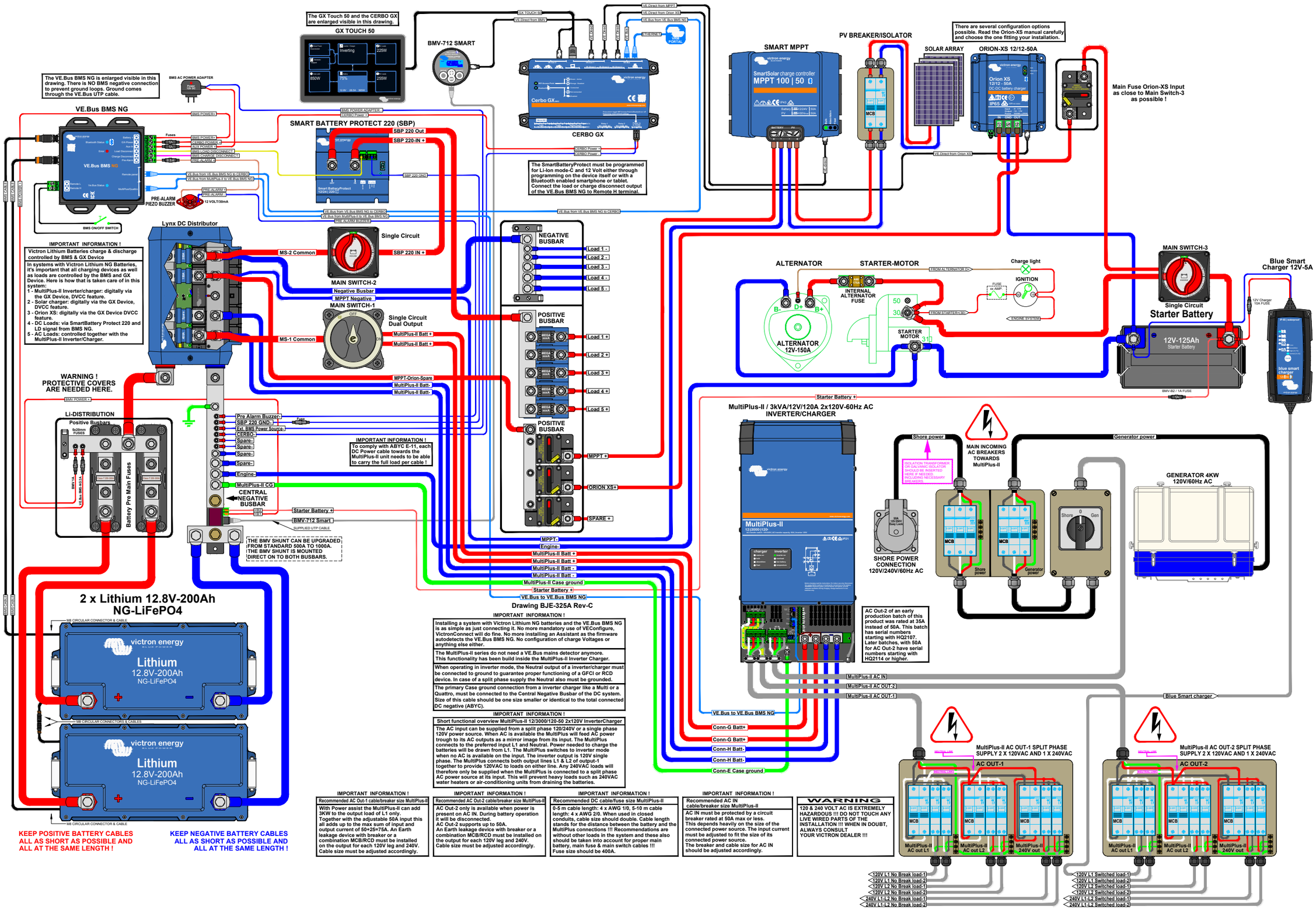

Drawing BJE-325A Rev-C

IMPORTANT INFORMATION !

Victron Lithium Batteries charge & discharge controlled by BMS & GX Device

In systems with Victron Lithium NG Batteries, it's important that all charging devices as well as loads are controlled by the BMS and GX Device. Here is how that is taken care of in this system:

1 - MultiPlus-II Inverter/charger: digitally via the GX Device, DVCC feature.
2 - Solar charger: digitally via the GX Device, DVCC feature.
3 - Orion XS: digitally via the GX Device DVCC feature.
4 - DC Loads: via SmartBattery Protect 220 and LD signal from BMS NG.
5 - AC Loads: controlled together with the MultiPlus-II Inverter/Charger.

IMPORTANT INFORMATION !

Installing a system with Victron Lithium NG batteries and the VE.Bus BMS NG is as simple as just connecting it. No more mandatory use of VEConfigure, VictronConnect will do fine. No more installing an Assistant as the firmware autodetects the VE.Bus BMS NG. No configuration of charge Voltages or anything else either.

The MultiPlus-II series do not need a VE.Bus mains detector anymore. This functionality has been build inside the MultiPlus-II Inverter Charger.

When operating in inverter mode, the Neutral output of a inverter/charger must be connected to ground to guarantee proper functioning of a GFCI or RCD device. In case of a split phase supply the Neutral also must be grounded.

The primary Case ground connection from a inverter charger like a Multi or a Quattro, must be connected to the Central Negative Busbar of the DC system. Size of this cable should be one size smaller or identical to the total connected DC negative (ABYC).

IMPORTANT INFORMATION !

Short functional overview MultiPlus-II 12/3000/120-50 2x120V InverterCharger

The AC input can be supplied from a split phase 120/240V or a single phase 120V power source. When AC is available the MultiPlus will feed AC power trough to its AC outputs as a mirror image from its input. The MultiPlus connects to the preferred input L1 and Neutral. Power needed to charge the batteries will be drawn from L1. The MultiPlus switches to inverter mode when no AC is available on the input. The inverter output is 120V single phase. The MultiPlus connects both output lines L1 & L2 of output-1 together to provide 120VAC to loads on either line. Any 240VAC loads will therefore only be supplied when the MultiPlus is connected to a split phase AC power source at its input. This will prevent heavy loads such as 240VAC water heaters or air-conditioning units from draining the batteries.

IMPORTANT INFORMATION !

Recommended AC Out-1 cable/breaker size MultiPlus-II

With Power assist the MultiPlus-II can add 3KW to the output load of L1 only. Together with the adjustable 50A input this all adds up to the max sum of input and output current of 50+25=75A. An Earth leakage device with breaker or a combination MCB/RCD must be installed on the output for each 120V leg and 240V. Cable size must be adjusted accordingly.

IMPORTANT INFORMATION !

Recommended AC Out-2 cable/breaker size MultiPlus-II

AC Out-2 only is available when power is present on AC IN. During battery operation it will be disconnected. AC Out-2 supports up to 50A. An Earth leakage device with breaker or a combination MCB/RCD must be installed on the output for each 120V leg and 240V. Cable size must be adjusted accordingly.

IMPORTANT INFORMATION !

Recommended DC cable/fuse size MultiPlus-II

0-5 m cable length: 4 x AWG 1/0, 5-10 m cable length: 4 x AWG 2/0. When used in closed conduits, cable size should double. Cable length stands for the distance between the battery and the MultiPlus connections !!! Recommendations are without other loads in the system and these also should be taken into account for proper main battery, main fuse & main switch cables !!! Fuse size should be 400A.

IMPORTANT INFORMATION !

Recommended AC IN cable/breaker size MultiPlus-II

AC IN must be protected by a circuit breaker rated at 50A max or less. This depends heavily on the size of the connected power source. The input current must be adjusted to fit the size of its connected power source. The breaker and cable size for AC IN should be adjusted accordingly.

WARNING

120 & 240 VOLT AC IS EXTREMELY HAZARDOUS !!! DO NOT TOUCH ANY LIVE WIRED PARTS OF THE INSTALLATION !!! WHEN IN DOUBT, ALWAYS CONSULT YOUR VICTRON DEALER !!!