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MHS-Tool-v5

Controller adjustment

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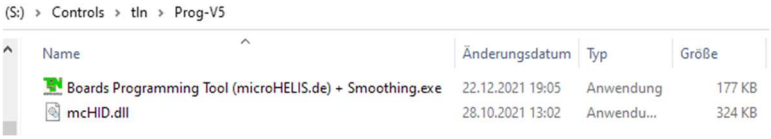
MHS/TLN Tool (v5)

Operation and setting options of the PICK-UP and 32-BTU boards

To use the 2 program components must be copied into a directory.

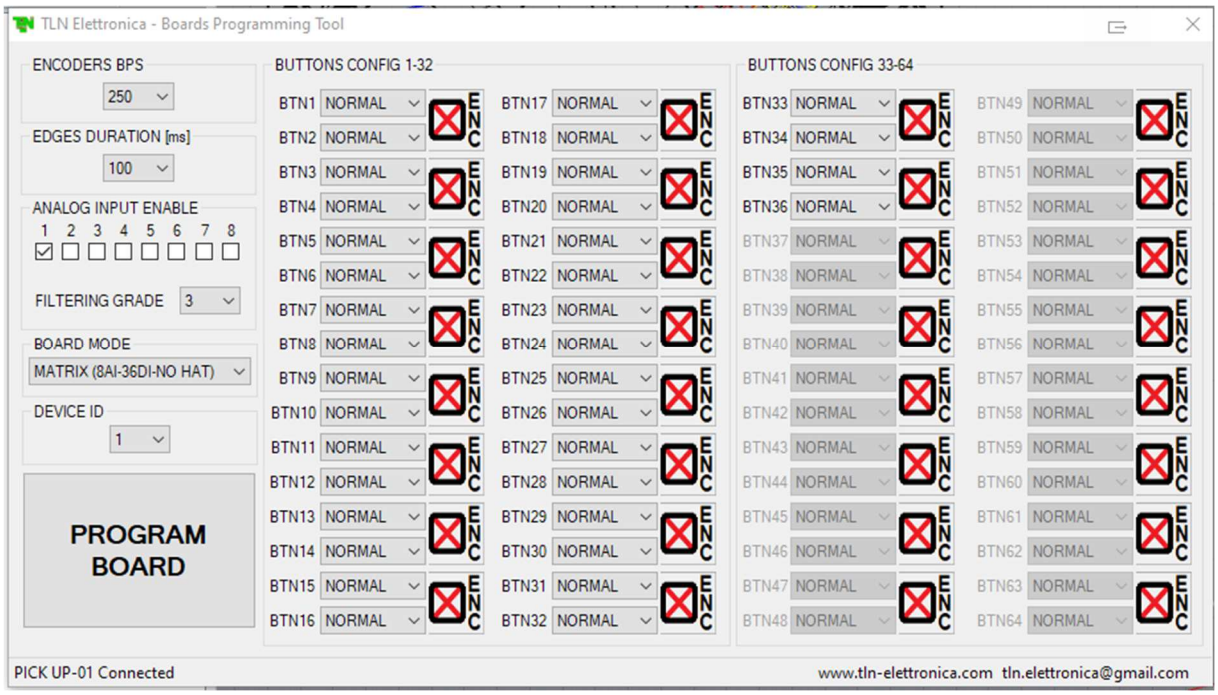


Calling up the program without a connected board

After plugging in the board, the program changes to the set parameters.

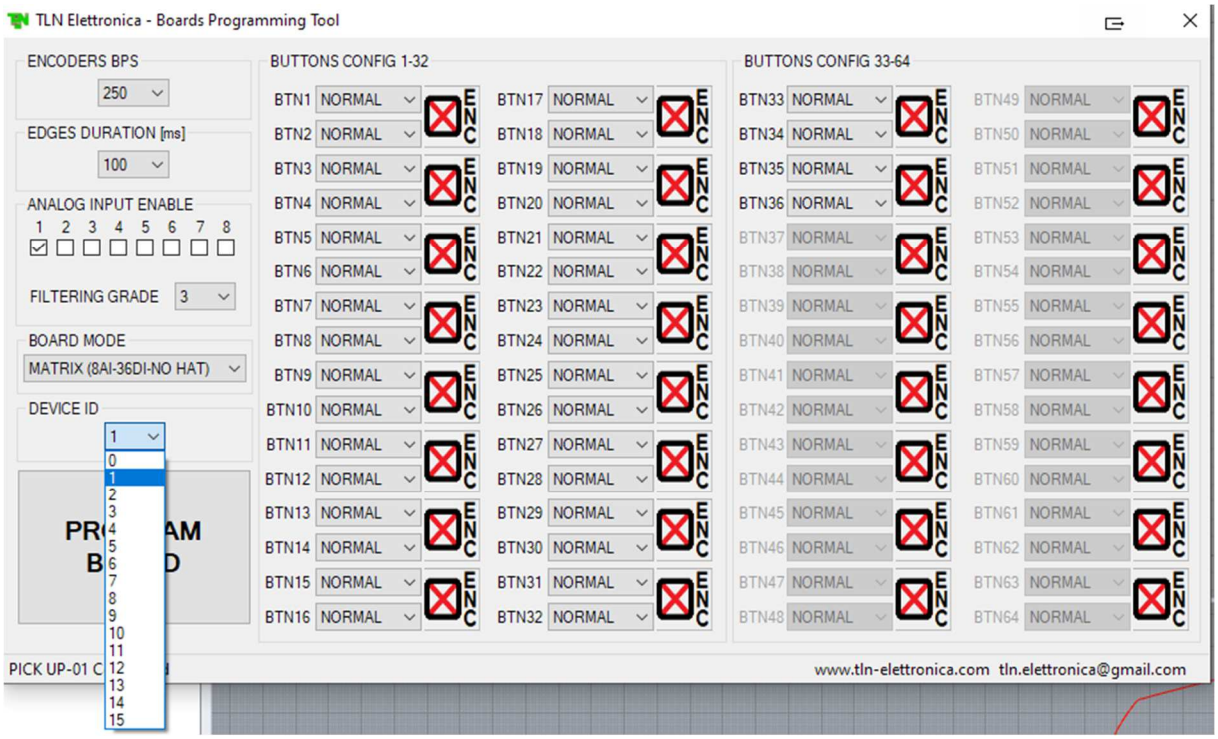
ID setting for PICK up and 32 BTU

Here is a board (from Oct.2021) that already supports the adjustable filter function.



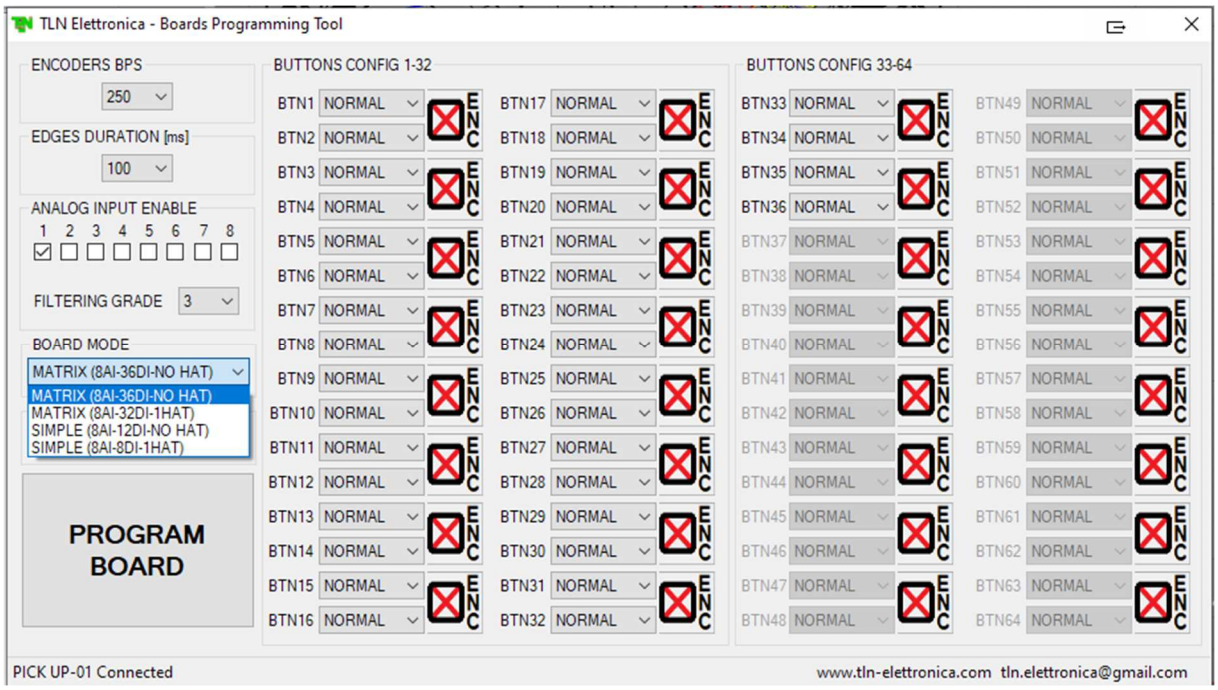
First of all, a device ID should be selected so that several boards can be differentiated in a system.

ID 0 to ID 15 are currently available.



PICK UP operating mode

Then the operating mode of the board can be selected



1. MATRIX (8AI-36DI-NO HAT)
   This mode has 8 analog inputs and 36 digital inputs via the SPREAD-OUT board, without directional coolie on inputs 33-36
2. MATRIX (8AI-32DI-1HAT)
   This mode has 8 analog inputs and 36 digital inputs via the SPREAD-OUT board, with 1 coolie hat (0-90-180-270) on inputs 33-36
3. SINGLE (8AI-12DI-NO HAT)
   This mode has 8 analog inputs and 12 digital inputs via the 12 contacts to the G contact
4. SINGLE (8AI-8DI-1HAT)
   This mode has 8 analog inputs and 8 digital inputs (Columns 1-6 and Rows 1 + 2) and 1 4-Way Coolie Hat (0-90-180-270) (Rows 3-6) via the 2x6 contacts

Now please click on "PROGRAM BOARD" and set the selected parameters.

Analoge inputs PICK UP

Then the "active" axes can be defined

This function must be done in any case before using the calibration (Windows or DXView), otherwise strange delays occur since Win 21H1.

In the picture only axes 1 and 5 are now active, the other axes then do not generate ghosts, e.g. in DIView. Axes 1-4 can also be laid using a connector cable with only 6 wires. When connected to the SPREAD-OUT board, these 4 axes are available in one handle next to the inputs, e.g. for an analog thumb stick.

The axes are named in Windows, but are independent of the actual function.

The FILTERING GRADE function available with the newer boards influenced the reaction to interfering signals.

E.g. unshielded cables next to the motor cables of powerful stepper motors, or worn potentiometers.

The sensor value is only transmitted as a mean value after several measurements.

However, this also influences the possible speed of position detection.

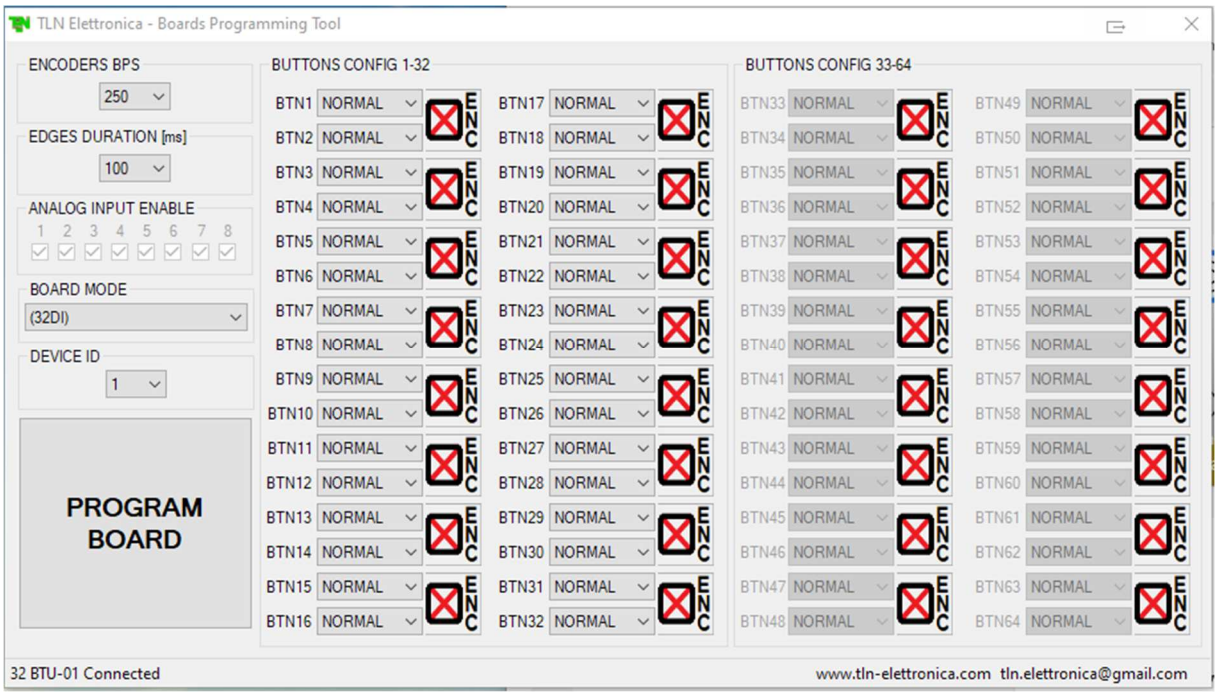
A small value assumes a few values: 1 passes the value on immediately,

a high value makes the corresponding measurements for an average value.

This results in a visible time delay in the value shown.

32BTU (Button To USB) Operation mode

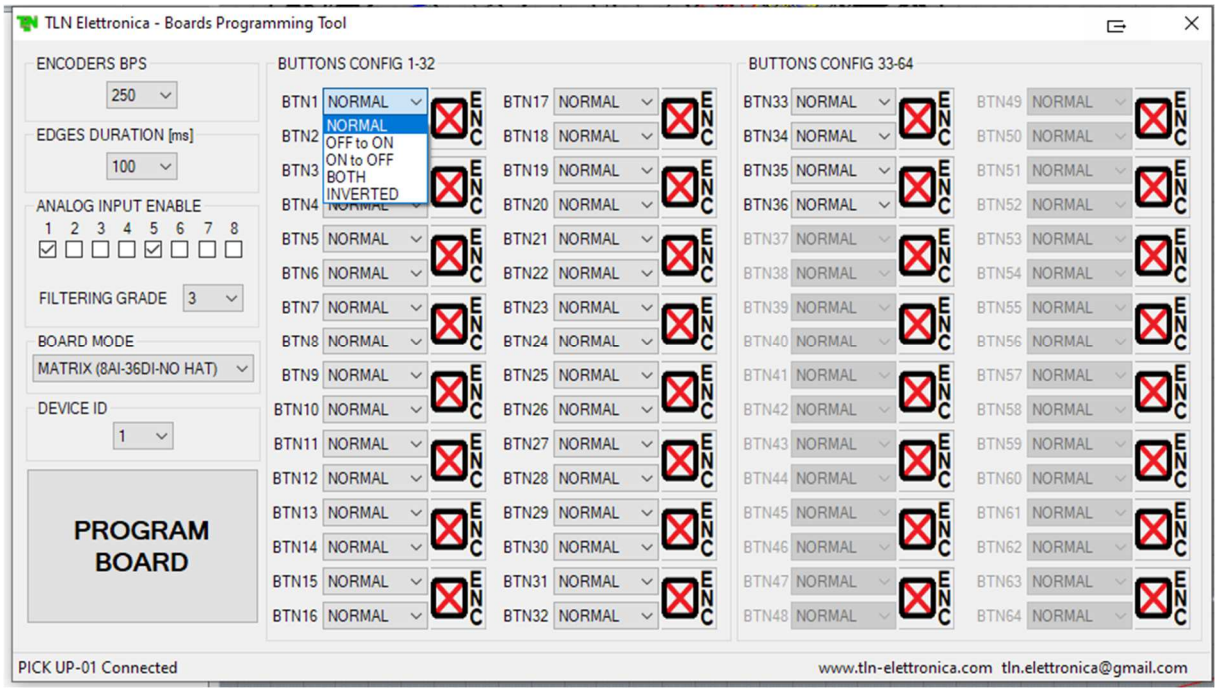
The 32 BTU has only one operating mode.



DIGITALE inputs

PICK UP and 32 BTU

The reaction of the digital inputs can be adjusted



NORMAL:

means here that the input is physically evaluated. The input is "pressed" "closed" as long as the contact is closed.

OFF to ON:

Only the switch-on process (close / press) is passed on as an impulse. The pulse duration is determined by EDGES DURATION. The switch-off process (open / release) is not registered.

ON to OFF:

Only the switch-off process (open / release) is passed on as an impulse. The pulse duration is determined by EDGES DURATION. The switch-on process (close / press) is not registered.

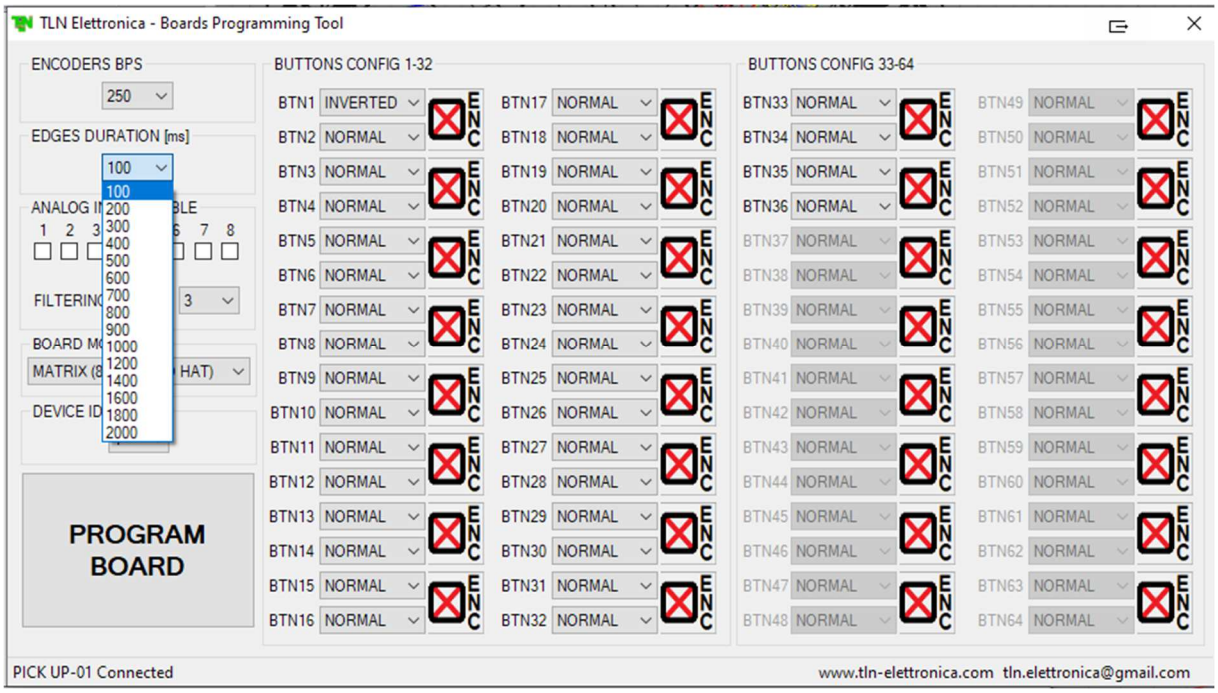
BOTH:

Both switching processes are passed on as an impulse. In the "Both" mode, a toggle function can be simulated despite a physical ON-OFF switch.

INVERTED:

Means here that the input is evaluated physically inverted. The input is “not pressed” “Open” as long as the contact is closed.

EDGES DURATION

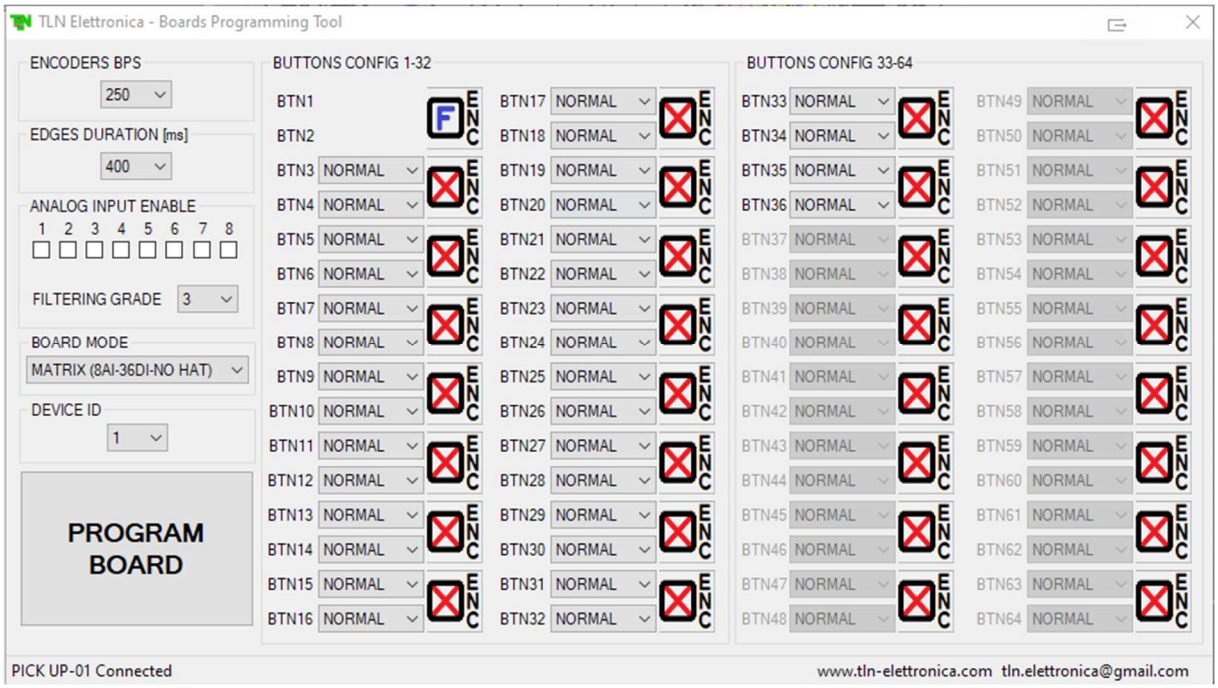


This allows the switching pulse duration for the button modes to be determined unequal to normal.

E.g. the switch-on process in the OFF to On mode starts the reported signal for the set duration. After the time has elapsed, it is automatically ended again.

Please transfer all selected settings to the board with "PROGRAM BOARD".

Encoder settings



To activate an encoder at the 2 inputs, simply activate the corresponding ENC box.

F = full step

H = half step

Q = quadrature

The ENCODERES BPS determines the pulse length and should be selected to match the encoder

Disposal of defective controllers

Defective controllers or other electronics from microHELIS.de can be disposed of at the recycling center in Germany. WEEE reg. No. DE 81028642

For other EU member countries and worldwide: please send the defective components back to microHELIS.de. We then forward these to further supply or disposal.