

DynaKar

Quick Guide for first use of the DynaKar



The DynaKar is a dynamic car which is ideal for carrying out school level investigations of the laws of motion from KS2 to KS5. It is a simple to operate wireless device which logs data on a Windows PC to produce graphs of distance and velocity against time and can be used to measure acceleration and other relevant parameters.

1. Install the Logbook Graphing software provided inside the box.
2. The unit takes two AA batteries which are installed from the base of the car.
3. Remove the USB Dongle from it's slot between the front wheels in the base of the DynaKar. Plug it into the PC onto which you have installed Logbook Graphing. (note no software drivers are required)
4. Turn the DynaKar On, using the switch on the base of the DynaKar.
5. Start Logbook Graphing software from the Desktop icon.
6. Logbook Graphing will show a meter which will change as you move the rear wheels of the car.
7. To start a log click on the toolbar icon 'Log DynaKar'.
8. The log will start when the rear wheels of the DynaKar have moved a short distance.

Recording Types:

There are 2 recording types available in Logbook Graphing, Quick Log and Regular

DynaKar Graphing Quick Log

In quick log mode there are 3 default settings, which cannot be changed:

- **Duration:** the length of the recording is set to 8 seconds.
- **Trigger Distance:** This is the distance the car needs to move before the recording starts and the default is set 10 mm. When a recording is started the distance is set to zero and when the car has moved by the trigger distance the recording begins.
- **Time Out:** The default time out is set to 60 seconds.

DynaKar Graphing Regular Recording

In regular recording mode there are 3 settings available:

- **Duration:** the length of the recording can be set, using the dropdown list in the recording window to 4, 8, 15, 30 or 60 seconds.
- **Trigger Distance:** The triggers distance can be set, from 1 to 100 mm.
- **Time Out:** The time out can be set to any value between 10 and 100 seconds.

Resetting the DynaKar Communications

If the displacement meter in Logbook Graphing software does not show any changes when the car is moved, wireless communications may need to be re-established. Try in turn:

1. Turn the DynaKar off and then on again, using the switch on the base of the car;
2. Check your batteries;
3. Ensure the dongle is plugged in to the computer
4. Restart the software.
5. Follow the pairing instructions below.

If communications is not reset by any of these actions please contact ScienceScope for support.

Pairing the USB Dongle.

Each DynaKar is paired to the USB Dongle with which it is supplied. You do not need to carry out any pairing actions, just plug the dongle into any PC and start the software to begin gathering data. If the DynaKar will not connect to the wireless dongle is LED on the top of the DynaKar will flash slowly. The below steps will enable you to pair the dongle and DynaKar.

1. Exit software
2. Unplug dongle
3. Switch off DynaKar
4. Switch on DynaKar
5. Hold pairing button on the bottom of the DynaKar until the LED on the top flashes fast. Then release.
6. Quickly plug the dongle into the PC. The LED will go out.
7. Start software and begin logging.

Power Saving Shutdown

The DynaKar has a power saving feature which will power down the car after 11 minutes of inactivity. To wake it up press the 'pairing' button on the base of the DynaKar, briefly. Do NOT hold it down. When not in use switch the DynaKar off.

Checking the Battery Level

When the DynaKar batteries are getting low the LED will begin to flash once every 2 seconds. Replace the batteries as soon as possible. When the LED comes on permanently the car will not work until the batteries are replaced.

Technical Specifications

Power:	2 AA 1.5V batteries
Typical Battery life	50 hours
Communications to the PC:	2.4GHz wireless
Enters sleep mode after:	11 minutes