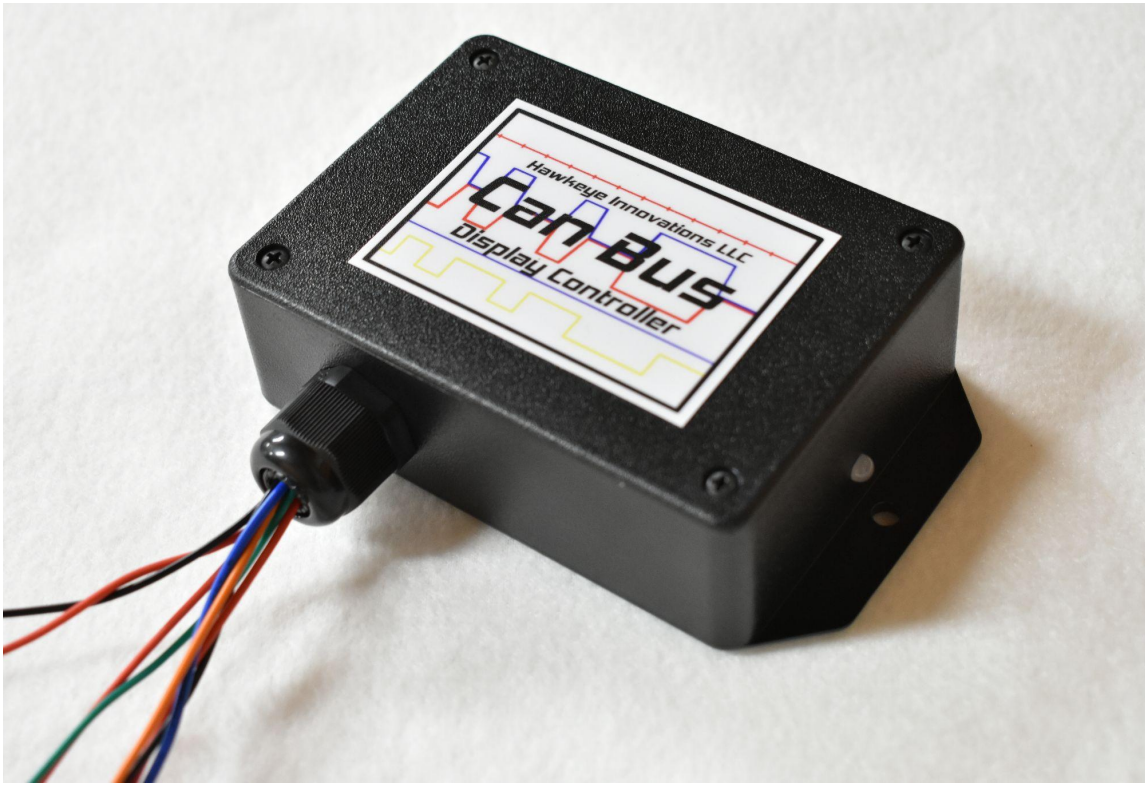
CAN Bus Display Kit MkII

---Manual---



HAWKEYE INNOVATIONS LLC

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Installation

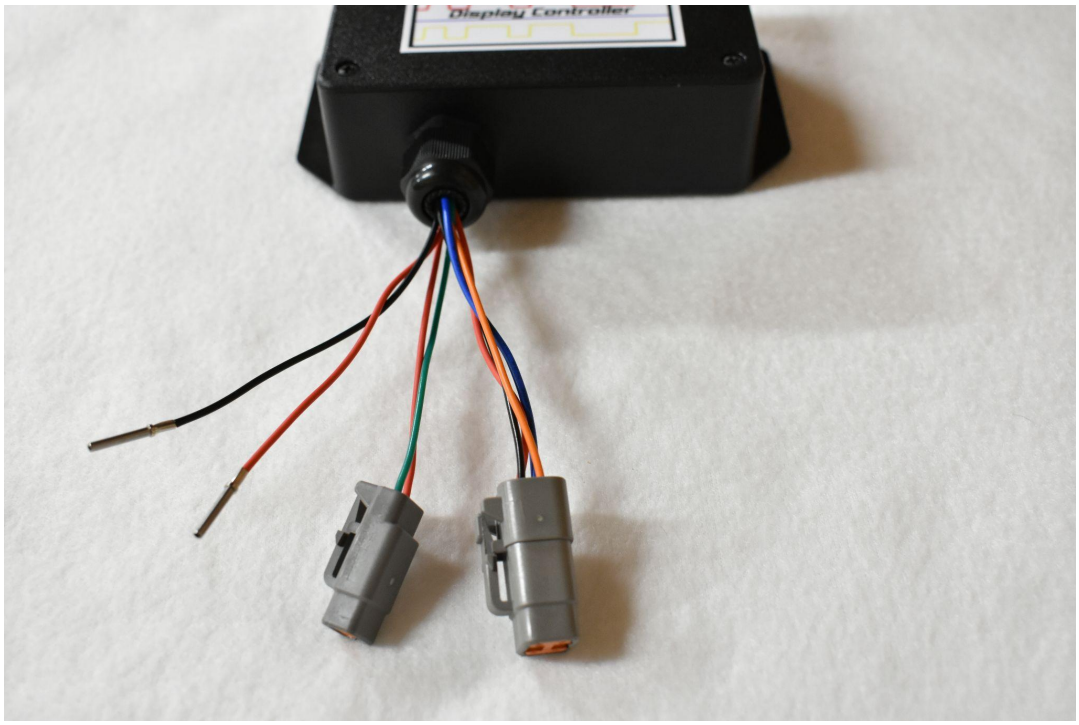

Figure 1

(12V Input, power supply) (CAN Bus, 2 pin) (Display output, 4 pin)

1. Without any power present on your 12V system or CAN bus network, wire up the included CAN bus harness (red and black twisted pair) from your harness kit (Figure 2). NOTE: wiring with power on or accidentally shorting out your CAN bus will destroy CAN bus devices! Always double check power supply and CAN wiring before proceeding. There is no termination resistor in the CAN display controller box, be sure your CAN bus has proper termination.

Red/Black Twisted Pair (CAN Bus harness):

Red - CAN High

Black - CAN Low

A 5A fuse is recommended on the power supply to the Display Controller. Most applications have it wired so that it is powered on ignition. We have pre-crimped a Deutsch DTM (size 20) contact (socket) on each of the power supply wires. You may add

your own Deutsch connector and build into your car harness, or cut off those terminals and solder your own wires to it.

Loose Red/Black Wires (power supply wires, shown in Figure 1)

Red - +12V supply

Black - -12V (Ground)

Figure 2

2. Take care that your CAN bus harness and display harness (black braided wrap harness in Figure 2) do not run near any high voltage/high current power cables. On the back of the display, there is a spot for a small circular flat battery. Ignore this and do NOT insert a battery.

3. Once you have verified that the power supply wiring is fused and correct, and the CAN bus wiring is correct, simply plug in the display harness (4 pin plug), CAN Bus harness (2 pin plug), and apply power to turn on the unit. Be sure the connectors click in completely.

4. Next, follow the Orion BMS CAN setup and HyPer 9 CAN setup instructions on the next two pages.

NOTE: The ‘Error’ text will only appear if there is an Orion BMS fault present, or a HyPer controller fault that is either a stopping or blocking fault.

Orion BMS CAN Setup

With the Orion BMS 2, CAN bus setup is easy. Looking at Figure 3, once you have your profile loaded, go to the ‘CANBUS Settings’ tab, then in the ‘3rd party devices’ block, check the box for ‘Hawkeye Display’. Be sure that the CAN speed of the BMS is 250kbps, unless you have a unit that was custom programmed to a different CAN speed. Be sure to upload the changes to your BMS! If you change the CAN speed of the BMS, after uploading the changes, you must disconnect the BMS power and wait 30 seconds before reconnecting the power.

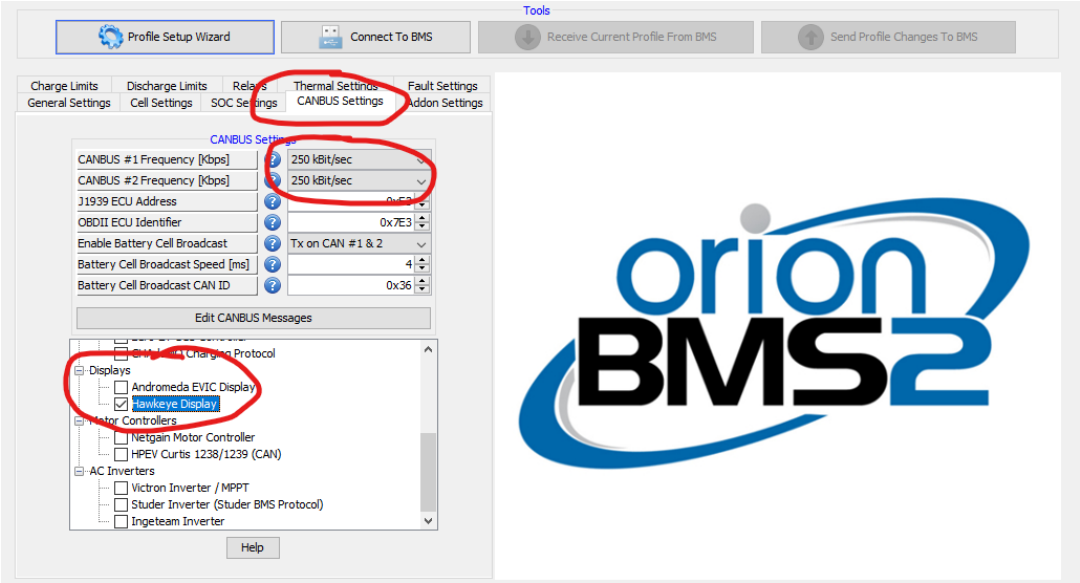

Figure 3

In Figure 4 below, you will see this message after clicking on Hawkeye Display, and just **ignore it.** The old default was 500kbps, but the new default for MkII displays is now 250kbps.

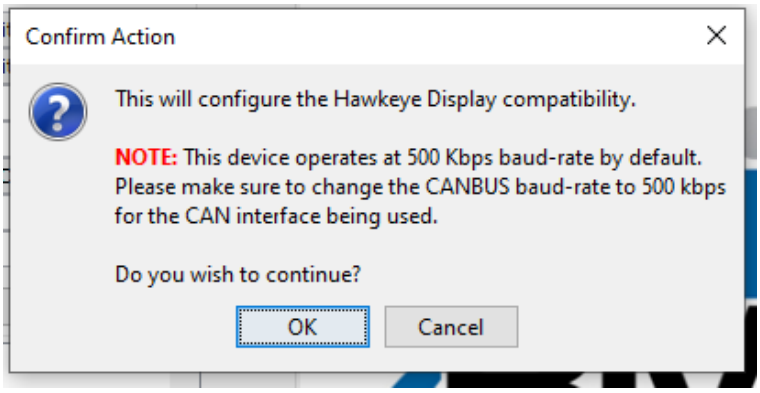

Figure 4

HyPer Controller CAN Setup

Once you have enabled the CAN bus functionality of the HyPer controller, make sure the CAN speed is set to 250kbps as shown in Figure 5.

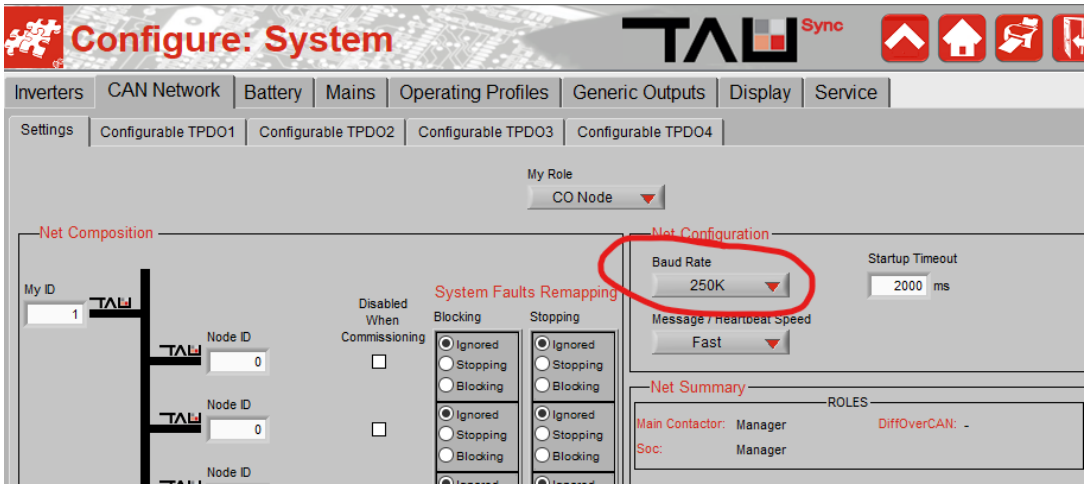

Figure 5

Next, go to ‘Configurable TPDO1’ page, and type in ‘153’ for the message ID, ‘64’ for the rate, and set the parameters to the right exactly as shown in Figure 6. If you need help with this, just send us your clone file via email and we can configure it for you.

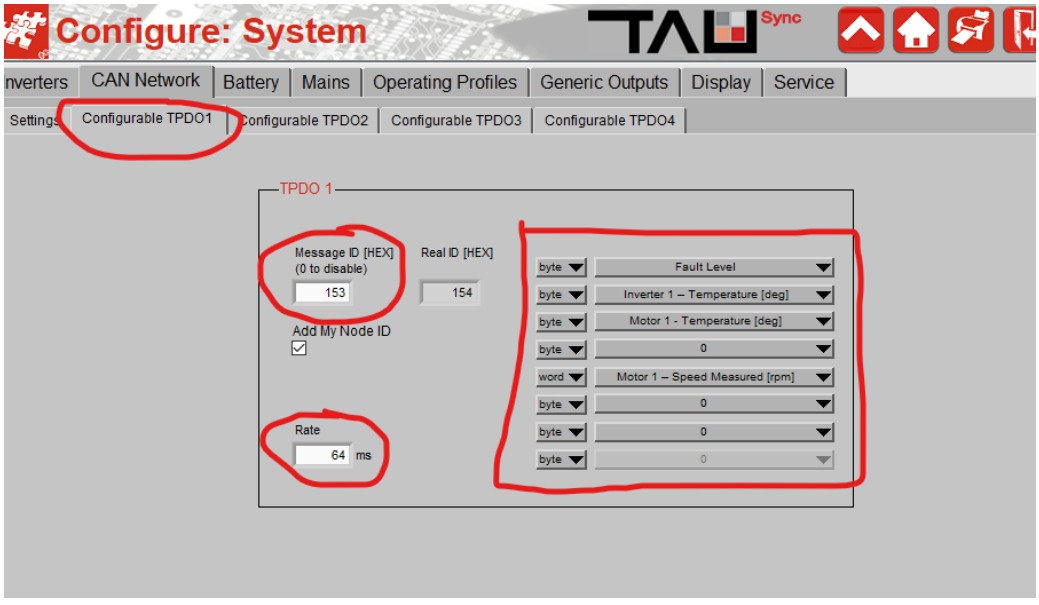

Figure 6

LED States

The LED will be red on start-up until it receives CAN data from either the BMS **or** the controller, then it will turn green. If it stops receiving data from both, it will turn red.

The CAN Bus Display Kit should now be fully operational and set up with your system. If you have any questions, please feel free to contact us!

Hawkeye Innovations, LLC

Email: **support@hawkeyeinnovationsLLC.com**

Display Case Installation

The Display Case will include mounting bolts (#5-40 countersunk), nuts, and plastic spacers as shown in Figure 7. Insert the display module into the case, then the bolts, and then the spacers as shown in Figure 8. This will allow you to mount the assembly flush.
NOTE: DO NOT overtighten the bolts otherwise it will damage the display. Lightly tighten only.

Figure 7

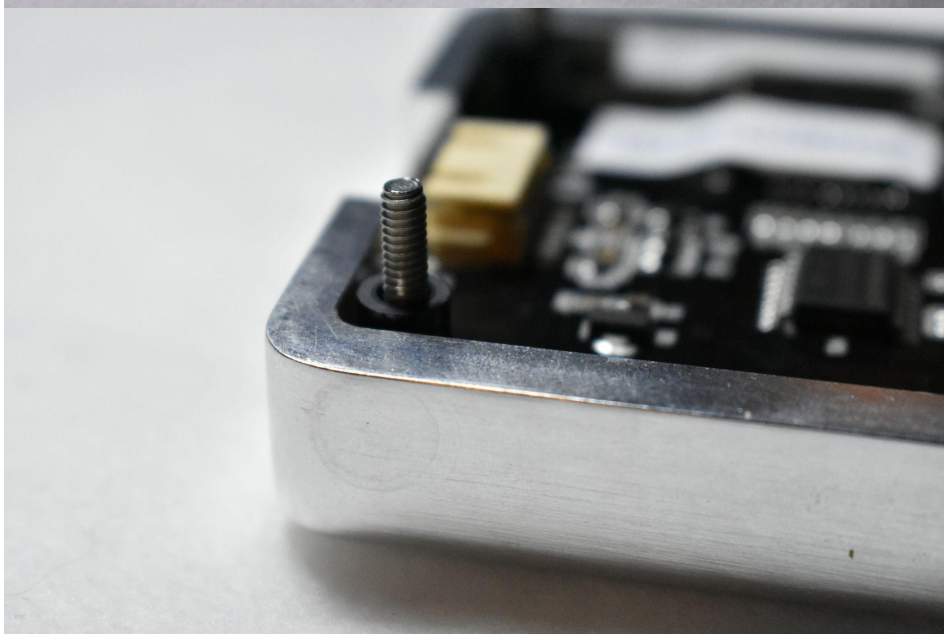

Figure 8