User's Guide

Version 1.6

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Contents

Overview 3

Commissioning 5

User Interface 7

Button Control....7
Touch Control....8
Accelerometer Control....8
Wheel Control....9

Settings 11

APP Settings....12
SSC Settings....13

1

Overview

With the „picCAR“ app and a PiKoder/SSC RX bluetooth-receiver you control your models with your Android smart phone or tablet using intuitive and very efficient user interfaces.

The remote function employs the smart phone's build-in bluetooth module. Depending on the module's spec your control range could be up to 50 m.

The core function of the app is build around the well known miniSSC protocol. Therefore the App can be used with a number of serial servo controllers besides the PiKoder family. However, more advanced features such as e.g. the „fail-safe“-function are exclusively supported by the PiKoder receiver.

Commissioning the app requires two simple steps:

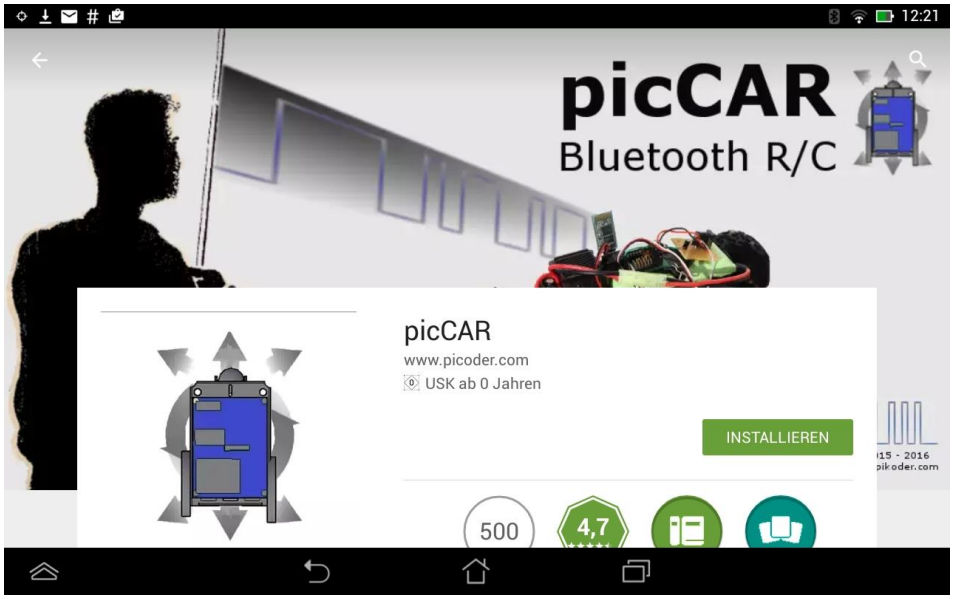
- Install the app through the Google Play Store and
- Pair your Android device with the bluetooth transceiver module following standard Android procedures

These initial steps are described in section 2; after commissioning the app you simply start the app like any other app on your device. Section 3 presents the user interface and section 4 illustrates the preferences and settings of the app.

2

Commissioning

The picCAR app is available free of charge in the Play Store; the installation is started after hitting the button and does not require any user interference. Please bear in mind though that you have to grant Bluetooth priveliges for the app.



The second and filnal step requires the pairing of your Android device with the receiver's bluetooth module (a standard HC-06 transceiver).

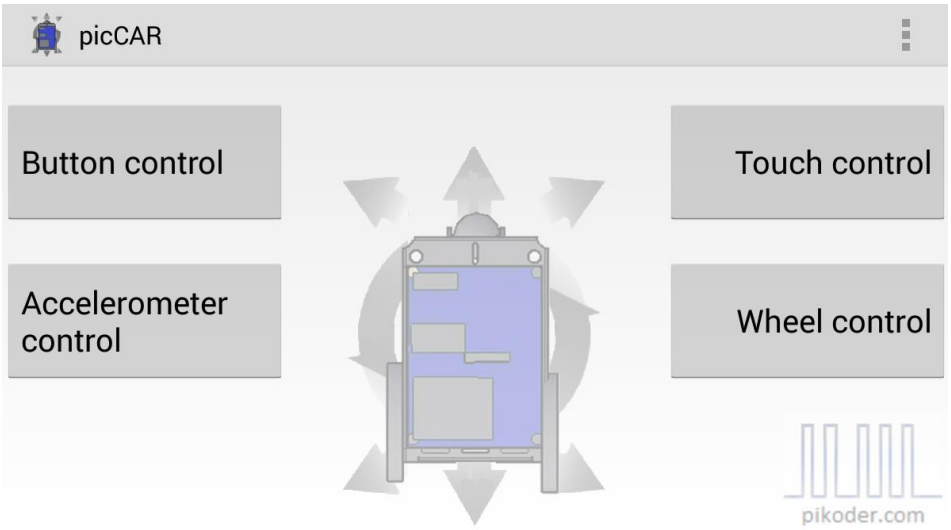
To do this, enter the Bluetooth menu inside Settings, then search for new devices. After a moment the device "HC06" will appear. Tap the HC06 in

the list, and you will then be asked for the PIN - it is 1234. This completes the setup of app.

3

User Interface

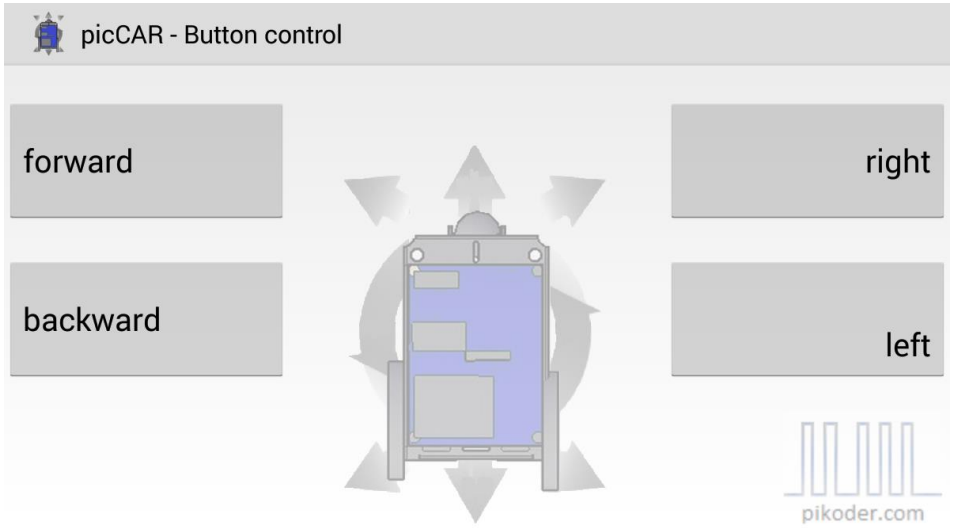
After starting the app you will be seeing the main screen which allows you to select from different user interfaces. Additionaly, this screen would be your starting point for specific settings. Please note that all control related screens are fixed to a landscape format to simplify model control.



To start contolling your model you would hit one of the four buttons selcting your prefered interface.

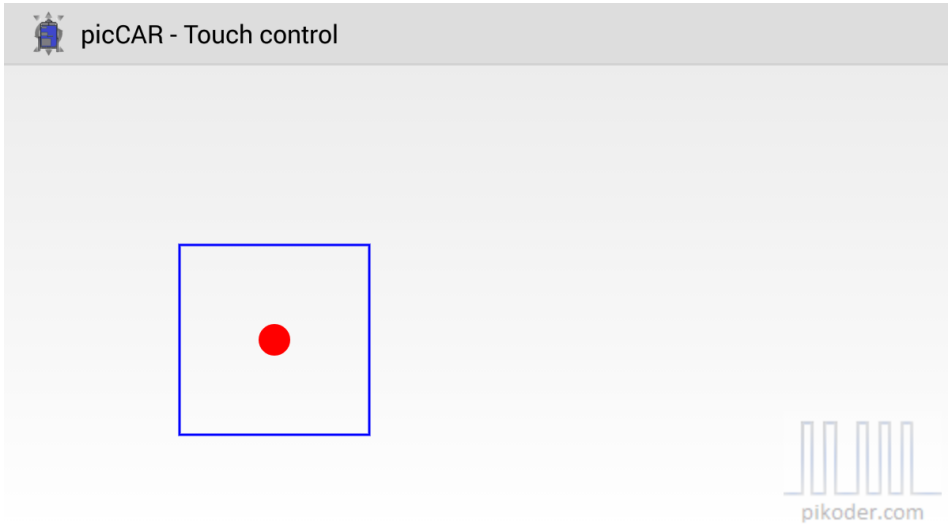
Button Control

Button Control offers a very simple user interface: you would control your model by simply hitting the command button.



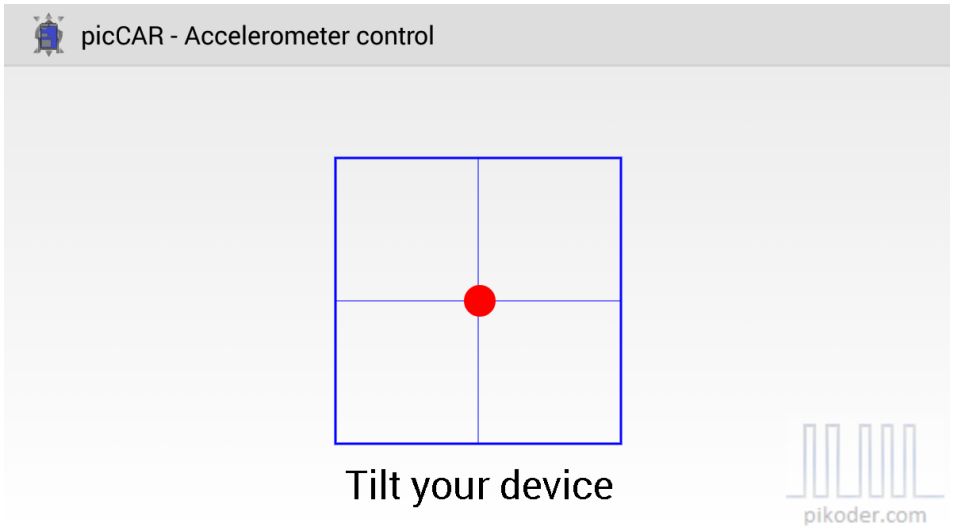
Touch Control

Touch Control implements a virtual thumbstick: you would control your model by touching and moving the red button.



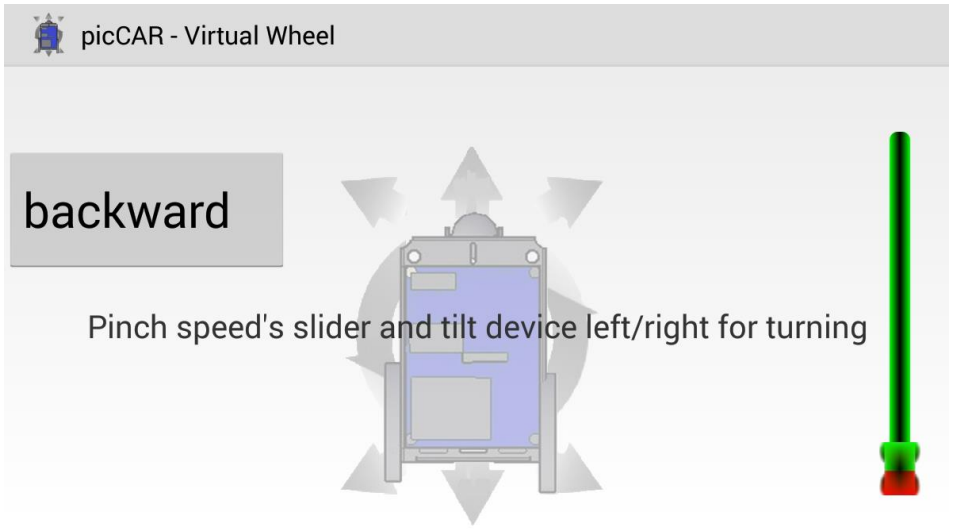
Accelerometer Control

In selecting this user interface you would move your device to control your model; the app does evaluate these movements and translates them into the respective commands.



Wheel Control

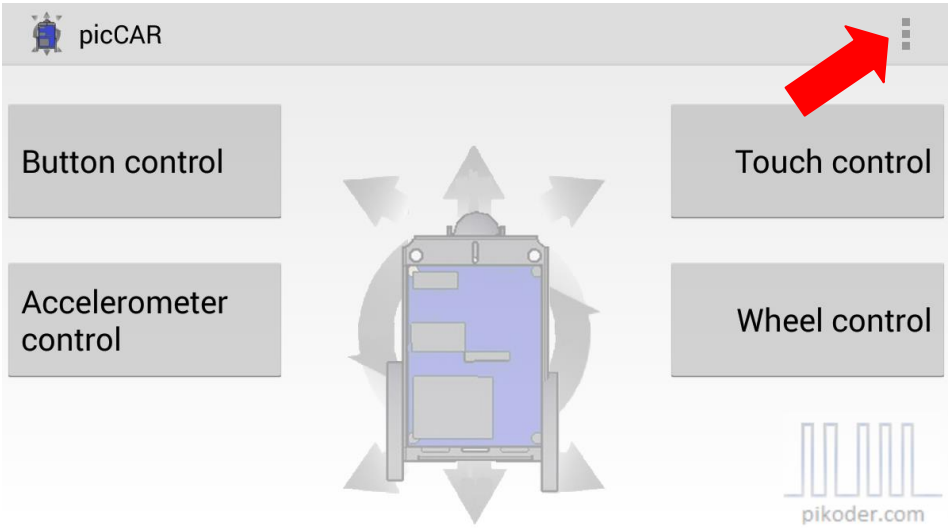
Wheel Control represents a combination of the Accelerometer and the Touch Control: directional control is based on movement of your device similar tot he Accelerometer Control and speed is controlled by a slider.



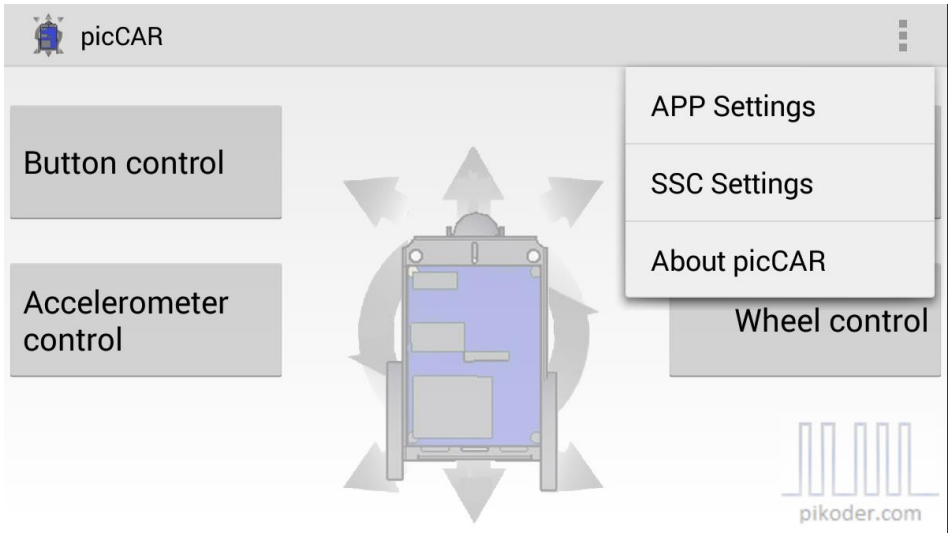
4

Settings

Your starting point for settings would also be the main screen (s. red arrow).

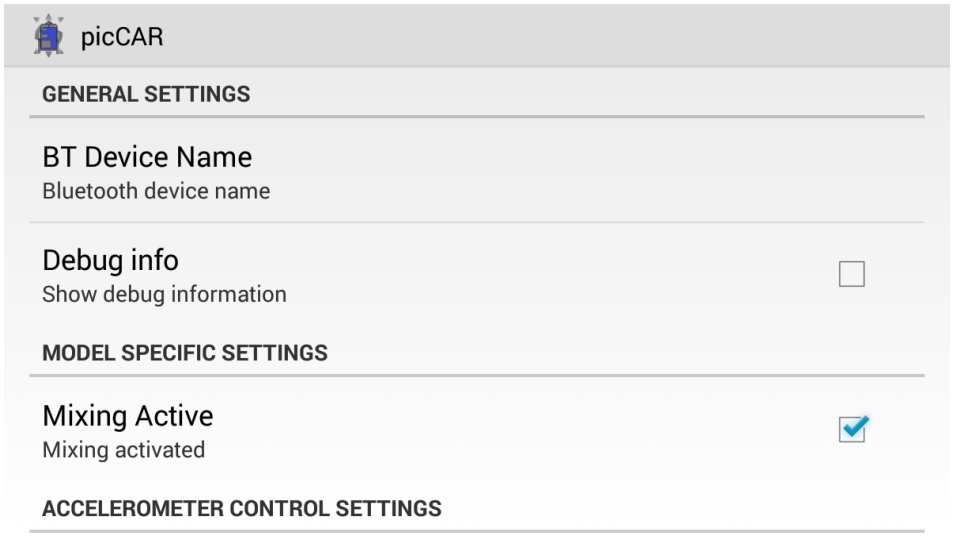


After activating the preference menue you are presented another menue offering APP Settings, SSC Settings, and the general help link to the PiKoder web page.

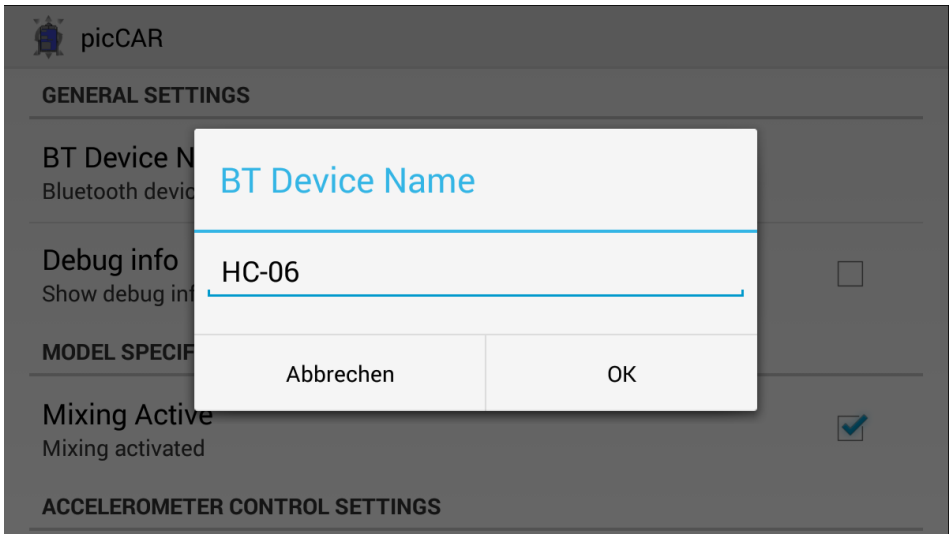


APP Settings

In this section you would be able to review basic settings of the app. The most relevant settings cover the bluetooth receiver device name and the setting for mixing.



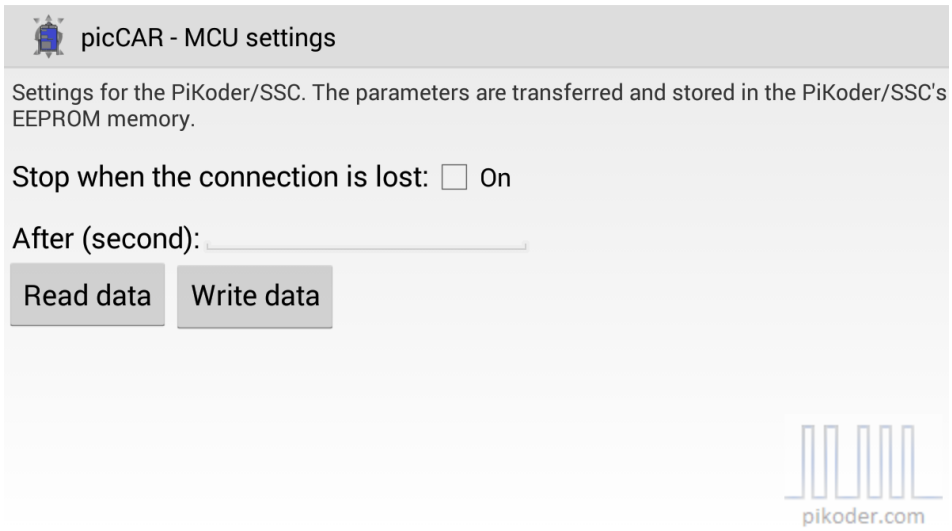
The default device name would be "HC-06" reflecting the PiKoder/SSC RX standard configuration. If you are employing another device then you can adapt the device name by tapping the field. Please note that the device which you are using has to be paired with your Android device.



Mixing is a specific feature required to control „two motor models“ such as tanks („Mixing Active“); if your model requires a conventional control (one channel for direction, one channel for speed control), then uncheck the box.

SSC Settings

SSC Settings are receiver specific settings and are therefore stored in the PiKoder/SSC's EEPROM.



The picCAR app features a „fail-safe“-function (in combination with the PiKoder/SSC RX): if within a given time frame no new command would be received then all channels will be set to a neutral position. Since you can pre-program these neutral positions for your model (refer to PiKoder/SSC RX User's Manual for mode details), you can ensure that a safe status is warranted (e.g. motors shut off).

The monitoring cycle can stretch from 0.1 to 99.9 seconds. To read the current receiver setting, you would hit the "Read data" key (s. above). This command will read the value from the PiKoder store and display it; the checkbox will be set automatically when a time out value > 0 is found. If you want to maintain this value then simply hit "Write data". This will sync the app and the receiver starting the fail safe function.

If you want to change the value then hit the input filed and the keyboard would appear allowing you to edit the field content. For disabeling the time out you would have to uncheck the box. Please note that a change only becomes effective after hitting the „Write data"-button.

For enabling the „fail-safe"-funktion you would check the box and then enter the time out value. As with all other changes you would have to hit the „Write data"-button to put this change into effect.