MGL/Garrecht Transponder interface self test

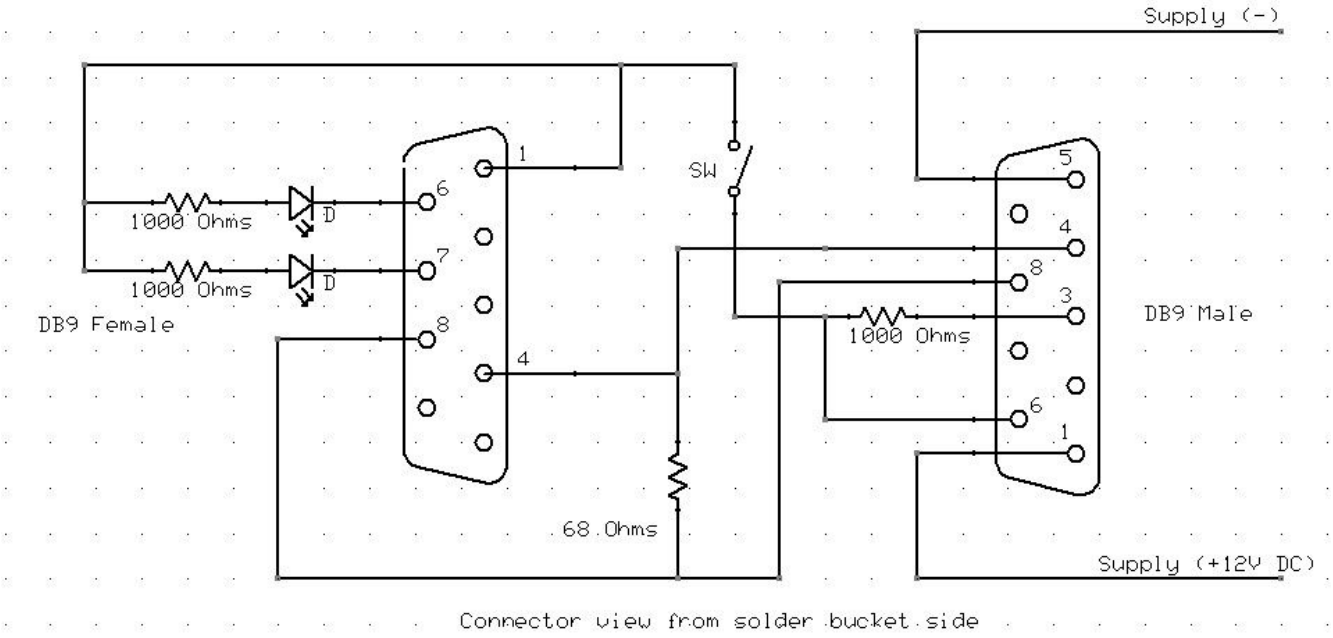
The MGL/Garrecht transponder has a built in self test facility.

In order to use this facility the following components are needed:

1 x D9 male solder bucket connector
1 x D9 female solder bucket connector
3 x resistors 1Kohm 1/4W
1 x resistor 68 ohms 1/4W
2 x LED any color 3mm
1 x spst switch (optional)

A few bits of suitable wire

1 x 12V regulated DC power source or 12V battery.



Construct the circuit shown in the above diagram.

The switch can be left of as long as you use a piece of wire instead – it is used to switch to test mode.

Connect the MGL/Garrecht interface. Note that the actual Garrecht transponder is NOT connected – we are only interested in the interface.
Apply power to the interface using the two wires for this purpose.

The interface LED should light up and after this start giving double flashes (indicating that it is not connected to anything).

Now close the switch for a few seconds until the two LEDs on the test connector start to light

up then open the switch again. After a few seconds the two LEDs on the test connector should go on/off alternately. The LED on the interface should also flash at the same rhythm.

This tests all interface connectivity. The CAN interface from the LAN is connected to the CAN interface to the transponder (note the 68 ohm termination resistor in the circuit). A few test messages are passed between the two interfaces to test for functionality.
RS232 lines as well as transponder ON-GND and power-on control lines are also verified (these now switch the two LEDs).

If this test passes as described it gives a very high confidence in the correct functioning of the interface board and its interfaces.