DroidCAL

Ecotrons EcoCAL for Android phones

User Manual

V1.4

Note:

DroidCAL software is the intellectual properties of ECOTRONS LLC, it's not allowed to re-produce or re-distribute without approval of ECOTRONS LLC.

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Email: info@ecotrons.com

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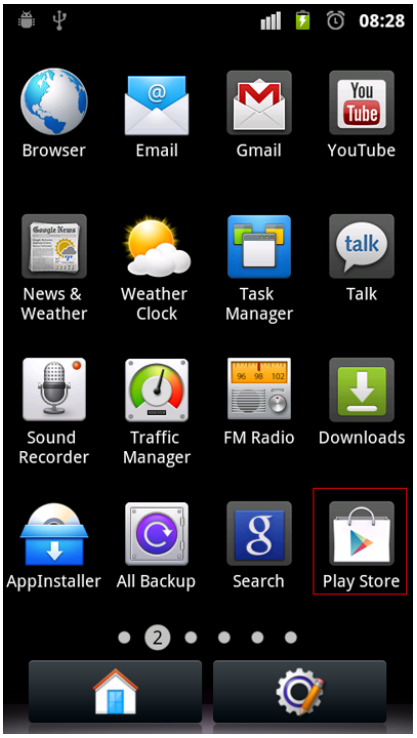
Chapter 1 Installation

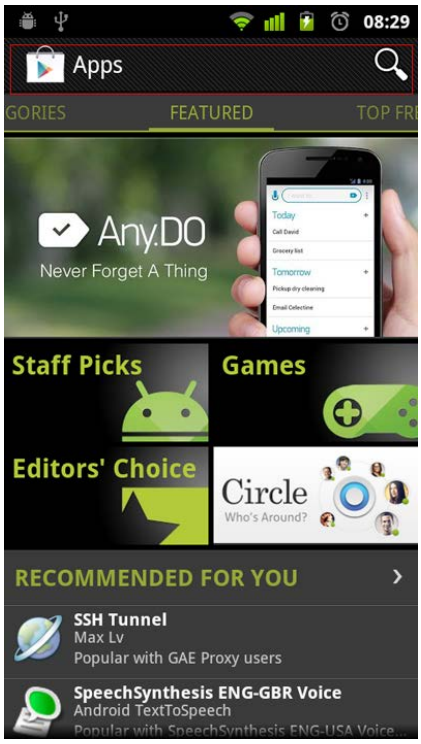
1.1 Install the DroidCAL via Android photo application “Play Store”

You can download the DroidCAL via Android phone application “Play Store”.
Just search “Ecotrons” in Google “Play Store”.

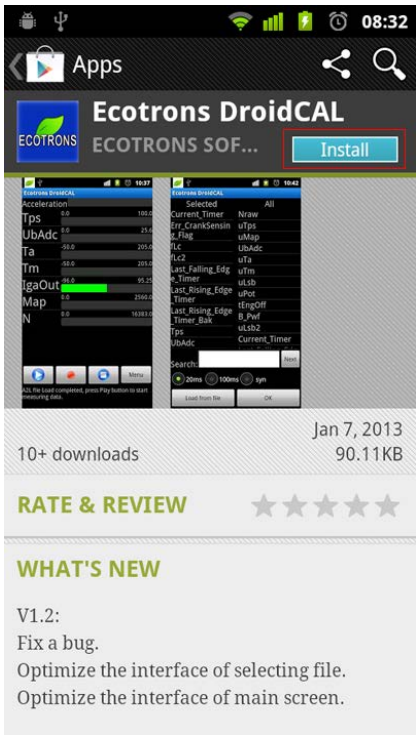
1. Open the Play Store.



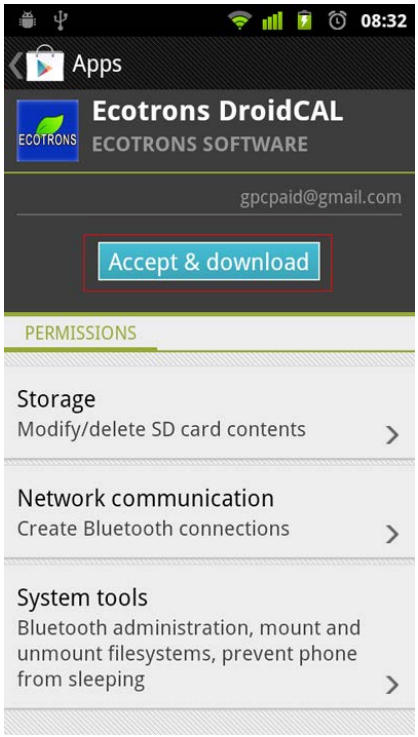
2. To search ecotrons in the search bar.



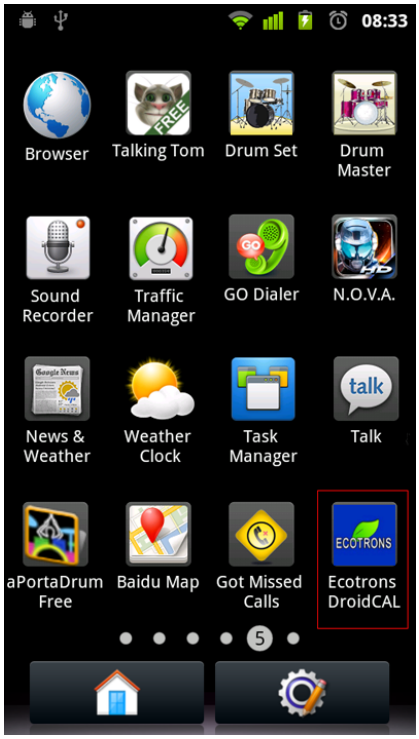
3. You will search Ecotrons DroidCAL. And then click the Install button to install DroidCAL.



4. Clicks accept & download.



5. After the download is complete, the software will automatically install. The following figure DroidCAL installed the appearance of the finished

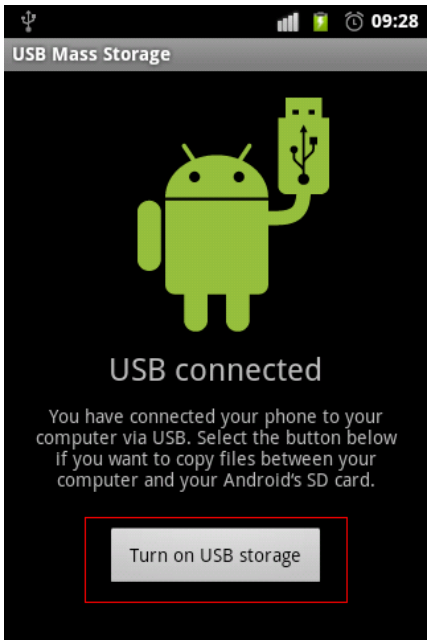


1.2 Install the DroidCAL via computer

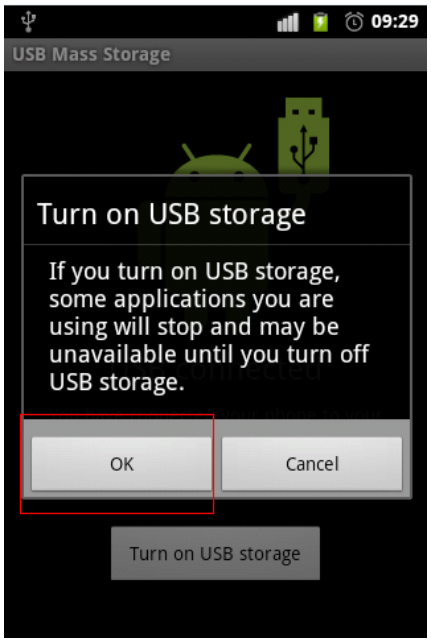
Note, different versions of Android phones, setting method may be different, specific settings,

please see the phone manual.

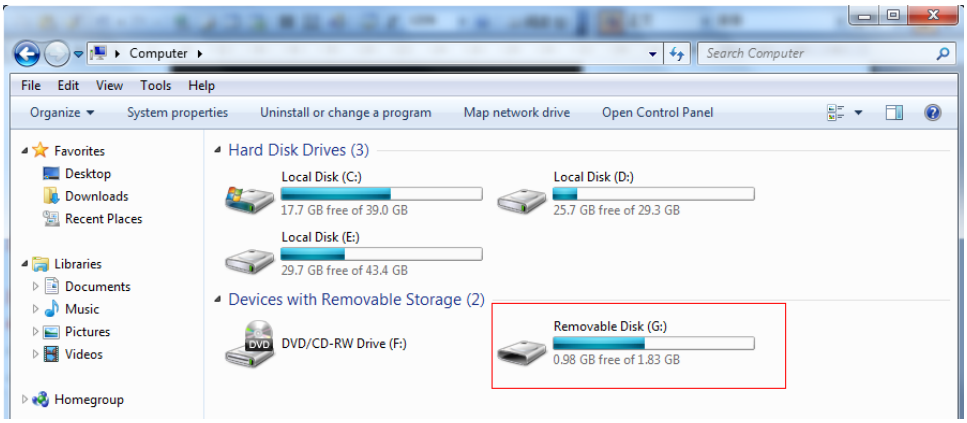
1. Using the phone data cable to connect your phone to your computer, "USB Mass Storage" window will pop up on the phone, and at the same time the USB icon appears on the phone's notification bar.



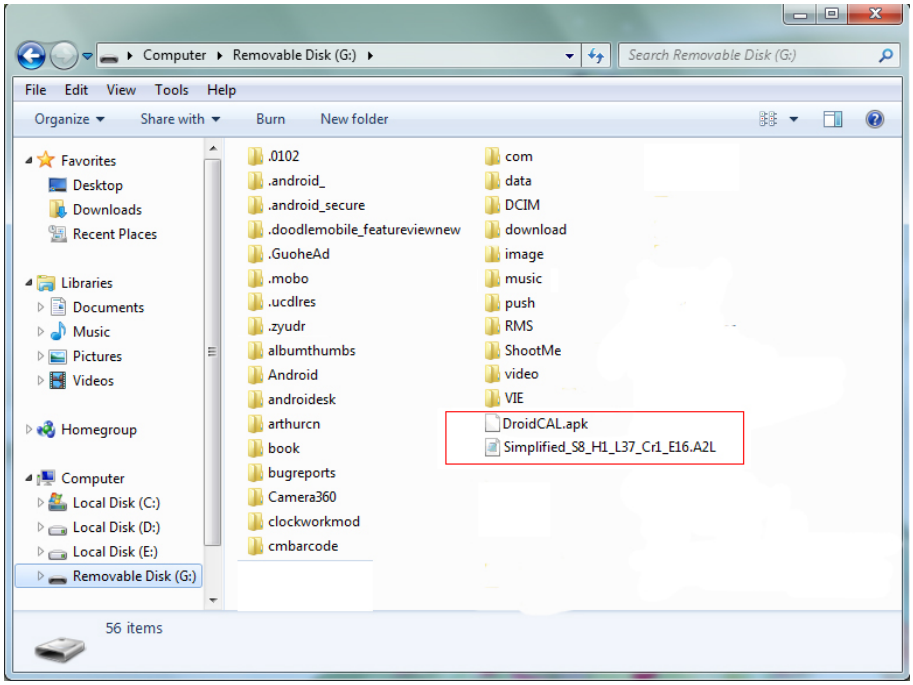
2. Click on the "turn on USB storage" button, Click the "OK" button in the pop-up window.



3. Open the "computer", select the disk drive corresponding to the phone's memory card, the default name is "Removable Disk".

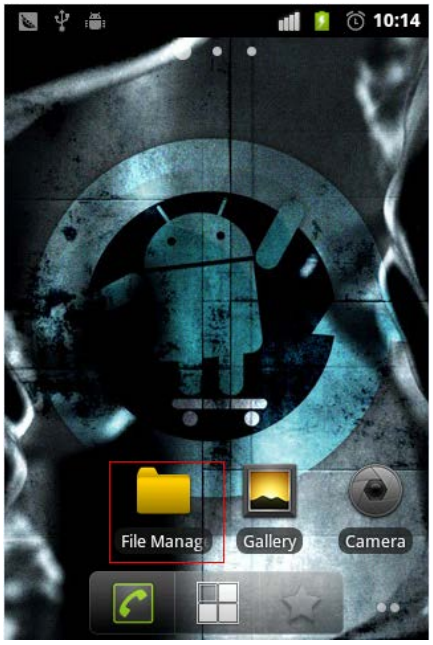


4. Double-click to open the "Removable Disk".
5. Copy and paste the " DroidCAL.apk" file and "A2L" file to "Removable Disk"



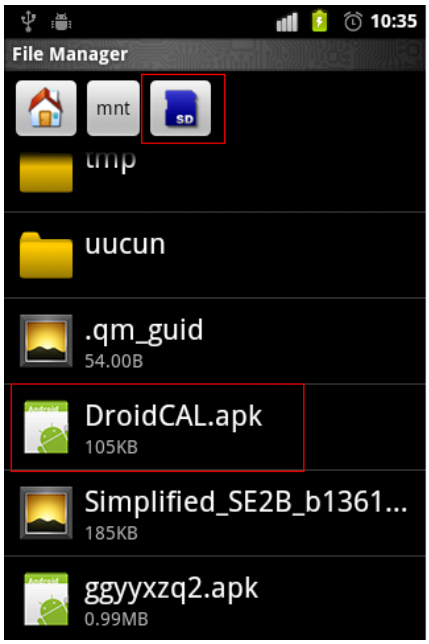
6. Click on the phone "Turn off USB storage" button, unplug the data cable.

7. Find the file manager on the phone (Different phone's file manager names may be different).

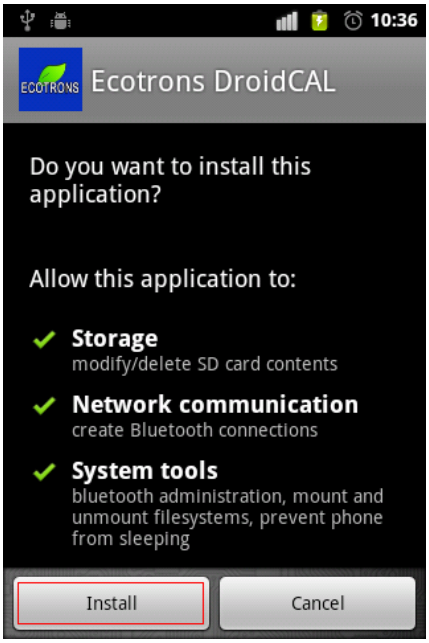


8. Open the file manager.(The default name of memory card is sdcard)

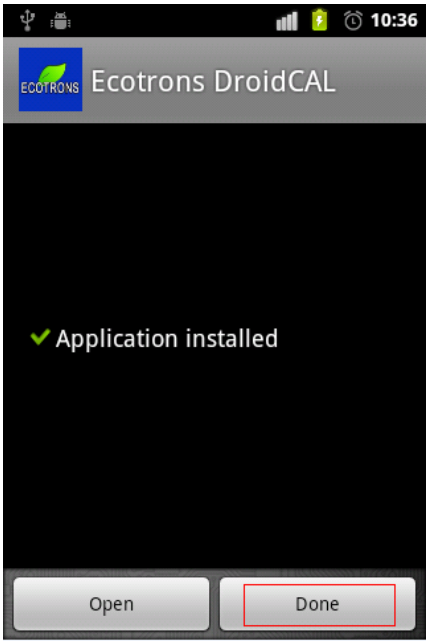
9. Find "DroidCAL.apk" file in the memory card.



10. Click DroidCAL.apk to install it.



11. Click the "Done" button, the installation was successful.



Chapter 2 Using DroidCAL

2.1 Connecting the Bluetooth Device

Ecotrons Bluetooth adapter is designed to set up the communication between Ecotrons ECU and a Bluetooth-capable mobile device, like a smart phone, a laptop or a tablet, without a wired connection. It is a plug-in device to the Ecotrons EFI kit. The idea is simple, to remove the wired connection. And the application is cool, to log ECU data and tune your fuel injection system via your mobile phone (Android phone for now. iPhone app is yet to be developed).

Previously, our customers have to put a laptop into the backpack during riding a bike to log data. And the wired connection has to be secured by extended serial cable, or worse, a serial cable plus an USB adaptor to the laptop. Often users have to use duct tape to secure the wired connection, during highway driving. Now with this Bluetooth adapter, you can set up the Bluetooth communication between the ECU and your Droid phone, and drop you phone in the pocket and start to drive. The data are logged seamlessly via Bluetooth communication. No more worrying about the dropped serial cable, or the USB connection shaken down.

Further more, you can even use the Droid phone as a display or multi-gauge, by fixing it on the cluster. Your phone will display real time RPM, TPS, lambda, temperatures, MAP sensor, etc.

Ecotrons Bluetooth module

Ecotrons Bluetooth spec:

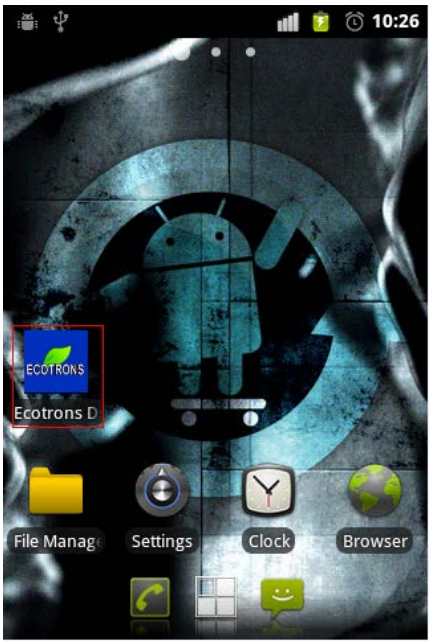
- Plug-in to a DB9 sub (RS232 connector)
- Connect to 12v battery directly

- Generic Bluetooth Communication
- Compatible to other Bluetooth devices
- No other parts needed for Bluetooth communication

1. Connect the Bluetooth module 12V+ to the 12V battery positive electrode, and connect 12V- to the negative terminal of battery.
2. Plug the Bluetooth module into the Ecotrons ECU harness, with the DB9-sub connector.

2.2 Load A2L file

1. On the phone menu find the DroidCAL icon. Click DroidCAL to run the software.



2. The first time you run the DroidCAL, software will load a demo A2L, interface is shown below.

3. Press the DroidCAL menu button →Load A2L file.

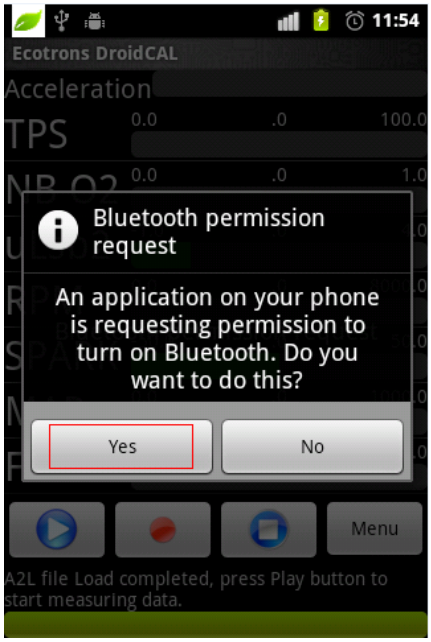
4. Select the A2L file to be loaded.

5. Successfully loaded A2L file.

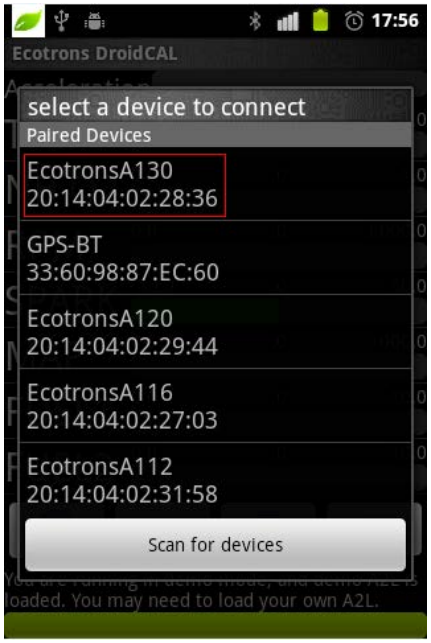
2.3 Start measuring

1. If the user needs to measure the data, click the play button.

2. First start measuring, if the phone's Bluetooth is not connected, it will request to turn on the Bluetooth function. The user clicks on the yes button, and automatically turns on Bluetooth.



3. Bluetooth function is turned on; the software will automatically search for available Bluetooth connections, and a list of available connections. Click Ecotronsxxxx (xxxx: Bluetooth module serial number, for example EcotronsA130) to connect. If no Ecotronsxxxx, the phone is not successful connected to the ECU.



4. First time connection may be required to enter a password, and the password is "1234".
5. Start measuring data.

6. If you want to stop measuring, please click the stop button.

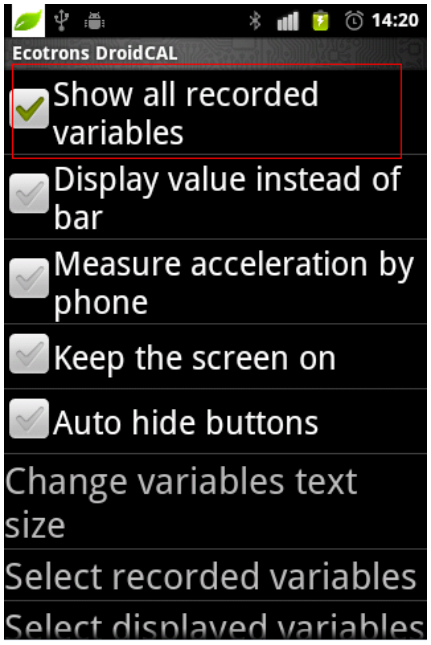
2.4 Data Recording

After the start measuring, the user can click the record button to record data.

The user can click on the stop button to stop the data recording.

2.5 Show all recorded variables.

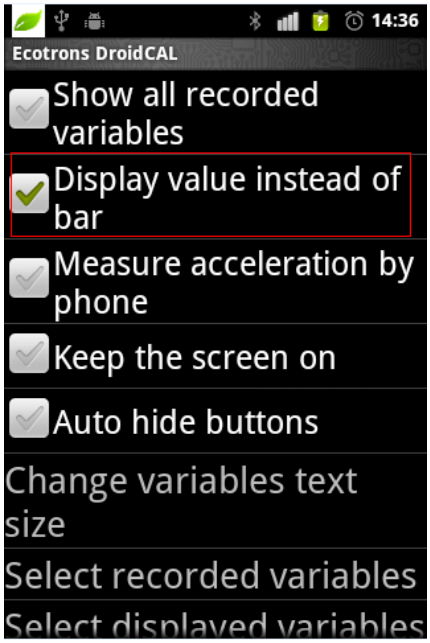
1. By default, DroidCAL shows only a few important variables, but DroidCAL actually recorded variables far more than these. Click Menu→Settings, open settings menu.
2. Select Show all recorded variables.



3. DroidCAL will display all the recorded variables.

2.6 Display value instead of bar

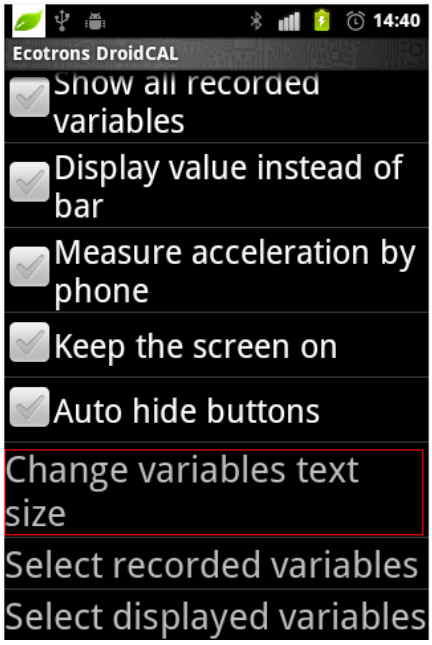
You can also use the current value of the variable instead of the bar shows. Click Menu→Settings, select Display value instead of bar.



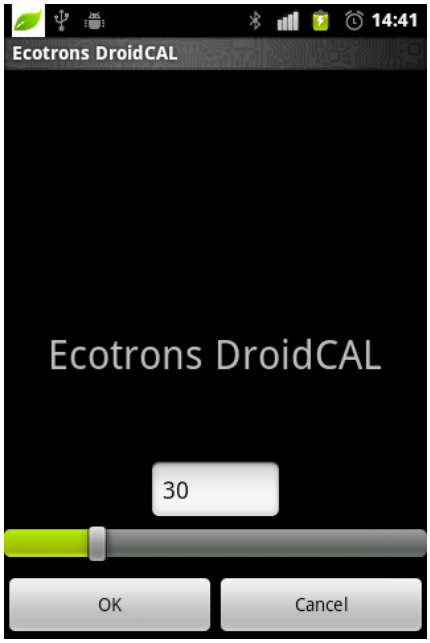
The changes will take effect the next time you start the program.

2.7 Change variables text size

If your screen is too big or too small, the variable text display inappropriate, you can easily modify the text size. Click Menu→Settings, select Change variables text size.

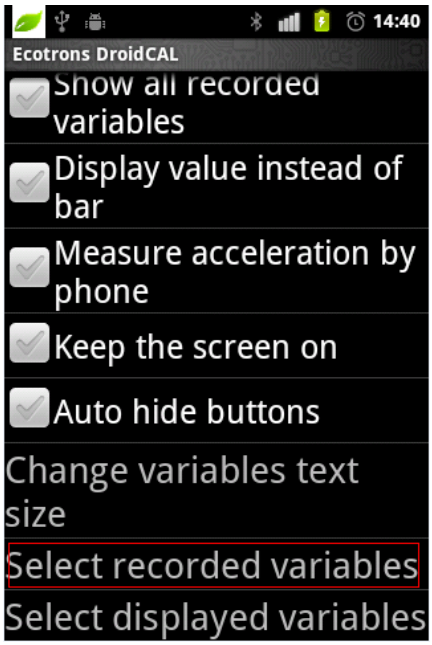


You can make changes as needed; the default text size is 30.



2.8 Select recorded variables

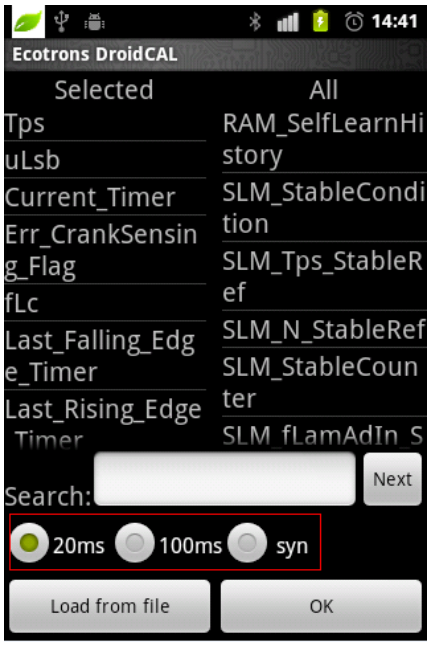
You may need to modify the variables to be recorded, click Menu→Settings→ Select recorded variables.



The variables have been selected on the left; the right is the optional variable. Click the list on the left to remove variable, Click the list on the right to add variables.

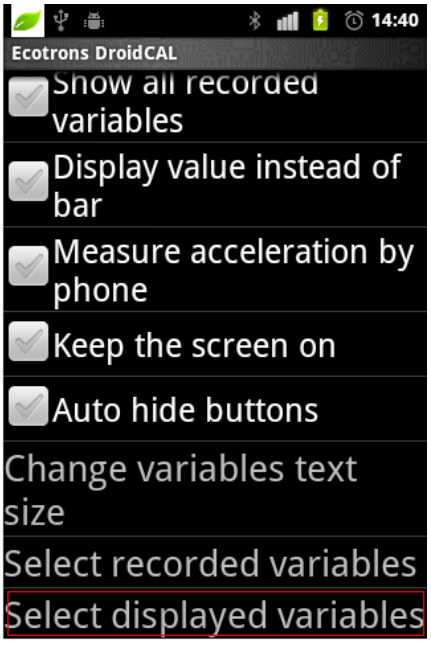
First select the variable to add to 20ms, 100ms or Syn, and then click the right of the list to add variables. Can select the variable to add to the three rate of 20ms, 100ms, Syn.

Click the OK button after selected.



2.9 Select displayed variables

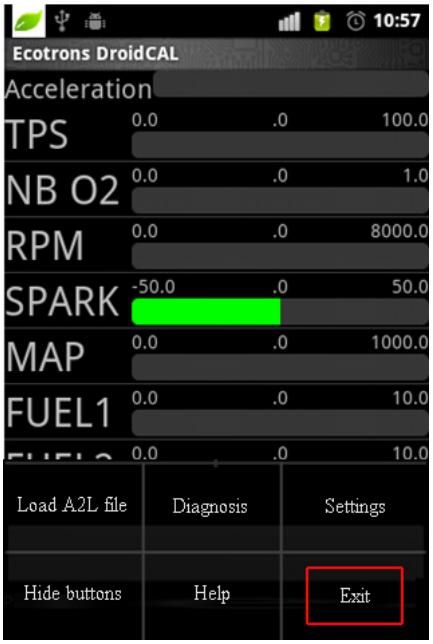
You may need to modify the variables to be displayed, click Menu→Settings→ Select displayed variables.



The variables have been selected on the left; the right is the optional variable. Click the list on the left to remove variable, Click the list on the right to add variables.
Click the OK button after selected.

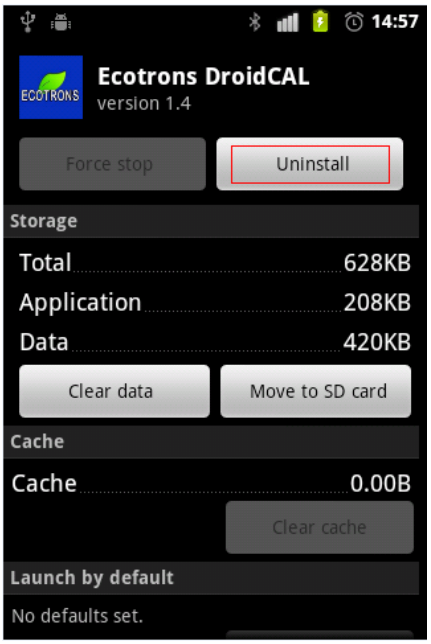
2.10 Exit DroidCAL

If you want to exit the DroidCAL, click Menu→Exit.



Chapter 3 Uninstall DroidCAL

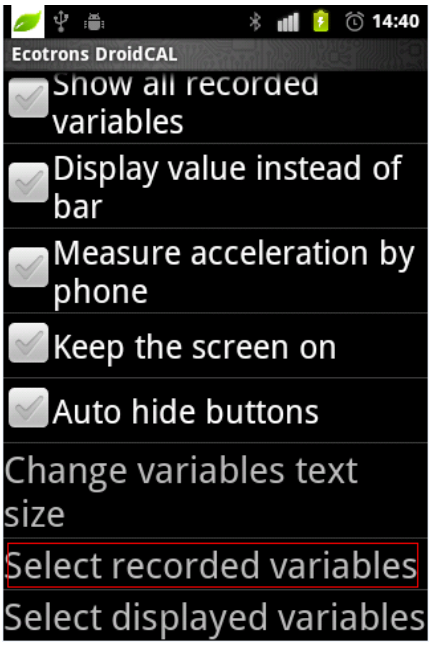
If you want to uninstall DroidCAL. First exit DroidCAL, and then click on the phone Settings→Applications→Manage applications→DroidCAL. Click the Uninstall button to uninstall the software.



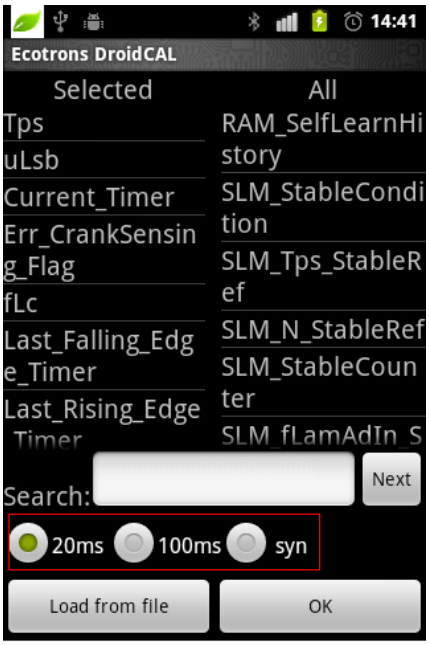
Chapter 4 Frequently Asked Questions

4.1 Add variables to be recorded

You may need to modify the variables to be recorded, click Menu→Settings→ Select recorded variables.

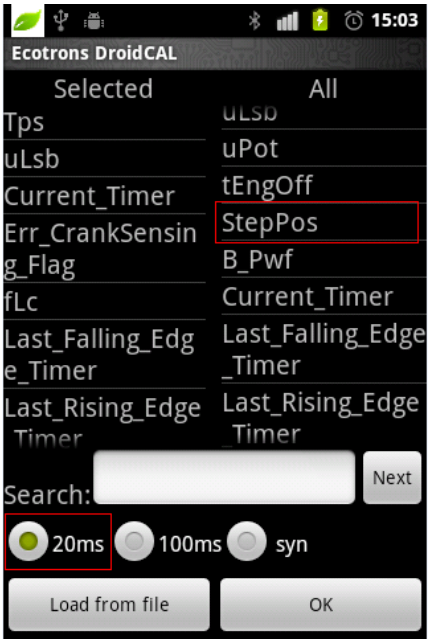


The variables have been selected on the left; the right is the optional variables. Click the list on the left to remove variable, Click the list on the right to add variables.
First select the variable to add to 20ms, 100ms or Syn, and then click the right of the list to add variables. Can select the variable to add to the three rate of 20ms, 100ms, Syn.
Click the OK button after selected.

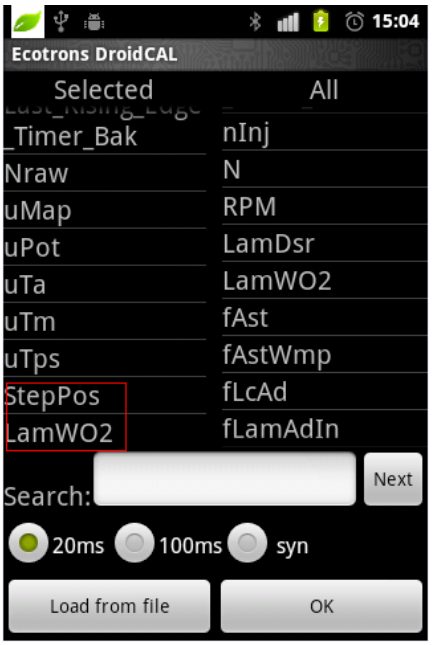


For example, add StepPos and LamWO2 to the 20ms list.

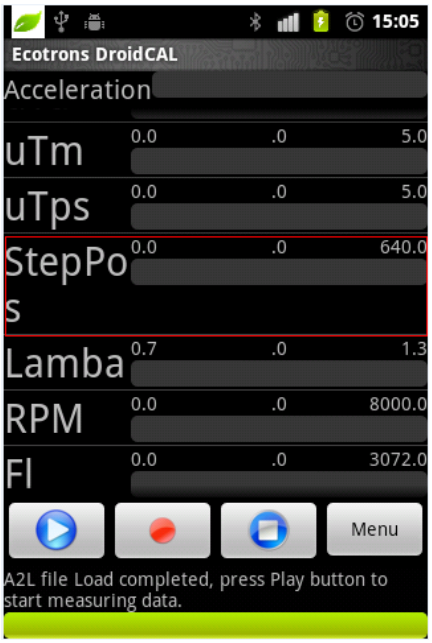
1. Select option 20ms, click the StepPos and LamWO2 in the "ALL" list.



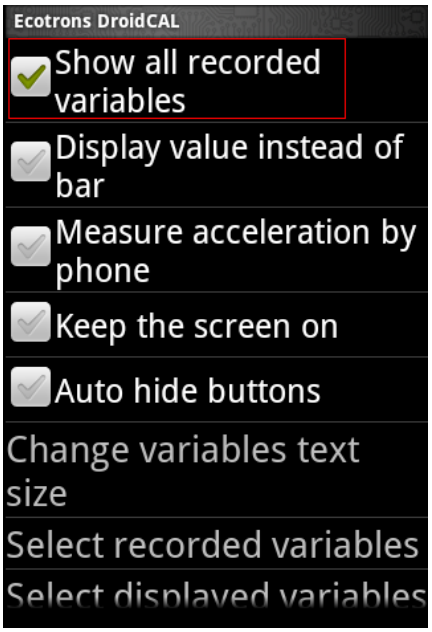
2. StepPos and LamWO2 will be added to the 20ms list. Click "OK" button, finished adding variables.



3. Return to the main window, you can see the selection of variables have been added to the list.



4. If you can't fond StepPos or LamWO2, click Menu→Settings→Show all recorded variables.


Ecotrons DroidCAL
Show all recorded variables
Display value instead of bar
Measure acceleration by phone
Keep the screen on
Auto hide buttons
Change variables text size
Select recorded variables
Select displayed variables