Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

Hyper Tough TD35090B

Hyper Tough Analogue Multi-meter TD35090B User Manual

Model: TD35090B

1. Introduction

The Hyper Tough TD35090B Analogue Multi-meter is a versatile and essential tool designed for professional electricians, DIY enthusiasts, and technicians. It allows for accurate measurement of various electrical parameters, including AC and DC voltage, DC current, and resistance. This manual provides detailed instructions for the safe and effective use of your multi-meter.

What's Included:

- Hyper Tough Analogue Multi-meter (Model TD35090B)
- One pair of test leads (red and black)
- One 1.5V AAA Battery



Figure 1: Hyper Tough Analogue Multi-meter TD35090B in its retail packaging, showing the product and included test leads.

2. Safety Information

Always observe the following safety precautions to prevent personal injury or damage to the multi-meter.

- **Electrical Shock Hazard:** To avoid electrical shock, always remove test leads from test points before replacing the battery or fuse.
- **Fire Hazard:** To prevent fire, install only a quick-acting fuse with the specified amp/volt rating.
- **Personal Protective Equipment:** Always wear safety goggles when operating the multi-meter to protect your eyes from potential hazards.
- **California Proposition 65 Warning:** This product may expose you to chemicals including lead and lead compounds, Di(2-ethylhexyl)phthalate (DEHP), and Di-n-butyl phthalate (DBP), which are known to the State of California to cause cancer, birth defects, or other reproductive harm. For more information, visit www.P65Warnings.ca.gov.
- Do not use the multi-meter if it appears damaged or if the test leads are frayed or broken.

- Ensure the function switch is set to the correct range before making any measurements.
- Do not exceed the maximum input values for any range.



Figure 2: Rear view of the multi-meter, highlighting the battery compartment and important safety warnings regarding electrical shock and fuse replacement.

3. Product Overview

Familiarize yourself with the components of your Hyper Tough Analogue Multi-meter:

- **Analogue Display:** The meter features a clear analogue scale for reading measurements.
- **Function/Range Selector Dial:** A central rotary switch used to select the desired measurement function (ACV, DCV, DCA, Resistance, Battery Test, Decibel) and range.
- **Test Lead Input Jacks:** Ports for connecting the red (positive) and black (negative/common) test leads.
- **Zero Ohm Adjustment (Ω ADJ):** A knob used to zero the meter when measuring resistance.
- **Test Leads:** Red and black probes with insulated handles for safe connection to circuits.



Figure 3: Front view of the multi-meter, displaying the analogue scale, function selector dial, and test lead input jacks.



Figure 4: Detailed view of the multi-meter's dial, showing various measurement ranges and the analogue display for precise readings.



Figure 5: Close-up of the included red and black test probes, essential for making electrical connections.

4. Setup

4.1 Battery Installation

The Hyper Tough Analogue Multi-meter requires one 1.5V AAA battery for operation.

1. Ensure the multi-meter is turned OFF.
2. Locate the battery compartment on the back of the multi-meter (refer to Figure 2).
3. Use a small screwdriver to open the battery compartment cover.
4. Insert the 1.5V AAA battery, observing the correct polarity (+ and -) as indicated inside the compartment.
5. Replace the battery compartment cover and secure it with the screw.

4.2 Connecting Test Leads

Connect the test leads to the multi-meter as follows:

1. Insert the black test lead into the "COM" (Common) input jack.
2. Insert the red test lead into the "VΩmA" (Voltage, Ohms, milliAmperes) input jack.



Figure 6: The multi-meter with its red and black test leads properly connected to the input jacks, ready for use.

5. Operating Instructions

Before taking any measurements, ensure the multi-meter is set to the appropriate function and range.

5.1 Measuring DC Voltage (DCV)

Use this function to measure direct current voltage (e.g., batteries, DC power supplies).

1. Turn the function selector dial to the desired DCV range (12V, 60V, 120V, or 300V). Always start with the highest range if the voltage is unknown.
2. Connect the red test lead to the positive (+) side of the circuit and the black test lead to the negative (-) side.
3. Read the voltage value on the DCV scale of the analogue display.

5.2 Measuring AC Voltage (ACV)

Use this function to measure alternating current voltage (e.g., household outlets).

1. Turn the function selector dial to the desired ACV range (60V, 120V, or 300V). Start with the highest range if the voltage is unknown.
2. Connect the test leads across the AC voltage source. Polarity does not matter for AC voltage.
3. Read the voltage value on the ACV scale of the analogue display.



Figure 7: The multi-meter in use, demonstrating a voltage measurement from a standard power strip.

5.3 Measuring DC Current (DCA)

Use this function to measure direct current flowing through a circuit.

1. Turn the function selector dial to the desired DCA range (30mA or 600mA).
2. **Important:** To measure current, the multi-meter must be connected in series with the circuit. Break the circuit and insert the multi-meter.
3. Connect the red test lead to the point where current enters the meter and the black test lead to where current exits.

4. Read the current value on the DCA scale.

5.4 Measuring Resistance (Ω)

Use this function to measure the resistance of components or circuits when power is OFF.

1. Ensure the circuit or component is de-energized before measuring resistance.
2. Turn the function selector dial to the desired Resistance range (ΩX10 or ΩX1K).
3. Short the test leads together (touch the metal tips).
4. Adjust the "Ω ADJ" knob until the needle points to zero on the OHMS scale.
5. Connect the test leads across the component or circuit to be measured.
6. Read the resistance value on the OHMS scale and multiply by the selected range multiplier (X10 or X1K).

5.5 Battery Test (BAT.)

Use this function to test the voltage of 1.5V and 9V batteries.

1. Turn the function selector dial to the "BAT. 1.5V" or "BAT. 9V" position.
2. Connect the red test lead to the positive (+) terminal of the battery and the black test lead to the negative (-) terminal.
3. Read the battery condition on the "BATT. OL" (Battery OK/Low) scale.

5.6 Decibel (dB) Measurement

This function measures decibel levels, typically used in audio applications.

1. Turn the function selector dial to the "dB" position.
2. Connect the test leads to the audio signal source.
3. Read the decibel value on the "dB" scale.

6. Maintenance

6.1 Battery Replacement

When the battery becomes weak, the meter's readings may become inaccurate. Replace the battery as described in Section 4.1. Always use a fresh 1.5V AAA battery.

6.2 Fuse Replacement

If the multi-meter stops functioning correctly, particularly on current ranges, the fuse may need replacement. Refer to the safety warnings on the back of the unit for fuse specifications. Always replace with a quick-acting fuse of the correct amp/volt rating (e.g., 600mA 300V max FUSED).

6.3 Cleaning and Storage

Wipe the multi-meter with a damp cloth. Do not use abrasive cleaners or solvents. Store the multi-meter in a cool, dry place away from direct sunlight and extreme temperatures when not in use for extended periods.

7. Troubleshooting

If you encounter issues with your multi-meter, try the following:

- **No Reading / Erratic Reading:**
    - Check if the battery is installed correctly and has sufficient charge. Replace if necessary.

- Ensure test leads are securely connected to both the multi-meter and the circuit.
- Verify the function selector dial is set to the correct measurement type and range.
- For resistance measurements, ensure the "Ω ADJ" knob is properly zeroed.

- **Fuse Blown (No current measurement):**
  - The fuse may have blown due to overcurrent. Replace the fuse as per Section 6.2.

8. Specifications

Parameter	Specification
Model	TD35090B
DC Current (DCA)	30mA, 600mA
DC Voltage (DCV)	12V, 60V, 120V, 300V
AC Voltage (ACV)	60V, 120V, 300V
Resistance (Ω)	ΩX10 (Scale center at 50Ω), ΩX1K (Scale center at 5KΩ)
Battery Test	1.5V, 9V
Decibel (dB)	+4~+37 (~37+6~37+14dB)
Overvoltage Category	CAT III 300V
Power Source	1 x 1.5V AAA Battery
UPC	889526274696

9. Warranty and Support

Hyper Tough products are manufactured to high-quality standards. While specific warranty details are typically provided with the product packaging or on the manufacturer's website, most Hyper Tough tools come with a limited warranty covering defects in materials and workmanship.
For technical support, warranty claims, or replacement parts, please refer to the contact information provided on your product packaging or visit the official Hyper Tough website. When contacting support, please have your model number (TD35090B) and UPC (889526274696) available.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

https://manuals.plus/asin/B08XBP8SXR

More documents and user manuals: **https://manuals.plus/**