PICCAN Getting Started

Three Node Activity Kit:

If you've unpacked a PICCAN CANRF Activity kit, you'll have received 3 PICCAN boards loaded with CANRFs, and supplied with ¼ wave length antennas, 3 AC adapters and an RS232 cable. The EEROM on the three boards are preconfigured to assign node IDs of 1,2 and 3 on the three cards.

The Lamp Device Driver which can control the three LEDs is also assigned a device ID of 1, User Class 0x30. The button is monitored with a KeyPad Device Driver (class 0x10) also assigned ID of 1.

Activity Boards:

Standard Activity boards come supplied with a CANRF that requires a user installed antenna or antenna connector. The CANRF has a place for either an SMA or RSMA socket connector or a small hole is provided for soldering in a ¼ wave length of 22g solid wire.

Cut three lengths of 22g wire 85 mm long and strip 3mm from one end. Insert the stripped end into the hole in shown in Figure 1 and solder with a low wattage grounded tip soldering iron. Install the CANRF into the Activity board being careful not to bend the pins.

Next connect a DB9F to DB9M communications cable to a PC or laptop and the first Activity board. Configure your communications program for 115kbaud, 1 stop bit, no parity bits. Apply power to the Activity board and you should see the opening Message and Prompt.

```
CANRF Activity Board Rev 0.18 Node #1
>ed
0000: 00 01 09 00 05 00 01 00 00 00
0010: 31 BF 02 00 00 00 00 00 00 00
0020: C8 00 00 00 00 00 08 00 01 02
0030: 03 04 05 06 07 00 00 00 00 00
0040: 01 05 75 50 00 01 00 00 00 00
0050: 00 00 00 00 00 00 00 00 00 00
0060: 00 00 00 00 00 00 00 00 00 00
0070: 00 00 00 00 00 00 00 00 00 00
0080: 00 00 00 00 00 00 00 00 00 00
0090: 00 00 00 00 00 00 00 00 00 00
0100: FF FF FF FF FF FF FF FF FF FF
0110: FF FF FF FF FF FF FF FF FF FF
0120: FF FF FF FF FF FF FF FF FF FF
>
```

The Node ID location 0 in the EEROM is 0 so the Node ID is 1.

Make sure that Byte 1 is set to 1 as this selects the CANRF. If it's not then use the EEROM modify command to change it to 1.

>em1,1

and then press reset. Typing in ed<CR> will display the changed parameter.

The third byte in our example here is set to 0x09 which means that received messages will be displayed with a red LED flash and the unit will send heartbeat messages once per second. Type in:

>em2,9

The CAN device will resend a message that doesn't receive an ACK. To track whether the messages received are the different or just a retry of the same message you can enable a packet counter. The value of this counter is tagged onto the end of the messages if there is room.

Set EEROM location 3, bit 1 to 1 to add on this bit counter.

>em3,2

Now power up the second Activity Board and set up the same EEROM parameters except make sure that location 0, the NODE ID value is different. Finally set up the third. Power them up and watch the red LED blink. Connect a the RS232 cable to one of the nodes and you'll see messages arriving from the others.

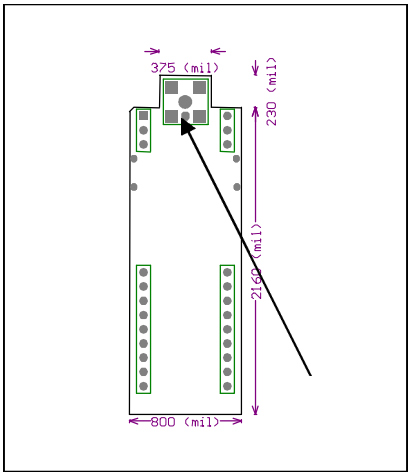

Figure 1 – Arrow points to antenna wire location.