



## ATD-5544 Mini Digital Multimeter Owner's Manual



### Features:

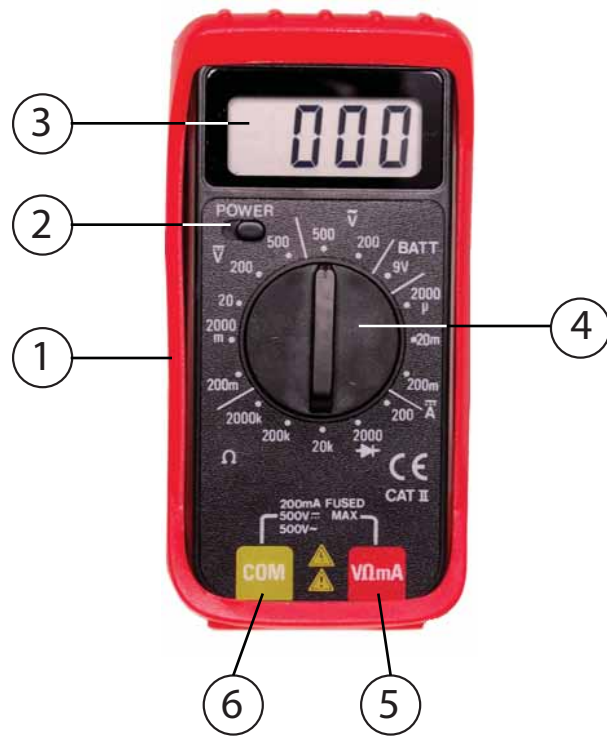
- (16) Test ranges
- (6) Test functions
- Protective holster
- 3-1/2" Digital LCD display
- Fuse protected
- Safety leads and jacks
- Uses (1) A23 12V battery

## GENERAL

Before attempting to operate the instrument, become familiar with each control. A thorough understanding of how the instrument operates will prevent mistakes and minimize measurement errors, instrument damage and the possibility of personal injury.

### FRONT PANEL DESCRIPTION

1. Case
2. Power Switch
3. 3-1/2 Digit LCD Display
4. Function and Range Switch
5. "V  $\Omega$  mA" Jack
6. "COM" Jack



### GENERAL SPECIFICATIONS

**Display:** 3-1/2 digit LCD with a max reading of 1999

**Polarity:** Automatic (-) negative polarity indication

**Zero Adjustment:** Automatic

**Over Range Indication:** Only the digit '1' is displayed.

**Power:** 12V Alkaline Manganese button cells A23, E12 (Japan) or equivalent.

**Dimensions:** 100mm long x 48mm wide 26mm thick

**Net Weight:** 104g (including battery)

## **ELECTRICAL SPECIFICATIONS:**

Accuracies are guaranteed for 1 year, 23° C +/- 5° C less than 75% RH

### **DC VOLTAGE:**

200m, 2V, 20V, 200V, 500V +/- 0.5% reading +/- 2d

Impedance: 1M ohm

OVERLOAD PROTECTION: 500V rms

### **AC VOLTAGE:**

200V, 500V (40Hz-400Hz) +/- 2% reading +/- 5d

Impedance: 450k ohm

Overload Protection: 500V RMS

### **RESISTANCE:**

200, 2000, 20k, 200k, 2000k +/- 1.5% reading +/- 4d

### **DC CURRENT:**

2000μ , 20m, 200mA +/- 2% reading +/- 2d

### **OVERLOAD PROTECTION:**

200mA/250V fuse

### **DIODE TEST:**

Test Current: 1.6mA MAX

Test Voltage: 3.2V MAX

### **BATTERY TEST:**

Range: 9V

Test Current: 6mA

### **OPERATION:**

- When "1" is displayed on the LCD display, this is warning that the input voltage should not exceed the indicated values. This is to prevent damage to the internal circuitry.
- The range switch should be set to the range which you want to test before operation. 2V setting measures voltages **up to** 2 volts, and the 20V setting measures voltages **up to** 20 volts and so on. For example, if you've measuring a 12V battery, use the 20V setting. 5V system? Use the 20V setting. If you set it incorrectly, you will see the LCD display read '1'.

### **DC VOLTAGE MEASUREMENT:**

Set the **FUNCTION and RANGE** switch to DC V position. ( $\overline{V}$ )

Connect test leads and select range. If the test voltage is not known beforehand, then set the range switch to the highest 500V range and work down. Probe across the source or load needed to be measured. The polarity of the red lead connection will be indicated at the same time as the voltage. If you reverse the leads, the measurement will appear as a negative (-) number on your display.

**AC VOLTAGE MEASUREMENT:**

Set the **FUNCTION and RANGE** switch to desired AC V position.  $\tilde{V}$

Connect test leads and select range, if voltage is unknown start with the largest scale and work your way down. Probe across the source or load needed to be measured.

**DC CURRENT MEASUREMENT:**

Set the **FUNCTION and RANGE** switch to DC A position.  $\overline{\overline{A}}$

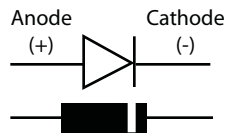
Connect test leads and select range, if amperage is unknown start with the largest scale and work your way down. Probe in series with the source or load needed to be measured.

**RESISTANCE MEASUREMENT:**

Set the **FUNCTION and RANGE** switch to desired ohm ( $\Omega$ ) range. If the resistance being measured is connected to a circuit turn off power and discharge all capacitors before applying probes across the load to be measured.

**DIODE TEST:**

Set the **FUNCTION and RANGE** switch to 2k/Diode  $\rightarrow$  ) position, connect test leads across the diode. RED probe goes to the anode of the diode and black probe goes to the cathode of the diode.

**BATTERY TEST:**

Set the **FUNCTION and RANGE** switch to **BATT** position. Connect test leads to the terminals of the battery to be tested. Red probe goes to the positive (+) post, black probe goes to the negative (-) post. This will test the static or resting voltage of the battery.

**MAINTENANCE CAUTION:**

Remove from any energized circuits to avoid shock hazard. Fuse rarely needs replacement and blows almost always as a result of operator error. If **BAT** appears on display, this indicates that the battery should be replaced. To replace battery remove screw in the bottom of case - remove the old and replace with a new A23 battery. Be careful to observe polarity. To replace 200mA/250V fuse (ESI-645) remove the screw in the bottom of the case, simply remove the old and replace with a new one.



## WARRANTY

### 1 YEAR LIMITED WARRANTY

THIS WARRANTY AND CONFIRMED RECEIPT(S) SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES

PURCHASED FROM: \_\_\_\_\_

DATE PURCHASED: \_\_\_\_\_

INVOICE/RECEIPT NUMBER: \_\_\_\_\_

Your ATD-5544 is warranted for a period of 12 months from the original purchase date.

For a period of one (1) year from your purchase date, ATD Tools Inc. will repair or replace (at its option) without charge, your ATD product if it was purchased new and the product has failed due to a defect in material or workmanship which you experienced during normal use of the product. This limited warranty is your exclusive remedy.

To access the benefits of this warranty, contact your supplier, or point of sale directly. You may be advised to return the product under warranty, freight prepaid, to your supplier for warranty determination.

If this ATD product is altered, abused, misused, modified, or undergoes service by an unauthorized technician, your warranty will be void. We are not responsible for damage to ornamental designs you place on this ATD product and such ornamentation should not cover any warnings or instructions or they may void the warranty. This warranty does not cover scratches, superficial dents, and other abrasions to the paint finish that occur under normal use. It also does not cover normal wear items such as but not limited to brushes, batteries, drill bits, drill chucks, pads or blades.

Subject to the law in your state:

- (1) Your sole and exclusive remedy is repair or replacement of the defective product as described above.
- (2) ATD is not liable for any incidental damages, including but not limited to, lost profits and unforeseeable consequences.
- (3) The repair and replacement of this product under the express limited warranty described above is your exclusive remedy and is provided in lieu of all other warranties, express or implied. All other warranties, including implied warranties and warranties of merchantability or fitness for a particular purpose are disclaimed and, if disclaimer is prohibited, these warranties are limited to one year from your date of purchase of this product.

Some states' laws do not allow limited durations on certain implied warranties and some states' laws do not allow limitations on incidental or consequential damages. You should consult the law in your state to determine how your rights may vary.

NOTE: This one year warranty does not cover dead batteries and blown fuses.

For warranty and service coverage, please return this product to your dealer for processing and evaluation as described above OR, return it directly to:

**Electronic Specialties, Inc.**  
139 Elizabeth Ln.  
Genoa City, WI 53128  
262-279-1400  
[WWW.ESITEST.COM](http://WWW.ESITEST.COM)

Defective units being returned to your dealer or to the factory should include proof of purchase date.  
Any testers that do not function due to misuse or abuse will be subject to out of warranty service charges.