CANopen Analyzer

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1. Features & System Requirements

FNC CANOPEN ANALYZER

Environment

Operating temperature	–40° to +85°C
Temperature for storage and transport	–40° to +100°C
Relative humidity	15 to 90%, not condensing
Ingress protection	IP20

Electrical

Voltage supply	Encoder specific V_{min} (for selected encoder) to V_{max} (for selected encoder)
Time stamp resolution	approx. 42 µsec

2. Connection

As in the image, a connection must be established between the encoder, encoder tester and the computer where the application is installed.
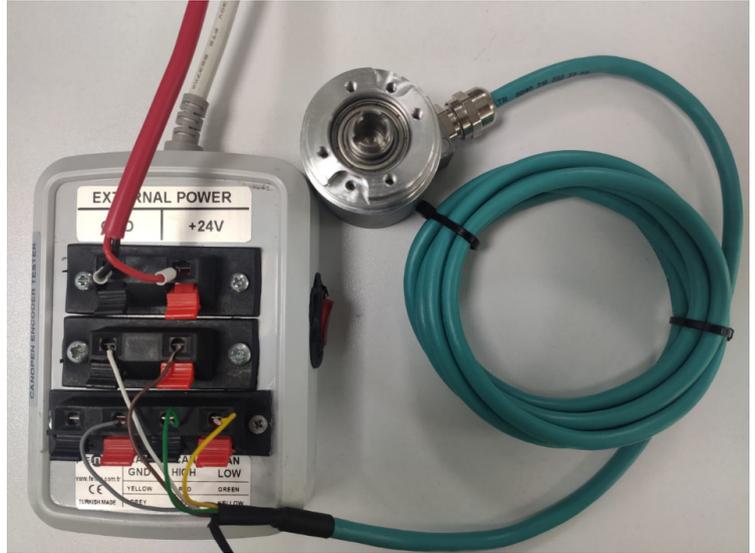
1. Connect an external 24V power supply to the FENAC CANOPEN ENCODER TESTER.

2. Connect the usb cable of CANOPEN ENCODER TESTER to the computer where the application is installed.

3. Connect the CAN cables of the encoder to the CANOPEN ENCODER TESTER as given in Table 1 below.

4. Connect the encoder power supply cables as given in Table 2.
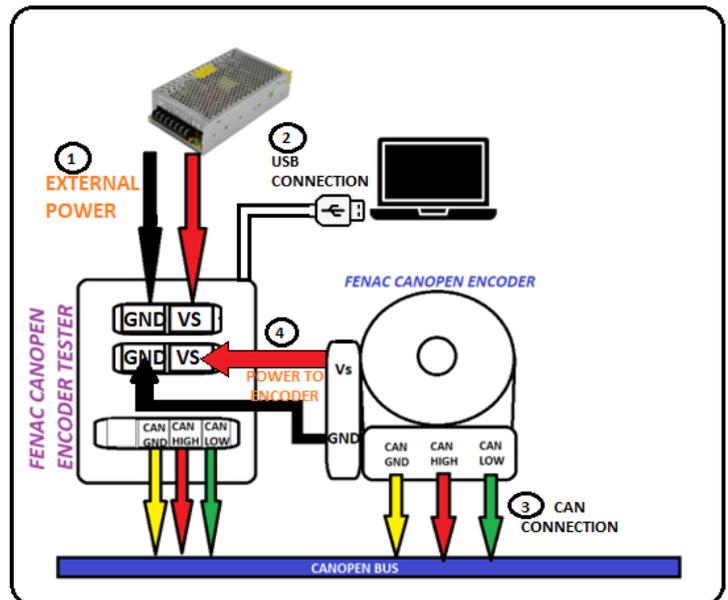
Table 1

Connection (CAN Wiring)	Color	
CAN GND	Gray	⚪
CAN HIGH	Green	🟢
CAN LOW	Yellow	🟡

Table 2

Connection (Encoder Supply)	Color	
Vs	Brown	🟤
GND	White	⚪

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3. Program Installation

CANOPEN Encoder Scanner Tester can be used to test Fenac brand encoders with CANOPEN output.

1. The USB cable of the device must be connected to a computer with windows operating system.

2. Open the win-x86 folder from the file you downloaded from the Fenac website.

📁 Application Files
📁 publish
📁 win-x86
📄 Fenac CAN Scanner Tester.application
📄 PeakOemDrv.exe
💿 setup.exe
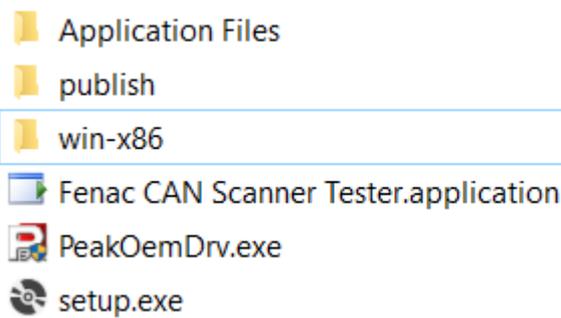
3. Click and open the "fenac_can_scanner_installer.exe" program under the Win-x86 folder. And do all necessary installation processes.

📄 fenac_can_scanner_installer.exe
📄 fenac_can_scanner_installer.pdb
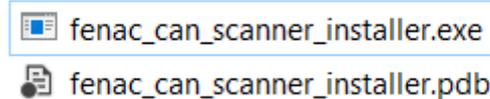
4. After all the installations are done, **"FENAC CAN SCANNER"** application will start automatically as shown in the image.
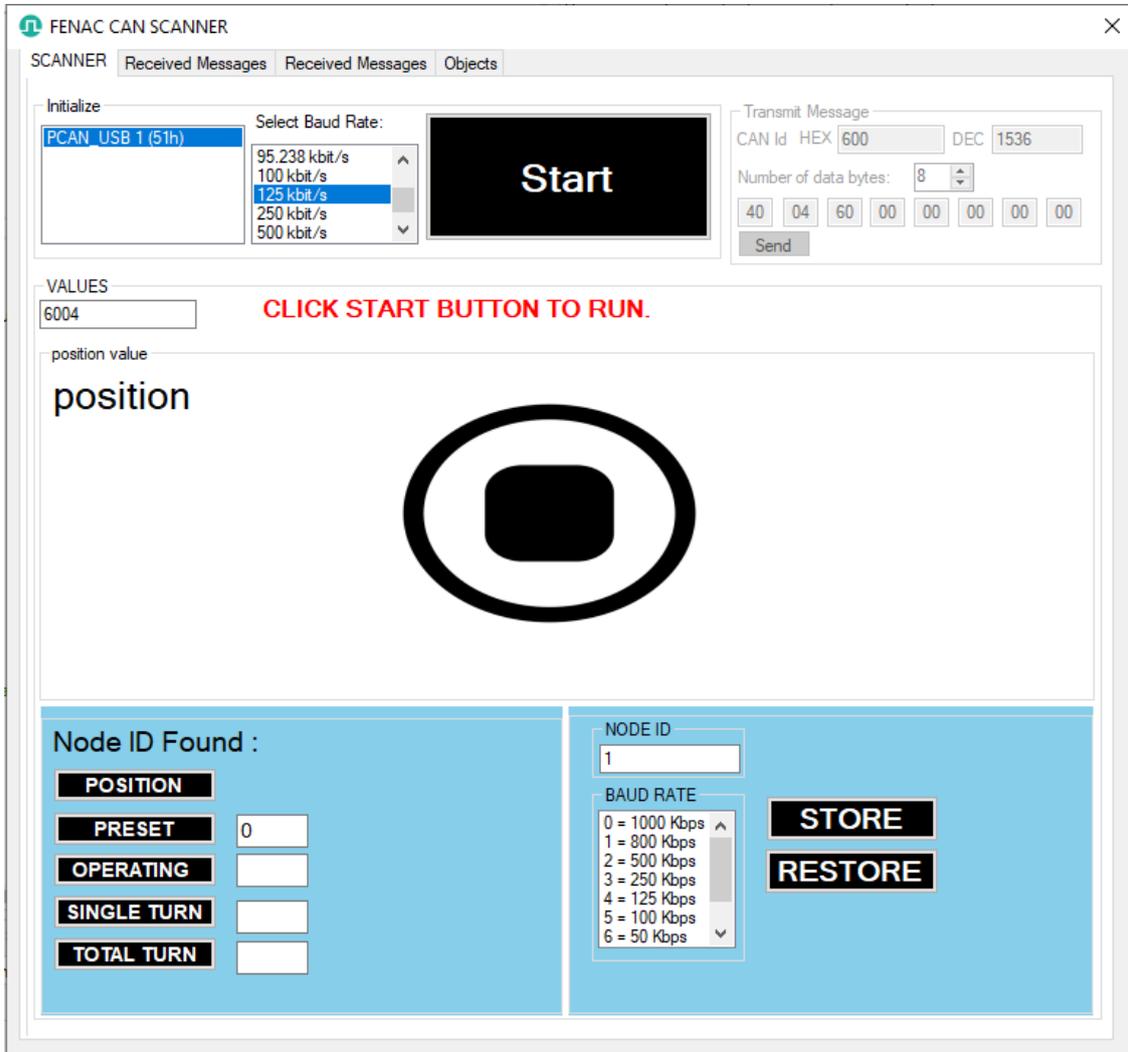
5. When you want to open the application again, it can be found by searching for FENAC CAN SCANNER from the start menu or "setup.exe" in the downloaded folder can be run.
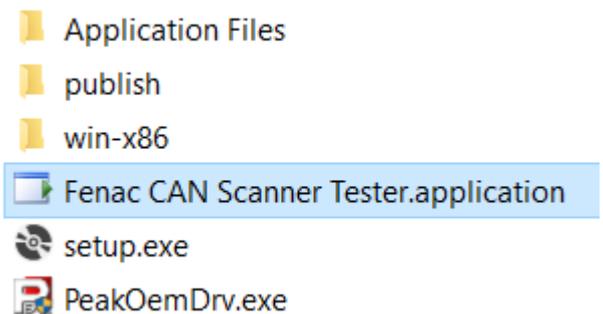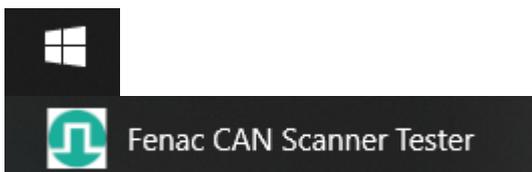
6. When the program is opened, since most of the Fenac brand canopen encoders has 125 kbit/s baudrate are installed in the factory settings, the application automatically runs at 125kbit/s. If the **"Fenac CanOpen Scanner Tester"** hardware is connected and there is no connection problem, the application interface will be as in the image below.
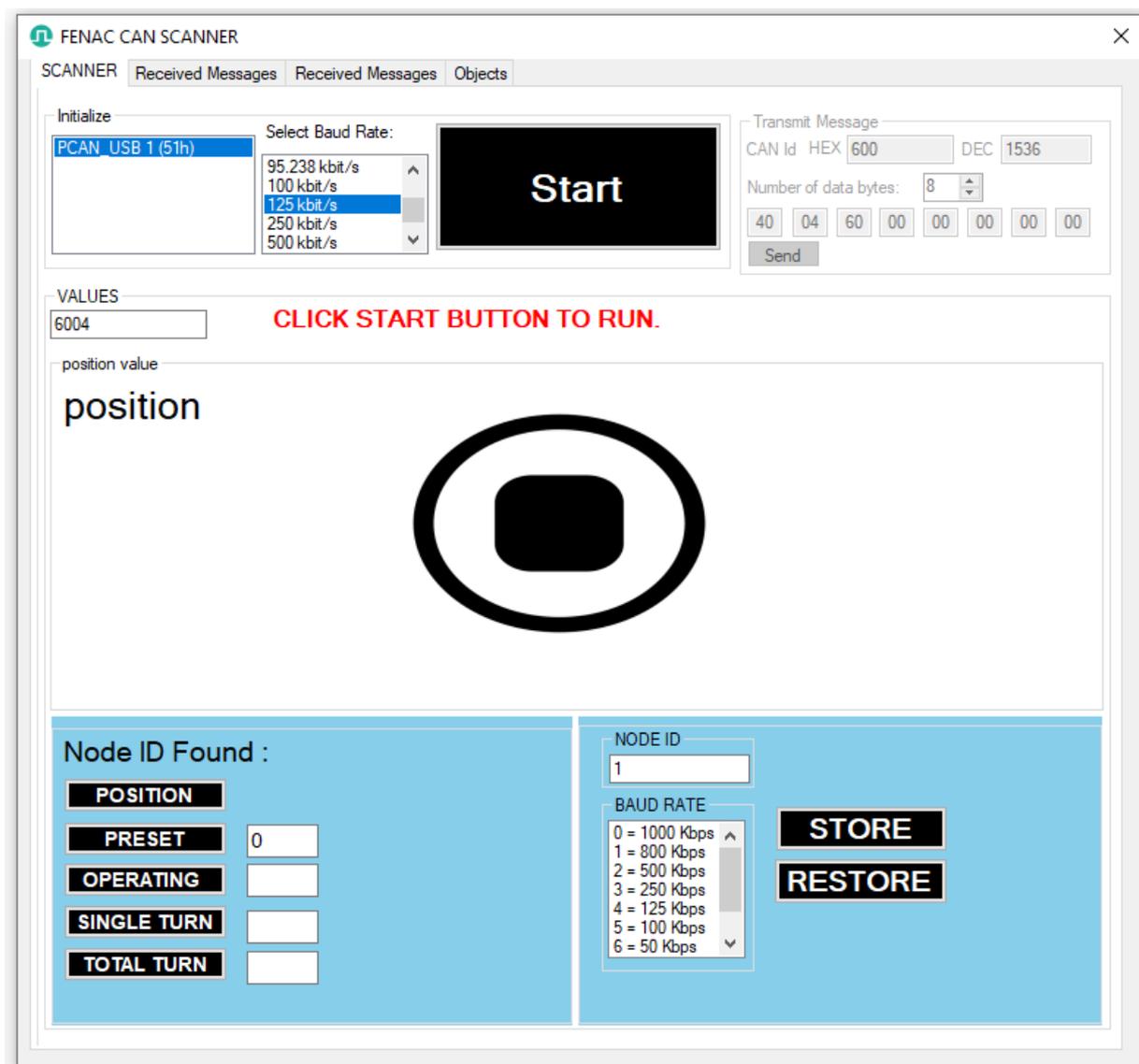
7. When the CanOpen encoder device's connection is not made correctly or the encoder's power supply is not made correctly, **"Connection problem. Check connections and settings"** warning is given and the icon indicating a problem with the connection appears on the screen. In this case, after connecting the Can High, Can Low, Can GND cables correctly, various baud rates should be tried to ensure that the correct communication speed is selected. **(Baud Rate setting is made in Initilize->Select Baud Rate.)** If communication still does not occur after these operations, cut off the power of the device and give it again.

8. When all connections are made correctly, when the encoder power is cut and reconnected, the position data starts to flow as in the image.

4. Testing

1. After the connection is established, the position values begin to flow.
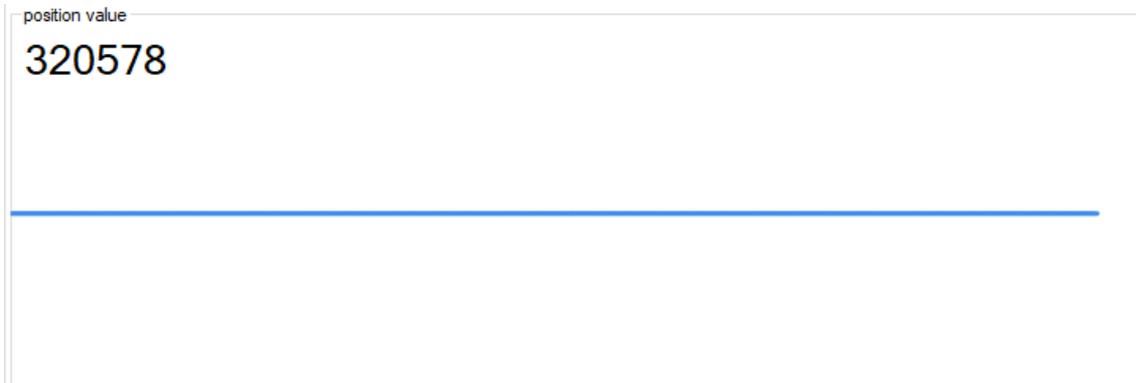
2. By clicking the Preset button, the position value is set to 0. If a value other than 0 is entered, preset operation is performed according to this new value entered. (The value of 123 is set as preset in the image below.)

3. NODE ID and Baud Rate values are changed and saved by pressing the STORE button. (In our example, Node ID is 17 and Baud Rate is 250 Kbps.) **"Restart your encoder's power supply. Select stored baud rate and click Start button."** warning appears on the screen.

4. According to the warning, the power of the encoder should be cut off and given again. When the encoder is energized, 250 Kbit/s Baud Rate must be selected from the **Initilize->Select Baud Rate** section, as indicated in red text, and then the Start button must be pressed. If there is an error condition here, the device should be powered off and given again. This process should be repeated until the warning disappears. When the communication is successfully established, **"PROGRAM IS RUNNING SUCCESFULLY"** will appear on the screen as in the image. We set the Node ID to 17, and we can see this from the "Node ID Found: 17" article.

5. To undo the changes we have made, the **RESTORE** button must be clicked. Afterwards, the device should be de-energized and given again. The 125 Kbit/s determined in the factory settings should be selected and the device should be started by clicking the Start button.
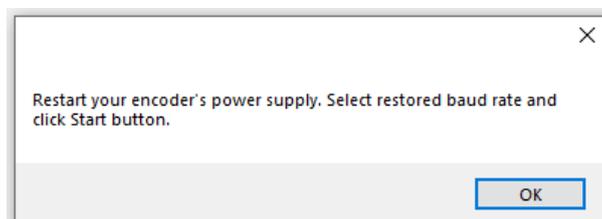
6. Finally, we did not mention the NODE-ID setting because the device NODE-ID scan is done automatically. However, NODE-ID 17, which was originally 1, was set and should be 1 again after RESTORE. This can be seen in the **"Node ID Found: 1"** section.