

- Grid Tied
- Off Grid
- Hybrid
- Backup

Commissioning Log

Date: _____

| | | | |
|--------------------|--|------------------|--|
| Customer Name | | | |
| Customer Address | | | |
| Phone Number | | Email | |
| Distributor/Dealer | | Date of Purchase | |
| Company Address | | | |
| Phone Number | | Email | |

| | | | | |
|-------------------------------|--|-------------------------------|--|--|
| Battery Model | | | Installation Date | |
| Number of Batteries in Series | | Number of Strings in Parallel | System Voltage | |
| Battery Date Code(s) | | | System Capacity (AH @20HR) | |
| | | | Low Voltage Disconnect (LVD) | |
| | | | Any additions/adjustments since battery install date | |

| CHARGE SOURCE(S): | Volts (V) | Watts (W) | Qty |
|-------------------|-----------|-----------|-----|
| RENEWABLE | | | |
| PV Panels | | | |
| Wind | | | |
| Other | | | |
| AC | | | |
| Generator | | | |
| Grid | | | |
| Other | | | |

| INVERTER/CHARGER INFORMATION: | | | | |
|-------------------------------|----------|--|---------|--|
| CHARGER(S) | | | | |
| Make | | | | |
| Model | | | | |
| Output | Volts DC | | Amps DC | |
| INVERTER(S) | | | | |
| Make | | | | |
| Model | | | | |
| Input | Volts DC | | Amps DC | |

| | CHARGE CONTROLLER SETTINGS | | | INVERTER/CHARGER SETTINGS | |
|--------------|----------------------------|----------|--------------|---------------------------|--------------|
| | Volts (V) | Amps (A) | Time (HH:MM) | Volts (V) | Time (HH:MM) |
| Bulk | | | | | |
| Absorption | | | | | |
| Float | | | | | |
| Equalization | | | | | |

TOTAL AVERAGE DAILY POWER CONSUMPTION:

| | | | |
|--|--|---------|--|
| KWH(AC) | | KWH(DC) | |
| Number of Days Between Full Charge Cycle | | | |

Details to your system information and user profile is mandatory to properly troubleshoot and ensure appropriate system set up. For assistance in completing non-battery related sections, please contact your system install/service technician and/or equipment manufacturer.

Commissioning Log

Commissioning Date:

HAS A COMMISSIONING CHARGE BEEN PERFORMED? Y N

AMBIENT TEMPERATURE (°C or °F): _____

All readings should be taken with the battery stabilized on float charge. All specific gravity readings must be temperature corrected. Do not add water before readings are taken. For charging parameters, please refer to our product user guide. Readings taken from Pos(+) to Neg(-) end of battery string.

| Cell# | Specific Gravity | Voltage | Cell# | Specific Gravity | Voltage | Cell# | Specific Gravity | Voltage | Cell# | Specific Gravity | Voltage |
|-----------|------------------|---------|-----------|------------------|---------|------------|------------------|---------|------------|------------------|---------|
| BATTERY 1 | | | BATTERY 5 | | | BATTERY 9 | | | BATTERY 13 | | |
| 1 | | | 25 | | | 49 | | | 73 | | |
| 2 | | | 26 | | | 50 | | | 74 | | |
| 3 | | | 27 | | | 51 | | | 75 | | |
| 4 | | | 28 | | | 52 | | | 76 | | |
| 5 | | | 29 | | | 53 | | | 77 | | |
| 6 | | | 30 | | | 54 | | | 78 | | |
| BATTERY 2 | | | BATTERY 6 | | | BATTERY 10 | | | BATTERY 14 | | |
| 7 | | | 31 | | | 55 | | | 79 | | |
| 8 | | | 32 | | | 56 | | | 80 | | |
| 9 | | | 33 | | | 57 | | | 81 | | |
| 10 | | | 34 | | | 58 | | | 82 | | |
| 11 | | | 35 | | | 59 | | | 83 | | |
| 12 | | | 36 | | | 60 | | | 84 | | |
| BATTERY 3 | | | BATTERY 7 | | | BATTERY 11 | | | BATTERY 15 | | |
| 13 | | | 37 | | | 61 | | | 85 | | |
| 14 | | | 38 | | | 62 | | | 86 | | |
| 15 | | | 39 | | | 63 | | | 87 | | |
| 16 | | | 40 | | | 64 | | | 88 | | |
| 17 | | | 41 | | | 65 | | | 89 | | |
| 18 | | | 42 | | | 66 | | | 90 | | |
| BATTERY 4 | | | BATTERY 8 | | | BATTERY 12 | | | BATTERY 16 | | |
| 19 | | | 43 | | | 67 | | | 91 | | |
| 20 | | | 44 | | | 68 | | | 92 | | |
| 21 | | | 45 | | | 69 | | | 93 | | |
| 22 | | | 46 | | | 70 | | | 94 | | |
| 23 | | | 47 | | | 71 | | | 95 | | |
| 24 | | | 48 | | | 72 | | | 96 | | |

STATE OF CHARGE AS A MEASURE OF SPECIFIC GRAVITY AND OPEN CIRCUIT VOLTAGE:

| Charge % | Specific Gravity | Cell Voltage | 12 Volt |
|----------|------------------|--------------|---------|
| 100% | 1.255-1.260 | 2.10 | 12.60 |
| 75% | 1.220-1.225 | 2.08 | 12.48 |
| 50% | 1.200-1.205 | 2.05 | 12.30 |
| 25% | 1.175-1.180 | 2.02 | 12.12 |
| 0% | 1.145-1.150 | 1.98 | 11.88 |

COMMISSIONING CHARGE

A refresh charge (or "boost charge") is recommended before putting batteries into service. The recommended refresh charge parameters are as follows,

- Charge current of 10-15A per 100 Ah C₁₀ until 2.40 V/cell is reached (3-5 Hrs)
- Charge at 5A per 100 Ah C₁₀ V/cell for 14 hours (voltage exceeds 2.40 V/cell)
- Rest 1 hour
- Charge with 5A per 100 Ah C₁₀ for 4 hours

INSPECTION CHECKLIST:

| | |
|--|--------------------------|
| Terminal/Cable Connections | <input type="checkbox"/> |
| Voltage/Specific Gravity | <input type="checkbox"/> |
| Electrolyte (Between Min/Max Markers) | <input type="checkbox"/> |
| Battery Container (No Shipping Damage/Leakage) | <input type="checkbox"/> |
| Vent Cap/Float Vents (Good Condition, No Damage) | <input type="checkbox"/> |

Repeat steps 3 and 4 (max 5 times) until the following criteria is met,

- All cells/blocks exceed 2.60 V/cell
- Electrolyte density of each cell does not deviate more than ±0.015 kg/l from the average value

Notes:

Do not allow temperatures to exceed 55°C (131°F), continue operation when below 45°C (113°F).
Top up with demineralized water to upper electrolyte level mark
Electrolyte density must not differ more than 0.015 kg/l between cells

Additional Notes/Observations: