



# The Volt Dropper

*Work Hard. Camp Easy.*

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**Product Manual**

**Version:** 1.0

**Release Date:** June 2025

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 **Designed, Tested & Assembled in Australia**

 **Built for Aussie conditions**

 **Powered by Max Voltage Store**

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**Brand:** Max Voltage Store

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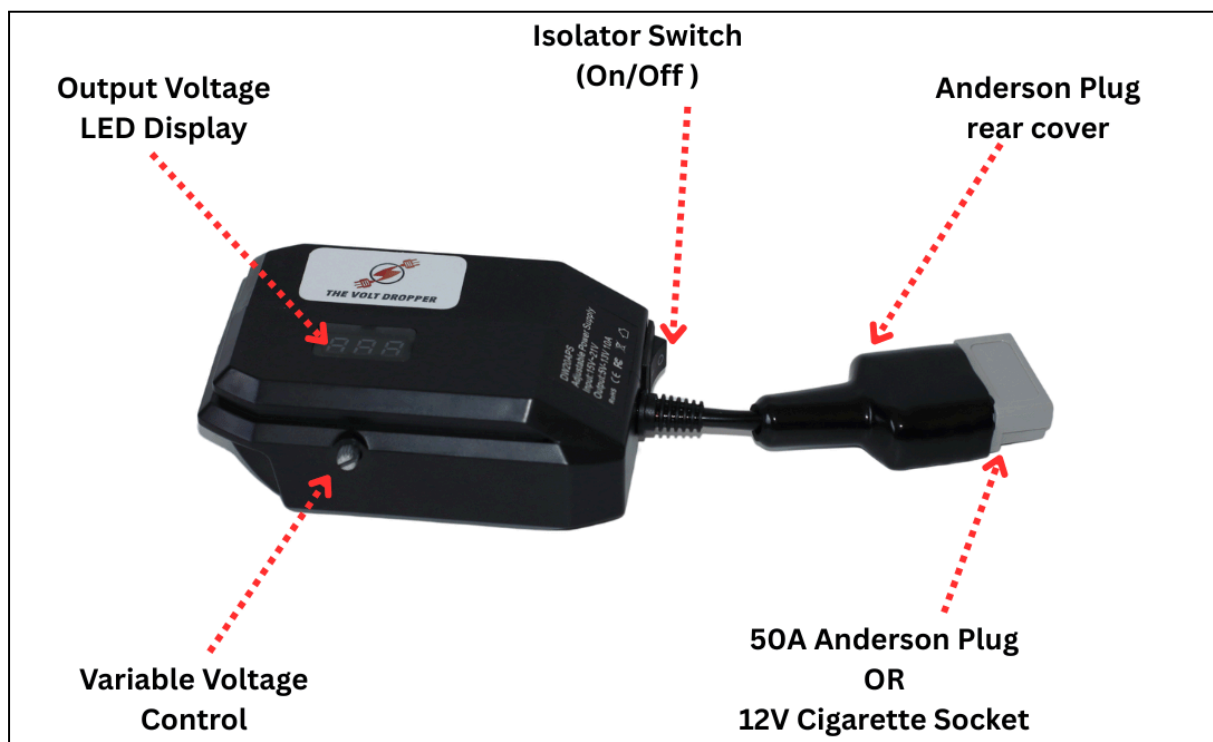
## 1. Introduction

### Thank you for choosing The Volt Dropper.

This compact, rugged device is designed to power your 12V appliances straight from your 18V lithium-ion power tool batteries — no vehicle wiring, no idling, and no hassle.

Whether you're out bush camping, fishing on the coast, enjoying a day at the golf course, or just escaping to the great outdoors, The Volt Dropper gives you reliable, portable power wherever you go.

## 2. What Is The Volt Dropper?



The Volt Dropper is a 12V DC converter that transforms 18–20V tool battery power into a stable, adjustable 12V output (5V–13V), capable of running common gear like:

- Car fridges
- LED camp lights
- 12V fans

- Air pumps
- Phone chargers (with a 12V adapter)

It's built to handle Australia's harshest environments, with multiple output options and full electrical protection to keep your gear running safely.

### 3. Safety Information

Please read this section carefully before using The Volt Dropper. Improper use can lead to equipment damage or personal injury.

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#### General Safety

- Only use The Volt Dropper with **18V–20V lithium-ion power tool batteries** from supported brands.
- Do not expose the unit to **water, excessive moisture, or direct rain**.
- Do not operate in **explosive or highly flammable environments**.
- Keep out of reach of children.

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#### Electrical Safety

- Ensure connected devices **do not exceed 10A total draw**.
- Only use **12V DC appliances** — not compatible with 240V AC devices.
- Always verify **polarity and voltage** before connecting any appliance.
- Allow the unit to **cool down** between extended uses if operating at high loads.

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#### Battery Safety

- Do not insert batteries that are damaged, swollen, or leaking.

- Never leave batteries attached for long-term storage.
- Remove battery after use to avoid unnecessary discharge or overheating.
- Always use batteries **within their original manufacturer's safety guidelines**.

## Protection Features

The Volt Dropper includes built-in protection for:

- **Overload**
- **Over-current**
- **Short circuit**
- **Low voltage**
- **No-load operation**

If a protection mode is triggered, disconnect all devices and remove the battery. Wait 30 seconds before reconnecting.

## 4. Specifications

Feature	Details
<b>Input Voltage</b>	18V–20V DC (Lithium-ion tool batteries)
<b>Output Voltage</b>	12V DC (adjustable range: 5V–13V)
<b>Max Output Current</b>	10A
<b>Efficiency</b>	≥ 95%
<b>Output Display</b>	Digital LED readout (real-time output voltage)
<b>Battery Compatibility</b>	Makita, Milwaukee, DeWalt, Ozito, Bosch, Ryobi (with adapter)
<b>Output Connector Options</b>	50A Anderson-style plug (with waterproof cap) OR 12V cigarette lighter socket
<b>Protection Features</b>	Overload, over-current, low voltage, no-load, short circuit

**Cable Construction**      PVC sleeving and reinforced plug sheath for durability

**Operating Environment**   -10°C to 45°C, dry environments only

## 6. Setup Instructions

Follow these steps to safely connect and begin using your Volt Dropper:

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### **Step 1: Insert the Battery**

1. Align your **18V lithium-ion battery** with the terminal on the Volt Dropper.
  2. Push down until the battery **clicks into place** securely.
  3. Ensure a snug fit — the unit should not wobble or disconnect easily.
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### **Step 2: Select and Connect Your Output**

Depending on your model, connect your 12V appliance to one of the following:

- **Anderson Plug** – for rugged appliances like fridges or lighting systems.
  - **12V Cigarette Socket** – for standard car accessories like fans or pumps.
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### **Step 3: Adjust Voltage (If Needed)**

1. Locate the **adjustment dial** or buttons (varies by model).
2. Turn or press to fine-tune the **output voltage between 5V and 13V**.
3. The digital LED display will show the **live output voltage**.

 Default output is 12V — ideal for most car fridges and accessories.

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### **Step 4: Power Up**

Once your appliance is connected and the voltage is set:

- The **LED display will illuminate**.
- Your connected device should now be receiving power.

## 7. Operating Tips & Best Practices

To get the most out of your Volt Dropper and extend its lifespan, keep the following tips in mind:

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### For Fridge Use

- A typical 12V car fridge draws **~1 amp per hour**.
  - A **6Ah tool battery** can run a fridge for **up to 8–10 hours**, depending on:
    - Fridge brand & model
    - Ambient temperature
    - How often the lid is opened
    - Amount and type of contents inside
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### Battery Swaps

- Keep a **charged spare battery** on hand for longer trips.
  - Swap batteries out **before they're fully drained** to avoid triggering low-voltage protection.
  - Remove the battery when not in use to avoid passive drain.
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### Temperature & Conditions

- Best operating range: **-10°C to 45°C**

- Avoid direct sunlight or hot surfaces
  - Keep away from water, rain, and mud
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## Voltage Tuning

- Most users will leave the output at **12V**, which suits fridges, lights, and pumps.
  - Lower voltages (5V–9V) may be useful for small fans or USB adapters.
  - Always double-check your appliance's input rating before adjusting.
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## Connection Safety

- Ensure connectors (Anderson or Cigarette) are **securely fitted**.
- Do not exceed the **10A maximum current draw** — this can trigger protection shutdown.

# 8. Troubleshooting

If you're having issues with your Volt Dropper, refer to the guide below for quick solutions.

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## Problem: No Power / LED Display Off

### Possible Causes:

- Battery is not seated properly
- Battery is flat or faulty
- Battery brand not supported or adapter not connected

### Solutions:

- Remove and reinsert the battery firmly



- Try a fully charged battery
  - Check for compatibility (Ryobi requires adapter)
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### **Problem: Device Turns Off During Use**

#### **Possible Causes:**

- Battery is depleted
- Output current exceeds 10A
- Overheat or protection mode triggered

#### **Solutions:**

- Replace or recharge battery
  - Check appliance current draw
  - Let unit cool, then reconnect
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### **Problem: Appliance Not Powering On**

#### **Possible Causes:**

- Appliance not rated for 12V DC
- Faulty appliance or cable
- Incorrect output selected

#### **Solutions:**

- Confirm voltage rating on your device
- Test with another known-working appliance
- Adjust voltage output if needed

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## Problem: LED Display Flickers or Voltage Drops

### Possible Causes:

- Overload condition
- Low battery voltage
- Loose connection at output

### Solutions:

- Disconnect and test with a smaller load
- Replace battery with fully charged one
- Reseat connector and try again

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If the issue persists after trying the above, reach out to us at [support@maxvoltagestore.com](mailto:support@maxvoltagestore.com) — we're happy to help.

## 9. Warranty & Support

### 2-Year Warranty – Built to Last, Backed by Us

Every Volt Dropper is covered by a **2-year warranty** from the date of purchase. We stand by our products and will repair or replace any unit that fails due to defects in **materials or workmanship** during normal use.

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### What's Covered:

- Faulty internal components
  - Malfunctioning voltage regulation
  - Display or output failures not caused by misuse
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## What's Not Covered:

- Damage from misuse, water ingress, or modification
  - Wear and tear from abnormal conditions (e.g. corrosion, impact)
  - Issues caused by unsupported batteries or overloading
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## Warranty Process:

1. **Contact us** at [support@maxvoltagestore.com](mailto:support@maxvoltagestore.com) with your order number and issue description.
  2. If approved, you'll be asked to **ship the faulty unit back** to us (at your expense).
  3. Once received and inspected, we'll send you a **replacement unit** (you'll also cover the shipping cost for the replacement).
  4. If repairable, we may opt to repair and return the original unit.
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If you have questions or need help with your Volt Dropper, don't hesitate to reach out — we're here to help.

## 10. Legal & Safety Notices

### Safety Warnings

- Always use the Volt Dropper with compatible 18V lithium-ion batteries from Makita, Milwaukee, DeWalt, Bosch, Ozito, or Ryobi (with adapter).
- Do not exceed the **maximum output current of 10A**.
- Only use in **dry, ventilated environments** — this product is **not waterproof**.
- Do not tamper with or attempt to modify the internal electronics.
- Disconnect the battery when not in use or before adjusting wiring connections.
- Keep out of reach of children.

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## Disclaimer

Max Voltage Store is not responsible for any damage caused by improper use, overloading, or use with incompatible devices or batteries. Always check your appliance's power requirements before use.

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## Compliance

This product has been designed and tested for compliance with local safety and performance standards. Intended for **recreational and light commercial use** only.