SoniQuex



DUAL-BATTERY LINEAR POWER SUPPLY

Parallel Power.

Absolute isolation. Clean DC for audio equipment, drawn from battery, finished by linear regulators. One pack plays while the other charges, and the swap between them is automatic.

2 × 38 Wh	5 V · 3 A	9 | 12 V · 3 A	2.1″ round
LI-ION PACKS	FIXED OUTPUT	SELECTABLE OUTPUT	TOUCH DISPLAY

01 · THE IDEA

Your system never touches the mains.

A mains supply carries noise from the grid, ripple from its transformer, and leakage through its ground. Parallel Power keeps all of that away from your equipment. The outputs always run from a battery pack, and the charger only ever connects to the pack that is resting.

STEP 1

One plays

The active pack feeds both outputs through low-noise linear regulators. Nothing switching is in the signal supply path.

STEP 2

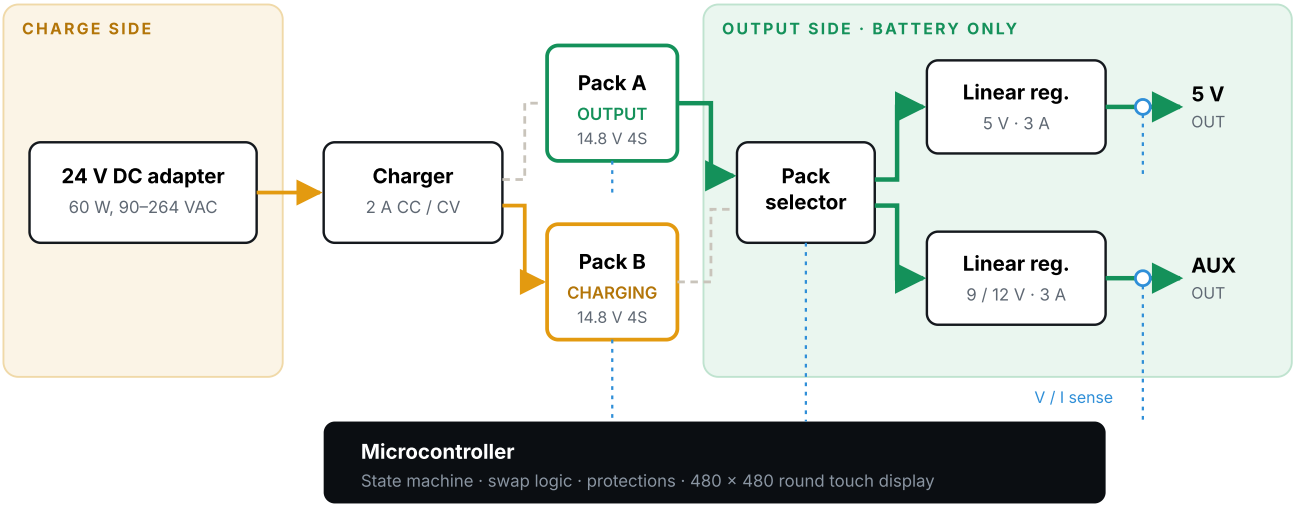
One charges

The resting pack charges from the 24 V adapter, isolated from the outputs. It reaches full and waits on standby.

STEP 3

They swap

At 8 % the outputs move to the other pack automatically, and the drained pack starts charging. Your music keeps playing.



Simplified block diagram. Green: power path to the outputs. Amber: charge path. Blue: voltage and current monitoring. The two paths never share a pack.

No mains-frequency ripple

A battery has no 50/60 Hz hum and no rectifier spikes. What the regulator sees is already DC.

Linear, not switching

Every output is finished by a linear regulator, so there is no switching noise in the band your DAC or streamer cares about.

Continuous play

With the adapter connected, playback can go on indefinitely at typical loads. See page 5.

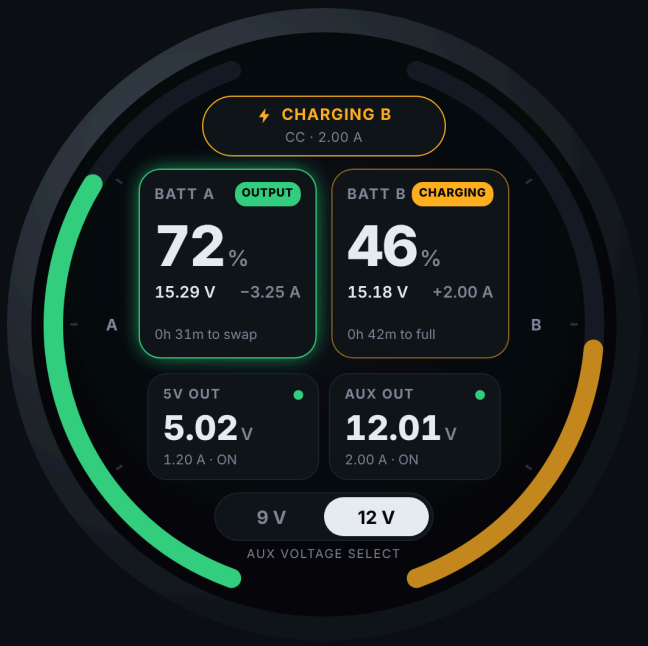
Measured, not guessed

Voltage and current are measured on every pack and every output and shown live on the display.

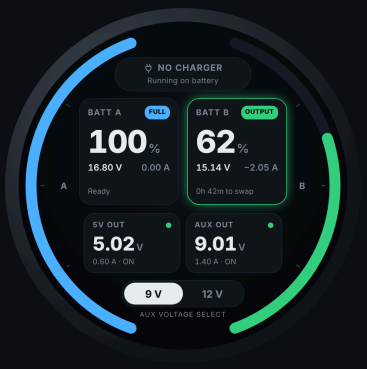
02 · THE DISPLAY

Everything the supply is doing, on one round screen.

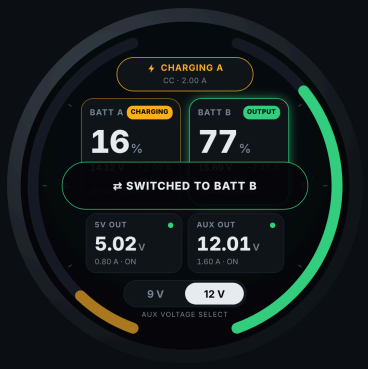
A 2.1″ 480 × 480 IPS touch display sits in the front panel. The outer ring shows both packs at a glance. The tiles show live voltage and current for each pack and each output.



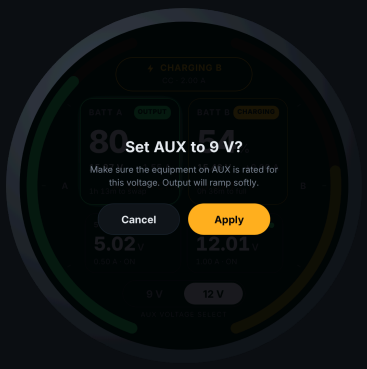
1. **Outer ring**
   Left arc is pack A, right arc is pack B. Each fills from the bottom, and its colour shows the pack's role.
2. **Charger pill**
   Adapter state: not connected, CC or CV charging with live current, full, or fault.
3. **Pack cards**
   State of charge, pack voltage, current (− out, + in) and time to swap or to full. The pack feeding the outputs glows green.
4. **Output tiles**
   Measured voltage and current on the 5 V and AUX outputs, with a status dot.
5. **AUX select**
   Touch 9 V or 12 V. A confirmation comes first, then the output ramps softly.



On battery only
Adapter unplugged. Pack B runs, pack A is full and on standby.



Automatic swap
At 8 % the outputs move to the other pack, and the drained one starts charging.



Safe voltage select
A 9 V device never gets 12 V by accident.

Green · feeding outputs, output OK
Amber · charging or dropout warning
Blue · full, on standby
Red · low, fault or output off

03 · SPECIFICATIONS

Technical data

OUTPUTS

Output 1	5.0 V DC, 3 A continuous, USB-A
Output 2 (AUX)	9 V or 12 V DC, 3 A, separate DC jacks
Simultaneous load	Both outputs at full rating
Regulation	Linear, low-noise
Voltage accuracy	± 1 %
Load regulation	< 0.5 %, 0–3 A
Mains ripple at output	None (battery source)
AUX selection	On touch display, with confirm and soft ramp

BATTERIES

Packs	2 × 4S Li-ion, with protection
Chemistry	Li-ion 18650, 4S
Voltage	14.8 V nominal, 16.8 V full
Capacity per pack	2600 mAh, 38.5 Wh
Total stored energy	77 Wh
Pack size / weight	36 × 36 × 69 mm, 227 g each
Swap threshold	8 % (resume above 18 %)

CHARGING

Charge input	24 V DC, 2-pin pluggable terminal
Adapter (included)	24 V DC, 60 W desktop adapter
Adapter mains input	90–264 VAC, IEC C14 inlet
Charge profile	Switching charger, CC 2 A, then CV
Charge time, per pack	≈ 1 h (8 → 85 %), full in ≈ 1.5 h
Charge while playing	Yes, resting pack only

MONITORING & INTERFACE

Display	2.1″ round IPS, 480 × 480, touch
Per pack	State of charge, V, I, time to swap / full
Per output	Measured V and I, status
Controller	Dedicated microcontroller

PHYSICAL

Enclosure	Brushed aluminium, chassis-coupled heatsinking
Dimensions (W × D × H)	430 × 309 × 87 mm
Weight	6.3 kg
Feet	Machined aluminium, 4×
Operating temperature	0–40 °C

BATTERY

14.8 V · 2600 mAh Li-ion

Four 18650 cells in series per pack, 38.5 Wh. Two installed, one active and one charging.

ADAPTER

24 V · 60 W adapter

Universal 90–264 VAC input. A 2 A charger refills a pack in about an hour. Only ever connected to the resting pack.

DISPLAY

2.1″ round IPS, 480 × 480

Capacitive touch, IPS panel with 80° viewing angles.

04 · RUNTIME & PROTECTION

How long it plays.

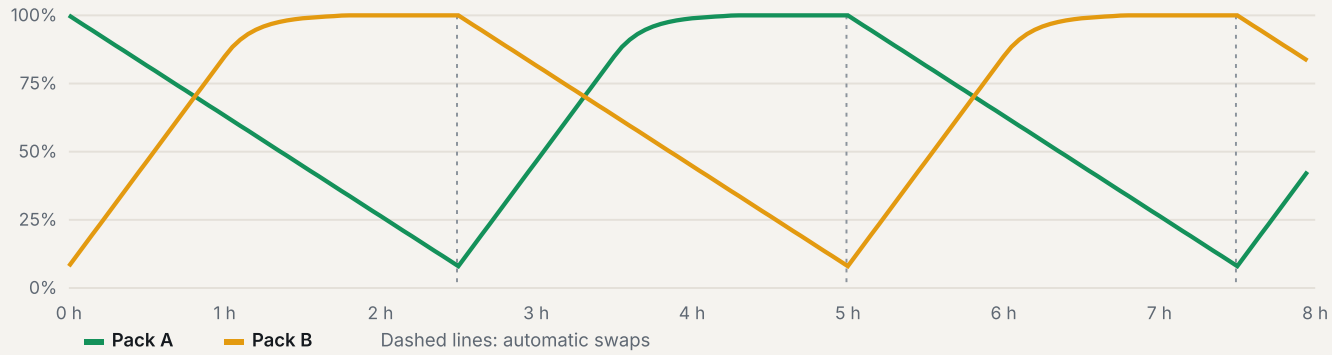
With a linear design, the battery current is close to the total output current, whatever the output voltage. Runtime therefore depends on how many amps your equipment draws, not on watts.

TOTAL LOAD (5 V + AUX)	ONE PACK	BOTH PACKS	BOTH PACKS, UNPLUGGED
0.5 A · small DAC	**5.0 h**	**10.0 h**	
1.0 A · DAC + streamer	**2.5 h**	**5.0 h**	
2.0 A · full front end	**1.3 h**	**2.5 h**	
3.0 A	**0.8 h**	**1.7 h**	
6.0 A · both outputs at maximum	**0.4 h**	**0.8 h**	

Total current drawn from the 5 V and AUX outputs together. Unplugged, no charging.

With the adapter connected, play without limit. The resting pack charges at 2 A and refills in about an hour. When your equipment draws about 1.8 A or less in total, each pack refills before the other one runs down, so the system can play indefinitely. Above that, the charger still stretches the runtime well beyond the table.

A typical day with the adapter connected · 1 A total load

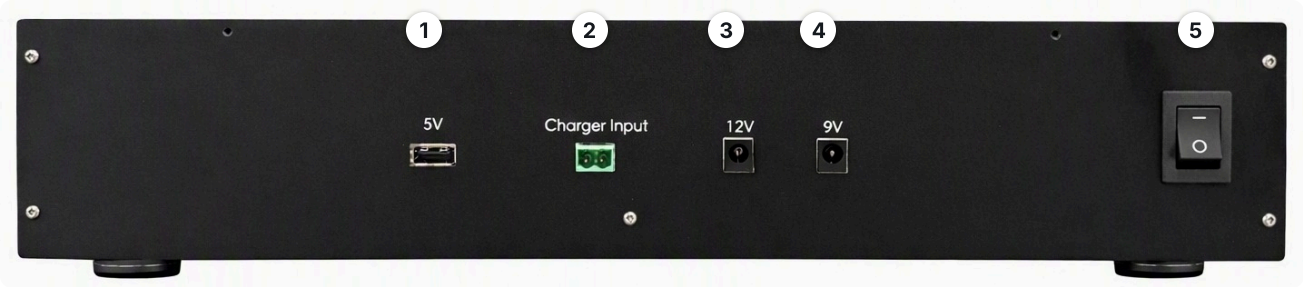


Each pack runs about 2.5 h at 1 A and recharges at 2 A in about an hour.

Protection built in

- **Over-current and short circuit** on each output, with automatic recovery
- **Dropout warning.** The AUX tile turns amber if pack voltage gets too low to hold 12 V
- **Voltage-change confirmation** so a 9 V device never gets 12 V by accident
- **Reverse-polarity protection** on the 24 V charge input
- **Both-packs-low shutdown.** Outputs turn off cleanly and restart when a pack is back above 18 %
- **Charger fault detection** including over-temperature, with charging paused
- **Soft-start ramp** on every output change and at power on
- **Thermal protection** on the regulators, which are bolted to the chassis

Rear panel



1 5 V OUT
USB-A, 3 A

2 CHARGER INPUT
24 V DC, 2-pin pluggable terminal block

3 12 V OUT
DC jack, 3 A

4 9 V OUT
DC jack, 3 A

5 POWER
On / off rocker switch

The 9 V and 12 V jacks are separate. Only the jack matching the voltage selected on the display is live, so a 9 V device on the 9 V jack never sees 12 V.

In the box

- SoniQuex Parallel Power unit, both packs installed
- 24 V / 60 W universal mains adapter, with 2-pin terminal plug
- IEC mains cord for your region
- 2 × DC output cables
- Quick start guide

Each pack holds 38.5 Wh, below the 100 Wh limit that applies to lithium-ion batteries in air shipping.

Works well with

- DACs and headphone amplifiers (5 V, 9 V, 12 V)
- Network streamers and music servers
- Phono stages and preamplifiers
- Network switches and reclockers for audio

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Preliminary information. Specifications, appearance and availability may change without notice.