EET4340

Interface Techniques

Lab 6 – CAN Part 1

You will need a PIC18F66K80 PIM and a CAN/LIN interface board. Carefully plug both into the PIC board. The CAN/LIN board is already jumpered correctly so don’t change any jumpers. The PIC board should be set for 5V.

1. Make a project with CANMain.c (and the LCD code.) Connect to another group and test the firmware. Either use a serial cable or connect jumpers from pin 2 to pin 2 and pin 7 to pin 7 of the DB9 connector.
2. Change the CAN baud rate to 100 kbs. Test it with the other group.
3. Change the data payload of one of your messages to a value of your choice. See if the other group receives the correct value.
4. Add a new message ID and send it out on every 10th button press (instead of the message that would normally be sent out.) Set the payload to a value of your choice.
5. Add an active filter so that only one of the messages is accepted. The other message should be filtered out. For example: filter out the 0x123 message and only accept the 0xaa message.
6. Set the filters to receive two of the three messages being sent by the other group. Filter out the other message.

Challenge: Modify the firmware so that an “On bus” message is sent out once every second. Choose an ID for your message. The data payload can be empty.