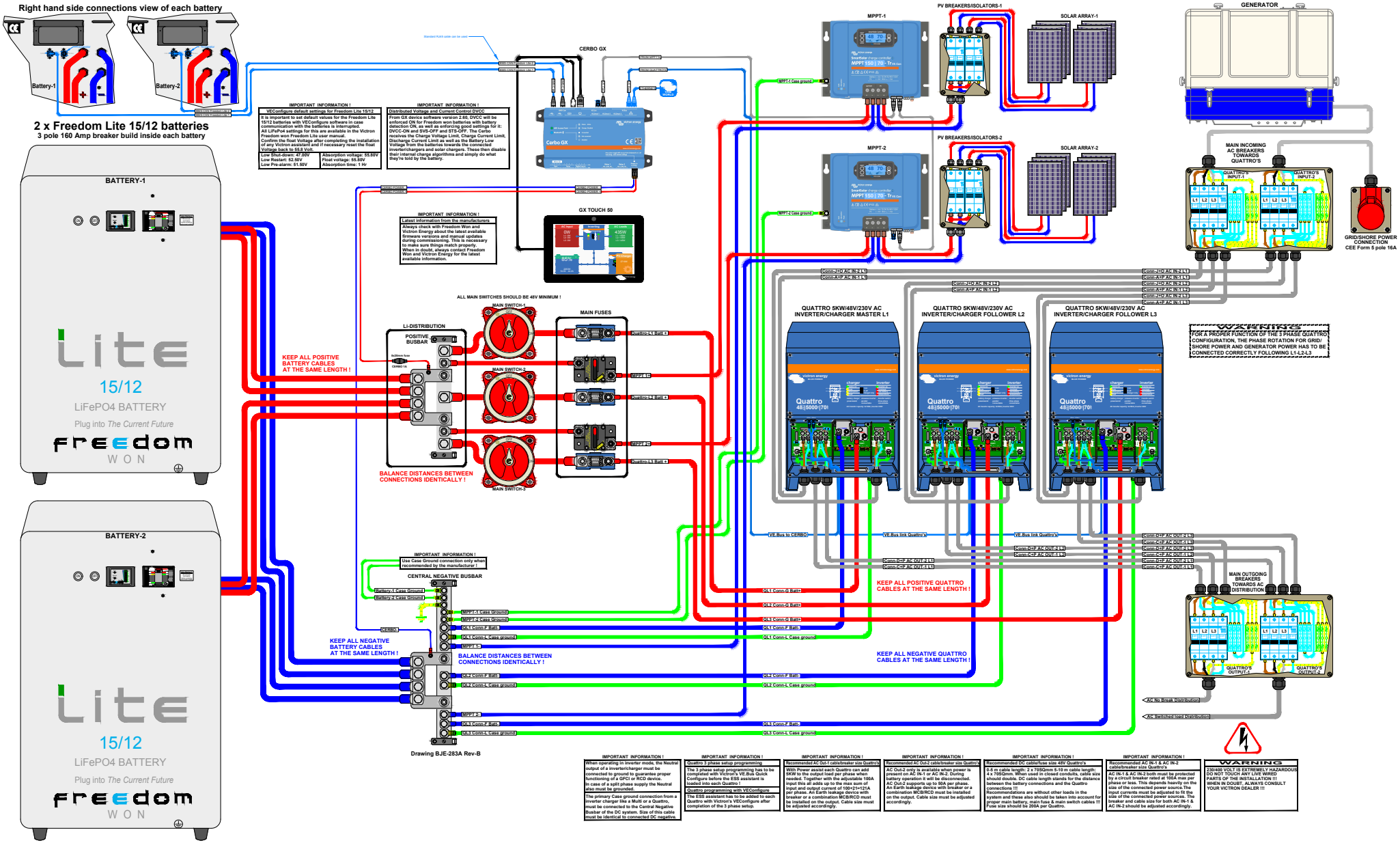

IMPORTANT INFORMATION !

VEConfigure default settings for Freedom Lite 15/12

It is important to set default values for the Freedom Lite 15/12 batteries with VEConfigure software in case communication with the batteries is interrupted.
All LiFePo4 settings for this are available in the Victron Freedom won Freedom Lite user manual.
Confirm the float Voltage after completing the installation of any Victron assistant and if necessary reset the float Voltage back to 55.8 Volt.

Low Shut-down: 47.00V	Absorption voltage: 55.60V
Low Restart: 52.50V	Float voltage: 55.50V
Low Pre-alarm: 51.50V	Absorption time: 1 Hr

IMPORTANT INFORMATION !

Distributed Voltage and Current Control DVCC

From GX device software version 2.60, DVCC will be enforced ON for Freedom won batteries with battery detection ON, as well as enforcing good settings for it: DVCC-ON and SVS-OFF and STS-OFF. The Cerbo receives the Charge Voltage Limit, Charge Current Limit, Discharge Current Limit as well as the Battery Low Voltage from the batteries towards the connected inverter/chargers and solar chargers. These then disable their internal charge algorithms and simply do what they're told by the battery.

IMPORTANT INFORMATION !

Latest information from the manufacturers

Always check with Freedom Won and Victron Energy about the latest available firmware versions and manual updates during commissioning. This is necessary to make sure things match properly.
When in doubt, always contact Freedom Won and Victron Energy for the latest available information.

IMPORTANT INFORMATION !

Use Case Ground connection only when recommended by the manufacturer !

IMPORTANT INFORMATION !

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 must be identical to connected DC negative.

IMPORTANT INFORMATION !

Quattro 3 phase setup programming

The 3 phase setup programming has to be completed with Victron's VE.Bus Quick Configure before the ESS assistant is loaded into each Quattro !

Quattro programming with VEConfigure

The ESS assistant has to be added to each Quattro with Victron's VEConfigure after completion of the 3 phase setup.

IMPORTANT INFORMATION !

Recommended AC Out-1 cable/breaker size Quattro's

With Power assist each Quattro can add 5KW to the output load per phase when needed. Together with the adjustable 100A input this all adds up to the max sum of input and output current of 100+21=121A per phase. An Earth leakage device with breaker or a combination MCB/RCD must be installed on the output. Cable size must be adjusted accordingly.

IMPORTANT INFORMATION !

Recommended AC Out-2 cable/breaker size Quattro's

AC Out-2 only is available when power is present on AC IN-1 or AC IN-2. During battery operation it will be disconnected.
AC Out-2 supports up to 50A per phase.
An Earth leakage device with breaker or a combination MCB/RCD must be installed on the output. Cable size must be adjusted accordingly.

IMPORTANT INFORMATION !

Recommended DC cable/fuse size 48V Quattro's

0-8 m cable length: 2 x 70SQmm 5-10 m cable length: 4 x 70SQmm. When used in closed conduits, cable size should double. DC cable length stands for the distance between the battery connections and the Quattro 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 200A per Quattro.

IMPORTANT INFORMATION !

Recommended AC IN-1 & AC IN-2 cable/breaker size Quattro's

AC IN-1 & AC IN-2 both must be protected by a circuit breaker rated at 100A max per phase or less. This depends heavily on the size of the connected power source.The input currents must be adjusted to fit the size of the connected power sources. The breaker and cable size for both AC IN-1 & AC IN-2 should be adjusted accordingly.

WARNING

230/400 VOLT IS EXTREMELY HAZARDOUS DO NOT TOUCH ANY LIVE WIRED PARTS OF THE INSTALLATION !!!
WHEN IN DOUBT, ALWAYS CONSULT YOUR VICTRON DEALER !!!