

Trouble Shooting Guide – Inverter (SW4048)

How to Operate:

To access the applicable menu (e.g., #5 error causes, #1 inverter operation), follow these guidelines:

1. Press the “On/Off Menu” (red) button on the far right, screen shows menu #1.
2. Press the “Menu Headings” arrow (↑ or ↓) to scroll to different menu #.
3. On the menu # of choice, press the “Menu Item” arrow (↑ or ↓) to select a group of menu items.
4. To choose the correct menu item to change (primarily on menu #1), e.g., “On”, “Sell”, press the “Set Points” arrow (↑ or ↓) until the black underscore is under the desired option.

Primary Trouble-shooting Steps:

1. Go to Menu #5 (Error Causes) by pressing the “On/Off Menu” (red) button on the far right, screen shows menu #1 (Inverter Mode); then press the “Menu Headings” arrow (↑ or ↓) to scroll to menu #5. Usually the “Error” (red LED) will be blinking, even if not, check for the error reason in menu #5 by pressing the Menu Item arrow (↑ or ↓) to view each error cause. You will see a “No” or “Yes” by each item when scrolling. Record the error cause, then go to step 2.
2. Go to Menu # 1 (Inverter Mode) by pressing the “On/Off Menu” (red) button on the far right. Reset by turning off the inverter by pressing the Set Points arrow (↑ or ↓) until the black underscore is under the “Off”. Wait for ~ 1 minute, then turn inverter back on by pressing the Set Points arrow (↑ or ↓) until the black underscore is under the “On”. The “Line Tie”, “AC1 In Good”, and “Bulk” or “Float” LEDs will now be lit (may have to wait a few minutes for operation to stabilize, i.e., all LEDs lit).
3. Go to Menu #4 (Meters) by pressing the “On/Off Menu” (red) button on the far right, screen shows menu #1; then press the “Menu Headings” arrow (↑ or ↓) to scroll to menu #4. Press the “Menu Item” arrow (↑ or ↓) to select “Inverter/Charger Amps AC”, which is the normal display.

Secondary Trouble-shooting Steps:

1. If the inverter will not synchronize with the grid, e.g., oscillates between “invert” and “float” check the push-button AC input breaker (bottom on the end with the external stacker cables and AC lines, left side when facing the inverter). If out, turn the inverter off (menu #1), push in to reset, then turn inverter on (menu #1).
2. If the inverter will not stay on because of “high battery voltage”, turn off the breakers that isolate the PV arrays, the breakers are on the side of the battery disconnect box (with no load the open circuit voltage from the PV modules exceeds the high battery voltage limit). Turn inverter on (menu #1), allow to sync, and then turn the PV breakers on.
3. If the inverter will not stay on because of “over current”, turn off the load breakers in the back up breaker box. Turn back on once the inverter stays on.
4. If the inverter continues to show error messages, e.g., “external stacking” (Trace term for anything not identified elsewhere), then turn off the battery breakers and the PV breakers, wait at least 5 minutes, then turn the breakers back on. The programming will have to be re-entered (menu #'s 9 & 10) before turning the inverter on.

Trouble Shooting Guide – Charge Controller (C-40)

1. For problems with the display, e.g., no display (typically, no current and wattage, but cumulative amp-hours and volts are still visible) or backlit function:

A. Push reset button on right side of controller and hold until LED starts flashing green/red (usually takes ~ 20 seconds of holding). Release, then push the reset button until there is a “long” (~ 1 second) pause of the LED not flashing (usually takes ~ 8 seconds of holding). The voltage, current, and wattage on the display should then read normal values. If this does not fix, then

B. Remove front panel and disconnect (phone) cable from display to controller for ~ 2 minutes, then reconnect.

2. For problem with controller, e.g., locks-up and displays battery volts, but no other readings:

A. Push reset button on right side of controller and hold until LED starts flashing green/red (usually takes ~ 20 seconds of holding). Release, then push the reset button until there is a “long” (~ 1 second) pause of the LED not flashing (usually takes ~ 8 seconds of holding). The voltage, current, and wattage on the display should then read normal values. If this does not fix, then

B. Remove front cover and disconnect (phone) cable. Verify voltage from battery (~ 52 VDC) and voltage from solar panels (~ 80 VDC). If no voltage from solar panels check breakers and fuses in combiner boxes. If voltage is present from solar panels, then: Disconnect positive lead from solar panels, then disconnect positive lead from battery (red cables on left side of box). Make sure leads do not contact any other component, wire, surface, etc. Wait a minimum of 5 minutes (better to wait 10 minutes), then reconnect battery cable, and then reconnect solar panel cable. I put wire nuts on the ends of the cable while waiting to prevent any arcing. Reconnect cable and re-install front cover. Note, can also open solar panel breakers, then battery breakers, but will have to re-program inverters. Critical that battery power to the controller is first on and last off.