CANCAB 2m2   notes.

I have made a few changes to Pete's 2. l. 9 code for this. Sufficient I think to make the rev up to m.

1.   I have tried to make it so you have full control of the loco 'on the main' while doing other things like service mode programming.

It was difficult to test all 'wrong' possibilities here so would appreciate more testing and finding problems. I did seem to get a 'blank' screen at one time but couldn't repeat it.

2.   Major change is in the Fn button actions. Have added the ability to set any Fn to either the usual on / off (with Pete's messages) or to momentary. Needs the attached cbusmessages2m.inc file now.

To set any Fn to mom, press the Fn key (with Fr set if needed). While holding the Fn key in, press and release the Consist button. Message will change to 'mom+' or 'mom-' depending on whether the Fn was already on or off. If the Fn was off, it should say mom- and when you release the Fn key, nothing should happen. If the Fn was on, it should say mom+ and then send an off and mom- when the Fn key is released. This was a bit messy and I don't know how well it will work.

Once in mom mode that Fn will always say mom+ when pressed in and mom- when released and send the corresponding Fn frames.

To get out of mom mode, press the Fn key and then the Consist button. It will revert to Fn 'on' as pressing the Fn key will always send an on while in mom mode.

The Fn state is now held in EEPROM. One byte per Fn (0 to 28). Hence no actual need for the CS to send Fn status on a walkaround. Also allows coverage of all Fns, not just those in the stack. This was essential for implementation of the DFNON / DFNOF protocol (see later) as otherwise the Fn info would have been lost on a walkaround.

A key on a CAB will retain its mom or on / off mode irrespective of loco. This, I feel is useful, especially for US sound locos where the same key is used for the same sounds irrespective of actual loco. However, if a loco is released, the Fn status is changed to all 'off'. Not sure how this will work with Pete's 'dispatch' mechanism. I didn't really understand this. (Pete to look at it?)

If you need to clear all mom keys, do a reset with the Consist button held in. A bit like clearing the loco data with the Prog / reset button. Unplug the CAB and replug it with the Consist button in.

As the Fn status is held in EEPROM, it was very easy to add the DFNON / DFNOF protocol option. This is in the code and tested. It is a conditional switch using the #DEFINE   FN_OUT1 (original option) or #DEFINE FN_OUT2 for the DFNON / DFNOF option. You can't have both at once though.

There have been a few other corrections and minor mods to the code.

Anyway, see if you like the arrangements. There are too many possible permutations and combinations for me to test thoroughly. If you could give it a 'shakedown' I would be grateful.

The code as attached has the old function frame format option so will work OK with existing CANCMDs. The alternative may be of use to Pete or Rob.

Regards

Mike