CANPanel Rev 1b WIP 2 release notes 14/2/17 – Pete Brownlow

This release is just a work in progress and not yet fully functional.

For developers – the source zip also contains the MPLABX project files – I used ver 3.50

To build the firmware you will also need the CBUS library zip ver 1b WIP 1.

Supported functionality:

- You can put the module into FLiM in the usual way – about 5 seconds press on the pushbutton until the yellow LED starts flashing. Note – green LED stays on until you have successfully allocated a node number and are in FLiM.
- The pushbutton matrix will now create ON events for each button with the correct node number
- If you hold the pushbutton down for about 10 seconds the yellow LED will flash twice as fast, you are now in test mode. To exit test mode, hold the pushbutton down for about 10 seconds again.
- Once in FLiM, you can use FCU to read properties, read Nvs and update Nvs. Note that this will be in FCU generic mode which just shows each NV as a value.
- Some Nvs are now implemented – docs to follow.

Details of test mode are described at the end of these notes.

Key functionality not yet present:

- Not all Nvs yet implemented
- Teaching events, whilst coded, is not yet debugged or tested
- Associating taught events to controlling LEDs yet to be completed
- Teaching Producer events not yet implemented
- Bootloader changes coded but not yet debugged or tested.

TEST MODE

There are several tests, which are cycled through, whilst in test mode, by pressing the FLiM pushbutton for about 1 second. Within each test, a short press will do an action which depends on the test in use.

The various messages described below will be displayed when 8 digits of 7 segment display are connected. If you have LEDs connected, such as the TM6 test board, then a pattern of LEDs will be displayed corresponding to those display segments, and you won't actually be able to read the messages.

Test 1: Exercise LEDs with a sequence of:

- ALL ON (Maxim test mode)
- Form large X (if using TM6 test board)
- Display "Hello" (if using 7 segment displays)
- Display 01234567
- Sequence through each LED (or segment) in turn, two cycles

A short press will restart the sequence.

Test 2: CBUS message display, shows first 4 hex bytes of most recent CBUS message received, in real time.

Test 3: Receive CAN status: Real time display of number of messages received, max software RX FIFO usage, current software RX FIFO usage and RX FIFO overflow count.
A short press resets the counters.

Test 4: Transmit test: Sends a block of CBUS messages (number and speed defined in Node Variables)
Real time display of number of messages sent, max software TX FIFO usage, current software TX FIFO usage and TX FIFO overflow count.

A short press repeats the transmission. Optionally increases count and/or decreases delay between messages according to a flag in a NV

Test 5: Random number generator - generates 1 to 8 in a random order. Seeds from free running tick timer.