

Getting started



The stepRocker can be used either with USB interface or with RS485 interface and converter.

YOU NEED

- TCM-1110 with stepper motor (e.g. QSH4218)
- USB interface or
- RS485 interface converter suitable to your TCM-1110 module
- Nominal supply voltage +24V DC (10... 30V DC)
- TMCL-IDE program and PC
- Cables for interface, motor, and power

PRECAUTIONS

- Do not mix up connections or short-circuit pins.
- Avoid bounding I/O wires with motor power wires.
- Do not exceed the maximum power supply of +30V DC!
- Do not connect or disconnect the motor while powered!
- START WITH POWER SUPPLY OFF!

STARTING UP

1. Using USB: connect USB interface to PC. Connect power supply. Download and install the file *TCM-1110.inf* (available on www.trinamic.com).
Using RS485: connect RS485 interface to interface converter (e.g. USB-2-485). Connect the RS485 converter to PC.
2. Connect motor to 4-pin connector of module.
3. Connect the power supply of module.
Pin assignment: 1 - GND
2 - 10... 30V DC

4. Turn power ON. The orange LED for power lights up and the motor is powered but in standstill now. *If this does not occur, turn power OFF and check your connections and power supply!*
5. Start the TMCL-IDE program (see next page how to configure the connection and to use the IDE)
6. Type the following in the open window:

```
ROL 0, 500           //Rotate motor 0 with speed 500
WAIT TICKS, 0, 500
MST 0
ROR 0, 250           //Rotate motor 0 with 250
WAIT TICKS, 0, 500
MST 0
```

7. Click the *Assemble* icon. Thereafter click the *Download* icon to download the code to the module. Click the *Run* icon. The program will now be executed.
8. Click the *Stop* icon and start *TMCL™ Direct Mode* to issue the following commands:

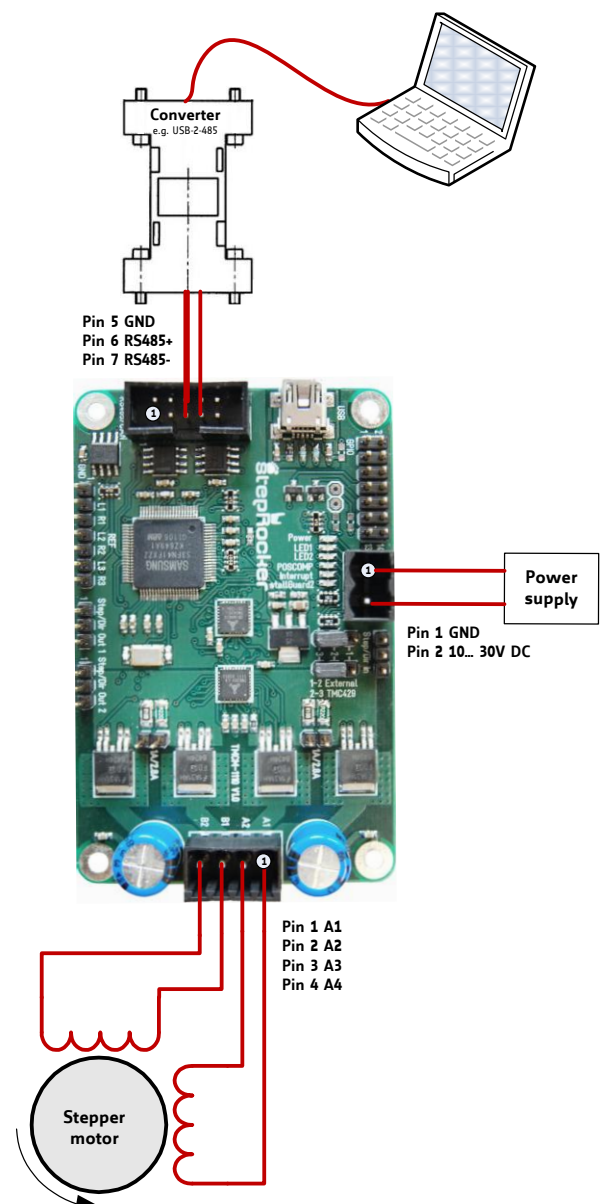
- ROR rotate right, motor 0, value 500 -> click *Execute*
The motor is rotating now.
- MST motor stop, motor 0 -> click *Execute*
The motor stops now.

FIRST STEPS ARE MADE.

Please refer to the TCM-1110 Hardware and Firmware Manuals, too.

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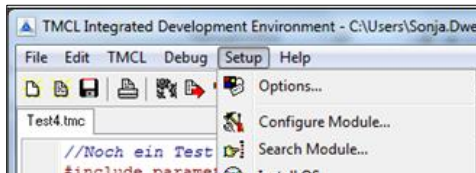
www.trinamic.com



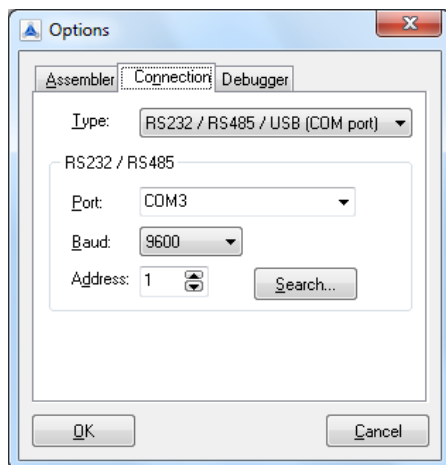
TMCL-IDE

The TMCL-IDE is available on www.trinamic.com.

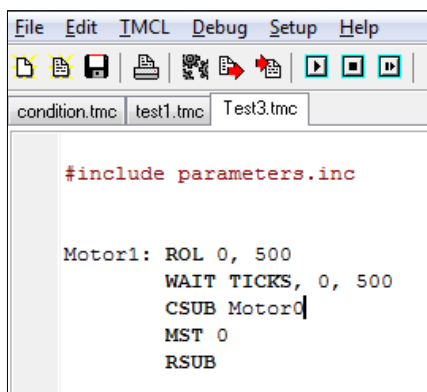
1. Make sure the COM port you intend to use is not blocked by another program.
2. Open TMCL-IDE by clicking *TMCL.exe*.
3. Choose *Setup* and *Options* and thereafter the *Connection* tab.



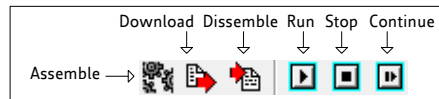
4. Choose *COM* port and *Type*. Click *OK*.



5. Write a program code into the white field and save it with *File/Save*. Note, that TMCL™ programs run standalone on the module, too.



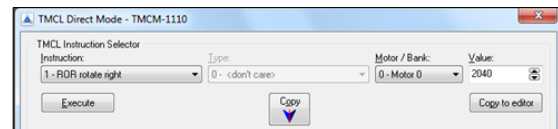
6. Click *Assemble* first, then *Download* and *Run* to start the program.



7. Stop all running programs by clicking *Stop* and start *Direct Mode* by clicking the appropriate icon.



8. The stepRocker is automatically detected, if the communication is established.
9. Issue a command by choosing *Instruction*, *Type*, *Motor*, and *Value* and click *Execute* to send it to the module.



TROUBLESHOOTING

IF COMMUNICATION IS NOT ESTABLISHED

- Check if the orange LED lights up. If not, check your power supply.
- Try to start *Direct Mode* and check, if the stepRocker is detected automatically.
- Check, if you are using the right COM port and it is not blocked by another program.
- Check, if the file *TMCM-1110.inf* is installed correctly.
- Check your connection settings. Default: 9600 baud, address 1.
- Check if your RS485 converter functions.

IF MOTOR DOES NOT RESPOND

- Usually the communication is not established (see above).
- Check the motor connection.
- If you are using a TMCL™ program try a movement command in *Direct Mode* to check if there is a problem with it.
- Restore factory settings by using instruction 137 for cancelling all settings modified by the user.