

Software ROBO Pro Coding fundamentals

Before you start working with ROBO Pro Coding, you should change a couple of important settings on your TXT 4.0 Controller. You will need the charged battery pack, which you should connect to the 9V ports in (+/-) on the TXT 4.0 Controller.

Switching on the controller:



Press the ON/OFF button for approx. 4 seconds, until the display switches on. The TXT 4.0 Controller will boot up.



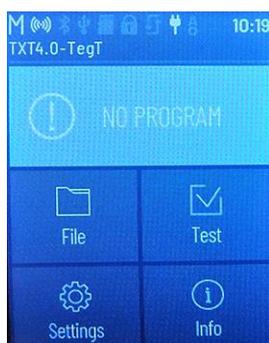
You can see that it is doing so on the start screen and the loading status bar.

The display indicator will be illuminated “green”.

Once the operating system is loaded, the selection window (display) of the Controller will appear. The display indicator will switch to “blue”.



Changing the working language:



The display is shown in “English” in the basic settings. The working language should be switched to “German”. To do so, click the “TouchScreen Display” - “Settings”. A window with the entry “Language” will appear.





Click the selection “Language”. A window with the individual national languages will open.

Select your language here. In our case, we need “German”. Click in the circle on the right to activate the selection.

Adopt the language setting by clicking the “Home button” symbol.

The change is adopted, and the entire display is shown in German.

The change will remain saved when you switch off the Controller.

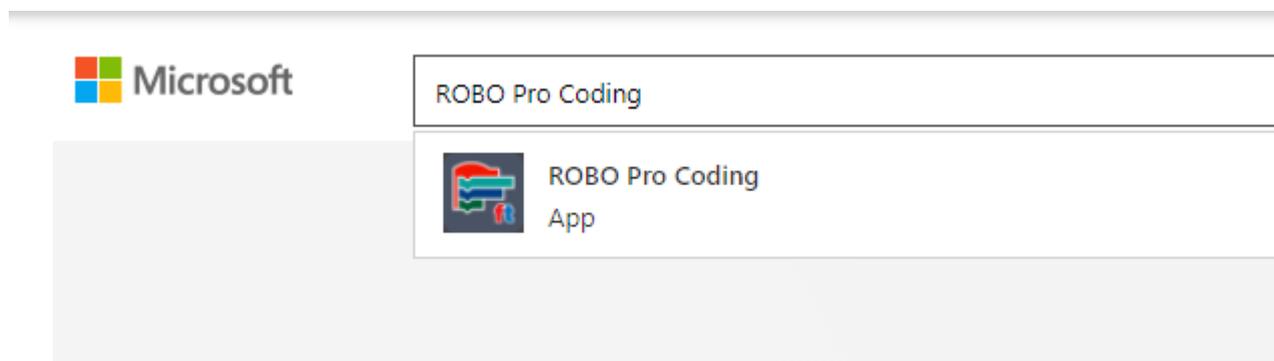


Installing ROBO Pro Coding from an app store

You can conveniently install ROBO Pro Coding from an app store. To do so, start your web browser and access the app store for your operating system.

www.microsoft.com

Simply enter “ROBO Pro Coding” in the “Search”.



Select the app, then the following window will appear:



ROBO Pro Coding

beemo • [Entwicklungstools](#) > [Entwicklungskits](#)

Die Software ROBO Pro Coding von fischertechnik bietet in ihrer mehrsprachigen Programmierumgebung neben der Möglichkeit zur graphischen Programmierung eine textbasierte über Python. Die Software läuft auf Computern mit Windows, Linux oder MacOS sowie auf mobilen Endgeräten mit Android oder iOS. Die Benutzer können aus den verschiedenen Lernlevels Anfänger, Fortgeschritten und Experte wählen, um so im jeweils passenden

Mehr

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Kostenlos

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△ Lesen Sie die Systemanforderungen

Click “Download”



ROBO Pro Coding

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Dieses Produkt gehört fischer Windows Store, Sie dürfen es auf diesem Gerät installieren.

[Installieren](#)

and then “Install” in the next window, then install the app on your PC.

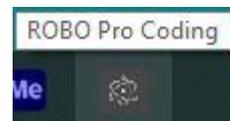
If you want to work with the program, it is a good idea to drag the Start symbol to the lower Start bar. To do so, open the Windows start symbol.



If you have just installed ROBO Pro Coding, the start file is available under “Recent”, otherwise, select the file under:

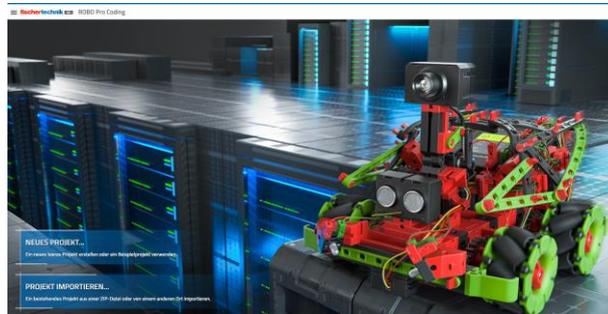


Use your mouse to drag the entry to the Start bar.

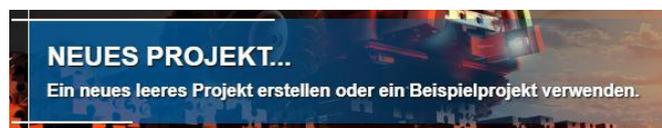


Now, you can always start the program by activating the button.

Start the “ROBO Pro Coding” program. The start screen for the programming environment will appear.



Click “New project” to select it.



In the template window, activate the entry “Empty” and confirm by pressing “NEXT”.



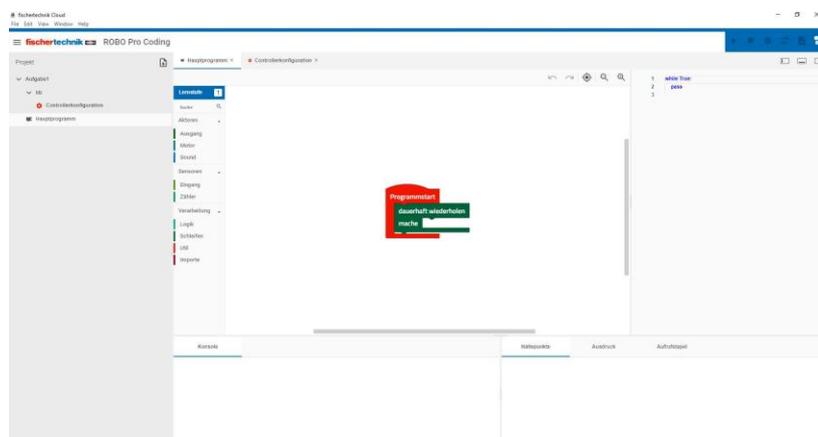
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Then assign a file name and confirm with “Create”.



The working screen for programming will appear.

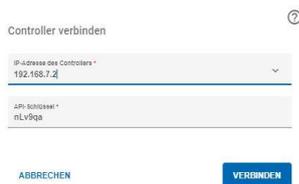


USB, WiFi, Access Point, Bluetooth Operation

Four ways to connect the TXT 4.0 Controller to your PC, tablet or smartphone are available.

The simplest way to work with the TXT 4.0 Controller is USB operation. To do so, connect the TXT 4.0 Controller – USB2 port using the included mini USB cable to a free USB port on a PC or laptop.

After ROBO Pro Coding has been launched, you need to activate the “Connect controller” symbol in the blue bar at the top right.



An input window will appear where the type of data transmission and a security code, the so-called “API key” for the TXT 4.0 Controller need to be entered.

After you click the down arrow, a selection window will appear. Here, select the entry “USB”.



The IP address “192.168.7.2” of the TXT 4.0 Controller is selected and displayed automatically.



Now, all you need is the API key for the TXT 4.0 Controller. This is found on the touch screen of the TXT 4.0 Controller.





Switch to “Settings” to do so.

In the next window, activate “API key”

A window will appear with the current code. Enter this into ROBO Pro in the “Connect controller” window.



Complete the entry by clicking “Connect”.



If everything has worked correctly, the connection symbol is shown in “green” in the blue line. In addition, all other commands shown in the line are activated.



USB, **WiFi**, Access point, Bluetooth **Operation**

You can also work in WiFi operation with the TXT 4.0 Controller. To do so, you do not need a USB cable between the computer and Controller.

The Controller is registered to the same network as the computer from which you want to control the Controller. It then receives an IP address from the router to which it is connected (such as 192.168.2.12). You can use this address to connect the computer to the TXT 4.0 Controller via WiFi.

In addition, the Controller is then connected to the internet, and will display whether there are operating system updates for the Controller (see the operating manual for the TXT 4.0 Controller).



For all of this to work, you will need to change the following setting on the TXT 4.0 Controller and in ROBO Pro Coding.

Select Settings - Network in the Controller display.



Activate the “WiFi” switch there.

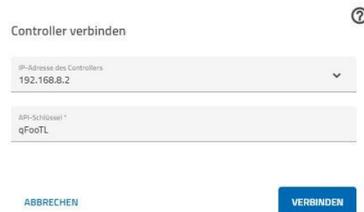


Then, the TXT Controller needs to be connected to the WiFi router. To do so, press “WiFi”. The available networks are displayed in the new window. Activate your network here. The input window will appear for you to enter your router password. This is provided in the documents for your router. After entering it, end the setting by pressing “Save”.

The WiFi symbol in the top line of the display shows that your connection is working.



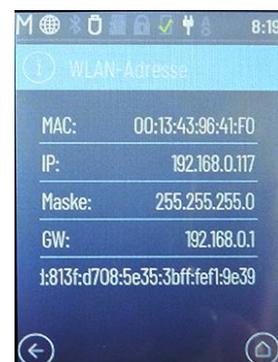
Now, you need to change the setting in ROBO Pro Coding. To do so, open the programming environment and click the “Connect Controller” symbol.



You have to enter the IP address the Controller received from your router as well as the API key in the input window.



The IP address is available on the display of the Controller under the menu option “Info” – “WiFi” and under “IP” there.



Enter the IP address into the input window in ROBOPro Coding, then the API key – Controller Display: Settings – API key. End the entries by pressing “Connect”.

Now, the other symbols in the blue line are activated. The button “Connect Controller” shows a green dot to indicate the connection was successful.



USB, WiFi, **Access point**, Bluetooth **Operation**

In Access Point operation, your computer, smartphone or tablet connects directly to the TXT 4.0 via the WiFi port. The computer can then not be connected to the internet at the same time in this case.

If you want to work in **Access point** operation (wireless transmission), you will need a WiFi port on your computer.

You will also need to change some settings on the TXT 4.0 Controller and on your computer.

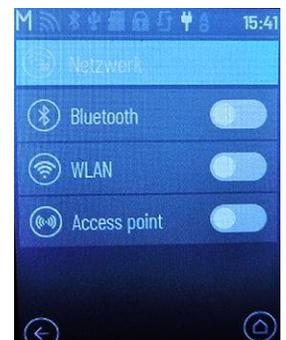


First, complete the following settings on the TXT 4.0 Controller:

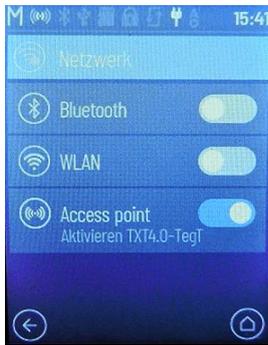


Activate the selection “Settings” on the display.

Activate the selection “Network” in the “Settings”



window.



In the following window, you will find the entry “Access point”. You must set the slide switch to the right here.

When the switch is in the right position it will appear blue, and the TXT 4.0 Controller is switched to “Access point operation”.

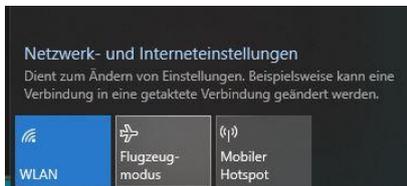
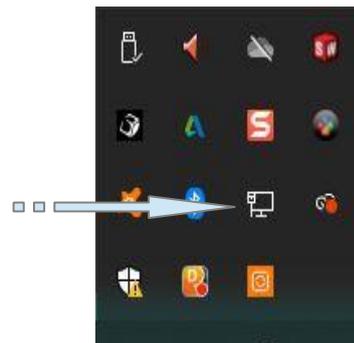
In the next step, you need to connect your computer to the TXT 4.0 Controller via the WiFi port.

Proceed as follows:

Click the network symbol in the bottom on the screen



symbol in status line



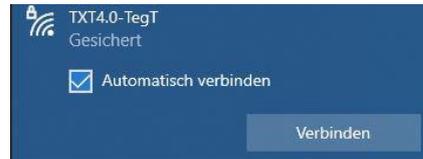
WiFi must be switched on; then the available networks will be listed.



If the computer finds the TXT 04 Controller, it will be shown in the list.

Use your mouse to click the list entry, and a window will appear where the TXT 4.0 Controller can be connected to the computer.

Do so by clicking “Connect”.



The first time it is connected, the program will ask for the WiFi key. This is found on the TXT display under Settings – Network – Access point – Password. Enter the key, and the computer will connect to the TXT 4.0 Controller.

For the “ROBO Pro Coding” programming environment to work with the TXT 4.0 Controller, a connection has to be formed. To do so, start ROBO Pro Coding.



As in USB operation, activate the “Connect Controller” button.



Click the down arrow in the selection window. All connection options are displayed.



Click the entry “WiFi AP” with your mouse.



Here as well, you must enter the 4.0 Controller and end the



API key for the TXT configuration with:



After a short while, the commands will appear in the blue line. Once the connection has been completed, the info display will switch to “green”.

USB, Access point, **Bluetooth Operation**

You can also connect the TXT 4.0 Controller to your computer via Bluetooth.



To do so, you must activate “Bluetooth” on the Controller via “Settings” – “Network”.

After completing the settings on the TXT 4.0 Controller, you also need to complete the settings on your computer.



You can activate the “Bluetooth symbol” in the lower status line of your PC using “Show hidden symbols”.

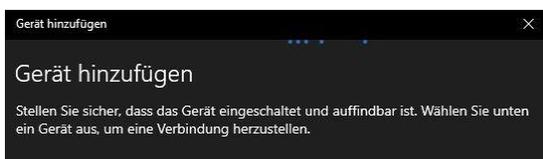
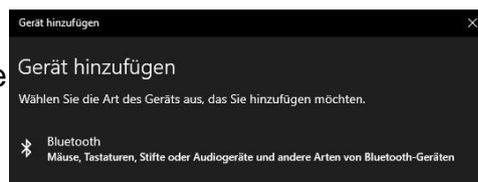


In the selection window, activate “Add Bluetooth device” and then, in the next window, select the entry



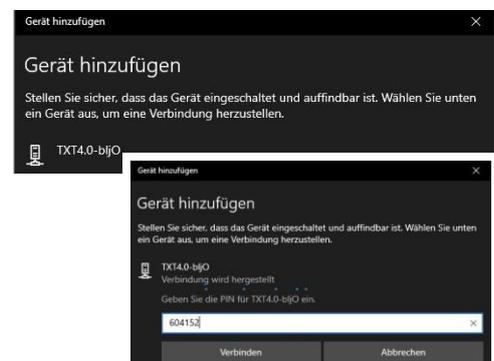
Bluetooth- oder anderes Gerät hinzufügen

A window will follow where you can select the “Bluetooth”.



The system will search for available devices.

If a Bluetooth device is found, it will be shown in the list.



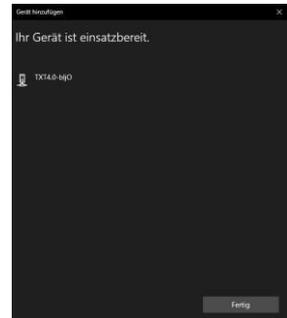
To add the device, left click on the entry.

The connection is then completed.

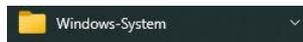


You now need to enter the PIN for the TXT 4.0 Controller in the connection window. This is found on the Controller display as the "Coupling code" under Settings – Network – Bluetooth

The connection is formed by clicking "Connect". This is shown in a separate window. Press the "Complete" button to complete this work step.



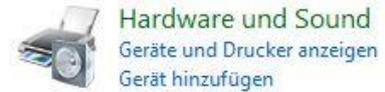
You need to complete the 3rd work step in the Windows operating system. To do so, select



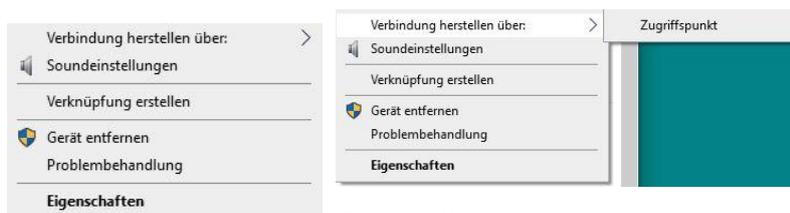
and then



In the "System control" window, select "Hardware and Sound" and "Display devices and printers" there.

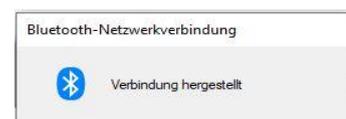


Now, all devices available on your computer will be displayed. Your TXT 4.0 Controller will be available as a selection.



Right click the symbol. Activate the entry "Complete connection via" and then "Access point" in the window that follows.

A status window will indicate that the connection is being made or has been made.



Please note: You will have to complete this step each time the Controller or the computer is switched off; otherwise, there will be no connection although the device is shown as

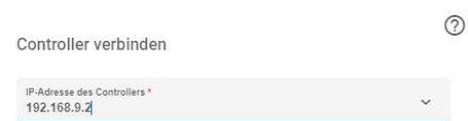
coupled.

Now, you can connect to the Controller in ROBO Pro Coding via Bluetooth.

Activate the command “Connect Controller” here as well.



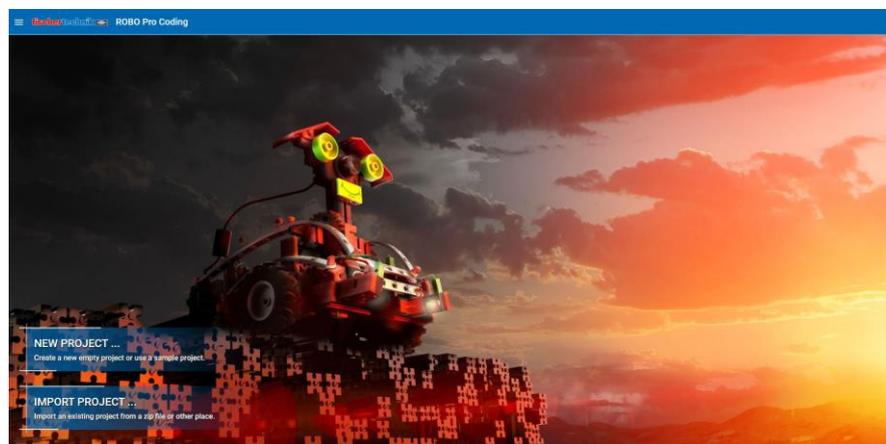
Next, select “Bluetooth”. The new IP address will be shown.



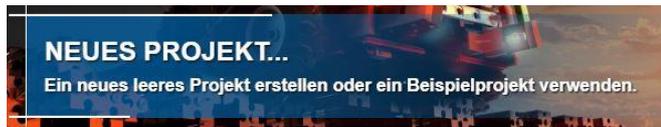
After entering the API key, you can complete the entries by clicking “Connect”. The blue line is now available with all of the commands.

ROBO Pro Coding, the programming environment

After the ROBO Pro Coding program has been started, the following screen will appear:



If you want to start a new “project”, select “New project”.



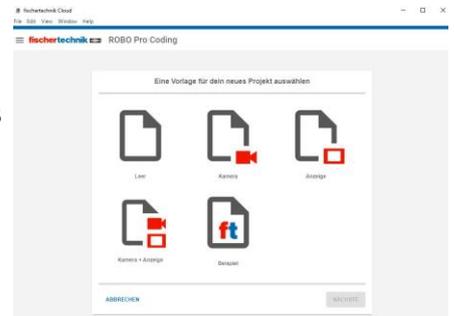
An input window will open where you will see different options for creating a new project.

Create an empty project window by clicking:

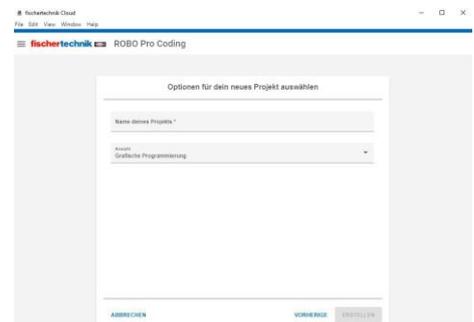


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Confirm the selection with
Click “Next”.



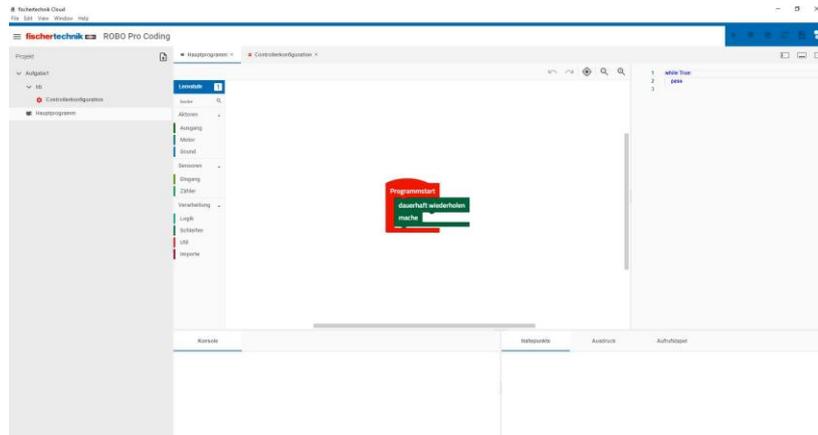
In the next window, you need to give the project a name and define the programming environment. “Graphic programming” is used to create the program.



Once the entries are complete, end the work step with:



Now, the ROBO Pro Coding programming screen is displayed.



If the working language is “English”, you will need to switch it to “German”.

To do so, click the three horizontal lines in the status bar at the top left.



Voreinstellungen

> Einstellungen

The left window will change and you will have to activate the selection “Settings”.

In the new window, change the language to “German” by clicking the right arrow.



The available languages are then displayed in the selection window.

Here, click “**ANWENDEN**” and confirm with:

Before you program the initial tasks and move your model, there is a little more important information you need to know.

Lernstufe

1

ROBO Pro Coding programs can be created with different programmer learning levels. Depending on the degree of difficulty required, you can choose between learning level 1 “Beginner”,

learning level 2 “Advanced” or learning level 3 “Expert”.

Lernstufe wählen

- 1** **Einsteiger**
Grundlegende Blöcke
- 2** **Fortgeschrittene**
Alle Aktoren und Sensorblöcke, Variablen und Funktionen
- 3** **Experten**
Alle Aktoren und Sensorblöcke, Listen, Variablen und Funktionen

ABBRECHEN

ÄNDERN

For instance: Select “Expert” and confirm by pressing the button:

If the TXT 4.0 Controller is not yet connected with ROBO Pro Coding, then complete the connection.

The display will jump from “white” to “green” after a short time.



Now, you can start programming. We will show you how to do so using a variety of models and programming examples. It is a good idea to start with the simple function model.