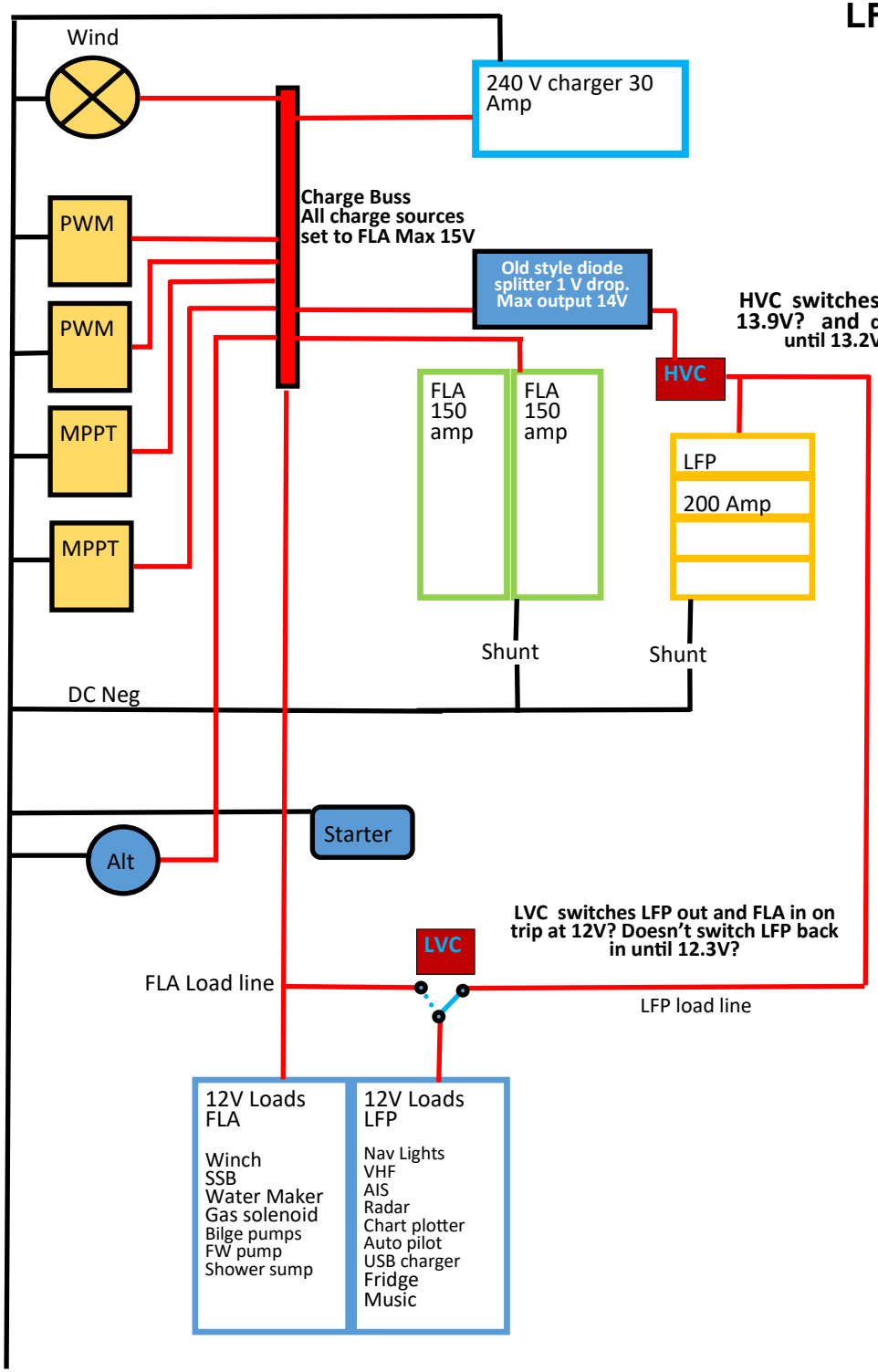
LFP FLA hybrid



Xantrex link 20 monitoring LFP and FLA

LFP stumbling block is the expense and it's a bit of an experiment. FLA one thing good about them they are reliable and cheap..ish.

So why not marry them together, FLAs are great at short big bursts of power, don't like being discharged or charged but are super reliable. So just keep them charged up.

LFPs Are great for discharge, re-charge really efficiently.
So all the stuff that normally drags down my FLA goes on that circuit.

Alt max 50amp, dialed back on Balmar 614. (single belt)
4 x 100W solar
Wind generator

So the idea is to lower the voltage from charge Bus to LFP by fitting an old style splitter diode pack, also stops feed back from LFP to FIA, may be able to pick one that has just right voltage drop. And they are cheap.

If it turns out that the FLA tries to charge the LFP through the diode splitter then maybe a Schottky diode could be put on that line

LVC. Because my LFP load is light approx. total worse case about 25amps, the LVC contactor could even be a 40amp NC/NO relay for testing, would prefer to find a better low current unit, also need something that would switch it at specified voltages, perhaps a Raspberry? Hopefully something easier..

HVC, Not massive load Poss max on HVC could be as high as 90/100amps on a windy sunny day after just starting the engine so would need to look into a suitable unit for that. Again need to find something to switch at specified voltages. The reason I would want the HVC is to prevent float on the LFP.

So in the event of an LVC event which I would expect to happen occasionally, it simply switches the switch board back from being split LFP/FLA back to all FLA. Win Win.

OK the radar and auto pilot etc would reset but that's not a major.

Manual measurement of cell balancing.

FLA 100 amp

Engine start battery charged by Balmar Duo. Alternator on Balmar 614