Q01: How to solve CAN Bus Transmission Fail problem?

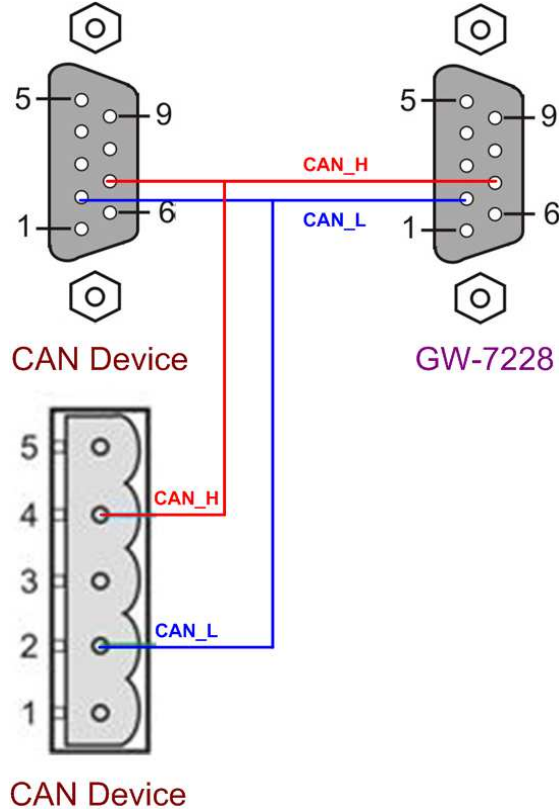A01: Make sure the CAN bus wiring is connected, and connected to the correct pin.

Figure 1: CAN Hardware Wire Connection

Q02: How to solve CAN Bus-Off problem?

A02: Make sure that no short circuit exists in the CAN bus wiring between GW-7228 and other J1939 devices.

Q03: Why the GW-7228 can not transmit output J1939 messages?

A03: 1. Make sure the Start/Stop sending J1939 output messages register (42009) is 0.

2. Make sure the Update Rate of J1939 output messages table is not zero.

www.icpdas.com

Q04: How to restore factory default?
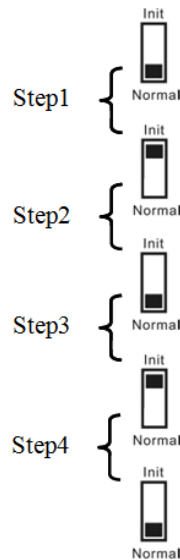
A04: 1. Power on the GW-7228

2. Change the Dip-Switch position of the GW-7228 and to complete the following steps in 5 seconds.

Step1. From "Normal" to "Init" position.

Step2. From "Init" to "Normal" position.

Step3. From "Normal" to "Init" position.

Step4. From "Init" to "Normal" position.

3. When the correct implementation of the above steps, the J1939/Modbus LEDs of the GW-7228 should be turn on, and that should be turn off after 500 ms later.

4. Reset the power of the GW-7228, and the GW-7228 would back to factory defaults.

6. Reconnect the GW-7228 by using the network setting as 115200 baud with none parity, 1 stop bit and 1 Net ID.

Q05: What is the communication Baud Rate in J1939 protocol?

A05: According the J1939-11 specification, the J1939 communication Baud Rate is 250K bps.

Q06: Should I add the termination resistor (120Ω) between CAN-H and CAN-L with our engine, when it connect to the GW-7228?

A06: It depends on the environment, we usually use the oscilloscope to measure the CAN bus signals, it will be determined according to the waveform, please refer the following figure.

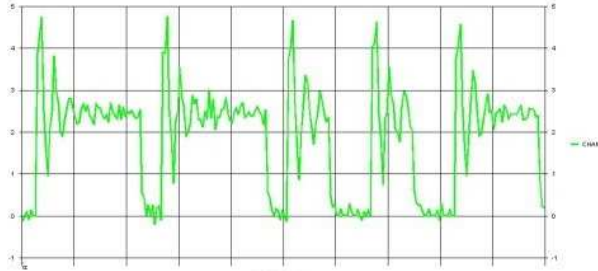In this situation, we recommend to add termination resistor.

Figure1. Waveform of the termination resistor is not added.

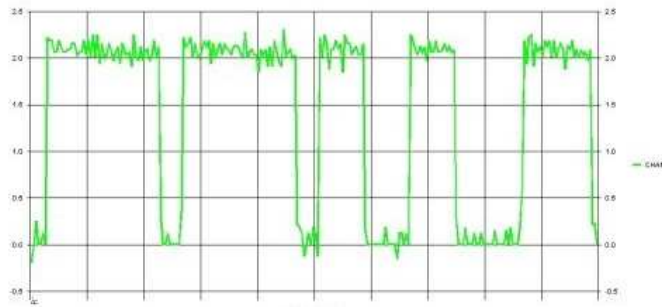After add the termination resistor, the waveform is as below.

Figure2. Waveform of the termination resistor is added

Q07: We want to get some parameters from our engine by using the GW-7228, can you provide the based PGN configuration table for us?

A07: Please refer the following J1939 input table configuration and Modbus register comparison table.

Modbus Register comparison table

Item	Parameter Name	Modbus Data Offset (From 0)	Data Length	PGN (DEC)	J1939 Data Offset (0~7)	SPN (DEC)	Data Resolution	Data Offset	Modbus Input Registers
1	Engine Coolant Temperature	0	1	65262	0	110	1 deg C/bit	-40 deg C	30001
2	Engine Oil Temperature	2	2	65262	2	175	0.03125 deg C/bit	-273 deg C	30002
3	Battery Potential	4	2	65271	4	168	0.05 V/bit	0 V	30003
4	Engine Oil Pressure	6	1	65263	3	100	4 kPa/bit	0	30004
5	Engine Speed	8	2	61444	3	190	0.125 rpm/bit	0	30005
6	Engine Coolant Pressure	10	1	65263	6	109	2 kPa/bit	0	30006
7	Engine Coolant Level	12	1	65263	7	111	0.4 %/bit	0	30007
8	Engine Fuel Delivery Pressure	14	1	65263	0	94	4 kPa/bit	0	30008
9	Engine Total Hours of Operation	16	4	65253	0	247	0.05 hr/bit	0	30009 30010

www.icpdas.com

J1939 Input Table Configuration in GW-7228 Utility

Q08: How to get the parameter from engine, if we don't know the source address of engine?

A08: The Source Address in the J1939 input configuration table, it shall only be one device on the network with a given source address, messages received must match both the PGN and source address to be used for this data field. If the Source Address set to 255, any message with a matching PGN will be accepted.