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TMT3978 Universal Translator
(Translating J1939 to J1587/J1708)

INSTALLATION INSTRUCTIONS:

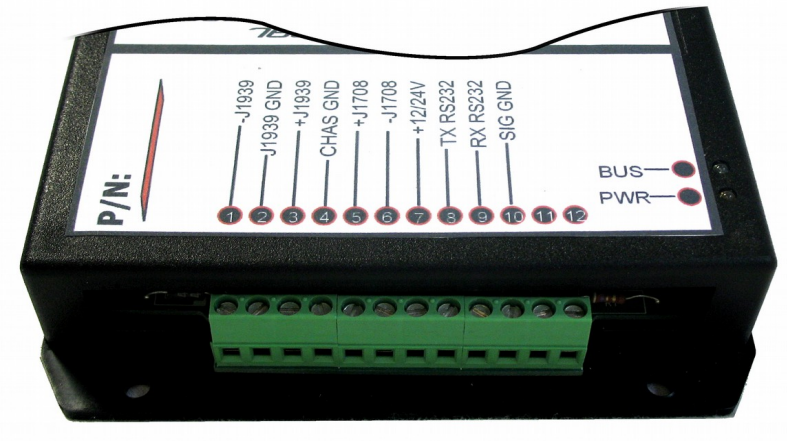

Figure 1: TMT3978 Terminal Strip

1. The terminal strip connections are numbered from 1 to 12, from the leftmost terminal to the rightmost terminal (see Figure 1).

2. Connect +12/24 volt power to terminal 7 and ground to terminal 4. The red LED, labeled “PWR,” should illuminate to indicate proper power and ground connections.

3. Connect your J1939+ to terminal 3 and your J1939- wire to terminal 1. If applicable, connect the cable shield to terminal 2.

    a) The TMT3978 requires that the J1939 bus has proper terminating resistors installed, which consist of two 120 ohm resistors connected between J1939+ and J1939- at each physical end of the bus (see Figure 2). A properly terminated J1939 bus should read 60 ohms between J1939+ and J1939- with a multimeter.

    b) The green LED, labeled “BUS,” will illuminate when data on the J1939 bus is detected. If the green LED is not on, try reversing the wires. The wire voltages can also be measured to confirm the presence of data on the bus. On an active bus, the voltage on the J1939+ wire should read between 2.5V and 3.5V relative to ground. The voltage on the J1939- wire should read between 1.3V and 2.3V relative to ground.

4. Connect your J1708/J1587+ wire to terminal 5, and your J1708/J1587- wire to terminal 6.

5. Two green LEDs are located inside the TMT3978 on either side of the terminal strip.

    a) The LED on the left is a running indicator which flashes slowly under normal operation. Under a fault condition, the LED will remain either lit or unlit.

    b) The LED on the right is a J1708/J1587 transmit indicator, which will illuminate to indicate successful data transmission. If this LED is not lit, it may indicate:

        1. There is no data to send (none received on J1939).
        2. The J1708/J1587 bus is congested.
        3. There is a physical problem with the J1708/J1587 bus.

6. If you aren't receiving data on the J1708/J1587 bus, The wire voltages can also be measured to confirm the presence of data. With data present, the voltage on the J1708+ wire should read between 3.5V and 4.5V relative to ground, and the voltage on the J1708- wire should read between 0.5V and 1.5V relative to ground.

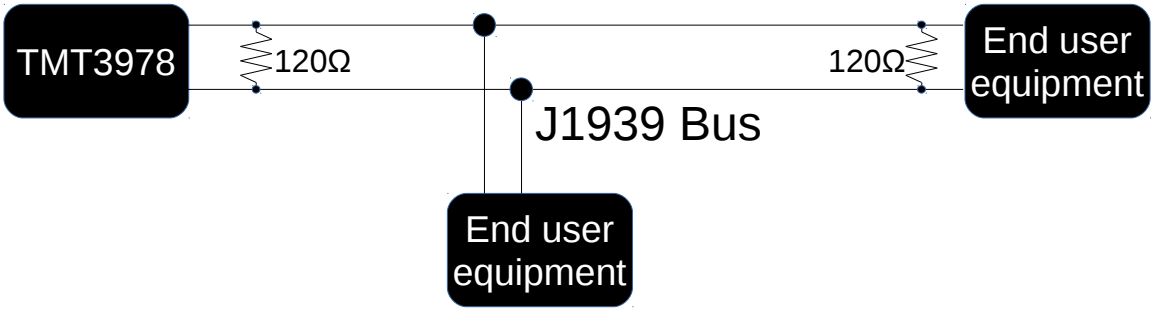

Figure 2: J1939 Terminating Resistors