All user settable parameters as well as additional information are accessible via the user interface which consists of the LCD screen and the three buttons located on the front cover.

Pressing any key during the normal operation of the unit will cause the main menu to be displayed. Using the right/left buttons will scroll through the menu options. Pressing the "Enter" button will cause that menu option or value to be selected. Use of the up/down menu increases and decreases the current menu value. Pressing the up button exits the menu (unless you are currently modifying a value, in which case it will increase the value. First press "Enter" to select the current value, and then press the up button to exit the menu).

The Red LED on the front of the unit indicates an error of some nature. The exact cause of the error will be shown on the LCD screen (unless you have activated one of the menu options).

The Green LED on the front cover is lighted when the unit is first turned on and also any time the charge performance is considered high enough to complete the current charge cycle. If the solar power is not adequate to complete the charge cycle, the cycle will be extended and the mode timer will not count down. When this green LED is lighted, the charger is able to pass enough current to the batteries to potentially complete a full charge of the batteries.

The internal green LED on the middle right of the large PCB board (motherboard) is lighted when the mosfets are engaged, which connects the solar to the batteries.

The red LED on the small daughter board is lighted when there has been an over-voltage detected. **To clear an over-voltage condition, all power to the unit must be disconnected for at least 10 seconds**. Once power is re-applied, the unit should clear the fault. **Over-voltage conditions should be addressed by ensuring your solar inputs never exceed 100 volts** solar panels should never be enabled without first ensuring the controller is powered up and running from the batteries.

This unit is designed for mounting in a dry indoor environment. **The enclosure will not protect the contents from moisture**. Do not mount outdoors where rain, snow or high moisture content is a possibility.

Solar systems should be designed for no more than 155 amps maximum current based on the manufactures data plate. To determine the total amperage of your solar system, divide the total wattage by your batter voltage. For example: On a 24 volt system, 3600 watts of solar / 24 volts = 150 amps. Wire you panels so the input voltage is between 1.6 and 1.8 times your battery voltage. On a 12 volt system, a VOC between 19 and 21 volts is optimum. Do not exceed twice your battery voltage.

Coleman Air

C155-SMAD Quick Start Guide

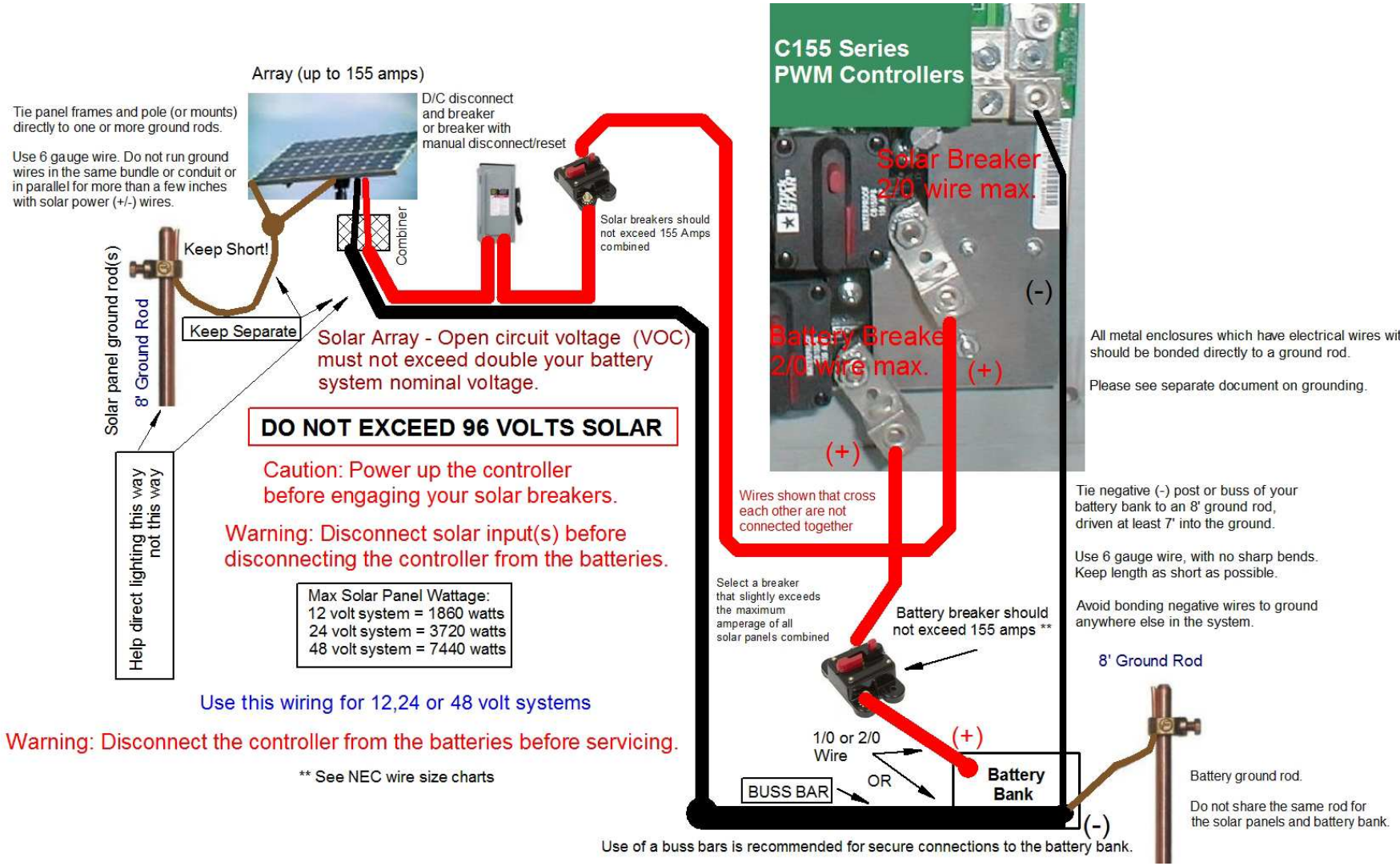
The digital version of the C155-SMA

The C155-SMAD balances the tried and true with the newest technologies, resulting in a super capable PWM controller for your alternate energy system that's easy to use and even easier to love.

This is the quick start guide only.

See http://ColemanAir.us to download the full instruction and installation manual.

- Massive 155 amps solar array capability.
- Fully digital and intuitive user interface.
- PWM charging algorithm based with 3-stage charge control.
- No jumpers or potentiometers need to be set.
- LCD 2 x 16-character backlit display.
- Both manual and automatic equalize modes are available.
- 200A shunt provides monitoring & reporting of solar amperage and wattage.
- Automatic nominal battery voltage detection.
- Nearly all charge parameters can be managed through the user interface.
- Fine tuning of displayed voltage and amperage via the calibration menu.
- Bulk, float and re-bulk set points and/or timers can all be set.
- Automatic LCD back light dimming to save energy.
- Dual Truck Star breakers, one each for solar and battery inputs.
- Supports 12, 24 or 48-volt battery systems.
- Vented cover and hinged lid.
- Large heat sink capable of dissipating excess heat in normal environments.
- Modular PCB layout allows for quick and inexpensive repairs if ever needed.



This unit may be used with solar (photovoltaic) inputs only. **Multiple solar panels (arrays) may be hooked up as long as you do not exceed the total capacity of the unit.** More information on these subjects is provided at http://ColemanAir.us (See: Articles and Information.) The optimum solar panel VOC is generally around 1.6 to 1.8 times the battery voltage.

Ungrounded solar panel frames are an invitation for system wide damage due to lighting strikes and/or electrically charged air. Ground rods at the solar panels and battery negative are required for safety and reliability.

Ensure you have selected adequate sized wire for the amperage you will be controlling. **Undersized wire can result in very high heat in the wire and connections possibly leading to a fire. Always use a fuse or DC disconnect! Hooking up an energy source or load without a fuse or disconnect can result in serious injury or death!**

The breakers inside the unit do not disconnect the incoming battery cable from the battery bank power. The external breaker shown above is required by code!

Use extreme caution when installing or servicing this controller. High amperages and voltages can KILL you. – Always disconnect the controller before servicing.