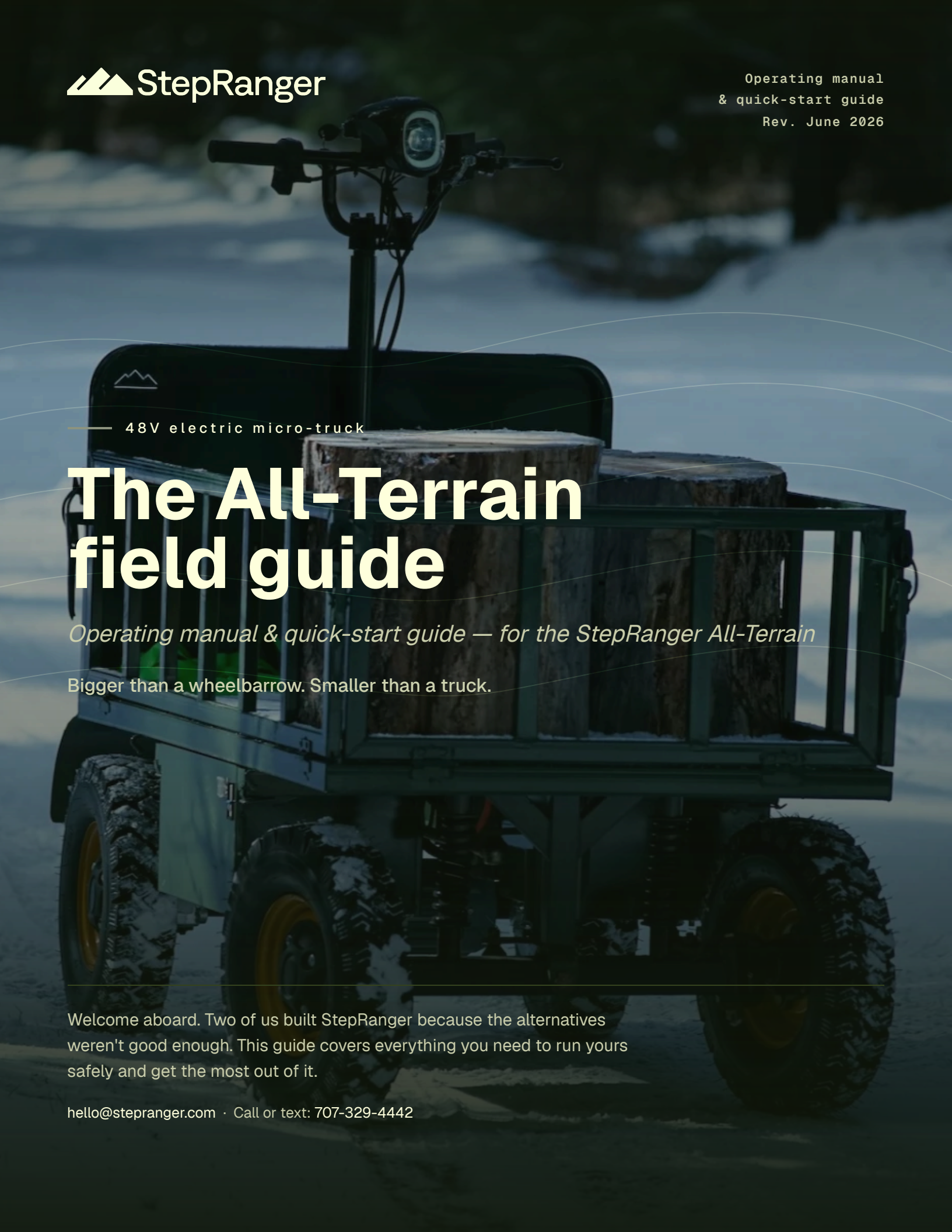
StepRanger

Operating manual
& quick-start guide
Rev. June 2026



48V electric micro-truck

The All-Terrain field guide

Operating manual & quick-start guide — for the StepRanger All-Terrain

Bigger than a wheelbarrow. Smaller than a truck.

Welcome aboard. Two of us built StepRanger because the alternatives weren't good enough. This guide covers everything you need to run yours safely and get the most out of it.

hello@stepranger.com · Call or text: 707-329-4442

Contents

A working owner's guide — setup, daily operation, terrain, care, and support, in the order you'll need them. Keep it in the bed; that's what it's built for.

00 Before your first ride 03
01 Know your StepRanger 04
02 Controls at a glance 05
03 Handlebar orientation 06
04 Battery & charging 07
05 Dual-battery & the key 08
06 Driving controls 09
07 Slope & terrain 10
08 Braking & safety 11
09 Tires & wheels 12
10 Bed setup & flatbed mode 13
11 Maintenance & storage 14
12 Troubleshooting 15
13 Finish, touch-up & dents 16
14 2-year warranty 17
15 FAQ & support 18

⚠ CAUTION · FOUR THINGS TO KNOW FIRST

- **Off-road use only.** The All-Terrain is not for public roads or highways.
- **Keep weight toward the front.** Running empty raises the risk of front-wheel lift — add ballast if you're unloaded.
- **Start in Low gear, Low speed.** Get a feel for the controls before opening it up.
- **Confirm the battery switch is ON (up)** before you expect it to move.

Start here

Before your first ride

00

Your StepRanger All-Terrain ships fully assembled and arrives with a charge of 80–100%, so you can put it to work right away.

Take five minutes with this guide first — it will save you time later and keep you safe.

WHAT'S IN THE BOX

- 1× StepRanger All-Terrain
- 1× 48V battery system (installed)
- 1× charger
- 2× keys



The All-Terrain, ready to work — rails up, bed clear, handlebars set.

WATCH FIRST

The complete walkthrough

Before you start, watch the full video tour of your All-Terrain — setup, controls, and your first drive, start to finish. Scan the code, or visit youtu.be/Chlg2u1mO5w.

HOW TO USE THIS GUIDE

Sections 03–06 cover the controls and the power system — read those before your first ride. Sections 07–10 cover terrain, braking, tires, and the bed. Sections 11–15 cover care, fixes, warranty, and how to reach us.

The numbers that matter

01

The StepRanger All-Terrain is a 48V electric micro-truck built for heavy hauling, land management, and work where a full-size truck won't fit.

Weight & capacity

Vehicle weight	~330 lb
Max payload + driver	1,000 lb
Frame structural capacity	~2,300 lb

Powertrain & range

Motor	1,000 W brushless
Drive	Rear-wheel
Top speed	~15 mph
Low-gear speed	~5 mph
Range, single battery	15–17 mi
Range, dual battery	~30–34 mi
Max climb grade	30° (~58%)

Battery & charging

System voltage	48 V
Battery type	Sealed AGM/GEL
Charging input	110 V outlet
Arrives charged	80–100%
Charger output	48 V / 2.8 A
Full charge	overnight

Wheels & tires

Stock tire size	16 × 4 in
Bolt pattern	4 × 4
Max tire pressure	62 PSI
Functional min (traction)	10–12 PSI

TIP · ONE PRODUCT, ONE VOLTAGE

The All-Terrain runs a 48V system. If a spec or part you find online lists a different voltage or model name, check with us first — we'll confirm the right fit for your unit.

Controls at a glance

Everything you operate while driving sits on the handlebars. A few setup controls live elsewhere on the vehicle.



The handlebar cockpit — ignition, headlight, throttle, brake lever, and horn.

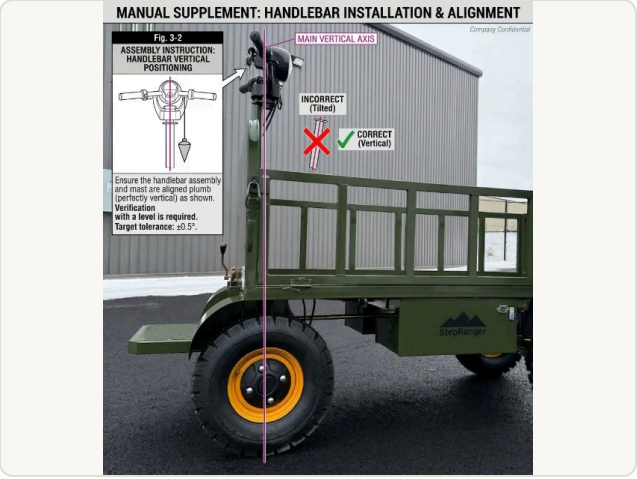
On the handlebars

Ignition key	1 click = driver's ring (running light); 2 clicks = ring + full headlight. Both enable driving.
Throttle	Right grip.
Speed switch	Low / Medium / High, right cluster.
Brake lever	Left grip, with parking lock.
Horn	Button in the left-grip area.
Forward / Reverse	Rocker near the throttle.
(P) button	Non-functional, and on some units unlabeled.

Elsewhere on the vehicle

Gear selector	Brass lever, left of driver at the rear axle. Low / High.
Charge port	On the left (primary battery) side. Dual-battery units have a working port on each side — see Dual-battery operation.
Rear step	Where you stand to drive.
Battery switch	Left underside, outside the battery box. ON (up) to drive.
Side-rail latches	One per rail; rails fold and fully remove.

Handlebar orientation



Bars sit vertical — plumb and parallel to the steering column — so steering feels even.

The handlebars should sit vertical — plumb and parallel to the steering column.

If they ever sit off true — after a hard knock, or if the clamp bolts work loose — reset them before riding so steering feels even and predictable.

To adjust

1. Gently pull up on one side of the plastic column cover to unclip it, then the other side, and lift it off.
2. Loosen the four clamp bolts.
3. Set the bars to true vertical, then retighten the clamp bolts securely.
4. Snap the column cover back into place.

Battery & charging

Your StepRanger arrives charged to 80–100%. The battery system lives in the box on the left side, and the charge port is on that same left side.

To charge

1. Retrieve the charger from the storage box on the right side.
2. Plug it into the left-side charge port.
3. Connect to any standard 110 V household outlet.

Plug in at the end of the day and it's fully charged overnight — the charger's light shows when it's complete.

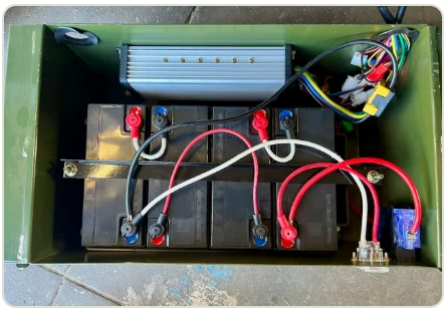
Battery switch. On the left underside (from the driver's seat), outside the battery box. It must be ON (up) before the unit will operate.

WHEN TO CHARGE

Charge at the end of any day you use it, whatever the gauge shows. Sealed lead-acid batteries prefer to be full rather than empty, so frequent charging is best — once at the end of the day, not on and off through the day. The battery gauge on the headlight is a simple voltage meter and won't always show the true charge left.

CAUTION · SINGLE-BATTERY UNITS

The right-side box is storage. Its charge port is non-functional but the box is pre-wired for an optional dual-battery upgrade.



The 48V battery system in its box.



Switch ON = up. The exterior battery switch.



The included 110 V charger.

Dual-battery operation & the key

If you ordered the dual-battery upgrade, a second 48V pack comes pre-installed in the right-side box, wired in parallel with the first.

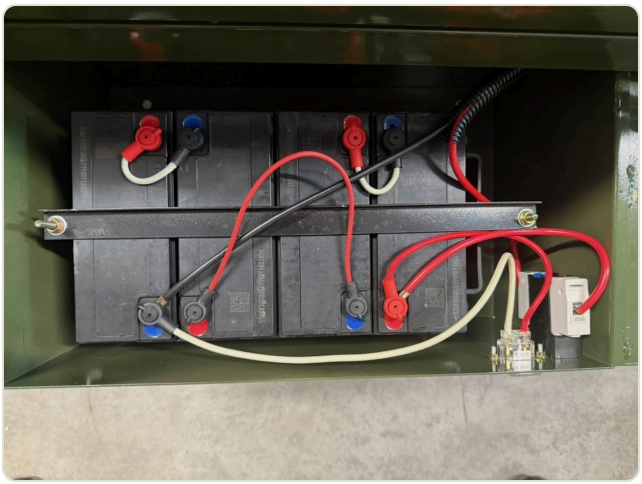
Run and charge them as one system — the practices below are how matched parallel packs last longest.

Run both packs together

Turn both battery switches ON (up) before every ride. The truck draws from both packs at once, which extends range and keeps them evenly worn. Don't run one pack at a time — that leaves the two at different charge levels, and reconnecting them sends a hard current surge between packs that shortens their life.

Normal charging

With **both battery switches ON (up)**, plugging into either charge port tops off both packs at once — use whichever port is convenient. If a switch is OFF, the charger only fills the pack on the side it's plugged into.



The second 48V pack, pre-installed and wired in the right-side box.

KEY, LIGHTS & HORN

- **1 click** — driver's ring (running light) + driving.
- **2 clicks** — ring + full headlight + driving.
- **Horn** — button in the left-grip area.
- No turn signals.

TIP · MONTHLY BALANCING CHARGE

Once a month, switch one pack OFF and charge the other to full on its own port, then swap and repeat. Two separate full charges keep the packs in sync and even out normal drift.

CAUTION · USE THE SUPPLIED CHARGER ONLY

It has the correct profile for these sealed batteries. Never use an 'equalize' or high-voltage setting — that damages AGM/GEL packs.

Driving controls

06

Throttle & speed

- Throttle is on the right handlebar grip.
- Speed switch (Low / Medium / High) — adjustable while driving.
- The (P) button is non-functional.

Forward / Reverse

- Rocker switch near the throttle.
- **Change direction only when fully stopped.**

Gear selector

Brass lever on the left side of the driver, at the rear axle:

- **High** — lever toward driver · normal mode.
- **Low** — lever away · high torque, ~5 mph.



One adjustable limit bolt sits behind each front wheel.

STEERING LIMIT BOLTS

Behind each front wheel is an adjustable bolt that sets how far the wheels can turn. These may need adjusting from time to time. Set each one so the steering reaches a firm stopping point when you turn in either direction, and so the stop is symmetrical — the same travel left and right. To adjust: loosen the nut, set the bolt, then retighten securely.

TIP · IF THE BATTERY DIES MID-USE

The StepRanger can be pushed. If it's in gear you'll feel slight resistance — nudge the brass gear lever to its middle (neutral) position for resistance-free rolling.

Slope & terrain performance

The StepRanger All-Terrain climbs grades up to 30° (roughly a 58% grade). Its 1,000 W rear-wheel drive and Low gear give it strong low-speed torque for hauling uphill.

Climbing

- Always use **Low gear** to climb — it's the high-torque, ~5 mph mode.
- It wants weight in front. Climbing empty risks front-wheel slip or lift. Add ballast to the front box (sand, gravel, or steel shot) when running unloaded.
- Heavier operators climbing unloaded are more prone to front-wheel slip — same fix: weight up front.
- If one drive wheel spins, shift your weight on the rear step toward the slipping wheel.

Descending

Control descents with the left-hand brake lever (dual disc brakes) — effective even with a heavily loaded bed. The parking lock on that lever holds the unit on a slope when stopped.

Suspension & surface

A front coil spring on a pivoting solid axle absorbs terrain at the front; the rear axle is rigid. It handles mild-to-moderate uneven ground well. Pavement and packed gravel grip best; wet grass, loose dirt, mud, and snow cut traction — choose Mud/Snow tires for those conditions.

SEE IT WORK

Montana slope torture-test

Scan the code, or visit youtu.be/87cllMmomZI.

Braking & safety

Brake & parking lock

- Brake lever — left handlebar grip, operating dual disc brakes.
- A built-in parking lock disables the throttle for safety. Engage it whenever you park or step away.
- Pull the brake lever to release the lock.

WARNING · OPERATE SAFELY

- **Off-road use only.** Not for public roads or highways.
- **Load toward the front.** Without a front load, the front wheels can lift and lose traction.
- **No passengers** in the cargo bed or any unintended area.
- **Never operate impaired** by alcohol, drugs, or medication.



Brake lever and parking lock, left grip.

SAFE-OPERATION CHECKLIST

- Start slowly in the lowest gear and speed until you're comfortable.
- Wear protective gear — helmet and appropriate footwear.
- Stay in control at safe speeds, especially on uneven or sloped ground.
- Add ballast when unloaded — steel shot, sand, or gravel in the empty front box improves handling.
- Match driver to vehicle — the age, size, strength, and skill to control it safely.

Tires & wheels

09

Stock tires are 16 in diameter × 4 in wide on a standard 4 × 4 bolt pattern.

CAUTION · TIRE PRESSURE — READ THIS

Run **62 PSI maximum** for the StepRanger application; a functional minimum of **10–12 PSI** improves traction on rough ground. The sidewall reads 116 PSI — that is the tire's raw rating, **NOT** the StepRanger spec. Do not inflate to the sidewall number.

TIRE OPTIONS

Option	Best for	Notes
Stock All-Terrain	Mixed ground, general use	Included. 16 × 4 in.
Mud / Snow	Loose dirt, mud, snow, hills	Strongest grip. Best for off-camber or low-traction work.
High-Flotation Turf	Flat, sensitive turf	Spreads weight on lawns. Widens unit to ~34 in. Not a traction tire — not for hills.
Solid (airless)	Puncture-prone sites	Heavier, rougher ride. Choose only where flats are a real risk.



High-flotation turf · 18 in. Spreads weight on lawns. Not a traction tire.



Mud / Snow · 16 in. Strongest grip for loose dirt, mud, snow, and hills.

TIRE CHAINS

We offer tire chains sized for the stock All-Terrain tires (16 in × 4 in). Contact us to add a set.

AFTERMARKET WHEELS

Offset rims are required so the wheels clear the brake calipers. 16–17 in tires fit well; 18 in depends on tread depth; anything larger can rub the flatbed.

Bed setup & flatbed mode

Hauling oversized loads

The side rails are extremely strong when closed and locked upright. Oversized items — plywood, 2×4s, 4×8 dock sections, even large furniture — can ride across the closed rails, strapped down.

Flatbed mode (removing the rails)

1. Pull the cotter pins securing the hinge pins.
2. Remove the hinge pins. Tip: a light tap with a small screwdriver helps pop them out.
3. Lift the rail away. Reverse to reinstall.



Oversized loads ride across the closed rails, strapped down — or strip the rails for a flat deck.

TIP · ENCLOSING THE BED

For loose material like mulch or gravel, we offer stainless brackets that mount to the side rails so you can panel in the bed. Contact us for current fitment and pricing.

WARNING · DON'T DRIVE WITH RAILS FOLDED DOWN

Folded-down rails hang past the body and restrict the front wheels in turns. Either keep the rails locked upright or remove them entirely for flatbed mode.

Maintenance & storage

11

The StepRanger is built to be low-maintenance. A few quick checks keep it running safely and protect its life.

Interval	Check
Before each use	Tires look and feel firm · brake and parking lock work · load is secured · nothing is obviously loose.
Weekly	Tire pressure with a gauge · wheel lug nuts tight · battery connections tight · general fasteners.
Monthly	Full walk-around · clean the unit · touch up any exposed metal · dual-battery owners: run a balance charge.

BATTERY & ELECTRICAL

Keep batteries securely seated and all connections tight. If anything feels loose or intermittent, see Troubleshooting.

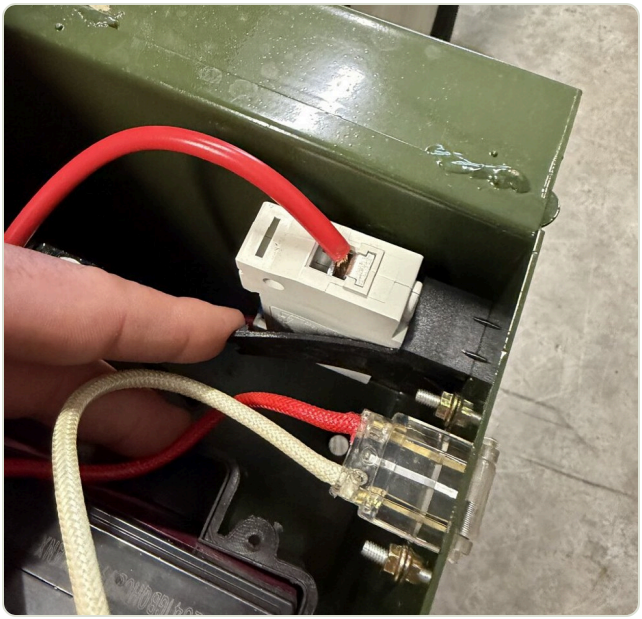
STORAGE & LAY-UP

Charge to 100% before any extended lay-up and store somewhere dry. Top up the charge periodically so the batteries don't sit depleted.

Troubleshooting

Most issues are quick fixes you can do yourself. Work through the matching row, top to bottom — if it's still not resolved, reach us and we'll take it from there.

If this…	Try this
Won't power on / no response to the key	Confirm the battery switch is ON (up) → check whether the switch feels loose or lacks a firm click (a faulty breaker) → open the battery box and check the small blue fuse and its holder → check the wire connections on the breaker (top and bottom) → on single-battery units, swap the identical breaker from the empty right-side box as a test → still nothing, contact us.
Moves slowly or loses power	Check the charge level on the handlebar display → confirm the gear selector is in High (lever toward driver) → confirm the speed switch is on H.
Steering feels off or uneven	Check the steering limit bolts are set symmetrically → confirm tire pressure is even side to side.
Battery dies while in use	Push it home — nudge the brass gear lever to neutral (middle) so the wheels roll freely.



The breaker switch is identical on both boxes — swap the spare from the empty box to test a unit that won't power on.

WE'RE HANDS-ON WITH SUPPORT

A quick photo or short video helps us diagnose fast — send one to hello@stepranger.com and we'll often hop on a video call. We stock every component, and in over two years we have yet to see a motor or differential failure.

Finish, touch-up & minor dents

Built for strength and heavy use, with a finish designed to protect against the elements rather than provide an automotive-grade appearance.

Each unit is factory-finished in a two-step process — an electronically bonded primer followed by a durable dipped topcoat — for maximum corrosion resistance.

Normal cosmetic variations

- Small paint chips or scuffs, especially on edges and latches.
- Visible grinder marks on the rear panel where the steering column is welded (present on all units).
- Minor ripples or surface texture from welding and paint.
- Light dents to the frame or fenders from freight handling.

Why this happens

Your StepRanger travels long distances fully assembled on a freight pallet, transferred many times between trucks and depots. Even well packaged, contact with straps, forklifts, or other freight can leave light wear.



Color-matched touch-up paint (2 oz, integrated brush) — available on our website.

TOUCHING UP PAINT

1. Lightly sand the area to remove loose paint.
2. Wipe clean with a dry cloth.
3. Apply outdoor metal touch-up paint — we sell color-matched 2 oz bottles with an integrated brush.

FIXING MINOR DENTS

- **Fenders:** bend back by hand with even pressure, or use a rubber mallet with light, controlled taps.
- **Frame:** work the dent out with a padded wood block and light hammer taps; protect the painted surface.
- Touch up any exposed metal to keep corrosion out.

CAUTION · KNOWN WEAR ITEM: LATCHES

The rubber latch cover and the latch hook on the battery box are a known wear point we're improving. If yours breaks, contact us — we'll mail replacements at no charge.

2-year warranty

Our warranty covers defects in materials and workmanship, as well as damage that affects performance or safety. Minor cosmetic imperfections — including small dents that can be remedied using the steps in Finish, touch-up & minor dents — are considered normal for freight-shipped utility equipment and are not classified as defects.

Covered

- Defects in materials and workmanship.
- Damage that affects performance or safety.
- Component support — we stock every part.

Considered normal (not a defect)

- Small paint chips, scuffs, grinder marks near welds.
- Light freight-handling dents to frame or fenders.
- Surface texture from welding and paint.

Coverage period: 2 years from delivery. Keep your order confirmation as proof of purchase.

FAQ & support

› How long does charging take?

Plug in at the end of the day and it's fully charged overnight. Charging after every day of use is best for sealed lead-acid batteries — they prefer to be full rather than empty. Go by the charger's light, which shows when it's complete; the gauge on the headlight is a simple voltage meter and won't always show the true charge left.

› Will it work on sand or the beach?

On firm or damp sand it does well; loose, dry sand is hard going for any small wheeled vehicle. Mud/Snow tires and slightly lower pressure improve flotation. Send us photos of your terrain and we'll give you an honest read.

› Do you stock replacement parts?

Yes — every component. Most issues are resolved by phone or video, and in over two years we've yet to see a motor or differential failure.

› Can I use tire chains?

Stock tires are 16 in × 4 in. Small-equipment chains may fit — verify your chain dimensions first.

› Can I remove the side rails?

Yes. Pull the cotter pins, then the hinge pins — see Bed setup & flatbed mode.

› Do you offer fleet or commercial pricing?

Yes. For multi-unit or commercial orders, reach out and we'll take care of you directly.

› What does the warranty cover?

Two years on defects and anything affecting performance or safety — see Warranty.

We're here to help.

Thanks for choosing StepRanger — now go put it to work.



EMAIL

hello@stepranger.com

CALL OR TEXT

707-329-4442

TAGLINE

Bigger than a wheelbarrow. Smaller than a truck.