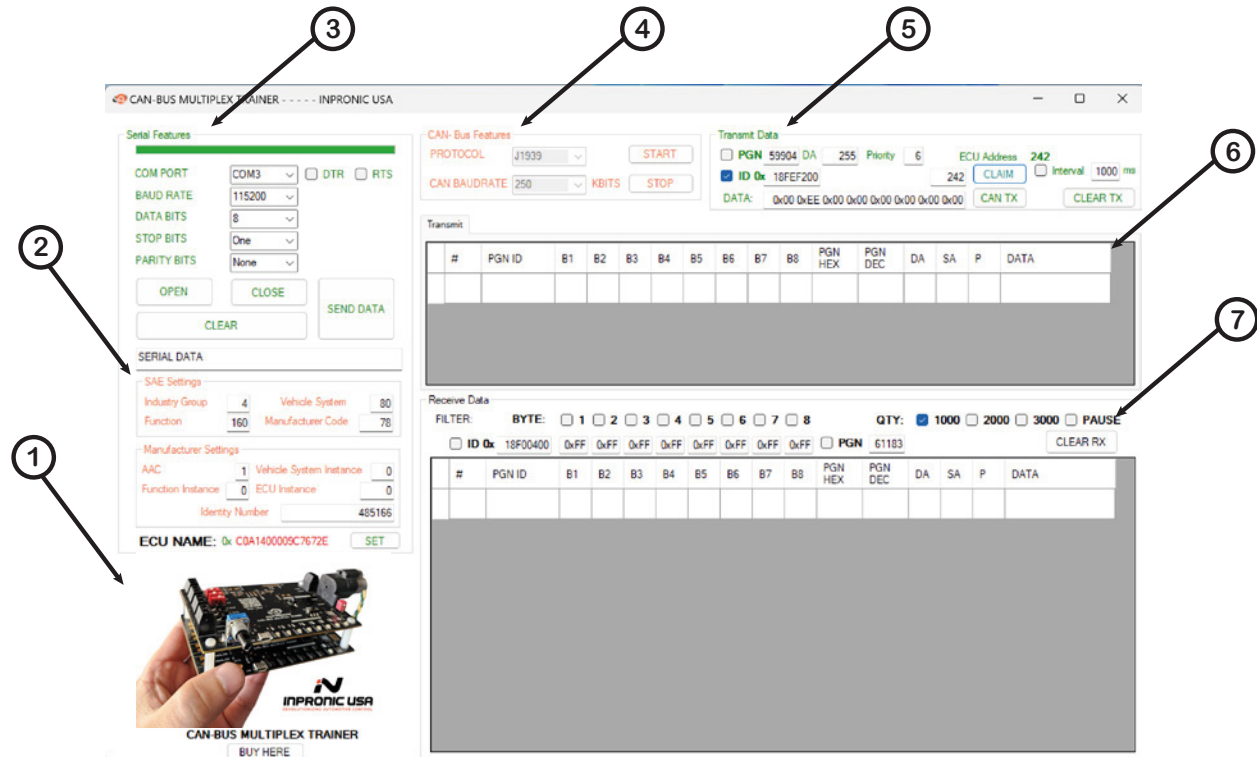
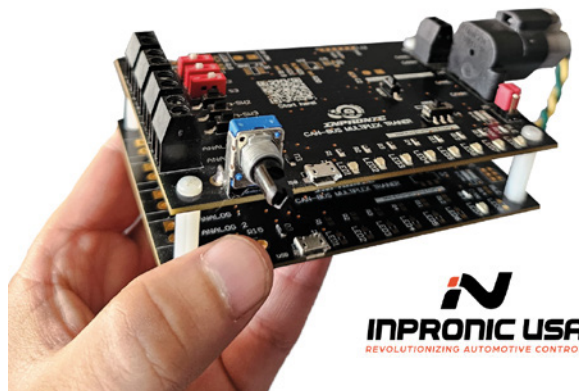


Can-Bus Multiplex Trainer SOFTWARE



1. Can bus Multiplex Trainer Board.



CAN-BUS MULTIPLEX TRAINER

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If you don't have already the board you can buy here:

<https://inpronicusa.com/store/ols/products/j1939-can-bus-multiplex-trainer-kit>

2. SAE Settings J1939

SAE Settings

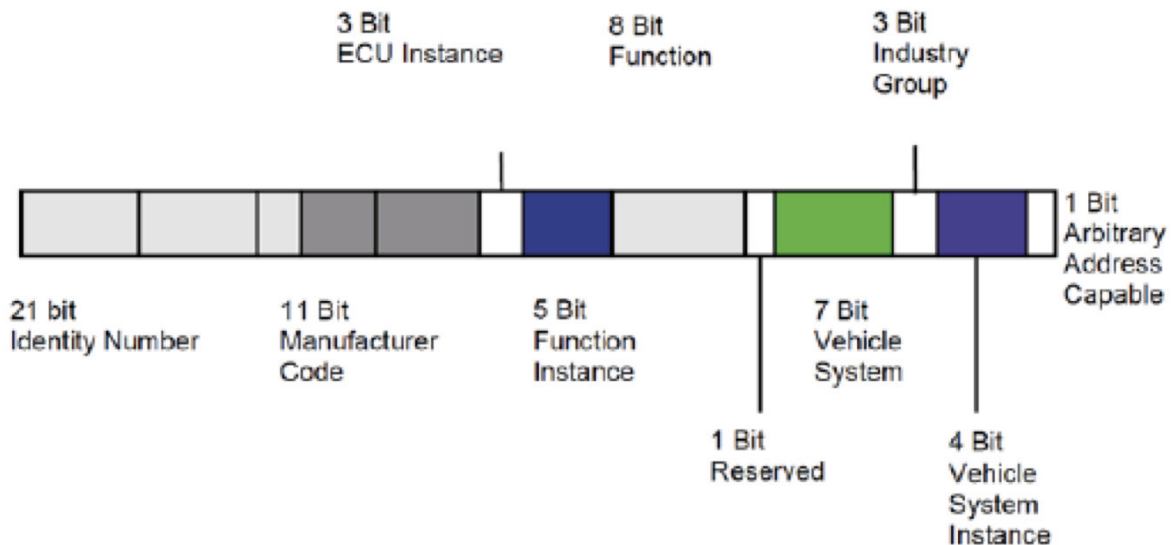
Industry Group	4	Vehicle System	80
Function	160	Manufacturer Code	78

Manufacturer Settings

AAC	1	Vehicle System Instance	0
Function Instance	0	ECU Instance	0
Identity Number		485166	

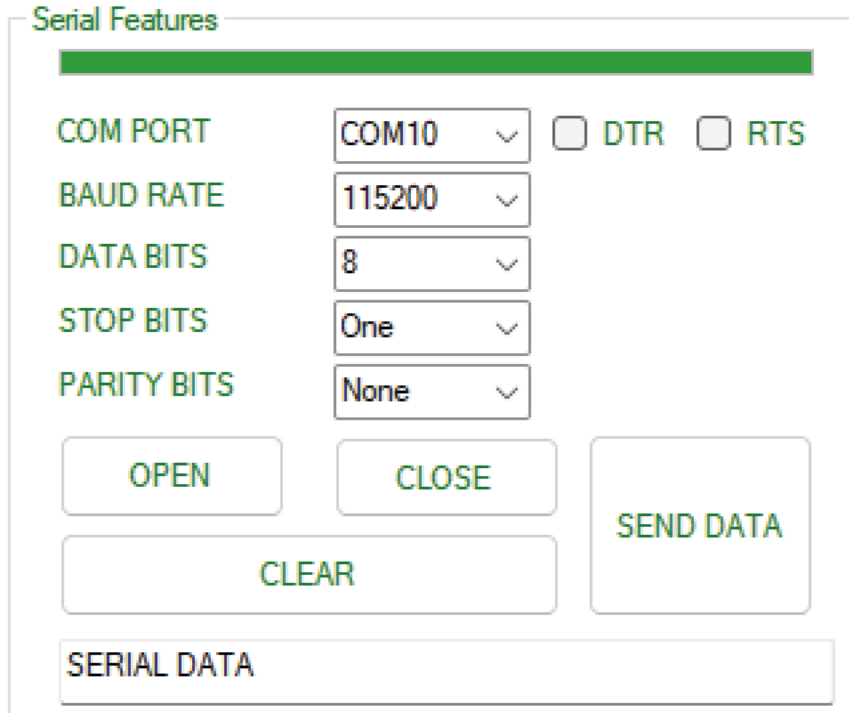
ECU NAME: 0x C0A1400009C7672E

Each ECU in a J1939 protocol must hold at least one NAME and one address, SAE J1939/81 defines a 64 bit for NAME, showing bellow.



Add all information accordingly and push SET to obtain the information to CLAIM the address for J1939 Protocol.

3. Serial Features



The 'Serial Features' window is a configuration interface for serial communication. It has a title bar 'Serial Features' and a green header bar. Below the header, there are several configuration options: 'COM PORT' with a dropdown menu showing 'COM10', 'BAUD RATE' with a dropdown menu showing '115200', 'DATA BITS' with a dropdown menu showing '8', 'STOP BITS' with a dropdown menu showing 'One', and 'PARITY BITS' with a dropdown menu showing 'None'. To the right of these options are two checkboxes: 'DTR' and 'RTS', both of which are currently unchecked. Below the configuration options are four buttons: 'OPEN', 'CLOSE', 'SEND DATA', and 'CLEAR'. At the bottom of the window is a text box labeled 'SERIAL DATA'.

In this Tab you can configure the serial protocol for communicate with the CAN-BUS Multiplex Trainer board under USB.

First choose the COM port connected with the board in this case it is COM10, set the BAUD RATE to 115200, data bits 8, stop bit one, and choose no parity.

Select OPEN to start the serial communication with the CAN-Bus Multiplex Trainer.

Don't forget to STOP the CAN-BUS before CLOSE The Serial Port, if you need send a serial data to the board you can do that using the Text box SERIAL DATA you can CLEAR it and write any text and **SEND DATA**.

It is very useful to deploy a new products special when you need to connect other peripherals like HMI screens, LCD, and so on.

4. CAN-Bus Features

In this Tab you can choose the Protocol to Monitoring – Simulate or Process the Data.

CAN- Bus Features

PROTOCOL J1939 START

CAN BAUDRATE J1939 KBITS STOP

OBD-II
J1939
CAN-OPEN
NMEA-2000

Also you can choose the Baud rate of CAN, typically the OBD-II use a 500Kbps, and J1939 250Kbps, and so on.!

CAN- Bus Features

PROTOCOL OBD-II START

CAN BAUDRATE 500 KBITS STOP

Transmit

#	PGN	B2	B3	B4	B5
3	0x18F	0xEE	0x00	0x00	0x00
4	0x18E	0xEE	0x00	0x00	0x00
5	0x18E	0x67	0xC7	0x09	0x00

5
10
20
50
83
100
125
250
500
800
1000

After choose this parameters you can START the communication under CAN-BUS Protocol

CAN- Bus Features

PROTOCOL OBD-II START

CAN BAUDRATE 500 KBITS STOP

OBD-II PROTOCOL

CAN- Bus Features

PROTOCOL J1939 START

CAN BAUDRATE 250 KBITS STOP

J1930 PROTOCOL

5. Transmit Data

In this Tab you can choose the IDs or PIDs accordingly your protocol.

Transmit Data

☒ PGN 59904 DA 255 Priority 6 ECU Address 242

☐ ID 0x 18FEF200 242 CLAIM ☐ Interval 1000 ms

DATA: 0x00 0xEE 0x00 0x00 0x00 0x00 0x00 0x00 CAN TX CLEAR TX

For example, for J1939 you have three different ways to send data.

First one is under PGNs, SA, DA, P, but to do it, is important to CLAIM the address to the ECU, in this case you first need to SET the name of the ECU and the address, if you have already other ECU with the same Address our TRAINER will change the actual ECU Address accordingly the J1939 Protocol.

Second one, if you know the PGN ID you can choose it and of course select the DATA to need to be transmitted. And press CAN-TX.

Transmit Data

☐ PGN 59904 DA 255 Priority 6 ECU Address 242

☒ ID 0x 18FEF200 242 CLAIM ☐ Interval 1000 ms

DATA: 0x00 0xEE 0x00 0x00 0x00 0x00 0x00 0x00 CAN TX CLEAR TX

Third you can select if need to send under PGNs or under ID, and select the value of interval from 1ms to 65559ms and the data will send accordingly your selection.

Transmit Data

☒ PGN 61444 DA 0 Priority 6 ECU Address 242

☐ ID 0x 18FEF200 242 CLAIM ☒ Interval 100 ms

DATA: 0x00 0xEE 0x00 0x00 0x00 0x00 0x00 0x00 CAN TX CLEAR TX

When you send the information on the Trainer Board you must receive the information on the other side like this.

CAN-BUS MULTIPLEX TRAINER - INPRONIC USA

Serial Features
 COM PORT: COM11 ☐ DTR ☐ RTS
 BAUD RATE: 115200
 DATA BITS: 8
 STOP BITS: One
 PARITY BITS: None
 OPEN CLOSE SEND DATA
 CLEAR

CAN-Bus Features
 PROTOCOL: J1939 START
 CAN BAUDRATE: 250 KBITS STOP

Transmit Data
 PGN: 55904 DA: 255 Priority: 6 ECU Address: 10
☐ ID 0x 18FEF200 CLAIM Interval: 1000 ms
 DATA: 0x00 0xEE 0x00 0x00 0x00 0x00 0x00 0x00 CAN TX CLEAR TX

Transmit

#	PGN ID	B1	B2	B3	B4	B5	B6	B7	B8	PGN HEX	PGN DEC	DA	SA	P	DATA
1	0x18EEFFDA	0x2E	0x67	0x09	0x00	0x40	0xA1	0xC0	0xFF	61183	255	10	6		00000000000000000000000000000000
2	0x18EAFFDA	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0xFF	60159	255	10	6		00000000000000000000000000000000

Receive Data
 FILTER: BYTE: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8
☐ ID 0x 18FEF100 OFF OFF OFF OFF OFF OFF OFF OFF PGN: 61444 CLEAR RX

#	PGN ID	B1	B2	B3	B4	B5	B6	B7	B8	PGN HEX	PGN DEC	DA	SA	P	DATA
863	0x18F004F2	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0x00	F004	61444	255	242	6	00000000000000000000000000000000
864	0x18F004F2	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0x00	F004	61444	255	242	6	00000000000000000000000000000000
865	0x18F004F2	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0x00	F004	61444	255	242	6	00000000000000000000000000000000
866	0x18F004F2	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0x00	F004	61444	255	242	6	00000000000000000000000000000000
867	0x18F004F2	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0x00	F004	61444	255	242	6	00000000000000000000000000000000
868	0x18F004F2	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0x00	F004	61444	255	242	6	00000000000000000000000000000000
869	0x18F004F2	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0x00	F004	61444	255	242	6	00000000000000000000000000000000
870	0x18F004F2	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0x00	F004	61444	255	242	6	00000000000000000000000000000000
871	0x18F004F2	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0x00	F004	61444	255	242	6	00000000000000000000000000000000
872	0x18F004F2	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0x00	F004	61444	255	242	6	00000000000000000000000000000000
873	0x18F004F2	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0x00	F004	61444	255	242	6	00000000000000000000000000000000
874	0x18F004F2	0x00	0xEE	0x00	0x00	0x00	0x00	0x00	0x00	F004	61444	255	242	6	00000000000000000000000000000000


 CAN-BUS MULTIPLEX TRAINER
 BUY HERE

Under OBD-II you just must send the PGN ID and the Data, for example I'll request a speed for the vehicle for this purpose I need to know the PID information, in this case it is 0x0D, and need to request, the request address under this protocol is 7DF, and the Data is 0x02 0x01 0x0D 0x55 0x55 0x55 0x55 0x55.

Transmit Data

☐ PGN 61444 DA 0 Priority 6 ECU Address 242
☒ ID 0x 7DF 242 CLAIM Interval 100 ms
 DATA: 0x02 0x01 0x0D 0x55 0x55 0x55 0x55 0x55 CAN TX CLEAR TX

When you send this information from OBD-II to the vehicle it will response with the speed information under PGN ID 7E8 with data 0x03 0x41 0x04 0x0F 0xAA 0xAA 0xAA 0xAA. It corresponds to a 4Km/h

#	PGN ID	B1	B2	B3	B4	B5	B6	B7	B8	PGN HEX	PGN DEC	DA	SA	P	DATA
11	0x000007E8	0x03	0x41	0x0D	0x13	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA130D4103
12	0x000007E8	0x03	0x41	0x0D	0x15	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA150D4103
13	0x000007E8	0x03	0x41	0x0D	0x16	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA160D4103
14	0x000007E8	0x03	0x41	0x0D	0x14	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA140D4103
15	0x000007E8	0x03	0x41	0x0D	0x04	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA040D4103

6. Transmit Tab

In this Tab, you will see all of the data sending by CAN-BUS, under the different protocol explained before. In this example bellow you can see the request data under OBD-II for speed and rpm for vehicle.

Transmit															
#	PGN ID	B1	B2	B3	B4	B5	B6	B7	B8	PGN HEX	PGN DEC	DA	SA	P	DATA
2	0x00007DF	0x02	0x01	0x0D	0x55	0x55	0x55	0x55	0x55	7	7	7	223	0	555555550D0102
3	0x00007DF	0x02	0x01	0x0D	0x55	0x55	0x55	0x55	0x55	7	7	7	223	0	555555550D0102
4	0x00007DF	0x02	0x01	0x0C	0x55	0x55	0x55	0x55	0x55	7	7	7	223	0	555555550C0102
5	0x00007DF	0x02	0x01	0x0C	0x55	0x55	0x55	0x55	0x55	7	7	7	223	0	555555550C0102
6	0x00007DF	0x02	0x01	0x0C	0x55	0x55	0x55	0x55	0x55	7	7	7	223	0	555555550C0102

7. Receive and Filter Tab

In this box you can see all the data received under CAN-Bus and under you protocol selected. You can filter the information for PGN, PGN ID, Data bytes. It is useful when you want to see for example just the response from OBD-II, because If you don't filter it is a lot of messages coming faster, so you need to filtering to just check the parameters what you are looking for.

Receive Data

FILTER: **BYTE:** ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8

☒ ID 0x

7E8

0xFF

0xFF

0xFF

0xFF

0xFF

0xFF

0xFF

0xFF

☐ PGN

61444

CLEAR RX

#	PGN ID	B1	B2	B3	B4	B5	B6	B7	B8	PGN HEX	PGN DEC	DA	SA	P	DATA
11	0x000007E8	0x03	0x41	0x0D	0x13	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA130D4103
12	0x000007E8	0x03	0x41	0x0D	0x15	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA150D4103
13	0x000007E8	0x03	0x41	0x0D	0x16	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA160D4103
14	0x000007E8	0x03	0x41	0x0D	0x14	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA140D4103
15	0x000007E8	0x03	0x41	0x0D	0x04	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA040D4103
16	0x000007E8	0x03	0x41	0x0D	0x05	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA050D4103
17	0x000007E8	0x03	0x41	0x0D	0x09	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA090D4103
18	0x000007E8	0x03	0x41	0x0D	0x10	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA100D4103
19	0x000007E8	0x03	0x41	0x0D	0x15	0xAA	0xAA	0xAA	0xAA	7	7	7	232	0	AAAAAAAA150D4103

Easy to check and understand.!

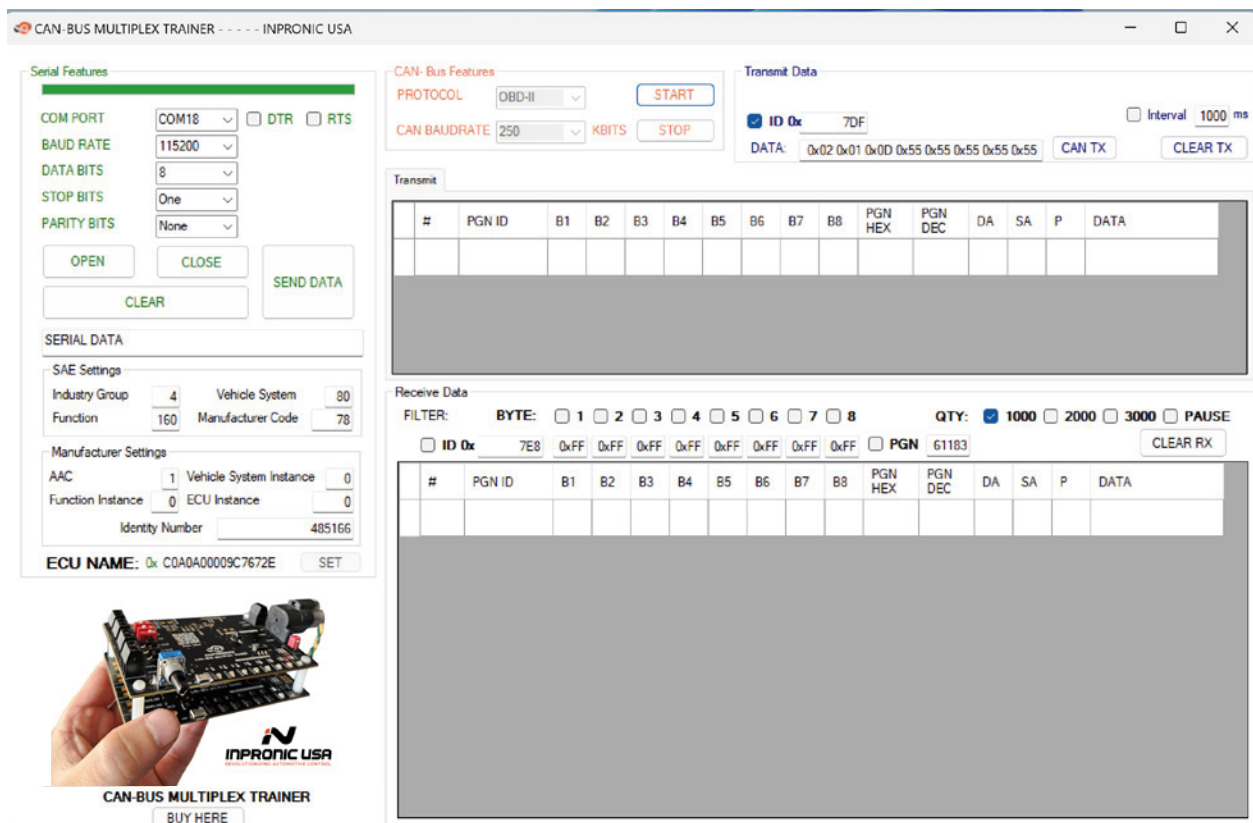
You can use two different windows with the same app, to simulate, it mean the up board can be your reader, and the down board can be your transmitted, and you will be ready to understand how it work before to connect the CAN-BUS Multiplex Trainer to the real world.!

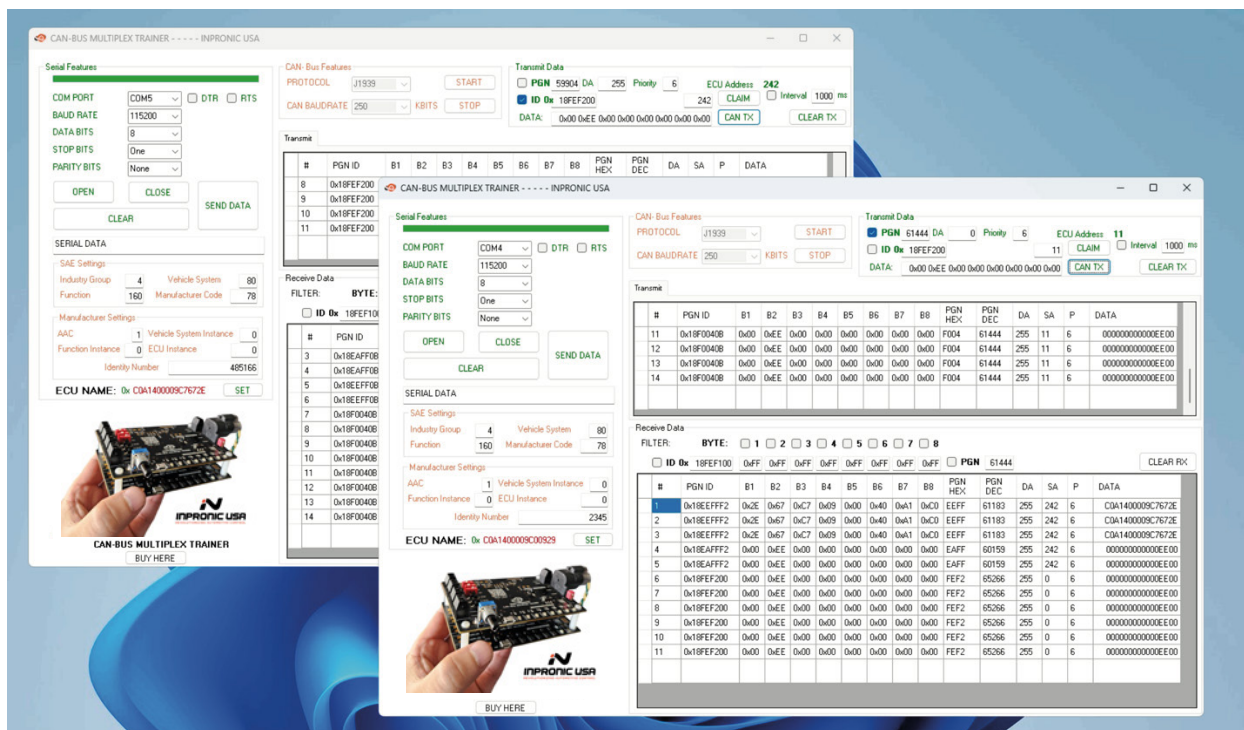
WHAT ARE THE NEW CHANGES IN THIS VERSION V1.0.2.

1. We have implemented three configurable Data Frame sizes—1000, 2000, and 3000 rows—to efficiently handle the high volume of data transmitted every millisecond when the board is connected to OBD2, J1939, or NMEA2000 networks. This approach ensures that the software remains responsive and avoids performance bottlenecks. Additionally, we've included a PAUSE function, allowing users to temporarily halt data reception for detailed analysis without interrupting ongoing CAN-Bus communication.

QTY: ☒ 1000 ☐ 2000 ☐ 3000 ☐ PAUSE

2. We have optimized the data acquisition process from USB to the CAN-Bus software to prevent crashes that occasionally occurred due to high transmission speeds. These improvements were implemented solely within the CAN-Bus Trainer software, eliminating the need for any firmware updates.





For more information about our Trainer and excited news keep in touch with us.

Any additional information Contact us:

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