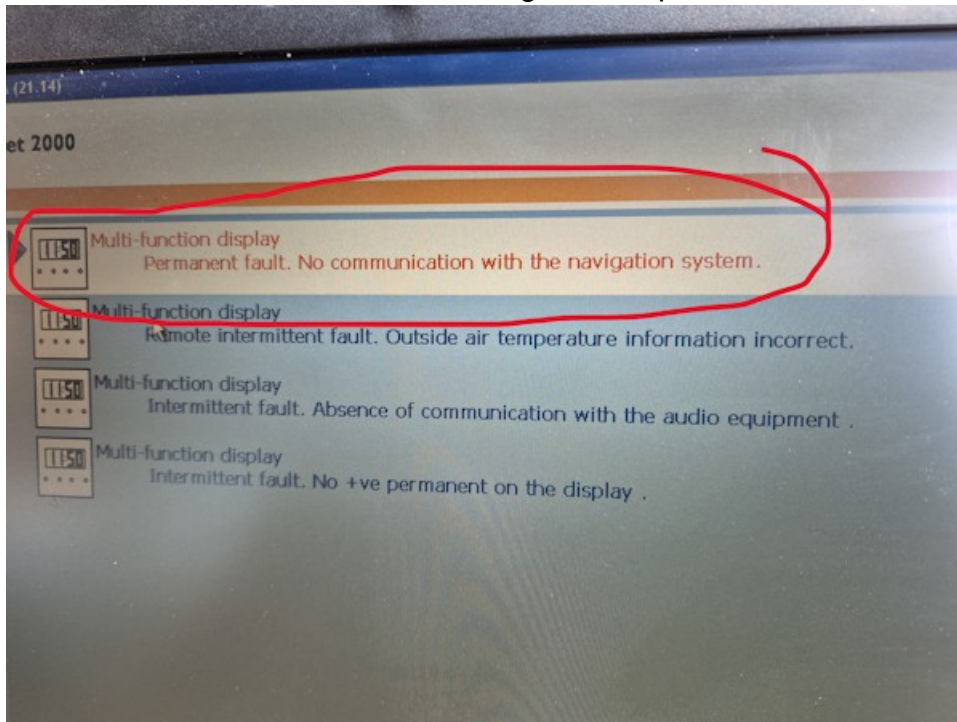


I investigated a battery drain today and took some photos to maybe help someone in the future. The battery itself is good, and while a bad battery can cause issues it shouldn't affect anything discussed in this post.

I was informed the battery on this car would go flat fairly quickly. I didn't check for myself exactly how quickly but instead started off the lazy way with PP2000. (Later I would do some actual diagnostics.)

The sat nav ECU wasn't communicating with PP2000. If the ECU can start up but doesn't have communication for the BSI to tell it when to go to sleep that'll cause a battery drain.



True enough the sat nav connector was a bit corroded. The CAN wires were probably dirty. I removed the sat nav ECU for weight saving and cable tied the connector off the floor to keep it dry.



Then I went away for a little over 2 weeks. When I got back the car wouldn't start. The way to check the battery drain on the coupe is a bit fiddly. I let the car go to sleep, removed the positive connection from the battery, then attached the probes of a multimeter to the battery post and the clamp using jump lead clamps. This allows the other end of the two jump leads to be connected together when I wanted to switch the ignition on and off again. Without turning the ignition on and off I found some ECUs will not go to sleep and the drain remained high. I think they need the BSI to tell them to go to sleep.

My sleep amp reading on the V6 was 50mA (0.05 amps). That is high for a coupe. Doing the same measurement on my HDi gives 20mA. I can normally leave the HDi for about 2 weeks and it'll still start, though I suspect the battery is getting a little weak on it.



Once the car has gone to sleep the trick is to check which fuses are still supplying amps. This can theoretically be done by measuring the voltage across each fuse. The ones not supplying amps will read 0V across the fuse and the ones supplying a bit might read 1 or 2mV. My multimeter is rubbish and drifts more than that so I removed then replaced each fuse one by one to see if it made a difference to the amps I was measuring from the battery clamp to battery terminal.

When I put the instrument display fuse back in the current draw went up and stayed up. I had to connect the two jump leads together and turn the ignition on and off again before it would go back to sleep.





After pulling fuse 22 (7 along from the top left of the interior fusebox) the current draw went down to 10mA. 10mA is a very good number. There will always be a bit of draw - the BSI might only be half asleep, just waiting for someone to open a door, and there is a bit of electricity used to remember the time and settings. I'm very happy with 10mA.



Fuse 22 is for interior courtesy lights and the rear view mirror. Removing the fuse reduced the draw by 40mA which works out at 0.5 watts. I'll check when it is dark whether there is some sun visor light staying on. Any tips about what else it might be appreciated of course.