MOBILE SOLAR

Quick start and reference for the field

MODELS
SRX-9
SRX-12
SRX-15

SRX-9, SRX-12 and SRX-15 Operator Guide

INVERTER/CHARGER	HEATED LITHIUM BATTERY	SOLAR, SRX-9 / SRX-12 / SRX-15	OUTPUT	BACKUP GENERATOR
8kW · 16.97kW peak	40.96kWh LiFePO4	3,375 / 4,500 / 5,625W	120/240V, 60Hz	Honda EU7000iS, auto start

ABOUT THE SRX-9, SRX-12 AND SRX-15 MODEL SOLAR GENERATORS

This guide covers the SRX-9, SRX-12 and SRX-15 models. Each is a split-phase mobile solar generator, comprised of an 8kW 120/240VAC AC output, a 40.96kWh heated lithium iron phosphate battery, a fixed solar array and a fuel-injected Honda backup generator with 30 gallons of onboard fuel. The three models are nearly identical, all sharing the same AC output, battery bank, charge controller, MATE3 system controller, Starlink mount, backup generator and electrical output panel. These units run silent on solar and battery, and start the backup generator only when necessary. The three models differ in trailer length and the number of solar panels. From an operational standpoint the units are the same. The six numbered procedures below run in order from setup to use. Each has its own detail page with photos and callouts below.

READ BEFORE OPERATING

This is energized electrical equipment. The inverter box contains live connections within the load center. Open it only when needed and keep it closed during normal operation. The battery box is not an operator access point. It stays closed and locked. The backup generator starts and stops automatically without warning, so before performing any maintenance, disable auto start. The solar array is fixed and does not lower. When fueling, remember gasoline only.

1 SETUP

Orient to the sun and deploy outriggers

Solar array to true south, tongue to the west → pull pin → slide out → re-pin → swing jack down → crank to ground on all four corners.

→ Detail: page 2 · Tie down to secure. Wind damage prevention: page 3

2 VERIFY POWER ON

Verify operational status

Verify PV combiner breakers on → open the inverter box, verify all breakers on → verify inverter on via the MATE3 system controller → close and lock the inverter box.

→ Detail: page 4

3 USE

Plug in your equipment

Confirm AC output is on and plug in your equipment.

→ Detail: page 5

4 GENERATOR

Backup generator

Honda EU7000iS in a lockable cage, 30 gal of fuel onboard (25 gal auxiliary tank plus 5 gal in the generator). Starts and stops automatically as necessary. Refuel with gasoline only.

→ Detail: page 6

5 MONITOR

System status and remote monitoring

The MATE3 system controller home screen shows solar, battery, inverter and generator at a glance. Create a user account at opticsre.com for remote monitoring and contact Mobile Solar for access.

→ Detail: page 7

6 TRANSPORT

Towing and transportation

Unplug loads → leave breakers on → close and lock the inverter box, battery box and generator cage → stow outriggers and jacks → hook up and tow.

→ Detail: page 8



SRX-9 Solar Generator



Curbside

Model differences at a glance

Same inverter/charger, battery, generator and outlet panel across all three.

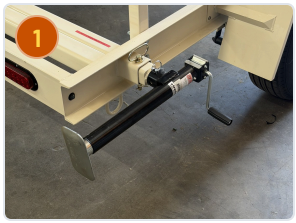
Panels: 9 / 12 / 15. Nominal chassis: width 8'-6" on all three; length 16' / 23' / 27'.

Contact Mobile Solar
(805) 466-1006
mobilesolarpower.net

Orient to the sun and deploy outriggers

Deploy outriggers at all four corners before powering on

Before you start: Orient the solar array to true south; the trailer tongue points to the west. Use true south, not magnetic. Park where ground is most level. Chock the wheels. Position safety cones.



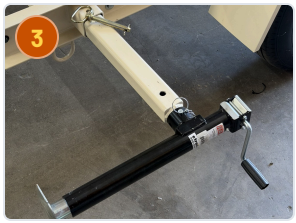
Locate outrigger

Find the retaining pin on the outrigger at the corner



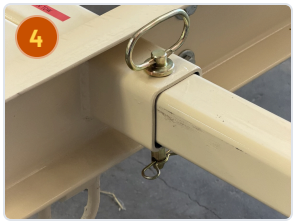
Pull pin

Remove the small safety hairpin first, then pull the larger retaining pin straight out



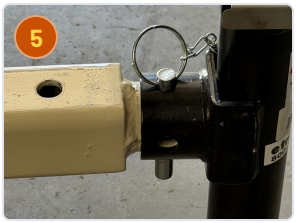
Slide out

Extend the outrigger fully until the second pin hole is visible



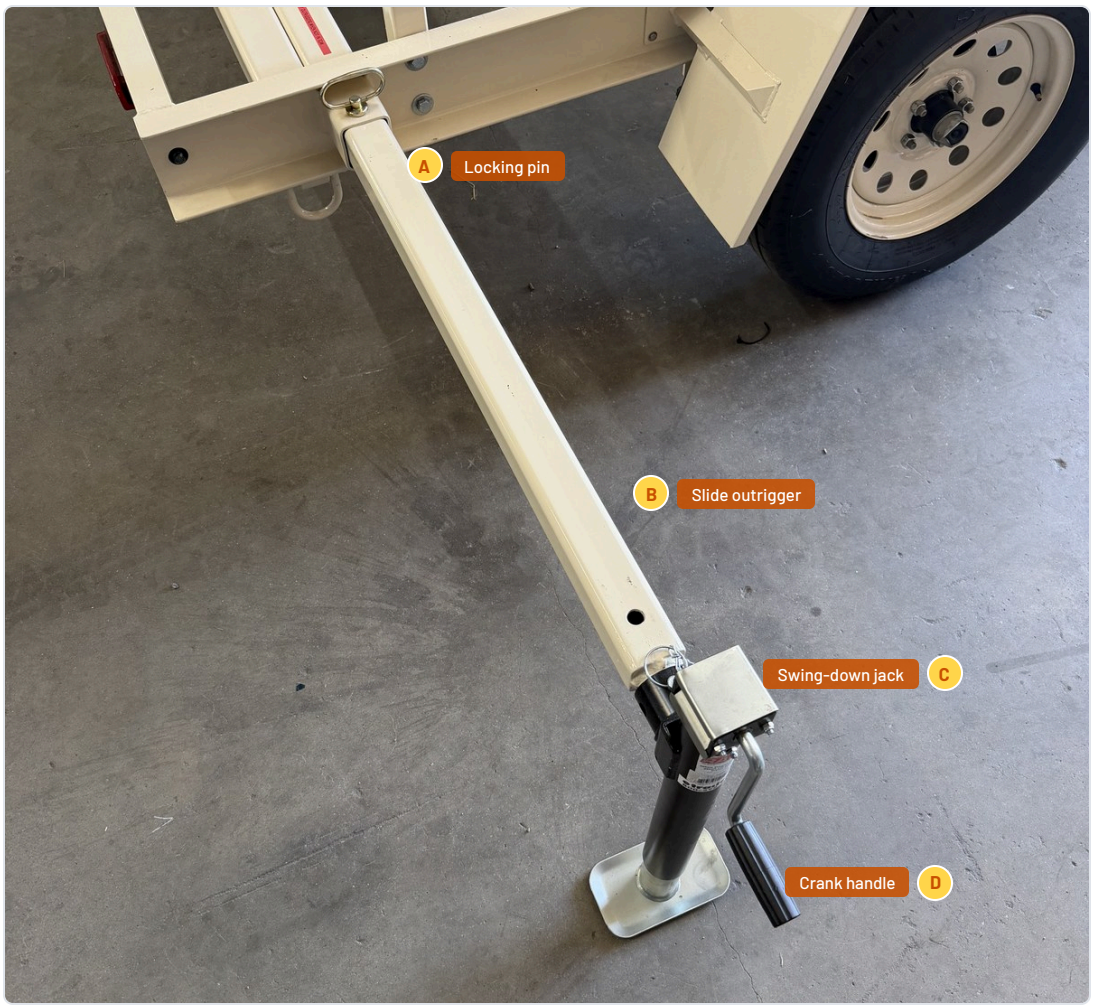
Re-pin

Insert the retaining pin through the hole to lock the outrigger, then reinsert the small safety hairpin



Swing down

Remove the jack pin, rotate the jack vertical, reinsert the pin, crank to ground



Component detail

A Locking pin

Remove the small safety hairpin first, then pull the retaining pin straight out.

B Slide outrigger

36-inch outrigger extension. Extends from the trailer frame. Two pin positions: stowed and deployed.

C Swing-down jack

Pivots 90 degrees from horizontal (stowed) to vertical (deployed). Manual crank adjusts height.

D Crank handle

Clockwise to lower. Snug to ground contact, then two to three extra turns to load the outrigger. It is not necessary to lift the trailer off the ground.

Cones, recommended

Place cones at all four corners by the outriggers and the ball coupler. Cones are not supplied with the unit.

Ball coupler

Can be removed if desired and stowed inside the inverter box.

WARNING Energized equipment with live connections. Keep all enclosures closed and locked.

Done right

Array faces true south, trailer tongue to the west. Unit sits as level as possible, outriggers slightly loaded. All four jacks touching ground. Cones recommended.

Common mistakes

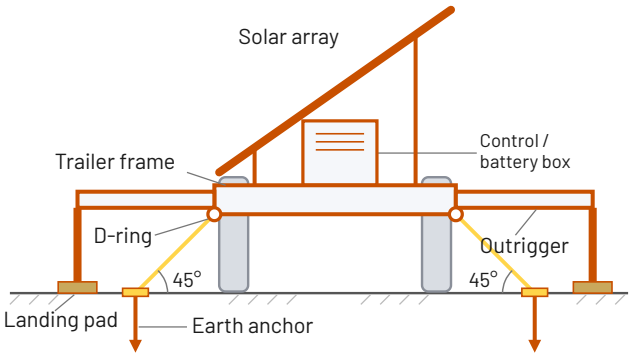
Forgetting to reinsert the locking pins, which lets the outriggers shift under load. Deploying jacks before deploying outriggers. Orienting by a phone compass without correcting for magnetic variation.

Tie Down to Secure. Wind Damage Prevention.

Deploy outriggers on all four corners. Secure anchors at all four corners.

FROM BEHIND

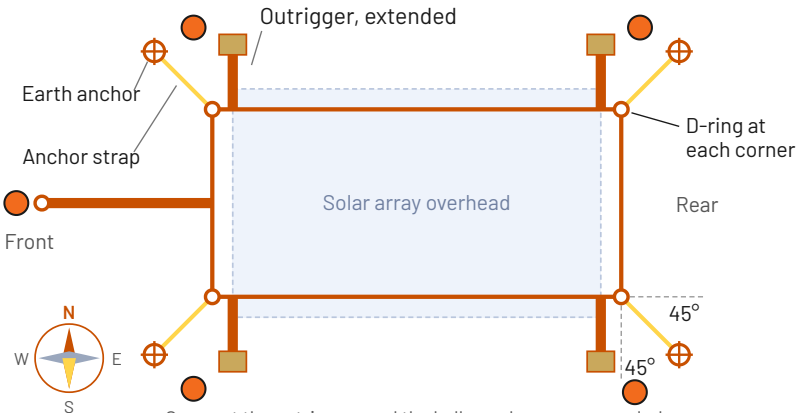
fasten at 45° to the ground



Stabilizer collar at grade.
Working load: refer to your engineer

FROM ABOVE

fasten on the corner diagonal, 45° to the side and the rear



Cones at the outriggers and the ball coupler, recommended.
Anchor on the corner, diagonally out 45 degrees.

How

1. Set one ground anchor at each corner, placed on the corner diagonal so the pull to tension is 45 degrees to the ground and 45 degrees out from the corner.
2. Fasten the anchor to the D-ring at each corner and tighten the fastening strap snug, no slack.
3. Check after the first day and after any high wind. Retighten to take out slack. Replace anything bent, frayed or worn.

Anchor type depends on the ground

Soft soil, firm soil, rock and asphalt each take a different anchor, installed to the maker's instructions. If anchors are supplied, they are a general-purpose choice, not a site-engineered design. Always confirm with an engineer for local wind exposure and soil type prior to choosing your earth anchor. Wind rating can only be determined from engineered calculations.

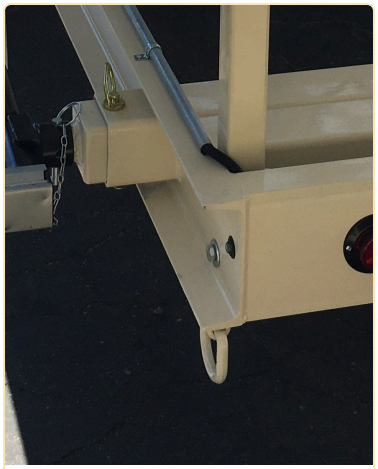
Anchors
One per corner, four total

Rating
Soil types and wind exposures differ. Refer to your engineer's recommendations

Fasten
At the D-ring, 45 degrees both ways, no slack

Check
After the first day and after any high wind

Example of one earth anchor system on a real unit, not a specification. Yours may differ.



D-ring under each corner of the frame, beside the outrigger. Fasten here.



Fastened from the corner down to a ground anchor set beyond the outrigger pad, no slack.



Front and rear corners anchored on one side, outriggers down first. Repeat at all four corners.

Done right

Four anchors, one per corner, each on the diagonal, each strap fastened snug with no slack.

Common mistakes

Anchor straight out from the side instead of on the diagonal. Loose anchor straps. Anchoring without the outriggers down first. Failing to check with your engineer for your specific location.

Verify operational status

Two boxes: the inverter box opens, the battery box stays closed

Before you start: Outriggers deployed (see p.2). There are two boxes, one for the inverter and one for the batteries. The inverter box is the one with the receptacles and circuit breakers on it. Everything you operate is in the upright inverter box. **The battery box is not an operator access point.** It stays closed and locked in normal use. **Remote monitoring:** create a free account at opticsre.com and request system access from Mobile Solar.



Unlock and open

Unlock the inverter box and swing the door fully open



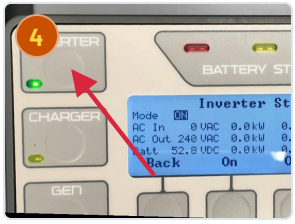
PV breakers on

Verify every PV combiner breaker is up and on. There are more than one (three on the SRX-9)



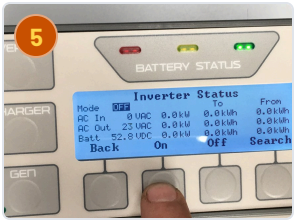
Breakers on

Open the breaker panel door and verify every breaker is on (pushed in toward the center)



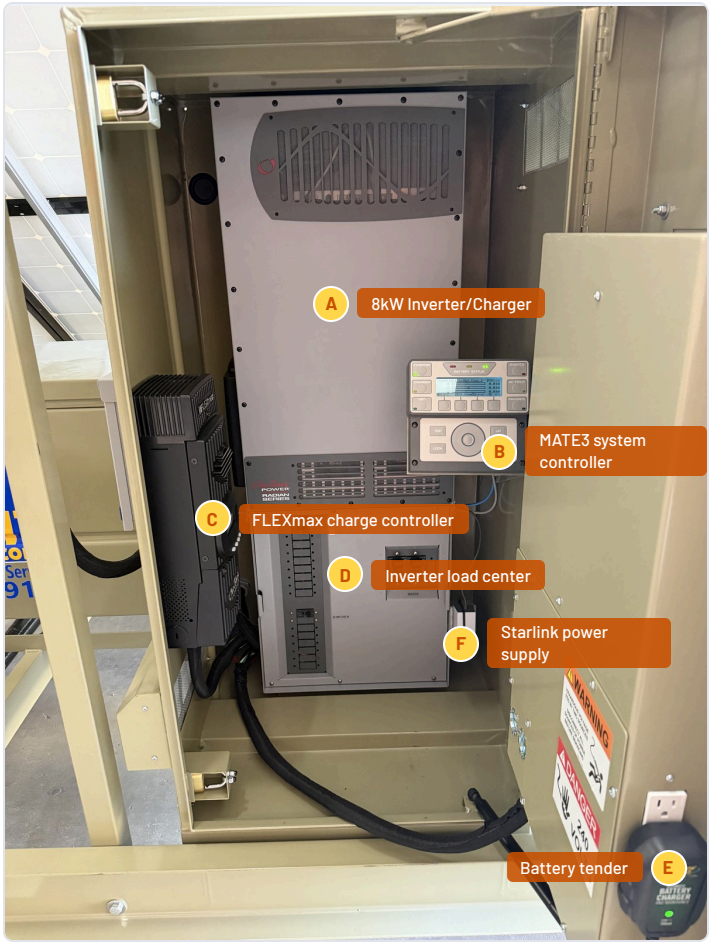
Inverter menu

Press the INVERTER menu button to reach the Inverter Status screen



Inverter ON

Press ON. You hear a click and the inverter LED goes green. Press BACK to return to the home screen



Inside the inverter box

A 8kW Inverter/Charger

8kW rated, 16.97kW instantaneous, 120/240VAC. Same unit on all three models.

B MATE3 system controller

The system brain: inverter on/off, battery state of charge, charge and discharge rates, event log, etc.

C FLEXmax charge controller

Uses power from the solar array to charge the battery bank. Runs automatically if all circuit breakers are on.

D Inverter load center

Main inverter/charger disconnect breakers and various AC and DC breakers. All on for normal operation, and should remain on during transport.

E Honda generator battery tender

Keeps the 12-volt starting battery in the Honda generator charged so the generator will start when the system calls for it.

F Starlink power supply

The white adapter on its own duplex receptacle on the side of the load center. There is no indicator on the supply itself. To check if Starlink is powered, look at the antenna; its LED slow-strobes blue when it is powered on.

WARNING Energized equipment with live connections. Keep all enclosures closed and locked.

If the system goes dark: the battery management system (BMS) shuts the batteries down when they run critically low, usually after the generator ran out of fuel or couldn't start. The only way to turn the battery back on is via a Bluetooth app such as BAT-BMS. Download it before you need it.

Done right

MATE3 system controller showing inverter on, no fault events. Solar charging visible on the FLEXmax in daylight. Inverter box closed and locked.

Common mistakes

Leaving the PV breakers off, so the battery never recharges from solar. Turning breakers off when you are done.

Plug in your equipment

All DC and AC connections occur within the electrical interface panel

Before you start: Confirm the inverter is on (see p.4). Total continuous draw across all outlets is 33.3A, with 70.7A available instantaneously for motor starting. When finished, lower the rain guard, the hinged door over the panel.



Home screen

Push the BACK button to view the home screen



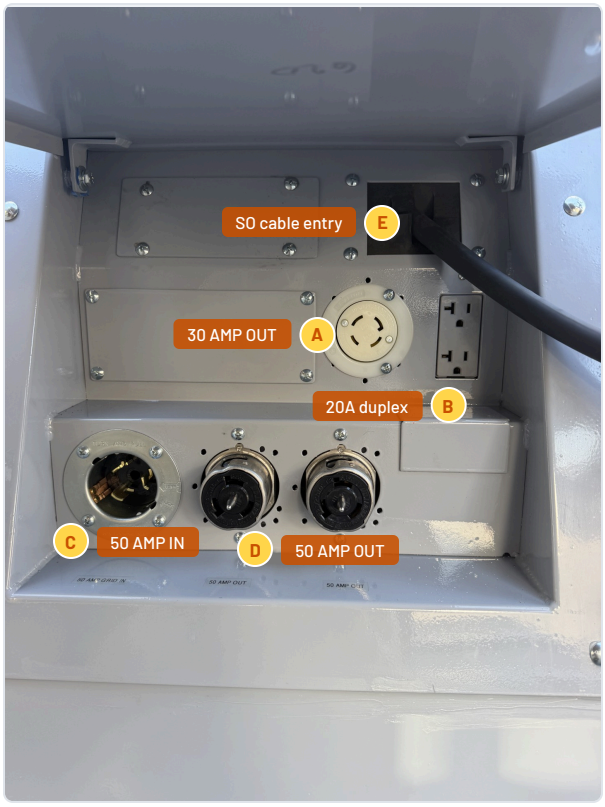
Choose outlet

Choose the outlet, or push SO cable through the entry point into the load center



Confirm breakers

Confirm all circuit breakers are turned on (pushed in toward the center)



Outlet detail

A 30A NEMA L14-30 twist-lock

Engraved "30 AMP OUT" on the panel. Three-pole, four-wire, so it carries 120/240V. For medium-draw equipment and small distribution panels. Leviton 2716.

B 20A NEMA 5-20 duplex

Standard 120V duplex outlet, two receptacles on one circuit. Accepts 15A and 20A plugs. A 5-20 shows a sideways notch on one vertical slot, which is how you tell it from a 15A.

C 50A Cali-style inlet

Shore power inlet, engraved "50 AMP IN". This is an **inlet**, not an outlet. It is intended to feed the unit from grid power. Leviton CS6375.

D 50A Cali-style twist-lock receptacles

Two receptacles, each engraved "50 AMP OUT". 120/240V. Leviton CS6369. Twist to lock.

E SO cable entry point

There is a rubber pass-through above the duplex receptacle. An electrician can land SO cable directly on a circuit breaker inside the load center.

WARNING Energized equipment with live connections. Keep all enclosures closed and locked.

Done right

Load runs without tripping a breaker. Discharge rate appears on the MATE3 system controller home screen, proportional to the load. Rain guard lowered.

Common mistakes

Overloading a circuit. Using extension cords that are damaged or miswired.

Backup generator

Honda EU7000iS gasoline generator, auto start/stop

Gasoline only. Use fresh, clean fuel. No diesel. The generator starts and stops on its own based on battery voltage. **Leave the generator key in the OFF position. If a manual run is required, start the generator at the MATE3 system controller, not at the generator.** If the generator is started with the key and push button at the Honda, it will run but the system will not charge the batteries or power your loads. The auxiliary tank holds 25 gallons plus 5 gallons in the native tank. Ensure the fuel shutoff valve is open. The cage is lockable; keep it locked on site.



Locate the cage

The generator sits in a lockable cage on the trailer chassis



Check fuel

Auxiliary tank holds 25 gallons. Keep the level visible in the sight gauge



Service platform

The service platform drops down and the generator slides out for service



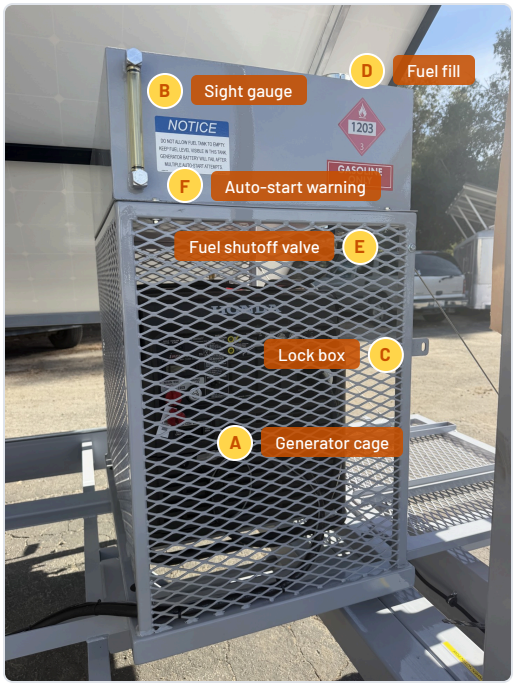
Fuel shutoff valve

The valve is on the underside of the 25-gallon fuel tank. It must be open for the generator to run



Key in off position

Leave the key in the OFF position. Don't start the generator with the key and push button. Use the MATE3 system controller generator button



Generator detail

A Generator cage

Lockable, theft resistant. Padlock located in the metal box.

B Sight gauge

Keep fuel visible in the sight gauge.

C Lock box

The square metal box on the cage. Holds the padlock.

D Fuel fill

Use fresh, clean gasoline only. Auxiliary tank holds 25 gallons. Fuel shutoff valve must be open.

E Fuel shutoff valve

Inside the cage, lower right under the GASOLINE ONLY sign, not visible here. On the underside of the 25-gallon fuel tank. It must be open for the generator to run.

F Auto-start warning

The generator is capable of starting at any time. Before maintenance, disable automatic generator start (AGS) at the MATE3 system controller, or call Mobile Solar.

WARNING Energized equipment with live connections. Keep all enclosures closed and locked.

Before any maintenance: disable automatic generator start (AGS) at the MATE3 system controller, or call Mobile Solar. The generator is capable of starting at any time.

Done right

Generator runs only when the MATE3 system controller calls for it, then shuts off. Key kept in the OFF position. Fuel visible in the sight gauge. Generator cage locked.

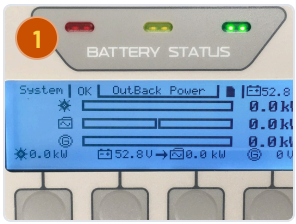
Common mistakes

Attempting to start the generator with the key and push button instead of via the MATE3 system controller. Running out of fuel, which causes multiple failed auto-start attempts and depletes the generator battery. Fueling with anything other than clean, fresh gasoline.

System status

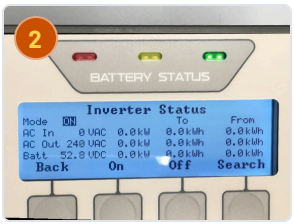
MATE3 system controller home screen and the FLEXmax charge controller

Green is normal. The home screen is the place to look for normal system operation. The same screens are available on the opticsre.com remote monitoring dashboard once system access has been granted (see p.4).



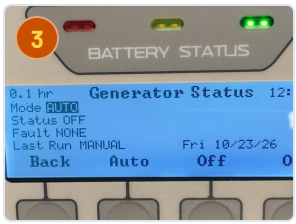
Home screen

Solar production, battery status, inverter mode and generator state, all on one screen



Inverter status

Mode ON, AC Out present. Press the BACK button to return to the home screen



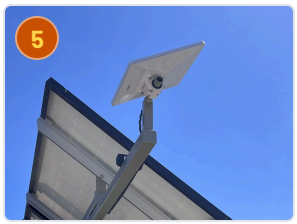
Generator status

Mode AUTO, Status OFF is normal. The system starts the generator as required



Charge controller

The FLEXmax charge controller shows volts and amps in and out, plus the charger state in the lower right



Starlink

LED on the Starlink slow-strobes blue when it has power. Mount part number: SeaView SVRCLMINI

What the numbers should read

Reading	Normal	Attention	Notes
Battery voltage	51 to 54V	Below 51.2V*	800AH @ 51.2VDC nominal. Below 51.2V, check the generator has fuel.
Inverter mode	ON / INVERTING	OFF	Inverter OFF means no AC output.
Charge rate	Positive in daylight	Showing no charge	No charge in daylight usually means the PV breakers are off.
Discharge rate	Tracks the load	Abnormally high	Ensure the load is sized appropriately to the circuit rating.
Generator	Key OFF; MATE3 system controller set to AUTO	Red light on the Honda status screen	Repeated cycling may indicate low fuel or oil level.

*Approximate. The exact point where a low battery needs attention sits somewhere between 50.6 and 52V, and 51.2V is a working figure rather than a measurable threshold.



Remote monitoring dashboard from opticsre.com

WARNING Energized equipment with live connections. Keep all enclosures closed and locked.

Done right

Green indicators, charge rate positive in daylight, MATE3 system controller tracking the connected load.

Common mistakes

Reading the charge controller instead of the MATE3 system controller for system state.

Towing and transportation

Reverse of setup, in order

Before towing: Everything unplugged. Inverter box, battery box and generator cage closed and locked. Jacks swung up and all four outriggers stowed and pinned. Final walk around: inspect for loose or unsecured items. Note: full width axle. Towing dimensions are 8'-6" wide and 9'-7" tall on all three models.



Unplug loads

Disconnect everything from the outlet panel and stow cords and power distribution equipment



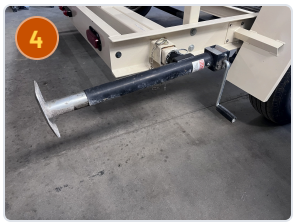
Leave breakers on

Breakers stay on. The system keeps managing itself in transit



Close and lock

Inverter box and generator cage locked, not just latched



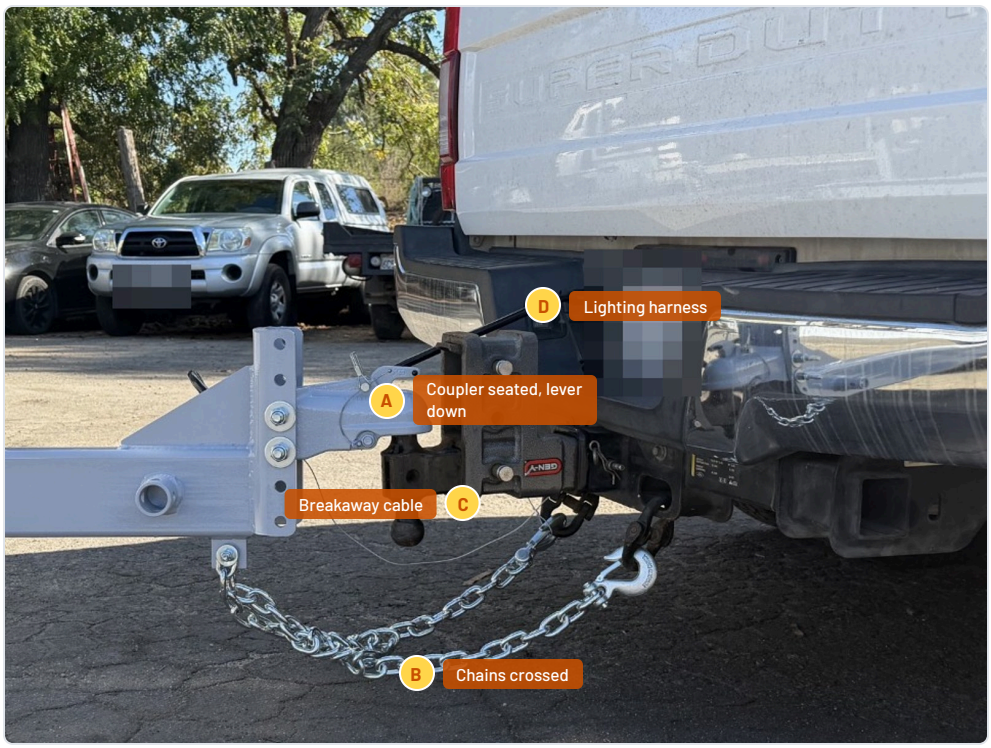
Stow outriggers

Crank up the jacks and swing them horizontal. Slide the outriggers in for transport. Insert the pins and small safety hairpins into jacks and outriggers



Hook up and tow

Properly connect the ball coupler, cross the chains, connect the breakaway cable and the seven-way light connector



Pre-tow checklist

- [ ] All four jacks up and pinned:
  Outriggers stowed, locking pins reinserted, including the small safety hairpins.
- [ ] Boxes and cage locked:
  Inverter box locked. Battery box locked. Generator cage locked.
- [ ] Coupler, chains and breakaway:
  Ball coupler seated and locked, chains crossed under the tongue, breakaway cable connected to the tow vehicle.
- [ ] Trailer lights connected:
  Seven-way trailer light plug connected to the tow vehicle.
- [ ] Brakes, running lights, turn signals:
  Working lights confirmed before towing. Tow vehicle brake controller set appropriately.
- [ ] Tire pressure checked:
  Factory tires are 80 PSI max rated. Recommended pressure 70 PSI.
- [ ] Final walk-around:
  No loose items on the trailer or left behind. Safety chains not touching the ground. Be aware of trailer width; it may be wider than your tow vehicle.

WARNING Energized equipment with live connections. Keep all enclosures closed and locked.

Done right

Trailer sits level on the ball, chains crossed and not dragging, lights working, brake controller set, nothing left behind or on the trailer.

Common mistakes

Towing with the jacks not properly pinned. Failing to lock the generator cage or boxes. Forgetting to re-pin the stowed outriggers. Loose items left on the trailer.