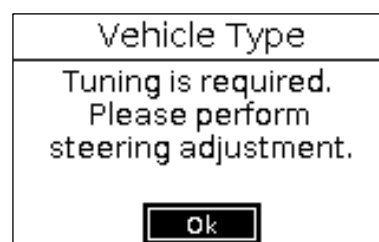
The screenshot shows a screen titled "Vehicle Type". Below the title is a text box labeled "Select vehicle type" containing the text "Trimble EZ-Steer" and a small upward-pointing arrow icon. At the bottom of the screen is a button labeled "Ok".



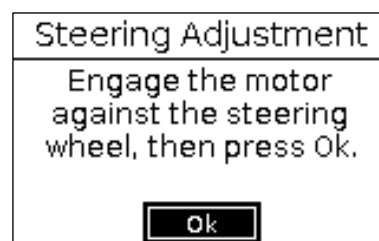
2. When you have pressed OK you should see a screen similar to this which will tell you the status of the CAN connection to the EZ-Steer kit. If this message is not displayed check your cables and connectors and ensure that you have powered up the EZ-Steer kit. Press OK when the screen below is displayed



3. If it is the first time you have set up the EZ-Steer or you are changing from another steer kit then you will be prompted to perform a configuration procedure for the EZ-Steer. Press OK to begin configuring



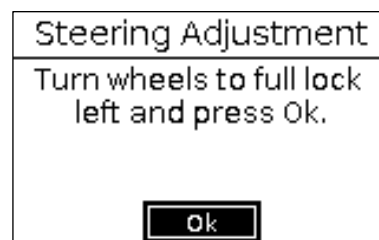
4. On the next screens enter the Antenna Separation, Red Antenna Offset and Vehicle Height. This procedure is covered in greater detail in the standard mojoRTK user manual



5. A screen will be displayed telling you to engage the EZ-Steer motor against the steering wheel. Press OK when the motor has been engaged



6. You will then get a message to start driving the vehicle at 4km/hr. Select an appropriate gear in fairly flat open ground **with a clear view of the sky as GPS is required for this step**. Press OK when you are ready

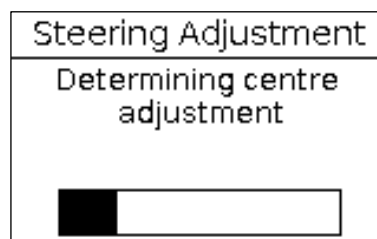


7. The system will then ask you to turn the steering wheel full lock to the left. Once you have done this press OK

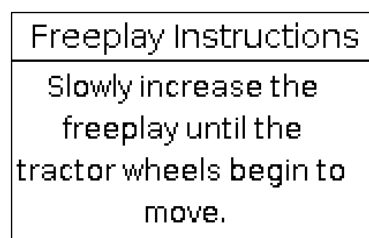
8. The system will then configure the steering for turning left. Keep the wheel at full lock left until configuration completes.

9. Repeat steps 7-8 for turning to the right.

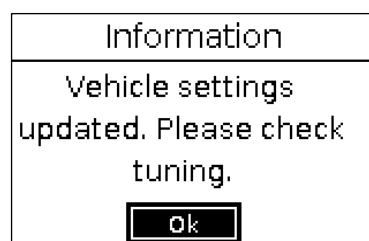
10. You then need to configure with the steering centred. It is recommended to try and get the nose of the tractor to aim at the same place while completing this configuration routine. It does not have to be perfect but the closer it is to the centre, the better



11. A screen will then be displayed stating that configuration is complete, however there is actually one more setting that needs to be adjusted. Press OK to continue



12. The final configuration step is the 'freeplay'. This allows the user to take out the movement of the steering wheel, taking up the slack. While you are changing this value the EZ-Steer motor will change turn, changing directions every few seconds (**Note**: the larger the value you set, the more it will move). Adjust this figure up until you see the wheels twitch slightly. Press OK when you are satisfied with the setting



13. Once you have entered the freeplay setting the screen below will be displayed telling you that you have completed configuration and prompting you to check the control tuning. See the [mojoRTK Tuning Guide](#) for more information on tuning.