



## TCU6 Customer Software 2.0 for Configuration File up- / download



	<b>Manual</b>	<b>P000201342</b>	Author: J. Schwarzhorn Release: C. Weil Date: 05.07.2022
	<b>TCU6 Customer Software 2.0 for Configuration File up- / download</b>		Page: 2/9

## Content


<b>1</b>	<b>Requirements .....</b>	<b>3</b>
<b>2</b>	<b>Installation .....</b>	<b>3</b>
<b>3</b>	<b>Capabilities .....</b>	<b>3</b>
<b>4</b>	<b>Main Window .....</b>	<b>3</b>
<b>5</b>	<b>Connecting with TCU6 .....</b>	<b>5</b>
<b>6</b>	<b>Writing Configuration File .....</b>	<b>6</b>
<b>7</b>	<b>Reading Configuration File .....</b>	<b>7</b>
<b>8</b>	<b>Programming new Firmware .....</b>	<b>8</b>

	Manual	P000201342	Author: J. Schwarzhorn Release: C. Weil Date: 05.07.2022
	TCU6 Customer Software 2.0 for Configuration File up- / download		Page: 3/9

## 1 Requirements

To run the software a simple PC or laptop with Windows 7 or higher operating system is required.

Additionally a RS232 or USB cable is required to connect the PC with the TCU6.

 <b>Note!</b>	<b>Configuration File up- / download is only possible for TCU6 devices with Software version <u>SW:1.7 or higher</u>.</b>
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## 2 Installation

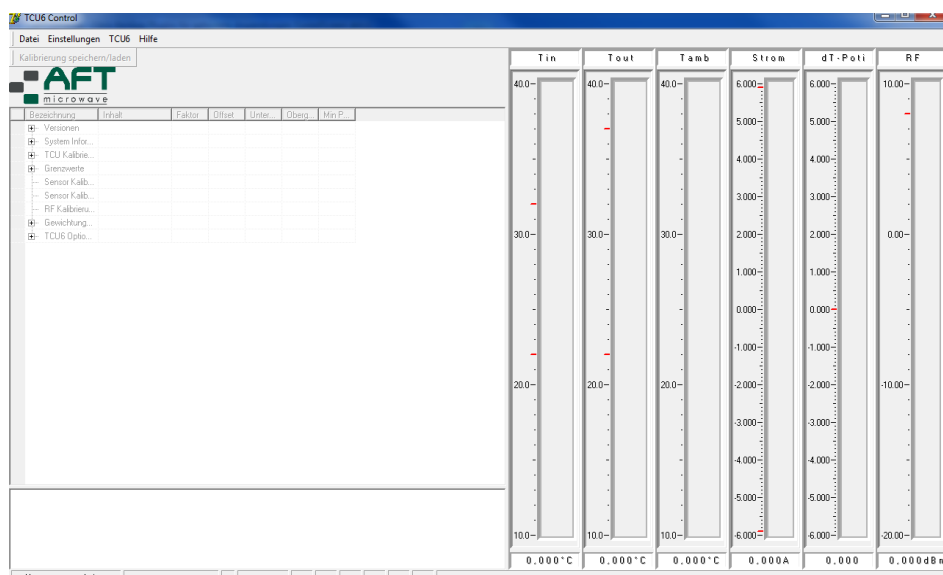
The software is only an .exe file. It does not need an installation. Copy the TCU6.exe file to a folder on your PC. You must have read and write access for this folder.

## 3 Capabilities

- The software gives you basic read access to the information stored in the TCU6.
- The sensor values are shown as well as the supplied coil current.
- The software allows you to write and to read a TCU6 Configuration Files (circulator S/N specific) into and out of the TCU6. This file contains all information about the settings for a given circulator.
- In case a firmware update is required, this can be done with this software too.

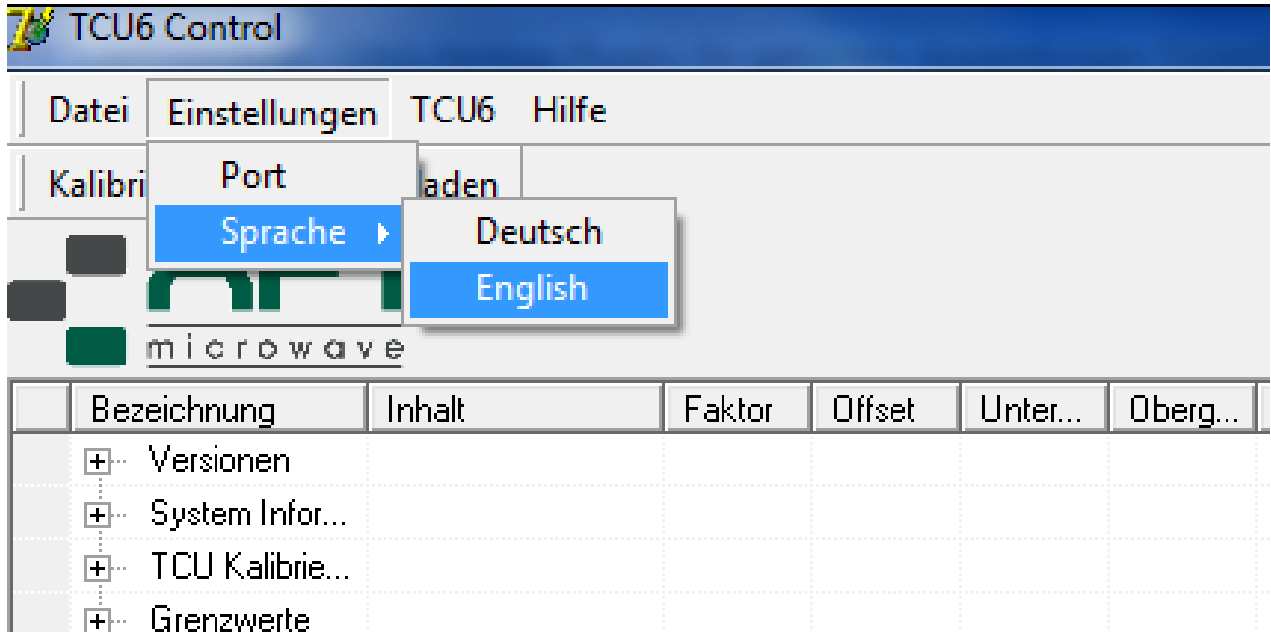
## 4 Main Window

Upon the start of the TCU6.exe the following main window will appear.



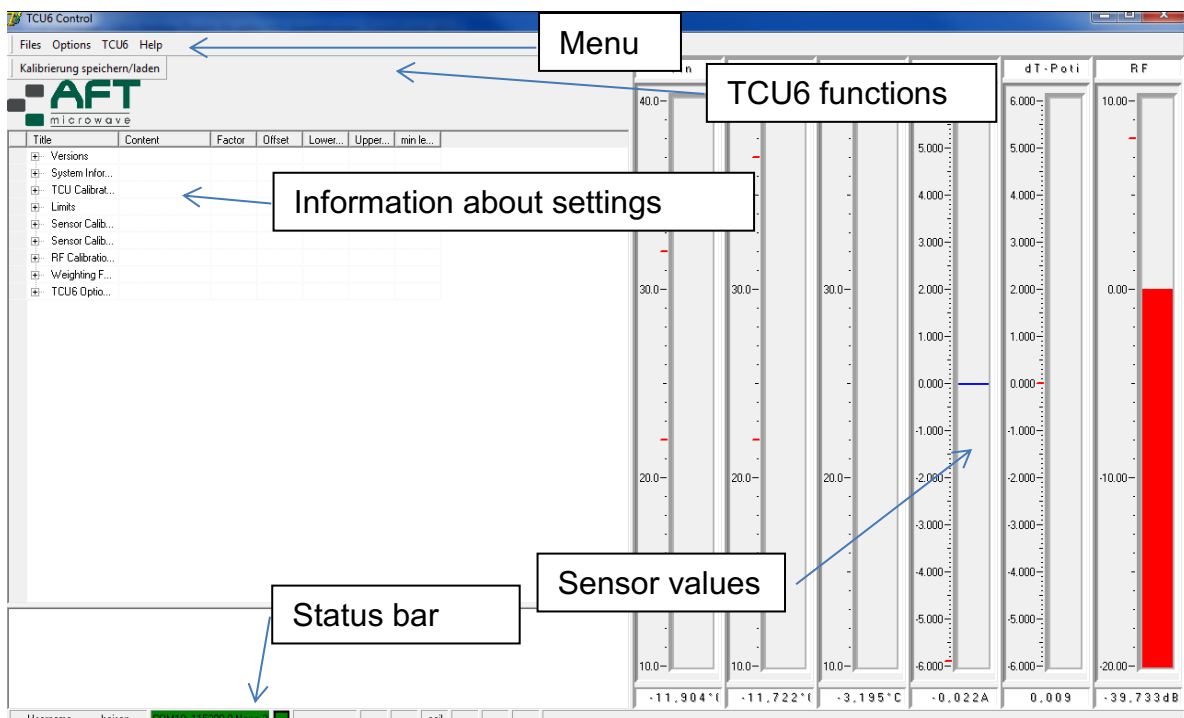
**Picture 1** Main window

The picture shows the GUI with German descriptions. To change to English please select:



**Picture 2** Language selection

All information is disabled until connection with the TCU6 is established. Detailed information can be obtained by clicking the small + sign. This will expand the information tree.

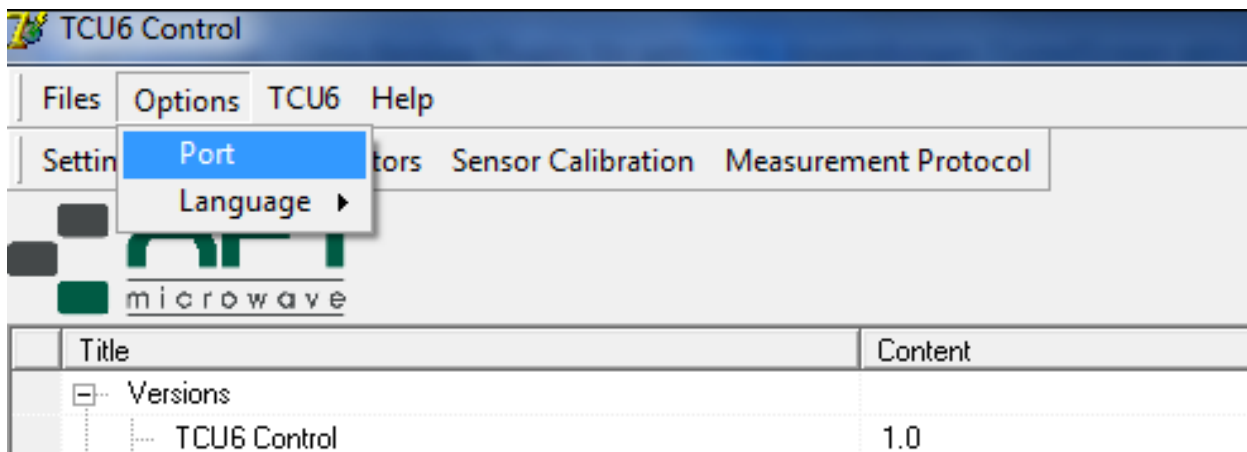


**Picture 3** Main window

## 5 Connecting with TCU6

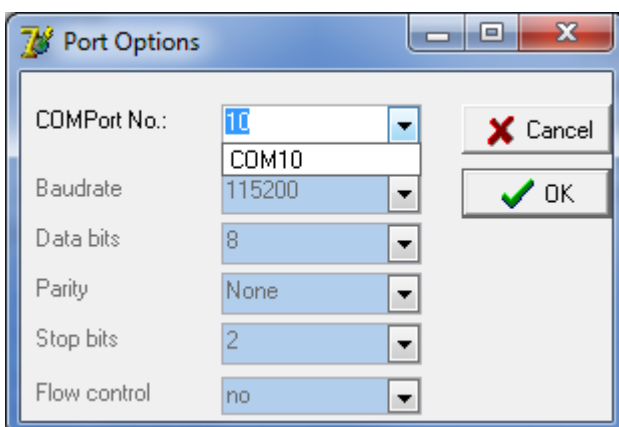
	<p><b>Warning! Do NOT initiate connection between TCU6 and PC under running RF in system!</b></p>
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Use either a RS232 or a USB cable to connect the PC with the TCU6. Please also have a look into the manual of the TCU6. The TCU6 will now be registered as a COM device in your Device Manager. Please have a look into the Device Manager and remember the COM-Port number. In the GUI select the Menu Options/Ports.



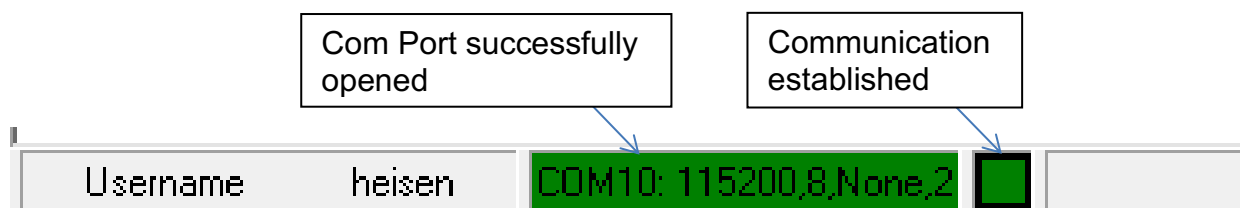
**Picture 4** Port selection menu

A COM-Port selection dialog will appear. A selection of the available com ports will be presented. Please select the COM-Port for the TCU6 as named in the Device Manager. In some earlier versions of Windows the TCU6 might not be recognized. In this case please install a common USB driver. Use Future Technology Devices International Ltd; FTDIChip CDM Driver Package. It can be found on <http://www.ftdichip.com>



**Picture 5** COM-Port selection dialog

The software will now connect to the TCU6. A successful connection will be shown in the status bar in green color.



**Picture 6** Status bar

## 6 Writing Configuration File

A TCU6 configuration file contains the full set of circulator S/N specific data. It is used to initially configure an unprogrammed TCU (e.g. spare) for operation with a specific circulator or to upgrade an existing TCU by overwriting the pre-programmed set of data.

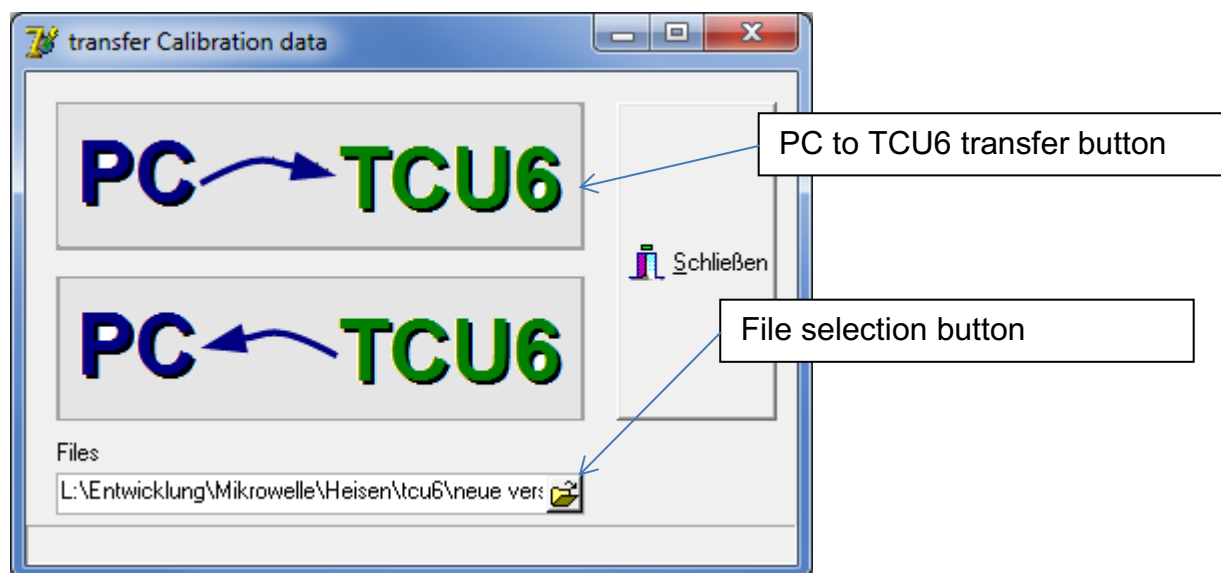
AFT file format: **XXXXXX\_Config\_YYYY\_MMM\_DD.TCU6-Dat**

where XXXXXX stands for the circulator S/N and YYYY\_MMM\_DD is the date when the file was generated. YYYY: Year, MMM: Month in JAN to DEC, DD: Day.


Caution: Use configuration files provided by AFT only. Do not modify the files.

To write a new Configuration File into the TCU6, please copy the file to the directory of the TCU6.exe.

Use the Calibration Save/Load button from the TCU6 functions bar. The following dialog will appear.



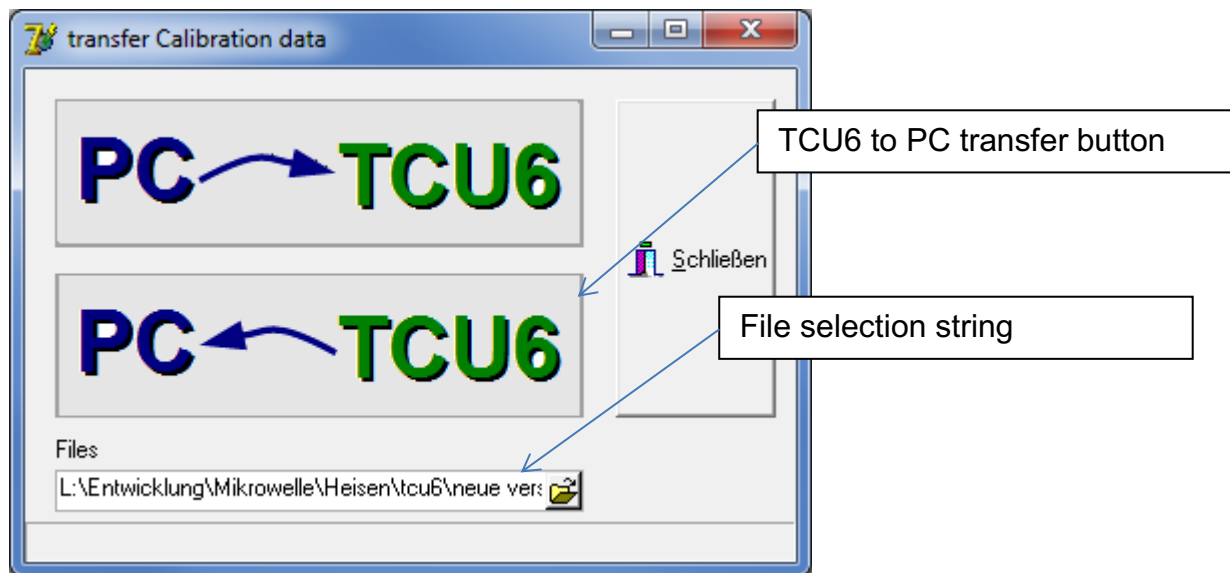
**Picture 7** File transfer dialog

	Manual	P000201342	Author: J. Schwarzhorn Release: C. Weil Date: 05.07.2022
	<b>TCU6 Customer Software 2.0 for Configuration File up- / download</b>		Page: 7/9

- Select the provided Configuration File (with file extension .TCU6-dat) by clicking the file selection button. Navigate to the appropriate file and select it.
- Now click the PC to TCU6 transfer button.
- The new data is now stored in the TCU6.

## 7 Reading Configuration File

Use the Calibration Save/Load button from the TCU6 functions bar. The following dialog will appear.



**Picture 8** File transfer dialog

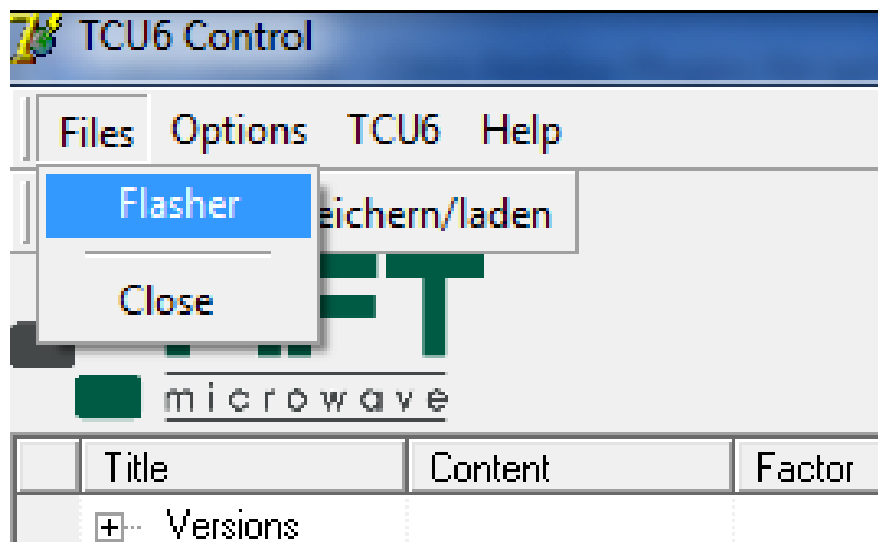
- Enter the path and file name you want to use in file selection string.
- Click the TCU6 to PC transfer button.
- The file is now available in the corresponding directory.

## 8 Programming new Firmware

Caution: Use original firmware files provided by AFT only.

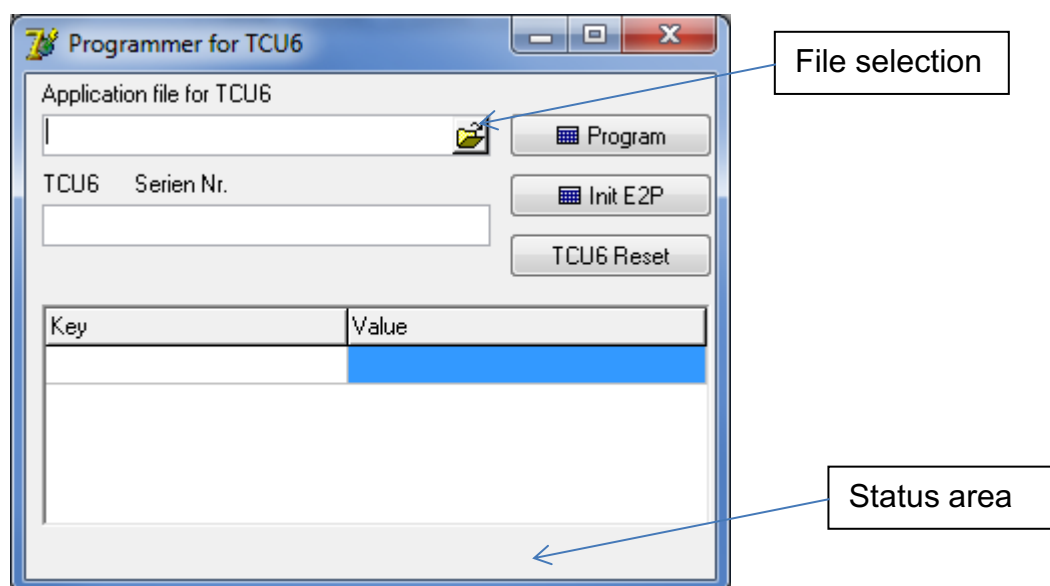
File format: The file will have the extension .hex.

Select the Menu File/Flasher




**Picture 9** Flasher menu

The following dialog will appear.



**Picture 10** Flasher dialog



	Manual	P000201342	Author: J. Schwarzhorn Release: C. Weil Date: 05.07.2022
	<b>TCU6 Customer Software 2.0 for Configuration File up- / download</b>		Page: 9/9

- Use the File selection button to select the supplied .hex file.
- Click the Program button. The TCU6 will now be flashed. This will also be displayed at the TCU6. A red progress bar will be displayed in the status area
- Upon completion the red status bar will turn green.
- Flashing is now completed.

The TCU6 will perform a reset and start with the new firmware. On rare occasions this reset will not be performed automatically. In these cases please switch the TCU off and then back on.