

TURRET Software

Programmable Encoder



- Power supply 5-28 volts DC
- 8 outputs channels single ended
- Preset by switch on cover
- Programmable by software
- Dedicated programming software for Rotating Tool Holders

MAIN SCREEN



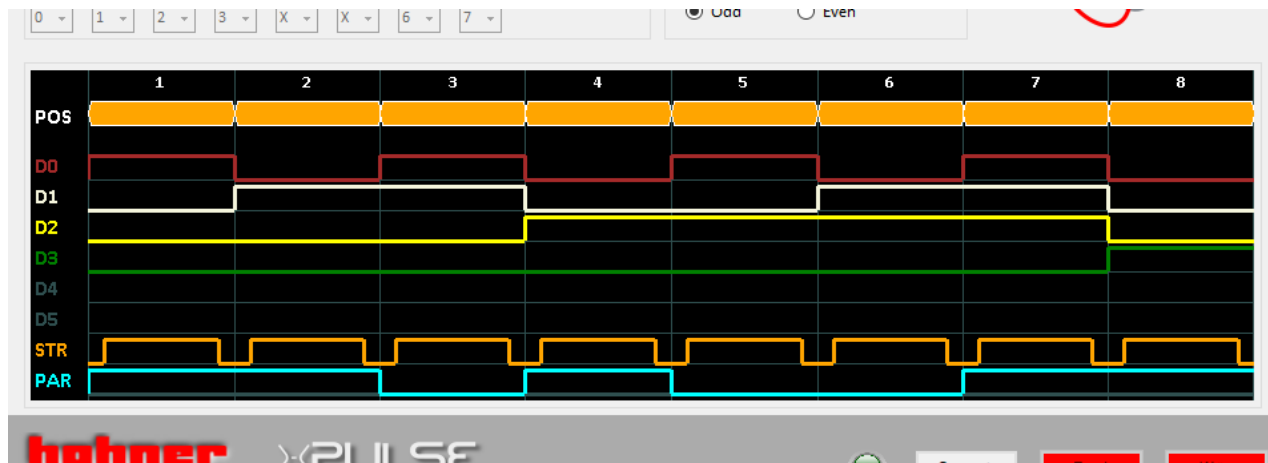
Software programming permits to change following encoder parameters:

First position:	intended as minimum position (usually set to 0 or 1)
Last position:	this is the maximum position (it depends by tools number) <i>For example: with 12 tools, last position = 12 – First position</i>
Code	can be selected from Binary, Gray or BCD (binary-coded decimal)
Strobe	is used to validate all others signals. Can be active Hi or Low. Max dimension depends by tools count. Can also be 0, in this case strobe signals is not used. <i>For example: with 12 tools, max strobe dimension is $360 / 12 = 30^\circ$</i>
Counting	counting up direction selection. <i>For example: 12 tools and First position = 0. If CW then encoder count from 0 to 11 while shaft CW rotating (shaft side view).</i>
Null Positions	set position to 0 (zero) before to switch from a position and the next one. Setting dimension to 0 disable the signal. Max dimension as for strobe. <i>For example: 8 tools, First position = 0. Null positions > 0. Counting is 0-0-1-0-2-0-3-0-4-0-5-0-6-0-7-0</i>
Channel Assignments	disabled function. Here active signals are showed. They depends by previous choices.
Parity	sets parity signal generation.

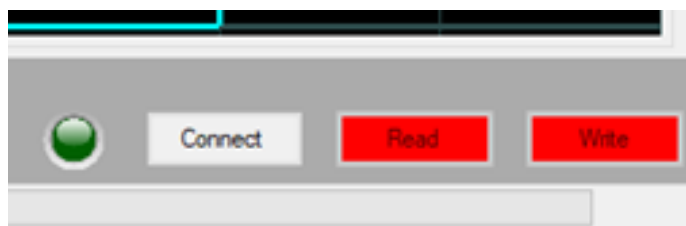
Software language can be changed by Language menu.
Available languages: English, German, Italian, Spain.

WAVEFORM

Bottom area shows waveform example based on above selections.



DEVICE CONNECTION



In this frame it is possible to connect encoder to pc thru USB cable.

Before connecting make sure that Windows correctly installs encoder drivers. Usually Windows automatically searches and installs correct drivers.

If Windows does not find the correct driver, they can be downloaded from this link:

<http://www.ftdichip.com/Drivers/D2XX.htm>

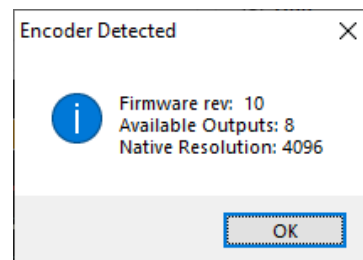
Encoder is correctly recognized when on 'Devices and Printers Control Panel' "R V1.0" icon is showed.

CONNECT

Push on it to connect encoder.

If Encoder is found then a pop up window shows the encoder information.

Only one encoder must be connected to computer at any one time



READ

Push on it to read back data from Encoder.

WRITE

Push on it to write setup data to connected Encoder.

Do not disconnect device until the process is complete

Note

EXAMPLE 1

Setup example for tool holder:

- 8 tool positions
- Counting from 1 to 8 with CW rotating, code BINARY
- Strobe HIGH active for 18°
- Parity ODD
- Null positions dimension 21°

The screenshot shows the Hohner Turret OS r1.0 software interface. The configuration settings are as follows:

- First Position [A]:** 1
- Last Position [B]:** 8
- Code [C]:** Binary (selected), Gray, BCD
- Counting [E]:** CW (selected), CCW
- Strobe [D]:** STROBE enabled when is High (selected), Low; length (°) - MAX 50°: 18
- Null Positions [F]:** length (°) - MAX 50°: 21
- Parity [H]:** Odd (selected), Even
- Channels Assignments [G]:** D0: 0, D1: 1, D2: 2, D3: 3, D4: X, D5: X, PAR: 6, STR: 7

The timing diagram below shows the signals for 8 positions:

Signal	1	2	3	4	5	6	7	8
POS	High	High	High	High	High	High	High	High
D0	High	Low	Low	Low	Low	Low	Low	Low
D1	Low	High	Low	Low	Low	Low	Low	Low
D2	Low	Low	High	Low	Low	Low	Low	Low
D3	Low	Low	Low	High	Low	Low	Low	Low
D4	Low	Low	Low	Low	High	Low	Low	Low
D5	Low	Low	Low	Low	Low	High	Low	Low
STR	High	High	High	High	High	High	High	High
PAR	High	Low	High	Low	High	Low	High	Low

The interface also includes a menu bar (File, Language, Edit, Tool), a toolbar, and a status bar with the Hohner logo, PULSE logo, and buttons for Connect, Read, and Write.

EXAMPLE 2

Setup example for tool holder:

- 12 tool positions
- Counting from 1 to 12 with CW rotating, code BINARY
- Strobe HIGH active for 18°
- Parity ODD
- Null positions dimension 6°

Hohner - Turret OS r1.0 - *

File Language Edit Tool ?

First Position [A] Last Position [B] Code [C] Strobe [D]

STROBE enabled when is High Low
length (°) - MAX 31°

Counting [E] Null Positions [F]

Binary Gray BCD
 CW CCW
length (°) - MAX 31°

Channels Assignments [G]

D0	D1	D2	D3	D4	D5	PAR	STR
0	1	2	3	X	X	6	7

Parity [H] Odd Even



POS 1 2 3 4 5 6 7 8 9 10 11 12

D0 D1 D2 D3 D4 D5 STR PAR



hohner <>PULSE Show tips

Revision History

Release	Release Date	Chapter	Modification	Page
A1	10-09-2019	-	Emission	-
